Addis Ababa University
School of Graduate Studies

Gender, Household Food Security and Coping Strategy: the case of Meskan Woreda of the Gurage Zone

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By : Mesay Kebede

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Title

Gender, Household Food Security and Coping Strategy: The Case of Meskan Woreda of the Gurage Zone.

BY

Mesay Kebede Duguma

DEVELOPMENT STUDIES

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ACRONYMS

DPPC	Disaster Prevention and Preparedness Commission
EGS	Employment Generation Schemes
EPRDF	Ethiopian People's Revolutionary Democratic Front
FAO	Food and Agriculture Organization
FDRE	Federal Democratic Republic of Ethiopia
FFW	Food For Work
FGD	Focus Group Discussion
FHH	Female-headed Household
FSS	Food Security Strategy
GDP	Gross Domestic Product
MHH	Male-headed Household
MoLSA	Ministry of Labor and Social Affairs
NGO	Non-Governmental Organization
SNNPRS	Southern Nations, Nationalities and Peoples Regional State
SOS	Save our Soul

Glossary of Local Terms

Arake	A local drink made from cereals through distillation in homes by local people
Bega	Dry Season
Belg	Small rainy season from March to April
Dega	Temperate weather
Derg	Military regime in Ethiopia from 1974-1991
Debo	A term to refer to working in group on several occasions
Idir	Traditional burial association
Injera	Local bread made from teff (Eragrostis tef)
Kebele	The lowest unit of administrative hierarchy in the Ethiopian government Structure
Kita	Traditional bread made from maize
Kollo	Roasted barley or wheat or beans
Teff	Eragrotis tef
Timad	Local measurement for land/1timad is equivalent to 0.25 ha
Woina Dega	Warm temperate weather
Woreda	District

CHAPTER ONE

INTRODUCTION

1.1 Background

Ethiopia is the third populous country in Africa. The incidence of poverty is 44 percent at national level. Agriculture plays important roles in the development of the national economy and contributes about 50 percent of the GDP and employs 85 percent of the population.

In Ethiopia, combinations of natural and man-made factors have resulted in a serious and growing food insecurity problem in many parts of the country. About five to six million people are chronically food insecure every year. There are people who do not have the capacity to produce or buy enough food to meet their annual food needs even under normal weather and market conditions (FAO, 2006).

According to the 2005 DPPC half year report on SNNPR food security situation, the Southern Nations, Nationalities and People's Regional State (SNNPRS) where the study area is located is one of the food insecure regions in Ethiopia. Quantitative and qualitative data analysis indicated that population number and area of the region facing food insecurity is increasing from time to time. Currently, 1.5 million people in 64 *woredas* of the Region are vulnerable to chronic and transitory food insecurity. Many households are only able to produce sufficient food to meet their food requirements for less than six months of the year.

The report also revealed, the food insecure in rural areas of the region includes the following vulnerable groups: landless and the poor without assets, very small and fragmented land holders, female- headed households, families with large size, dislocated pastoral members, drought and pest affected households.

The main economic base of the study *woreda* lies on a subsistence rain fed agriculture, with high variability in occurrence, spatial and temporal distribution of rainfall. Even under normal times, agricultural production often fails to sustain life for a prolonged period through out the year. Farm management system in the *woreda* generally follows traditional method and the role of irrigation is very limited and hence, agriculture is dependent on rain- fed farming. The *woreda* generally faces acute shortage of food approximating semi- starvation for most households lasting about 8 months within a time span of one year.

At a household level, female- headed households are more food insecure than male-headed households. There are many challenges to women in general and to female-headed households in particular in playing a more active role in food security than male-headed households. These, according to Senait (2000), include inadequate access to and control over productive resources (such as land, labor, and capital), lack of access to appropriate and efficient technologies and/or inputs to raise productivity, institutional barriers, cultural and social constraints in a form of gender-biased customs and conventions, stereotypes, and misconceptions about women.

1.2 Statement of the Problem

In many countries, particularly developing nations, the society's perception of the 'normality' of male- headed households renders female- headed units an anomalous, isolated and disadvantageous category (Chant, 1997). In this kind of patriarchal society, men are often privileged as heads of households despite women's critical economic role. A woman is given subordinate position to her husband even if she plays an equal role. This has resulted in the deterioration of the social and economic situation of women while males' needs, preferences and problems are of primary concern. This further exacerbates marginalization, and economic and social vulnerability of women (Young, 1993).

According to FAO's report (2007), women produce between 60 and 80 percent of the food in most developing countries and are responsible for half of the world's food production. Yet, despite their contribution to global food security, women farmers are frequently underestimated and overlooked in development strategies.

FAO study also revealed that while women in most developing countries play critical roles in various agricultural activities, they have been the last to benefit from or in some cases have been negatively affected by the prevailing economic growth and development process. It is further explained that farmers are still generally perceived as 'male' by policymakers, development planners and agricultural service deliverers. For this reason, women find it more difficult than men to gain access to valuable resources such as land, credit, agricultural inputs, technology, extension and training services that would enhance their production capacity (Ibid).

Similarly in Ethiopia, rural women who comprise the bulk of the country's agricultural workforce and who engage in food production, processing and preparation are often neglected and deprived of services and amenities. As a result, they are vulnerable to poverty, food insecurity, gender bias and effects of environmental changes and disequilibria.

Research in rural parts of Ethiopia reveals that little is done about the all-round potential of women in general. Hence, heavy male bias continues to inform development planning and extension activities (Dessalegn, 1991). Moreover, although rural women are engaged fully in agricultural activities, the division of labor in rural Ethiopia is quite traditional that certain jobs are reserved for men and others for women. Men are still considered to be the head of the household, the bread winner.

In Ethiopia, since rural households are non-functional without female roles in field and domestic activities (Yared, 1999; MoLSA/WAD, 1999), their roles should be investigated. However, while policy makers claim that rural women have been enabled to get their share of land and asset that would lead to the betterment of their lives, there is little evidence that shows the improving conditions of women in general, and those of female – headed households in particular (Yigremew, 2000).

Thus, based on the above idea, this research attempted to look at the food security situation and the type of coping strategies persued by female and male- headed households in *Meskan Woreda* of the Gurage zone.

1.3 Objective

General Objective

The general objective of this research is to assess the food security situation and the type of coping strategies used by female and male- headed households in *Meskan Woreda* of the Gurage zone.

Specific Objectives

1. To assess the status of food security/ insecurity situation in female and male – headed households.
2. To investigate the underlying causes of the prevalence of food insecurity in female and male-headed households.
3. To explore the diverse coping mechanisms which are pursued by female and male-headed households to adjust to risks of food shortages.

1.4 Key Research Questions

1. What is the level food security/insecurity situation in female and male- headed households?
2. Is there difference in the level of food security status in female and male-headed households? If there is, what factors contribute for the difference?
3. What are the coping strategies pursued by female and male- headed households to adjust to risks of food shortage?

1.5 Significance of the Study

The findings of this study would provide additional information and understanding to local conditions through filling data gaps in the design of programs and projects. The researcher hopes it would benefit concerned organizations and institutions working on related issues. On top of this, findings of the research would give insight for researchers and students interested in similar research theme for further investigation in other areas.

1.6 Scope of the study

This research has focused on addressing the food security situation and the type of coping strategies pursued by female and male- headed households in *Meskan Woreda* of the Gurage Zone. The study mainly relied on the perception of household heads to assess the food security status of households. Objective measurement approach has not been part of the analysis in this aspect. The research is also restricted to identifying the major coping strategies adopted by households in the study area whereas the determinant factors for using a specific coping strategy by households is not fully covered in the analysis part of the research. The study is also limited to specifically selected two *kebeles* in the *woreda* taking female- and male-headed households as the main target population. The researcher has used cross- sectional household survey to collect the relevant information for the study.

1.7 Organization of the Paper

This paper is organized into five chapters. The first chapter comprises the introduction of the research consisting of statement of the problem, objective of the paper, the research questions, the significance, the scope, the limitations of the paper and the research methodology. The second chapter deals with literatures reviewed from various sources. The third chapter provides background information about the *woreda* and the study *kebeles*. Chapter four consists of the research findings and discussions and the paper winds up by presenting conclusion in chapter five.

1.8 Limitations of the Paper

The researcher has encountered a number of shortcomings during the course of the study. One of the major drawbacks was the inaccessibility of some of the areas in the study sites due to rugged topography and lack of suitable rural roads. The other major constraint was the lack of access to supplementary written documents both at *kebele* and *woreda* level in the Woreda Agriculture and Rural Development Office to further strengthen the findings of the research. Lack of willingness of most of the surveyed respondents to disclose real information about their asset possession and production level has also rendered some limitation to the finding of the research. Therefore, the researcher has relied on other primary sources such as government officials of the Woreda Agriculture and Rural Development Office and other key informants. The researcher has also faced some limitation in the analysis of the paper in that the study has overlooked the objective measurement approach to assess the food security status of households and completely depended on people's perception to identify the food security level of households. Lack of detailed discussions on coping strategies could also be mentioned as one of the flaws to this thesis.

1.9 Research Methodology

1.9.1 Sampling Procedure

The survey *woreda* is purposively selected because of its highly traditional and subsistence rain fed type of economy, recurrence of natural adversities, low level of development and mainly due to the researcher's familiarity with the area.

The researcher used purposive sampling technique to choose two *kebeles*, namely *Beresa* and *Dobo Tuto*, out of the 47 *kebeles* in the *woreda*. The reason to purposively choose these two *kebeles* is primarily based on the intensity of vulnerability of the areas to seasonal food insecurity and the relatively significant number of female-headed households which are exposed to food insecurity. Besides, the accessibility of the *kebeles* to the *woreda* town, transport network and the researcher's prior exposure to the selected sites could be mentioned as strong factors for purposively choosing those sites.

The total number of households in *Beresa* and *Dobo Tuto Kebeles* was taken as sample frame. The data on the total number of households in the two *kebeles* was obtained from the respective Rural Kebele Administration Offices. Accordingly, out of 695 households in *Beresa Kebele*, there were 190 female-headed and 505 male-headed households. On the other hand, out of a total of 420 households in *Dobo Tuto Kebele* there were 30 female- headed and 390 male- headed households. At the beginning, the researcher has determined the total sample size for the study to be 150 households (14 percent of the total households in the two *kebeles*). Then, since the research is gender based, sample sizes were determined basing female and male-headed households in the study area. In this case, 90 samples of male- headed households (10 percent of the total male headed households) were taken. With respect to female-headed households, owing to their smaller number compared to their counter parts, the researcher has taken all of female-headed households in *Dobo Tuto Kebele* and 30 female-headed households from the *Beresa Kebele* making a total of 60 sample female- headed households to ensure better representativeness of the sample. Hence, the survey was carried out on a total of 150

households out of which 60 are female-headed households and the rest 90 are male-headed households.

Based on the lists obtained from the respective Rural Kebele Administration Offices, sample households from each category of female-and male- headed households were drawn using a simple random sampling technique to ensure equal chances of being chosen.

With regard to key informants, focus group discussions and household case-story the study used purposive or judgment sampling since informants will be selected on the basis of their social position, roles in the community, knowledge of the community and critical information rather than on representative consideration. Accordingly, key informants were selected from peasants (both female and male heads of households, respective *kebele* chairpersons, Woreda Agriculture and Rural Development Office experts and Development agents).

Moreover, two focus group discussions were conducted, with female and male- heads of households taken from both *kebeles*, each containing 6 participants. The participants of the discussion were composed of peasants of different age group and economic status. These included female and male heads of households, village representatives/leaders, and religious leaders.

1.9.2 Method of Data Collection

Data for this particular study was obtained from primary and secondary sources.

1.9.2.1 Primary Data

Household survey: To generate information at household level, household level survey was undertaken using self-administered questionnaire in the two *kebeles*. Close-ended questions were prepared and used to gather relevant information in relation to the

objectives of the study. Prior to conducting the interview, the questionnaire was pre-tested on randomly selected households in the study sites and accordingly revision was made. Four enumerators were recruited based on their proficiency in communicating using local language, educational background and prior experience to similar works. Training was given to enumerators on the procedures to follow while conducting interviews.

Focus group discussions: these were conducted with female and male household heads in each sample *kebeles.* The FGDs helped to gather information such as female and male-headed households' access to crucial factors of production such as land, labor, farm animals, farm technologies and credit facilities. Besides, the researcher was able to extract pertinent information related to the study such as the causes of household food insecurity in female and male-headed households and the types of coping strategies used during food shortage seasons in the study area.

Household case stories: a total of three case- stories were carried out with household heads during the period of the survey to supplement the findings of the study with important information such as the situation of access to land in female headed households and types of consumption patterns used as coping strategies in farm households.

Key-informants: these were approached from each *kebele.* It involved village elders, Woreda Agriculture and Rural Development Office Food Security Desk Experts, Woreda Extension Team Leaders, Development Agents, Peasant Association Leaders and Kebele chairpersons in the study sites. The information gathered from key informants has been used in the study to strengthen the findings obtained through household survey.

Observation- observation of the study *kebeles* was carried out before and during the study period by the researcher. The researcher's observation of the study kebeles therefore, has contributed to substantiate some of the findings of the study.

1.9.2.2 Secondary Data

Secondary data sources such as policy documents, books, reports and other relevant resources are used for the study.

1.9.3 Method of Data Analysis

The data was generated through quantitative and qualitative methods. Therefore, some qualitative and quantitative techniques were used to analyze the data. The qualitative data obtained from focus group discussions, key informant interviews, household case stories and personal observation was analyzed through simple description using words. Whereas, the quantitative data that was generated through household survey was entered in to an SPSS software and analyzed using various tools of descriptive statistics such as percentages, cross tabs and frequencies.

CHAPTER TWO
LITERATURE REVIEW

2.1Key Concepts and Definitions

For better understanding of the concept of food security, various researchers consider households as a fundamental unit. In this case, two types of household heads can be identified. Female and male heads of households.

A Male-headed household- is identified as a unit in which there is an "intact' couple or at least other adult female if not the man's spouse (Chant, 1997).

A Female- headed household: is defined as a unit where an adult woman (usually with children) resides without a male partner (Chant, 1997). In literature, two types of female headships are identified and explained as follows.

(a) De-jure female- headed household: in which, the male partner is permanently absent due to separation or death, and the woman is legally single, divorced or widowed (Moser, 1993).

(b)De facto female- headed household: refers to a household in which the male partner is temporarily absent. Here, the woman is not the legal household head. She is often perceived as dependent although she may, for most of her adult life, have primarily if not total responsibility for the financial as well as the organizational aspect of a household (Moser, 1993).

Chant (1997) has argued that factors that lead to female headship involve social and economic factors which among others include economic changes, economic decline, and lack of employment opportunities in rural areas, population pressure, rapid urbanization and female out migration due to various social pressures. Cultural factors can include family disorders for various reasons, weakening of traditional security systems, divorce, death of husband and the practice of polygamy.

According to FAO's study report of 2007, it has been indicated that the number of female-headed households is increasing significantly in rural areas in many developing countries as rural men migrate due to lack of employment and other income generating opportunities. The study further shows that in Sub-Saharan Africa, 31 percent of rural households are headed by women, while in Latin America, Caribbean and Asia, women head 17 percent and 14 percent respectively. While there are different types of female headed households, in almost all countries female- headed households are concentrated among the poorer strata of society and often have lower incomes than male- headed households.

Food Security: having similar basic concept, different institutions and organizations defined food security differently. Conventionally food security is defined as "access by all people at all times to enough food, for an active and healthy life" (World Bank, 1986:1).

The four core concepts in the definition as identified by Maxwell and Smith (1992) include: "sufficiency"(defined as the calories required for an active, healthy life), "access" to food (through production, purchase, exchange or gift), "security" (defined as the balance between vulnerability, risk and insurance) and "time" (where food insecurity can be chronic, transitory or cyclical).

Food security can be viewed at global, regional, national, sub-national, household or individual levels. Recent researches are more concerned with the latter two.

In defining food security in the context of subsistence farming households, Getachew (1995) described food security as an ability to establish access to productive resources such as land, livestock, agricultural inputs and family labor combined to produce food or cash.

There are four components that indicate the food security status of rural households (FAO, 1998). These are access, availability, use /utilization and asset creation.

Access: refers to the stock of food in the market as well as the purchasing power created by saving money or in the form of assets such as cattle and other possessions. The first one is asset ownership (in size and types of productive assets). The second one is income (sources of income earning activities and employment). In most cases, employment generation schemes (EGS) and off-farm employment opportunities are considered as ways of improving access to food in Ethiopia. The capacity of local markets to deliver the food demand is as equally important as the degree of entitlements or capacity that individuals have to purchase the food they need at all times (Kifle, 1999 as cited in Dagnew, 2002). The same author also stated in Ethiopia, the major attempts are only concentrated around creating access to food through an increase in production and productivity with little emphasis to creating access through product and income diversification.

Availability: refers to the availability of active family labor that is able to create incomes and assets. In addition, it also refers to own production and capacity to produce enough food. On the supply side, cereal out put is the key indicator, as cereals provide about 60 percent of dietary energy in developing countries, the figure being higher in least developing countries. To improve food availability, promotion of irrigation, adoption of low-cost inputs and drought-resistant crop varieties are among the key factors. In general, at micro level, availability could be taken as households' capacity to produce the food they need. Although there is no national data on this issue, some studies in Kindo Koisha conducted by SOS/Sahel suggest that households cannot feed their members for more than six months from their own production even in 'normal years' (Dagnew, 2002).

Use/ Utilization: this aspect of food security component relates to changes in household consumption pattern, which includes eating habits or creating strategic mix in feeding patterns to stabilize the availability of food, food stocks and income management (Dessalegn, 1987). Utilization of food can be improved through the expansion of safe water supply and sanitation, and promotion of community health services and prevention. It underlines the importance of such processes, including marketing, storage, processing, cooking practices and nutrition to the attainment of food security (World Bank, 2001). It

has however proved difficult to support the study by micro-level findings, relating to the actual food utilization and management at household level in Ethiopian situation.

Asset Creation: asset creation at household level is a very important component of food security indicator. In times of food shocks, households adopt specific kinds of 'coping strategies'. As indicated by Kifle (1999), these strategies involve behavioral change in terms of food choice, frequency of eating, seeking other income sources, borrowing from kith and kin, etc. In times of emergencies, vulnerable households begin to sell their belongings or 'assets' such as livestock, tools, personal possessions or household goods. Thus, food security interventions should enable to create assets at household level.

In respect to the time dimension, food insecurity is divided in to two broad categories: chronic (permanent) food insecurity and transitory food insecurity.

(a) Chronic/permanent food insecurity: refers to a continuously inadequate food caused by lack of resources to produce or obtain food (Reutlinger, 1987). It is a common feature of poor households in most parts of the world.

(b) Transitory/seasonal food insecurity: refers to a temporary decline in household's access to enough food. This happens due to instability in food prices, food production or household incomes. In its worst forms, it produces famine (Reutlinger, 1987).

Food self –sufficiency: refers to a condition where production of crops or livestock by households covers their annual food consumption requirements (Degefa, 2005). Bringing the concept in to local context, attempts were made to differentiate self- sufficiency from food security. According to Degefa (2005) self sufficiency is a concept that deals more with availability, while food security in addition to food availability deals with issues such as access, utilization and security.

Seasonality: refers to a varying phenomenon that entails significant change in the biotic potential of the landscape within the annual cycle (Thomas & Leatherman 1990).

Seasonality is a common phenomenon in many parts of Ethiopia where agriculture is highly dependent on rain (Degefa, 2002).

Coping strategies: are defined as a careful pre- plan adopted, as a mechanism to attain food security at the time of food shortages in a household (Frankenberger, 1994). According to Dagnew (1993), household coping strategy is defined as a relief or recovery mechanism used by individual households or members of households to adjust to risks of food shortages by themselves with no outside support.

2.2 Review of Literature on Food Security in Ethiopia

2.2.1 The Level of Food Security/ Insecurity Situation in Ethiopia

In this section, the food security/insecurity situation and its national and regional dimension in Ethiopia will be examined by putting more emphasis on the regional context/problems.

As stated in Dessalegn (1990), the history of Ethiopia is highly linked with severe, recurring food shortage and famine. In much of the available literature, such problem is mainly associated with recurrent drought. Currently, there is growing consensus that the food insecurity and poverty problems are closely related in the Ethiopian situation. Between 1983 and 1993, Ethiopia witnessed three major droughts and a nationwide famine that left up to a million people dead (Dessalegn, 1990). During the 1980s, both food production and per capita food availability had experienced a downward trend. Total domestic production on average decreased by 0.4 percent per annum, leaving behind an uninterrupted dependency on food aid (Adera B., 1999 as cited in Dagnew 2002).

In spite of significant political and economic reforms during the 1990s, some years of record harvest and increasing levels of assistance from the international donor community, Ethiopia remains to be one of the most food –insecure countries in the world. For the past twenty years, according to the records of the DPPC, the number of

beneficiaries in Ethiopia in need of annual food assistance has not fallen below two million people. During the 1990s, even after the subtraction of the population of Eritrea, the number of beneficiaries has not dropped below three million, despite bumper harvests in 1995 and 1996. In the year 2000, some eight million people were identified as needing relief assistance.

On the other hand, the years 1973-74, 1984-85, 1993-94 and 1999-2000 were drought years in the recent Ethiopian history. Especially some pastoral areas like Somali region and Borena in the Oromiya Region were badly affected during the 1999-2000 drought-related crises. The origin of the crises goes back to 1998, when the *meher* rains ended early, damaging some of the long maturing crops traditionally grown during the same season. In addition, the *belg* (small rains) in 1999 failed completely in the *belg* crop-growing areas of Tigray, Eastern Amhara and parts of SNNPR. In February 2000, FAO/ WFP estimated the total food production for 1999 at 10.72 million tons, a reduction of six percent from the production in 1998 and inadequate to meet the country's needs (Christian Aid, 2000).

In spite of the bumper harvests in some years in the mid-1990s, the country is still food insecure. The minimum average calorie requirement is estimated at 2, 100 calory per person per day. However, the current average figure is not more than 1,700 kcal for the country (Dagnew, 2000). The food insecure social groups in Ethiopia include: the urban unemployed, people in areas of conflict, destitute peasants, pastoralists who depend on markets for cereal supply and refugees from neighboring countries, namely from Somalia and Sudan.

Although agriculture dominates the Ethiopian economy, accounting for about 50 percent of the GDP and for 85 percent employment, it is increasingly evident that access to off-farm sources of income is critical to the survival of the rural poor (Jenden 1994, Carswell, 2000). Peasant agriculture accounts for over 90 percent of the agricultural output, and is rainfall dependent. Not only the quantity, but also the timing of rainfall is of critical importance. The right amount of rain at the right time is far more important

than the use of fertilizer, improved seeds, agrochemical or irrigation. Under the present condition, where farmers' incomes are so low and household assets, particularly livestock holdings, have been so depleted, an unfavorable seasonal rainfall can mean vulnerability or destitution for the rural households. It is often stated that Ethiopia can expect a major drought in at least the three years out of ten. This oversimplifies a much more complicated picture. The different farming systems in the country have different rainfall requirements (Dagnew, 2002).

2.2.2 Major Causes of Food Insecurity in Ethiopia

Ethiopia is listed among those countries in Sub- Saharan Africa with the most perilous, long term food situations. Various historical records reveal famine in Ethiopia is a phenomenon for over centuries. According to some accounts, Ethiopia has faced some 44 severe famine catastrophes including the tragedy of "the great famine" that hit the country towards the end of the 19th century (Pankhurst, 1985 as cited in Degefa 2005).

The term famine is used to explain severe food insecurity and it is referred as the worst manifestation of food insecurity (Devereux, 2001). Sen (1981) argues that famine prevails when people lack the ability to command enough food. On the other hand, Mesfin (1984) argues famine is a cumulative effect of a subsistence production system which attributes to the combination of the peasant world, the natural factors (physical environment) and the socio-economic factors. In elaborating the bond that exists between these elements he argued that an agricultural population must first be made vulnerable to famine by socio-economic and political forces, prior to the damage caused by any natural factor that leads to famine (Mesfin, 1984).

Similarly, in a study about Ethiopian famine, Getachew (1995) stated that household's risk of food insecurity and famine were aggravated by long term secular decline in resource endowment coupled with unsound food policy intervention. He also underlined that the failure of Ethiopian small scale agriculture to feed its population is mainly due to the prevailing gaps in policy and the continuing decline in access to productive assets of

most farmers (Getachew, 1995). On the other hand, other researchers account for the cause of food insecurity in Ethiopia to natural resource degradation. The base for their argument is the subsistence, peasant dominated and rain fed type of agriculture that is pursued despite the large percentage of agricultural population that the country supports.(Degefa, 2005).

Generally, the causes of food insecurity in Ethiopia as reviewed from various literatures are categorized and presented as follows.

A. Environmental Factors

Environmental factors include land, water, vegetation, soil, and climate upon which agricultural activities (crop production, livestock rearing, fishery, forestry, apiculture, horticulture, etc) are based. Hence, any hazard against these resources can affect food security situation of a given community (Yared, 2001).

However, the degree of environmental influence varies depending on the level of development, and subsistence farmers in developing regions are generally regarded as more susceptible to environmental shocks (Degefa, 2002).

In explaining the effect of environmental changes on the livelihood of farmers in Ethiopia Getachew (1995) argued that the traditional farming systems of the Ethiopian peasants consumes and exploits the natural resource base, therefore, resource degradation, depletion and environmental problems are inevitable. They also elaborated that environmental disturbances and over exploitation of natural resources leads to the prevalence of natural catastrophes including flood, drought, water logging, excessive heating and the like which are the immediate causes of famine in Ethiopia. It was also discussed that the rainfall variability, degraded soil, scanty vegetation cover which cause ecological imbalances coupled with improper and poor land management practices and the accelerating population significantly add to the occurrence of famine in Ethiopia.

In strengthening the above arguments, it is stated that development largely rely on appropriate and sustainable use of the environment and the management of natural resources which in turn is a critical factor to the pursuit of food security and economic development (FDRE, 1996).

B. Demographic Factors

Rapid population growth leads to a demand for additional land and clearing of new areas for expansion of farm land and settlement. According to the CSA (1997/98), Ethiopia had a gross national product (GNP), at market prices, of Birr 755, which is one of the lowest GNPs in Sub-Saharan Africa. On the other hand, the population growth rate is one of the highest not only in Africa but also in the world.

The Ethiopian Food security strategy which was issued in1996 also stipulates that high population growth rate is one of the main impediments to ensure food security, provide effective education, health and other essential social and economic services (FDRE, 1996).

In support of the above statement Dagnew (2002) argues rapid population growth among other factors is the cause for natural resource degradation which aggravates insecurity problems in rural households. In his study on seasonal food insecurity in Oromiya Zone, Degefa (2002), also revealed that the rate of population growth which exceeds the rate of economic growth has resulted in small land holding, resource exploitation, and limited fallow period among the rural communities in Ethiopia.

C. Economic Factors

Some of the manifestations of economic problems that are considered as the constraints of agricultural production according to Degefa (2002), include lack of cash, absence of off-farm incomes, shortage of farm oxen, shortage of modern farm inputs, traditional farm implements and practices. In explaining the implications of these constraints, he

stated that farmers with no ox are more vulnerable to household food shortages as they rent out their land to other farmers with better pulling power or has to get oxen on a rent which makes them loose some of their produce through shares.

Similarly, Dessalegn (1997) argues that oxen possession in farm households is the determinant factor of production. Lack of oxen or no oxen possession according to him can potentially cause household food insecurity in the context of rural Ethiopia where cultivation is possible with drought power.

In understanding the effect of economic factors in households' food production, researches by Yared (2001) verify that agricultural inputs such as improved seeds, fertilizers, herbicides and farm implements which are vital to increase production and productivity are not well accessed by most peasants due to high cost of chemical fertilizers and improved seeds, poor performance of the market, lack of competitions and monopolization of input supply in the hands of the government, lack of access to credit facilities and low market values of agricultural producers.

D. Social Factors

According to Degefa (2002), social factors such as shortage of human labor, health problems, low levels of education, poor food rationing and absence of saving tradition are among the causes to the occurrence of seasonal food shortages in farm households.

In support to the above statement, Workneh (2000) states labor is an important determinant in peasant food production as most agricultural operations in small farming systems are labor intensive. Similarly he argues that farmers' access to appropriate technologies and knowledge is crucial for raising agricultural production.

E. Infrastructural Factors

Infrastructural constraints such as inaccessibility to road, absence of irrigation, absence of rural credit, inadequate extension service, poor storage facilities, low prices of agricultural output and lack of veterinary services could be reflected in households' food insecurity (Degefa, 2002).

On the other hand, credit provisions among the most important infrastructural facilities could contribute to peasants' access to production inputs such as oxen, seed and fertilizers. However, literature indicates that there is very limited access to this crucial form of capital in many rural parts of the country. Basically, the sources are expected to be either informal (community money or grain lenders, burial associations, urban traders etc) or formal institutions (NGOs or government micro financing institutions).

In line with the above idea, Workneh (2000) also noted that even though the importance of credit for poor small farm producers is unquestionable, farmers with smaller land holdings and limited production capacity may not be credit worthy in the face of creditors compared to large farm holders.

A study in *Erenssa* and *Gabri* communities of Oromiya Zone by Degefa (2005) indicated that obtaining loans from local money lenders has largely declined due to various factors. For instance, he found out that the inability of poor households to repay loans has led to mistrust and this, in turn, has become a major problem to obtain loan from local money lenders.

In similar study, Degefa argued that the presence of credit could help establish some non-farm activities such as petty trading, tea trading etc. that require a sizable amount of cash to start with. However, due to the assumption that rural areas are the domain of livestock rearing and crop production, there are limited opportunities for the rural population to obtain credit by working in non- viable sources of livelihood.

F. Political Factors

As explained by Getnet (2002), the neglect of peasant agriculture in the formulation and execution of macro- economic policies, focusing on growth through industrialization during the Imperial Regime producers' cooperatives and state farms during the Derg Regime, as well as the poor agriculture-industry linkage by the current EPRDF Regime are the major causes of poverty and food insecurity in rural Ethiopia. In strengthening the above argument, Degefa also accounted the recurrence of famine since 1950s largely to the failure of the government to combat poverty and food shortage.

In examining the causes of contemporary famines in Ethiopia, he identified two major government policies that can lead to livelihood insecurity: absence of better shock absorbing capacity during times of natural hazards, and weakness in intervening through emergency at times of food shortage and starvation (Degefa, 2005).

2.2.3 Coping Strategies of Rural Households in Ethiopia

Various literatures on coping strategy emerge due to the need to understand how rural people survive during times of food crises. Similarly, Yared (1999) noted peasants do not remain passive at times of seasonal food shortages rather implement seasonal coping strategies that help balance and maintain their economic and food security.

After Corbett's(1998) case studies from South Asia, it was identified that rural people facing food crises first use those strategies which have little long- run cost (such as drawing down savings and calling on remittances). Then follows strategies with higher long run costs such as selling the households' plough. Finally there are strategies that show economic destitution and failure to cope. These include leaving their village in search of better livelihood options. Similarly, Stephen Devereux argued that peasants fist sell an asset that minimizes the return lost per unit of cash raised by its sell (Devereux, 2001). These sequences are also indicated by Watts (1983) where he has explained the

importance of cost and reversibility of households' action apart from the effectiveness of each strategy in terms of alleviating household food shortage.

Related field surveys and micro- level intensive studies in rural parts of Ethiopia also suggest that households employ different coping strategies to survive seasons of food shortages. Scholars like Dessalegn (1987) and Webb (1994) have contributed a lot in conceptualizing the "sequencing approach", which attempts to depict the sequence of progressively economically unattractive steps that peasants take to deal with increasingly severe food shortages. These are summarized as follows.

Austerity & Reduced consumption: this encompasses resource management actions such as altering the mix of food items and reducing their variety so as to balance the needs of the family. In addition to the efficient use of family resources, women strive to augment their food by engaging in spinning, cotton basketry, hairdressing, petty trading, selling labor and fuel wood (Dessalegn, 1987).

Cooperation among the villagers: though mutual beneficial deals vary from community to community. Cooperation in local community involves borrowing grain, bartering food for assets, mortgaging of assets, setting up credit, etc. (Dessalegn, 1987).

Temporary migration: this involves the movement of individual peasants in search of employment, when they are faced with food shortage or when they recognize that food shortage occurs. Disaster victims migrate to surplus or famine deficit areas and daily labor in urban areas are opportunities that are tapped during the temporary migration.

Divestiture and Asset Disposal: in his case study from Wollo, Dessalegn (1987) stated that the system of divestiture adopted by peasants varies from family to family, and is always selective and gradual. At certain point in distress cycle, peasants sell their smaller stock first, followed by young cattle, then by cows, and finally work oxen. In most cases asset disposal is made for at least three reasons: to purchase food for the remaining stock,

to by grain (food) and to facilitate migration by either leaving some assets with relatives or selling them.

Crises migration: this involves mass migration, death, and wide scale dislocation of communities. In times of drought where all other strategies, as noted above are tried sequentially, families enter the final stage of death and disposal. This usually happens when all normal systems collapse, whereby the members of the community can no longer overcome the food crises (Dessalegn, 1987).

However, there are arguments against a strictly sequential approach in conceptualizing peasant coping strategies. In Corbett (1988) as cited in Yared 1999, it has been underlined that peasants utilize different coping mechanisms simultaneously because one strategy is often inadequate or because they do not want to exhaust its possibilities. Yared's study in *Wogda*, in Northern Shoa also revealed that better understanding of coping strategies followed by rural households require due consideration of the availability of prerequisite resources such as animals, labor, and inputs; household economic status and productivity; and values regarding wage labor and loans. Besides, severity of food and cash shortages, relative importance of consumption items, variation in market prices and animal physical status, and the conditions of environmental and economic systems are important determinants in the type and pattern of coping strategies pursued by a household during food shortages (Yared, 1999).

2.3 Review of Relevant Policies and Strategies related to Food Security in Ethiopia

The 1992 IGAD food security study indicated that Ethiopia has the highest number of food insecure people in Sub-Sahara Africa (Tesfaye and Debebe, 1995).Both chronic food insecurity, which originates mainly from a high ratio of urban unemployment and limitations of rural holdings, and transitory food insecurity that emanates from recurring disasters (mainly drought), displacement of people and refugee inflows are critical

concerns in the country. An estimated 52 percent of the country's population is food insecure (FDRE, 1996).

To address the distressing situation of food insecurity, the Ethiopian Government, in addition to the ongoing macroeconomic policies that are targeted to re-orient the economy toward a free market system, has endorsed a number of other policies. Among these are the draft Food Security Strategy, the National Policy of Disaster Prevention and Management, the Population Policy and Environmental Policy. Based on the essence of this paper, the Food Security Strategy of the government is summarized as follows.

2.3.1 The Food Security Strategy (FSS)

In 1996, the Ethiopian government developed a draft Food Security Strategy and in 1998, a Regional Food Security Program, which was targeted to tackle the problem of food insecurity in the four major regions namely, Tigray, Amhara, Oromiya and SNNPR was developed.

The first version of the food security strategy was prepared in 1996 and was revised recently through intensive dialogue and broad participation of the federal, regional and donor community.

The revised strategy targeted mainly at the chronically food insecure moisture deficit and pastoral areas. It is characterized by a clear focus on environmental rehabilitation as a measure to reverse the current land degradation. At the same time the focus on biological measures as a source of income generation for food insecure households differentiates it from the 1996 strategy. Water harvesting and introduction of high value crops, livestock and agro-forestry development have been new elements in the revised strategy. In recognition that the pursuit of food security is a long term and multi-sector challenge, institutional strengthening and capacity building is included as sectoral element of the strategy.

As in the past, however, the overall objective of the FSS is to ensure food security at household level, while the rural development policies and strategies (ADLI), would focus on ensuring national food self-sufficiency (FDRE,2002).

The strategy is intended to address both supply and demand sides of the food equation: availability and entitlement, respectively with in the framework of National Agricultural and Rural Development Strategies. This could be effected from the perspective of ensuring both food security at national and household levels taking in to consideration the diverse nature of the country's economy. The strategy adopted rests on three pillars. Increasing the availability of food through domestic (own) production; ensuring access to food for food deficit households; and strengthening emergency response capabilities (FDRE, 2002). These three pillars are briefly revised here under.

2.3.1.1 Increasing Domestic Production

According to the strategy, availability of food is going to be increased by farming intensification and opening up new lands for cultivation, as well as diffusion of simple technology packages to small land holder farmers in areas where there is reliable rainfall. These include introduction of irrigation in areas with less reliable rainfall; and enhancement of livestock products through improved livestock breeds, better nutritious animal feeds and better animal services as the main ingredients to stimulate increase in food production. In addition, to promote food production, the strategy anticipates to create a stable macroeconomic environment, encourage the private sector to invest in agricultural production, processing and marketing, intensify agricultural research and training programs, strengthen security of access to land and improve small farmers' access to better rural roads to promote the expansion of rural enterprises that generate non farm incomes. In addition, the strategy incorporates the need to create employment, increase and diversify agricultural exports and address the specific problems of pastoral areas (Dagnew, 2000).

2.3.1.2 Ensuring Access to food (demand side).

Food insecure farming households as well as the non- farming community get some and /or all of their food from the market. Farmers need market to supplement their own production while the later use it as the only source. To purchase food from the market, households need sufficient income that can cover at least their minimum food and non-food requirements. However, many households in the drought prone and moisture deficit as well as urban areas lack sufficient income to meet their basic needs (FDRE, 2002).With respect to the above perspective, the revised strategy has indicated food security measures aimed at addressing demand side problems within the framework of the Rural Development Policies and Strategies. These include the following.

A. Micro and Small-scale Enterprises

The envisaged market led agricultural development is expected to lead to large-scale direct and indirect growth in non- farm incomes and employment. To this effect, the strategy points out promoting and strengthening micro and small scale enterprise development through industrial extension services. These developments are believed to create additional employment opportunities in the private sector (FDRE, 2002).

B. Improving the Food Marketing System

The policy of the government regarding agricultural marketing and distribution is to encourage the participation of the private sector and cooperatives to improve the efficiency of the system. On the marketing front, parastatal business enterprises are expected to play significant roles in stabilizing prices as well as reaching farmers who are far from agricultural input market. To benefit from all these policy measures, the food security strategy emphasizes on measures related to establishment of market stabilization schemes (for prices of strategic food crops) along with agricultural price and market information system (FDRE, 2002).

C. Supplementing Employment and Income- generating Schemes

The strategy points out off-farm income generating activities would help supplement own production for a considerable number of farmers as coping mechanisms during periods of food shortages. To this effect public employment generation schemes (EGS and FFW) are proposed. This would intern help contribute to soil conservation, the construction of roads, small-scale irrigation, water supply and sanitation. This again leads to food production increase, reduce real rural food prices and improved health conditions. It would also help improve environmental protection and natural resource conservation.

D. Targeted Program

These programs are primarily designed to transfer resources aimed at both developing capacity for self provisioning and support vulnerable groups, who would not be capable of self –provisioning during short and medium term. The former scheme is aimed at provision of inputs (seed and fertilizer), small agricultural tools and implements to resource poor farmers (food insecure) extending small loans to destitute women to help them develop sustainable livelihood. The latter scheme involves cash transfers to orphans, the aged and handicapped or self targeting food subsidies for particular vulnerable groups (FDRE, 2002).

2.3.1.3 Emergency Capabilities

In addressing the risks of household food security, the strategy focuses on strengthening emergency capabilities such as the monitoring surveillance and early warning arrangements, the capacity for food and relief distribution, strategic reserves of food grains, and its analysis of the international food trade and aid situation. Strengthening such capabilities is noted to be based on the successful experiences and a focus on developing decentralized distributive arrangements (Dagnew, 2000).

Generally, although the development of food security strategy is considered as a positive step in addressing the deep- rooted food insecurity problem in Ethiopia, a number of weaknesses are identified with the overall conception of food security issues by policy makers and practitioners.

One major weakness as pointed out by Seneit (2001) is lack of recognition of the dynamic and multi-dimensional nature of food security and the subsequent little importance attached to food security by policy development practitioners. The failure to promote it as a cross-cutting issue to be addressed in development program components is another area that needs a closer look.

2.4 Conceptual Frame work

The main concern of this research is to explore the gender difference in food security status and the type of coping strategies used at household levels taking female and-male headed households in the study area.

The households targeted in the area are largely agricultural. The conceptual framework (model) developed and presented below attempts to illustrate how household food security could be interrelated with various factors and activities, each of which is in turn influenced by other factors.

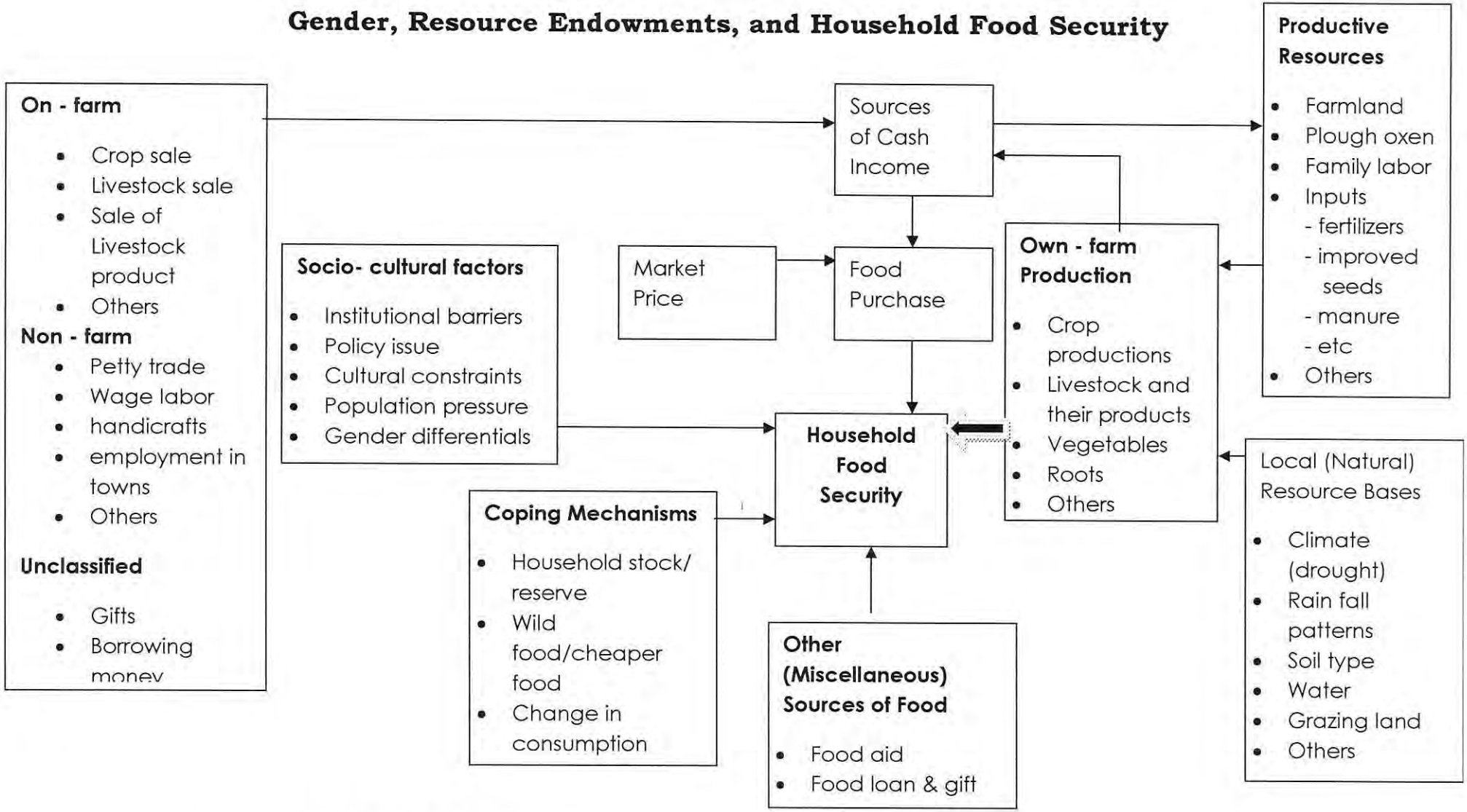
To understand the food security situation of female-and male-headed households in the study area, the following model makes an attempt to examine the role of households in creating food access and availability in grouping the activities into:

- Own-farm production activities such as crop and livestock productions;
- Non- farm activities such as petty trading and wage labor
- Informal transfers through *idir*, *iqub*, borrowing and gifts and formal transfers in a form food aid and others.

In this model, household food security is mainly through own-farm production. Own-farm production is intern influenced by the endowment of various productive resources as well as natural resource bases. It is clearly demonstrated that the major sources of food are crop and livestock productions, in fact followed by miscellaneous sources of food and food purchase. Similarly, the major sources of cash income are sale of agricultural products, non-farm activities and other forms of transfers (either formal or informal). In the model, food security is also influenced by institutional barriers (lack of credit), cultural constraints, population pressure, and policy issues and gender differentials.

Gender differentials are one of socio-cultural factors that affect household food security. The gender role differences may be expressed in the form of farm household production, availability of family labor, cultural division of labor, sources of assets and income, decision making on agricultural production and control over various resources and so on. Therefore, gender role differences in a community may have detrimental effect on household food security.

Analytical Framework to Visualize the Interrelationships of Gender, Resource Endowments, and Household Food Security



Source: Adopted from Asfaw (2006)

CHAPTER THREE

MESKAN WOREDA AND THE STUDY KEBELES

This chapter is devoted to introducing the study *woreda* and the study *kebeles*. Necessary background information regarding topography, demographic characteristics and their livelihood activities are briefly discussed. Besides, the location of the study area in relation to the Zone and the country is depicted using maps.

3.1 Meskan Woreda

3.1.1 Physical Characteristics

Meskan Woreda is situated in the Gurage zone of the Southern Nations, Nationalities and Peoples State. It is one of the 15 *woredas* of the Zone. The capital of the *woreda*, Butajira town is located at 200Km south of Addis Ababa. The *woreda* has 47 *kebeles* of which 38 are rural and 6 urban. The Woreda Administrative Council, Line Ministries and the Gurge Zone Development Association have their offices in Butajira town.

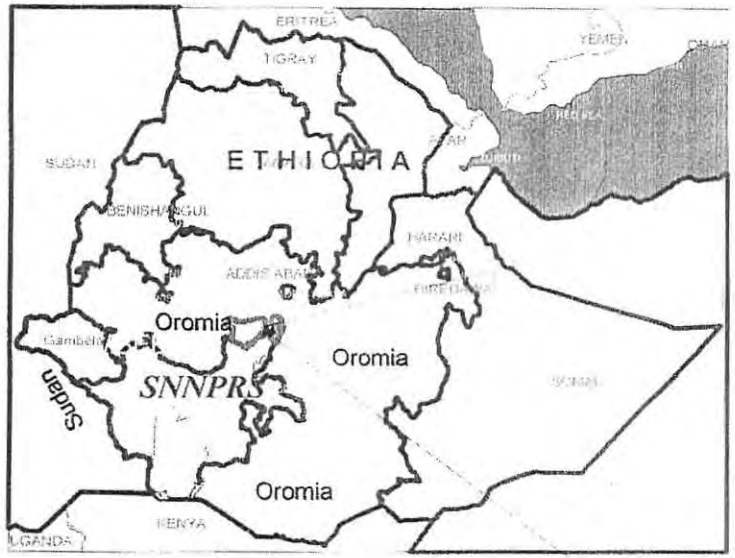
The *woreda* has area coverage of 552,000sq.Km and its elevation ranges from 1501-3500 m above sea level. Astronomically, it is situated between 7.99-8.27°N Latitude and 38.26-38.57° E Longitude.

Based on the 2007 Regional Abstract Report, the mean annual temperature of the *woreda* was registered to range from 7.5-17.5°c and a mean annual rainfall between 1001-1200mm.

3.1.2 Population, Religion and culture

According to the 1994 housing and population census, the total population was 228, 154 of which 113, 779(49.9 percent) are male and 114,375(50.1 percent) are female. With

GEOGRAPHICAL LOCATION OF THE STUDY AREA *Meskan Woreda*



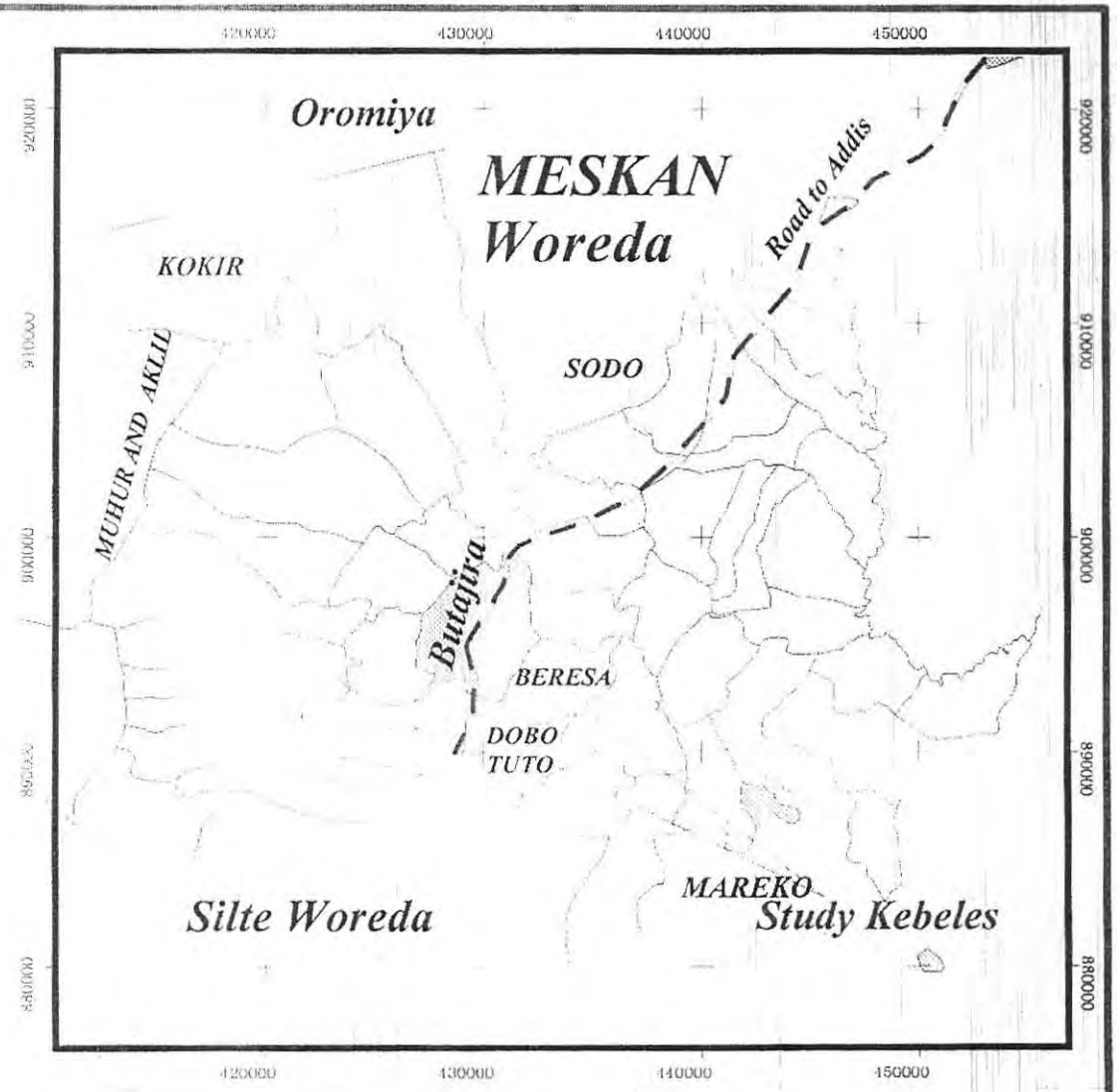
LEGEND

Road.

- Main Gravel
- Minor Gravel
- Earth Track
- Earth
- Zonal baundary
- Regional boundary
- International boundary

Lake

All the boundaries Shown in this Map are not authoritative



Scale; 20 0 20 Kilometers

Source: CSA, 1994

respect to rural/ urban settlement pattern 30, 459(13.4 percent) was urban and 197,695 (86 percent) rural. According to the regional statistical abstract report in 2007 the *woreda* has a total population size of 225,565 of which 112,914 are male and 112,655 are female. It also consists of a total of 47, 439 households.

The major ethnic group of the *woreda* is the Gurage, sub divided into the Sodo, Meskan, Silti and Mareko clans. The population is predominantly Muslim and the majority among the Sodo practice Christianity of the Orthodox denomination. Polygamy is witnessed as an aspect of marital life among the Muslim population.

3.1.3 Socio-economic Profile

Rural households live in traditional round houses (tukuls) made of wood and plastered with clay, covered by thatched roofs. The majority of rural households share their living quarters with their domestic animals. Water (for both human and animal use) is mostly obtained from springs, rivers and well.

The majority of the rural people are engaged in subsistence agriculture taking place on small and fragmented plots through the employment of oxen and traditional farm implements. Maize and Inset are the major staples in the *woreda*. Poor households often take recourse to petty trades and hired labor to supplement meager incomes derived from farm activities.

Due to the recurrent drought and low agricultural productivity in most parts of the *woreda*, the challenges imposed on many rural households especially on female-headed households multiply several folds owing to their multi responsibility of managing household affairs. The instinct for survival and self-preservation, therefore, compels women to take recourse to preying on the environment that again appears the last sanctuary for making life easier. Sale of fuel-wood and using natural vegetation covers as source of energy remains to be the only option for ensuring the barest kind of existence.

Poor women and their surviving children face serious risks of diseases and hazards of various kinds emanating from malnutrition, excessive poor sanitation, unhygienic housing condition, etc. Such diseases as eye infection, goiter, elephantiasis and bacterial infections are rampant.

3.2 The Study Kebeles

The study kebeles, *Beresa* and *Dobo Tuto*, are located approximately at similar distance from the capital Butajira which is around 5km. Accoding to the Regional Abstract Report of 2007, there are around 4,194 people living in *Beresa Kebele* and 2,688 in *Dobo Tuto Kebele*. Both of these *kebeles* share similar agro climatic zone that ranges between Woinadega and Kola. Topographically, they are characterized by rugged, mountainous and rocky landscapes. Most areas also have infertile sandy soils for crop cultivation.

The study sites are one of the few most neglected areas in the country throughout the ages. The neglect, coupled with the recurrence of natural adversities and the entrenchment of harmful traditional practices, has rendered the situation of women in particular and those of female-headed households in general to be fragile beyond imagination in terms of misery and destitution. Agricultural activities, even under normal times, often fail to sustain life for a prolonged period throughout the year. Previous researches in the study area revealed that there is usually acute shortage of food approximating semi-starvation for most households lasting about 8 months within a time span of one year. Low productivity, a nearly complete absence of alternative employment other than farming and natural calamities, exacerbated by harmful socio-cultural and economic practices account for such state of affaire in the study sites.

CHAPTER FOUR
FINDINGS AND DISCUSSION
DEMOGRAPHIC AND SOCIO-ECONOMIC CHARACTERISTICS

In this chapter, the data obtained through household survey, FGDs, key informant interviews and household case stories are presented. To make the finding more meaning ful information gathered through FGDs, key-informant interviews and household case stories are integrated with the household survey analysis when appropriate. Accordingly, the analysis is presented in four major sub- sections. In the first sub-section, demographic characteristics of respondents are presented. In the second sub-section some back ground information on households' livelihood activities and strategies are discussed. Thirdly, findings related to food security status of households are presented. The fourth and the fifth sub- sections have dealt with the causes of household food insecurity and the type of coping strategies pursued by households respectively.

4.1 Demographic Characteristics of Respondents

4.1.1 Age of Household Heads

As shown in table 1, the survey result on the age of household heads showed the majority of female heads of households that accounted to 41.7 percent are within the age range of 37-47. Similar result was also observed on the side of male heads of households where the majority of the respondents (30 percent) are with in the same age category. The survey also revealed smallest percentage of female as well as male household heads (1.7 percent and 2.2 percent respectively) in the lowest age group of 15-25 years. With regard to the older age categories that are above 48 years of age, the data showed nearly 41 percent both for female and male-headed households.

Table 1 Age of Household Heads

Age group	FHH		MHH		Total	
	No.	%	No	%	No	%
15-25	1	1.7	2	2.2	3	2
26-36	9	15	24	26.7	33	22
37-47	25	41.7	27	30	52	34.7
48-58	15	25	25	27.8	40	26.7
59-69	10	16.7	12	13.3	22	14.6
Total	60	100	90	100	150	100

Source: Field Survey, 2008

4.1.2 Religion of Household Heads

The survey result on the religion of household heads indicated 66.7 percent and 54.4 percent of female and male household heads respectively were followers of Muslim religion. Followers of Orthodox religion also accounted to 33.3 percent and 44.5 percent of female and male household heads respectively. (refer to table 2)

Table 2 Religion of household heads

Religion	FHH		MHH		Total	
	No.	%	No.	%	No.	%
Orthodox	20	33.3	40	44.5	60	40
Protestant	-	-	1	1.1	1	0.7
Muslim	40	66.7	49	54.4	89	59.3
Total	60	100	90	100	150	100

Source: Field survey, 2008

4.1.3 Marital Status of Household Heads

As shown in table 3, larger number of widows prevailed for female heads of households. Out of the female household heads, only 6.7 percent were married (but abandoned by

their husbands). These belong to the de facto female headed households. Besides, 18.3 percent were divorced. As the FGD results with female heads of households showed, the leading cause of unstable marriage in the study sites is bigamy while there are also some cases of conflict over household resource utilization and management, frequent disputes between couples and few health issues.

Table 3 Marital Status of Household Heads

Marital Status	FHH		MHH		Total	
	No.	%	No.	%	No.	%
Married	4	6.7	80	89.9	84	56
Single	-	-	2	2.2	2	1.3
Divorced	11	18.3	3	3.3	14	9.3
Widower/d	45	75	5	5.5	50	33.4
Total	60	100	90	100	150	100

Source: Field survey, 2008

It was also found out that in the study area most of the divorced, abandoned or widowed women did not remarry another husband as most of them lost their spouses at their older ages and mostly were occupied with raising their children. However, as the case study women and focus group discussions indicated, females find it difficult to lead an independent life due to lack of assets, and lower income. As one female head of household explained:

> *It is always good to be two rather than only one. I have lost the father of my children due to illness before ten years. I have only 2 daughters and they are married. I have no one to plough my land. So I gave it to a sharecropper and the produce I get from the land is decreasing from time to time. So I sell firewood to get some income. And now I am aging so I am struggling to survive. If I had a man at home, I wouldn't suffer this much.*

4.1.4 Educational Level of Household Heads

The survey proved a high rate of illiteracy among female household heads as compared to their counter parts. Only 5 percent of female respondents can read and write while 95 percent of them are illiterate. On the other hand, 48.3 percent of male-headed households were illiterate while 32.2 percent of them were in the read and write category. (Refer to table 4)

Table 4 Educational Level of Household Heads

Educational level	FHH		MHH		Total	
	No.	%	No.	%	No.	%
Illiterate	57	95	42	48.3	99	67.3
Read and write	3	5	28	32.2	31	21.1
1-8	-	-	8	9.2	8	5.4
9-11	-	-	6	6.9	6	4.1
11-12	-	-	2	2.3	2	1.4
>12	-	-	1	1.1	1	0.7
Total	60	100	87	100	147	100

Source: Field survey, 2008

4.1.5 Family Size of Households

Larger proportion of female-headed households (55.9 percent) are in the age category of 4-6 while greater proportion of male-headed households that account to 39.7 percent are in the age category of 7-9. Moving to larger size family categories, the data showed smaller figure for female headed households while it is quite different for male-headed households. For instance, only 11.9 percent of female-headed households had family size ranging from 7-9. Likewise the smallest category has relatively greater proportion of female-headed households which accounted to 23.7 percent compared to male-headed households which is 15.4 percent. (refer to table 5)

Generally, the survey result on family size of respondents indicated female-headed households have relatively smaller family size compared to male headed households.

Table 5 Family Size of Households

Family size	FHH		MHH		Total	
	No.	%	No.	%	No	%
1-3	14	23.7	12	15.4	26	19
4-6	33	55.9	27	34.6	60	43.8
7-9	7	11.9	31	39.7	38	27.7
10-12	4	6.8	7	9	11	8.1
>12	-	-	1	1.3	1	0.7
No children	1	1.7	-	-	1	0.7
Total	59	100	78	100	137	100

Source: Field survey, 2008

4.2 Livelihood Activities and Strategies

"A livelihood comprises the assets (natural, physical, human, financial and social capital), the activities and the access to these (mediated by institutions and social relations) that together determines the living gained by the individual or household" (Ellis, 2000: 10). Therefore, livelihood strategies are composed of activities that contribute for survival of households. However, activities that households pursue change over time due to shifts in social factors, trends and shocks which leads people to develop their own survival strategies.

In the study area, households are mainly engaged in farm activities such as crop production and livestock rearing (mixed agriculture). Non- farm activities such as petty trading and hired labor are also means of survival for many poor households.

4.2.1 Crop Production

Crop production is the main economic activity for the study population. Even though there are variation in the type of crops grown and the size of farm land possessed by households, almost all of the respondents in the study sites are engaged in crop production. This includes the landless and those who are able to access land through share cropping.

Households in the study sites rely mostly on long cycle crop harvested in November. Maize is the main staple crop. According to the interview with the kebele Development Agents, households in the study sites also grow haricot bean, sorghum, barley and *teff*. Pepper, coffee and chat are also grown to a smaller extent in the study sites.

Households grow different types of crops both for household consumption and for sale. Maize is largely produced for home consumption while households also produce it for sale. Moreover, crops such as *teff*, sorgum, haricot bean and barley are produced both for home consumption and sale. Among these crops, haricot bean is largely produced for sale in the study sites. Perennial crops such as coffee, pepper and chat as well as fruits and vegetables are rarely cultivated in the study sites and their contribution either for home consumption or sale is very limited.

According to one peasant key informant, recently intercropping main crops with cash crops such as chat and pepper is becoming difficult for many households due to declining soil fertility and lack of enough rainfall in the study area. Therefore, most households depend only on growing annual crops such as maize and sorghum both for food and sale.

4.2.2 Livestock Rearing

Livestock perform multiple functions in the country's economy by providing food, input for crop production and soil fertility management, raw material for industry, cash income, saving fuel, social functions and employment. In addition to these, livestock are used as assets for the rural peasants and are one of the most important insurance/collateral to get

loan. Therefore, livestock can serve as a vehicle for improving food security and better livelihood, and contributes significantly to agricultural and rural development.

The studied people were asked whether they owned some form of livestock or not. Accordingly, their responses were presented in the following table.

Table 6 Livestock Ownership of Households

Type of Household	Livestock Ownership					
	Yes		No		Total	
	No.	%	No.	%	No.	%
FHH	45	75	15	25	60	100
MHH	77	85.6	13	14.4	90	100
Total	122	81.3	28	18.7	150	100

Source: Field Survey, 2008

The survey result showed 75 percent of female-headed households did have some form of livestock against 85.6 percent of their counterparts. However, comparing female and male-headed households, the survey result showed larger number of female-headed households did not possess any livestock compared to their counterparts. The figure showed 25 percent of female-headed households against 14.4 percent of male-headed households. This may negatively impact the food security situation of female-headed households as livestock play an important role in improving the livelihood of households. The following table demonstrates the possession of different types of livestock by household type.

Table 7 Type of Livestock Possession by Households (multiple response)

Type of livestock	No. of Livestock possessed													
	FHH						MHH						Total	
	1		2		>2		1		2		>2			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Oxen	12	92.3	1	7.7	-	-	41	74.5	12	21.8	2	3.6	72	16.3
Cows	26	96.3	1	3.7	-	-	50	84.7	6	10.1	3	5.1	86	19.5
Calves	10	76.9	3	23.1	-	-	45	81.8	6	10.9	4	7.3	68	15.4
Donkey	2	18.1	6	54.5	3	-	28	93.3	2	6.7	-	-	41	9.3
Mules	1	100	-	-	-	-	-	-	-	-	2	100	3	0.7
Horses	-	-	-		-		2	28.6	5	71.4	-	-	7	1.6
Sheep	8	40	1	5	11	55	13	25	11	21.1	28	53.8	72	16.3
Goats	1	14.3	1	14.3	5	71.4	4	18.1	8	36.3	10	45.5	29	6.6
Pollutry	4	26.7	7	46.7	4	26.7	4	7.5	15	28.3	34	64.1	68	15.4

Source: Field Survey, 2008

As shown in table 7, when it comes to important livestock for farm households such as ox, 92.3 percent of female-headed households have only one ox while it is 74.5 percent for male-headed households. Compared to female- headed households, male-headed households have a better possession of oxen in that 21.8 percent of the respondents own 2 oxen while only 7.7 percent of female-headed households have two oxen. Of all types of livestock, female- headed households have a better possession of pack animals like donkeys and smaller animals like goats and sheep. Donkeys are largely used for transportation of water and grain in the study area.

The interview held with the Woreda Food Security Desk experts revealed that households' livetock possession in the two *kebeles* is generally low. It was also revealed that many factors have contributed for limited resource in terms of livestock in the study sites. One could be due to increasing number of households who de-stock their possessions due to the recurrent droughts and food shortages in the past few years. Loss of livestock due to shortage of grazing land and animal diseases also contributed for

limited livestock possession in the study sites. It was also explained that efforts are in progress to re-stock households with no livestock possession though the productive safety net program in the *woreda.*

4.2.3 Non- Farm Activities

As noted by Dagnew (2002), using various alternative sources of household income in a form of non-farm income sources is crucial for rural poor to compensate for inadequate and/or unpredictable agricultural production. Common rural household non-farm activities include petty trading, seasonal migration (primarily of the most able-bodied household members) to find any kind of paid work and sale of firewood or grass. However, in Ethiopia opportunities for diversification of agriculture continue to be very limited.

In explaining the contribution of non- farm activities in households' food security, Degefa (2005) has stated that households attainment of food security through non-farm activities depends among other things on the type of activity, the amount of income earned and the sustainability of the activity.

As households in the study area normally produce once in a year, households have long period of slack season especially after the months of November/December (harvest season) till the *belg rain* which marks the plough season. Therefore, most households engage in different non-farm activities during these slag seasons. For rural households with no farm land and oxen, non-farm activities are performed as the main livelihood strategy through out the year.

The most important non-farm activities identified in the study area were petty trading such as sell of firewood, and wage labor in near by towns. These activities also serve as major coping strategies for many poor households during seasonal food shortages in a year. (refer to table 8)

Table 8 Non-farm Activities Pursued by Households (multiple responses)

Non-farm Activities	FHH		MHH		Total	
	No.	%	No.	%	No.	%
Sell of firewood	10	16.7	5	5.7	15	10
Sell of *araki* and *tella*	5	8.5	1	1.1	6	4
Sell of *kita* and *kollo*	5	8.5	1	1.1	6	4
Sell of salt and soap	45	77.6	33	37.5	78	52
Work as daily laborer	19	32.8	37	42	56	38.1
Total	84	-	77	-	161	-

Source: Field survey, 2008

As the survey result showed, many respondents are engaged in petty trading such as selling of salt and soap to supplement their income to fulfill their family's food and other needs. The figure is higher for female-headed household which is 77.6 percent against 37.5 percent of male-headed households. Female- headed households also work as a daily laborer (32.8 percent) in the near by town followed by sell of fire wood (16.7 percent).On the other hand, 42 percent of male-headed households engage in wage labor while only 5.7 percent of them are involved in sell of fire wood.

Interview with the Woreda Food Security Desk Experts revealed that the safety net program through its Employment Generation Schemes (EGS) is providing job opportunities for certain number of food insecure households in the study *kebeles*. One of these is the cash for work program where individuals receive payments through engaging in various environmental rehabilitation programs in their locality such as soil and water conservation, flood control, agro-forestry and rural road construction. It was also learnt that such kind of programs in the study areas have contributed in reducing the number of male labor migration to towns in search of employment.

Despite the importance of non-farm activities for poor households in the study area, the respondents have identified various constraining factors to get access to such activities. Among these include limited start-up capital, high cost of raw materials, lack of basic rural infrastructure such as roads to town markets etc.

All the above non-farm income generating schemes are performed by the households without leaving their villages. None of the surveyed households participated in seasonal migration during the study period. However, the results from the focus group discussions and interviews of key informants revealed that members of households seasonally migrate to nearby towns in search of employment to supplement income for the family. However, this often occurs at the worst seasons of food shortages in most destitute households.

4.2.4 Asset Transfer

When the livelihood of households is threatened due to failure to produce sufficient amount of crops, inability to rear sufficient livestock or inability to fill the gap through non-farm activities, they tend to rely on transfers either from the community or from the government/aid agency. These types of transfers therefore form an alternative livelihood strategy for the study population at times of critical food shortages.

Informal Transfers

These are kinds of assistances which are directed from the community. It can be carried out between parents and son/daughters, between friends and neighbors in various forms. These kinds of transfers are largely practiced among households in the study sites at times of severe food shortages. These include exchange of oxen, use of relatives' or friends' oxen, share farming, involving in *debo* (group work) and *idir* and asking loan or gift from relatives or neighbors. However, recently, most of these informal transfers have taken forms of mutual support systems on the basis of trust and reciprocity in rural households.

The survey result on female and male-headed households regarding the use of such informal transfers in the study *kebeles* has indicated that female-headed households are largely involved in such kind of transfers compared to male-headed households.

This may imply that more subsistence and low income households who are food deficits are found among female-headed households in the study sites.

Formal Transfers

Formal transfers include those government interventions including cash for work or direct food aid. The two study sites are among the some of the *kebeles* in the *woreda* which were selected by the government to receive assistances either in a form of productive safety net or the EGS programs.

The data obtained from household survey indicated, only 5.1 percent of female-headed households received direct food aid while the figure for male-headed households showed 10.2 percent. With regard to the involvement of households in safety net programs, the majority of the sample households are not benefiting from the safety net program. This involves 67.2 percent and 62.5 percent of female and male-headed households respectively.

According to the key-informant interview held with the Woreda Agriculture and Rural Development Office, Food Security Desk experts, the safety net program is targeted for 30,302 households in the *woreda.* Similarly, the interview with one of the Development Agent in *Beresa Kebele* revealed that a total of 298 households are benefiting from the safety net program out of which 21 of households are receiving free aid and 277 households are supported through cash for work program.

4.3 Food Security Status of Households

Extensive literature is written on measurement of households' food security and the recent shift from objective measurement of food intake to people's perceptions of their own situation. Degefa (2005) argues there are limitations in the 'calorie-measurement approach' that was used to determine the status of household food security. In his argument he stated that, first, calorie measurement mainly tells about per capita food

availability rather than access and utilization dimensions of food security. He further argued that analysis of a single year's intake for a household tells more regarding a seasonal food shortage than depicting chronic food insecurity in terms of poverty and its persistence over many years. He also asserted that data obtained from peasants about the amount of their harvest may face serious drawbacks as peasants may deliberately disclose inaccurate information for various reasons such as getting the relief food assistance. Moreover, poor recording habits of farm households about the amount they produce, consume or purchase at the market was also identified by the same author as one significant shortcoming to the objective measurement approach to household food security status.

In this regard, the researchers' attempt to gather information through the objective measurement of food intake approach has failed during the pre-test of the questionnaire. This was probably for the aforementioned reasons such as respondents' failure to recall the amount they produce, consume or purchase at the market and/or unwillingness of respondents to give appropriate data for various insecurity issues. Owing to these and some of the drawbacks in using 'calorie measurement approach' as it is demonstrated in different literature, the researcher in this study has relied on people's perceptions and of the level of their food security to assess the food security status of households in the study sites.

Accordingly, the subsequent sub- sections deal with households' food security situation by comparing female and male-headed households in the two *kebeles*. Therefore, findings are presented first, by assessing whether or not households are sufficient in food from their own production. Second, assessment of households' perception about their households' food security situation are discussed. Third, indicators such as change and continuity in the frequency and types of meals over certain periods in the past season are used to assess the surveyed households' situation of food security/insecurity in the study area.

4.3.1 Food Self –Sufficiency

According to Degefa (2005),self –sufficiency in the context of peasants who are leading subsistence way of life entails whether the crops and livestock they produce at home cover their annual food consumption requirements or not.

Participants of the FGD described a non-self sufficient farm household in the locality as one who goes out to market to purchase grain to meet his/her household food requirements.

Based on the above contextual definition, households were asked about their perception of their households' self-sufficiency in terms of food. As shown in table 9, out of the total 18.2 percent of the respondents who reported self sufficient, 6.8 percent were female-headed households where as the rest 11.4 percent were male-headed households.

On the other hand, 93.2 percent of female-headed households reported that their production at home did not cover their family's annual food consumption requirements. Though, the figure for male-headed households is also quite large, they are found relatively at a better situation compared to their female counter parts.

Table 9 Food self-sufficiency of Households

			Household Type		Total
			FHH	MHH	
Production at home covers annual food consumption requirements	Yes	No.	4	10	14
		%	6.8	11.4	9.5
	No	No.	55	78	133
		%	93.2	88.6	90.5
Total		No.	59	88	147
		%	100	100	100

Source: Field survey, 2008

The survey result generally entails the less availability of food through home production both in female and male-headed households to feed household members throughout the year. However, the situation is even worse in the case of female-headed households.

In relation to this, respondents were also asked the maximum period/duration that production at home sustains their family's food requirements. Though there are slight differences between male-and female-headed households, the majority of both female and male-headed households face shortage of food for 8 months at minimum in one production year. In this case, out of 55 respondent female-headed households who reported non-self sufficient, 93 percent of them responded production sustains for maximum of four months in one year. While in the case of male-headed households, 56.3 percent responded home production covers the food requirement of their family for maximum of six months of the year. According to some peasant key informants this is common under normal condition with good amount of rain.

Therefore, households rely on other sources to acquire food during the deficit seasons. Among these other sources are purchase of grain on the market and/or dependence on transfers from social networks or public sources. To purchase food from market, households need to generate income from non-farm activities. In this regard, 67.7 percent and 61.8 percent of female and male-headed households respectively were able to purchase food from market using income obtained by engaging in non-farm activities. This implies households in the study area to a greater extent rely on purchase on markets to fulfill their family's food requirements which indirectly entails high rate of food self-insufficiency among farm households. The rest of the non-self sufficient households access food via different forms of transfers (both public and social). These are mostly among poor female headed-households who are unable to generate adequate income to purchase grain from market as they are constrained by various factors that are discussed in the later section of this paper.

4.3.2 Household Food Security

The concept of food-security differs from self-sufficiency in that it encompass a number of issues such as 'access', 'utilization', 'security' and 'availability' while self-sufficiency is limited to only food availability (Degefa, 2005).

After the study households are made aware of the above two different issues, they were asked to differentiate their household level of food security as food secure, seasonally food insecure and chronically food insecure. The responses obtained are as follows. (refer to table 10)

Table 10 Households' Perception of the Level of their Food Security

		FHH		MHH		Total	
Househds' perception of their level of food security		No.	%	No.	%	No.	%
	Food secure	5	8.5	9	10.3	14	9.6
	Seasonally food insecure	46	78	75	86.2	121	82.9
	Chronically food insecure	8	13.5	3	3.5	11	7.5
Total		59	100	87	100	146	100

Source: Field Survey, 2008

The survey result showed high proportion of food insecure households both in female and male-headed households. With slight difference between the two types of households, the figure depicted 91.5 percent and 89.7 percent of female and male-headed households lived either through seasonal or chronic situations of food shortages in the study area. On the other hand, even though the number of households who responded food secure are generally low both in female and male-headed households, smaller number of female-headed households compared to male-headed households reported food secure which is 8.5 percent against 10.3 percent of their male counterparts. Several factors would come in to play to explain the disparity between female and male- headed households in this regard. Therefore, section 5.4 is devoted to explain these factors.

4.3.3 Frequency of Meals

The number of meals per day and the composition of each meal vary for rural households according to the season, the size of the previous harvest and the sustainability of income from non-farm activities. This survey was carried out during food shortage periods of the year in the study sites. Therefore, households responded to this kind of food shortage seasons in various ways among these is changes in the type and frequency of consumption in their household. The table below shows the average frequency of meals of households during one weak prior to the period of data collection.

Table 11 Average Frequency of Food intake by Households for 7 days before the Start of the Survey

			Frequency of Meals				
			One time	Two times	Three times	More than three times	Total
Type of household	FHH	No.	1	49	9	-	59
		%	1.7	83.1	15.2	-	100
	MHH	No.	1	41	45	1	88
		%	1.1	46.7	51.1	1.1	100
	Total	No.	2	90	54	1	147
		%	1.4	61.2	36.7	0.7	100

Source: Field survey, 2008

The study result on the average frequency of food intake during the seven days prior to data collection showed some differences between female and male-headed households. It can be understood that regardless of the type of foods they consume, the majority of female-headed households, which account for nearly 85 percent of the total respondents are undernourished and are food insecure. Smaller number is registered for male-headed households in which around 48 percent of them were able to feed themselves less than three times a day. Only 15.3 percent of female-headed households were able to consume 3 times a day against 51.1 percent of their male counterparts. The prevailing gap between male and female-headed households in terms of frequency of meals per day can be

explained in different ways. One could be due to the shortage of available food and lack of access to food in female-headed households than male-headed households. The other reason could be the food habits and the coping mechanisms to food shortages in households which may be reflected by reducing the number of meals.

Female household heads who participated during the FGD explained, it is common to reduce the number of meals even to one meal a day in times of critical food shortages. As one key informant female head explained in her own words:

> *"I usually pass the day with a piece of 'Yebuna kurs'(a piece of bread served with coffee ceremony in the morning) Sometimes I don't even remember whether I have eaten with in a day or not as I usually leave the house early in the morning and return back home late in the evening to get some income to my family. "*

4.3.4 Change and Continuity in the Type of Meal

The type of meal that is consumed in any rural household largely depends on the economic status and cultural preferences of the people. The change and continuity in the type of meals that people consume at home therefore, to some extent, tell the food security status of households. What people consume under normal situation may differ from times of livelihood economic crises.

An in-depth interview with peasant key- informants in the study area indicated that *kita* (traditional bread) made from maize served with cabbage, is what many households consume at normal seasons. Besides, in few well to do families, *injera* made from *teff* with different kinds of *wot*(kind of sauce) is served. During seasons of food shortages poor households usually shift to cheaper and easily prepared food items such as *nifro* and *Kolo* made mainly from maize mixed with other cereals.

In relation to the above information, households were also asked whether there were changes in the last few months of the post harvest season from the ordinary type of meal

that they serve at home. Accordingly, it was found out that the majority of both female and male-headed households which account to 79.7 percent and 69.3 percent respectively have revealed shifts to less preferred and cheap food items as a result of food shortages in post harvest season.

The above figure for female- headed households in this case could be a reflection of a large number of female-headed households who are vulnerable to seasonal food shortages as compared to their counter parts. The other explanation could be the saving culture in most female headed households as it is practiced as a coping mechanism during food shortage seasons.

4.4 Major Causes of Food Insecurity

A number of factors can explain the trend towards the increasing food insecurity situation in Ethiopia. The interaction between environment, high population growth, diminishing land holdings and lack of on-farm technological innovations have led to a significant decline in the productivity per households. These trends have combined with the repeated effects of drought over years, to substantially erode the productive assets of communities and households. A loss of community assets such as pasture and forests has led to increasing environmental degradation and increased pressure on farm, leading to declining investment in soil and water conservation practices. More importantly, households are less able to cope with seasonal shortfall because they cannot accumulate savings (eg. Livestock holdings and food stores) even in good days. In addition to these, limited off- farm income opportunities among rural households and limited access to food through purchase has made their vulnerability even worse. In the subsequent sections some of the major causes of peasants' seasonal food shortages in the study sites are presented in three major categories; crop production related constraints, livestock production related constraints and non-farm income constraints. The discussion is made with particular emphasis to female and male-headed households in the two *kebeles*.

4.4.1 Crop Production Related Constraints

Access to land

Land holding in rural context plays an important determinant factor of the type and size of crops produced and the availability of pasture land that in turn determines number of livestock reared (Degefa, 2002). Therefore, the size of farmland has vital role in households' food security.

The existing pattern of land distribution in Meskan woreda in general and the study sites in particular is largely a result of land distribution during the Derg regime. Accordingly, the majority of the study population, including female-headed households, had some form of arable land except few landless households. Among the landless are those who didn't inherit land, or migrants from other areas. The survey finding in this case indicated 98.3 percent of female-headed households had farm land compared to 92 percent of male-headed households. The large number of female-headed households who had possessed land in this case could probably be attributed to the effects of the land redistribution in the current regime that has granted land right to rural female heads of households.

However, there are various research findings in different parts of Ethiopia that showed how rural women are disfavored in terms of possession of important assets such as land due to unfair and traditional marriage and divorce patterns. Similarly in the study area, women are also trapped by various cultural and traditional practices in relation to marriage. As it has been stated in the previous sections, polygamy (having more than one wife) is widely practiced in the study area and it is also witnessed from the survey findings that dispute on resource utilization and management, is among the main cause of divorce in the study area. The experience of one woman in the study area is presented as follows:

> *She is a 48 years old, mother of 4 daughters. She was married to a man at her young age. When she got older and older, her husband left home and started living with a young mistress. Then, he gave his mistress portion of land that belongs to his first wife and him.*

She reported to the kebele saying that her husband inappropriately abused her right over her share of land. Then fearing the consequences, he started to show up at home after seven years. However his relation with his mistress was still continuing. During this time, he restricted her in-laws not to plough over the land claiming he is the owner of the land. During the land measurement in 2005, he made his mistress register for ownership of portion of land that legally belongs to his first wife and him. However, his first wife was made to share the rest of the land with him (which is a small portion of land). She once again, reported the case to be seen by law. But he started to threaten her that he would kill her if she ever try to go to the law. Then he restricted her not to share 'eshet'(the produce) from their farm that year. This time, when she try to go to the law, he severely attacked her and she run away to her family. She still has the case in court but still doesn't get any solution.

Land Size

World Bank study report of 1998 as cited in Yigremew (2001) revealed that while 80 percent female-headed households had less than 2 hectares of land and 50 percent had between 2 and 4 hectares, 57 percent of men had less than 2 hectares and 31 percent between and 2 and 4 hectares.

Similarly in the study area, female-headed households who own less than 1 hectare of land account to 93.1 percent while 86 percent of the sample male-headed households have less than 1 hectare of land. Male-headed households who had land more than one hectare were estimated 14 percent while only 6.9 percent of female-headed households had land greater than 1 hectare. (refer to table 12)

Table 12 Land Holding Size of Households

Type of Household			Size of Land Holding			Total
			Less than 1 hectare	1-2 hectare	3-4 hectare	
	FHH	No.	54	4	-	58
		%	93.1	6.9	-	100
	MHH	No.	74	11	1	86
		%	86	12.8	1.2	100
	Total	No.	128	15	1	144
		%	88.9	10.4	0.7	100

Source: Field survey, 2008

The average land size in the two *kebeles,* according to the information obtained from the Woreda Agriculture and Rural Development Office is 0.5 hectare. However, agricultural land size in the study area may vary depending on the economic status of households. Fore instance, those economically strong households who are able to access land in different ways such as through rent are able to own up to eight *timad* or 2 hectares of land. On the other hand, poor households own only half *timad* of land while medium level farmers own between 2 to 3 *timad* of land.

During the key informant interview with the Woreda Agriculture and Rural Development Office Food Security Desk Experts and the focus group discussions, it was also noted that land in the study sites is becoming more and more fragmented and scarce due to growing population size and population densities as fertility rate of women in productive age group is very high. Hence, there is increasing trend of land division among household members as new grown- ups in a family demand share of their family's land which makes individuals' possession of land very small. As a result, farm land size is decreasing from year to year.

In some male-headed households peasants increase their holding through rent and share cropping. However, there were almost no incidence of land rent among the female-

headed households because they don't have other necessary resources such as labor and oxen to expand and cultivate more land. Therefore, in most cases, they rent out or share crop their land with some one who has better resources. In this regard, the survey indicated that 96 percent of sampled female-headed households sharecrop their land while only 6 percent of male-headed households have to do this.

Small land holding in the study area has discouraged many farm households to use crop rotation and fallowing and different agricultural inputs to improve the soil fertility. Therefore, ploughing hill sides and continuous use of land with limited soil conservation practices resulted in degradation of soil in many areas. Hence, declining land size and poor land quality have worsened the condition of declining crop production and land productivity in the study area which indirectly affects the availability of food crops in many households.

Small land holdings also impact the food security of households as farm households face shortage of land to grow more types of crops to ensure the availability of grain at different periods of a year. Besides, coupled with poor soil fertility and limited use of agricultural inputs, the production obtained from such small size farmland would be very limited which affects the potential of many farm households to fulfill their own food requirements.

Soil Fertility

As noted by Degefa (2005), not only the size of land holdings but also the quality of land affects the type and amount of crop that a peasant harvests. This in turn affects household's level of food security.

From the researcher's observation of the study sites, the survey results and key informant interviews, it is possible to tell that both study *kebeles* have rugged topography with poor soil fertility. It was noted from the interviews with the *kebeles'* Development Agents that the fertility of the soil has continued to decline due to poor soil management practices

coupled with huge pressure created on land due to increasing population density in the study area. It was also observed that most households due to shortage of land plough on hillsides which further aggravate soil erosion at times of heavy rain. On top of that, adverse climatic conditions such as erratic rain and flood in the area have worsened the condition for the past few years. For these reasons, many peasants are discouraged to apply agricultural inputs such as fertilizers as the soil may easily be washed away due to heavy rain during the rainy period.

The other predicament to loss of soil fertility is the absence of adequate water supply to cultivate the soil during long dry periods as both of the study sites seriously suffer from lack of adequate water sources. Besides, lack of irrigation and poor rain water harnessing in the two study sites are important issues that need urgent intervention.

The survey finding on the use of fertilizers by households in the study area illustrates that relatively smaller proportion of female-headed households compared to male-headed households use agricultural inputs such as fertilizers. Besides use of natural fertilizers such as compost are rarely practiced as its preparation needs some skill and labor. Therefore, their land even could not grow vegetables such as cabbage and potato to supplement the food needs of their family during critical food shortage seasons.

Access to Labor

Ethiopian agricultural activity is labor intensive. Even though, the grand labor availability is not as such a serious problem, some households' livelihood situation is threatened by lack of labor, especially male labor.

Similarly, the household survey on the size of family showed that 55.9 percent of the total sample female-headed households had family size that ranges between 4 and 6 followed by family size of 1 to 3 which is 23.7 percent. However, taking male-headed households, 39.7 percent of them have family size that ranges between 7 and 9 followed

by 34.4 percent that have family size of 4 to 6. Thus, the data made clear that female – headed households compared to their male counterparts has relatively smaller family size. The study also showed that 81 percent of female-headed households have faced critical shortage of labor during their last production season while relatively lower number of male-headed households which accounted to 60.7 percent said had problem of man power during their last harvest season.(refer to table 13)

Table 13 Labor Availability of Households

Have faced shortage of labor in the last production season			Yes	No	Total
	FHH	No.	47	11	58
		%	81	19	100
	MHH	No.	54	35	89
		%	60.7	39.3	100
Total		No.	101	46	147
		%	68.7	31.3	100

Source: Field survey, 2008

Yigremew in his study of Land Redistribution and Female-headed households in North West Ethiopia has noted that the deficiency of male labor in many female-headed households is caused by the social norms that prohibit women from ploughing especially in the grain producing areas where plough cultivation is highly practiced. As a result, a larger number of women depend on male labor both for access to resources and for production activities (Yigremew, 2001).

Similar to many parts of Ethiopia where ploughing is culturally mens' task, the study area also experiences the same tradition. Therefore, this, coupled with shortage of male-man power to carry out the traditionally assigned mens' task such as plouging has constrained female-headed households from undertaking important agricultural activities such as ploughing. Consequently many female-headed households who have no male labor at home give their land to sharecropping.

As the survey result depicts women-headed households have relatively fewer access to plough oxen in spite of its importance in the intensive-plough cultivation of the area. Nearly 55 percent of the total respondents had no oxen at all and 78.3 percent comprises female-headed households while 38.9 percent goes for male-headed households. Besides, only 20 percent of female-headed households have one ox as against 45.6 percent of their male counterparts.

This situation confirms the argument by Yigremew (2001: 8), which states "as women do not plough land and as keeping oxen requires additional labor and resources (such as fodder), women would more likely have no oxen or at best own fewer oxen than male-headed households."

In general, lack of oxen in many female-headed households coupled with shortage of male labor power limits the production potential of many female-headed households and leads them to sharecropping their land even with minimum benefits.

Agricultural Input Use

Subsistence farmers aim at producing sufficient food crops that enable them to satisfy their family's consumption requirements. This implies any farm input that augments agricultural productivity would be expected to boost the overall production, which in turn contributes towards attaining household food security.

Nearly 37 percent of respondents in the study areas did not use agricultural inputs out of which 45 percent were female-headed households against 31.5 percent of male-headed households. The most important agricultural inputs used were fertilizers, high yielding inputs, herbicides and pesticides. From the focus group discussion with peasant household heads, it was revealed that the number of people who are applying fertilizers in the study sites is decreasing from time to time. Again, those who are unable to use these inputs especially fertilizer are mostly poor female-headed households. (refer to table 15)

Some female heads of households during the FGD also noted that they face various constraints while they give their land to a share cropper. One is the declining productivity of their land as their land may not be properly cultivated by the share cropper. They have also mentioned that unless the sharecropper is loyal, he may inappropriately reduce their share from the total produce. Besides, an in- depth interview with one of the *kebeles'* chairperson also revealed that as there are no strong legal contractual agreements between sharecroppers, female heads of households sometimes face illegal claims from the person who ploughs their land.

In general, the social norm that prohibits rural women from ploughing and shortage of male power in female-headed households in the study sites has forced them to rely on male labor. Consequently, most rural female heads of households share crop their land which decreases their share of production from their own holding and which in turn made them to be less food sufficient compared to male-headed households.

Availability of Plough Oxen

In areas of Ethiopia where plough agriculture is dominant, a pair of oxen is essential for effective farming. However, various studies in different parts of Ethiopia show women household heads have lesser possession of oxen.(refer to table 14)

Table 14 Oxen possession of households

Type of Household	Number of Oxen Owned									
	None		1 ox		2 oxen		More than 2 oxen		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
FHH	47	78.3	12	20	1	1.7	-	-	60	100
MHH	35	38.9	41	45.6	12	13.3	2	2.2	90	100
Total	82	54.7	53	35.3	13	8.7	2	1.3	150	100

Source: Field survey, 2008

Table 15 Agricultural Input uses of Households

Type of Household	Use of Agricultural Input Use					
	Yes		No		Total	
	No.	%	No.	%	No.	%
FHH	33	55	27	45	60	100
MHH	61	68.5	28	31.5	89	100
Total	94	63.1	55	36.9	149	100

Source: Field survey, 2008

The primary reason for households for not using these inputs as the survey and Focus group discursion results explain are lack of financial capital due to high price of inputs. Associated with lack of access to these crucial agricultural inputs is the absence of rural credit giving financial institutions in those *kebeles* and fear of debt by many farm households to take loan from individuals. In addition to this, small land holding and uncertainty of rainfall (especially of moisture with out which effective utilization of inputs is hindered) in the study *kebeles* has discouraged households not to use these agricultural inputs. Further more, those female-headed households who sharecrop their land are not able to use fertilizer on their land as they could not share the cost of fertilizers with the person whom they shared their land with. For these reasons the productivity of land is decreasing from time to time as the soil depletes its fertility and nutrients. Key informants of female-headed households also noted that they are unable to use animal manure instead of fertilizers as there is critical shortage of feed for domestic animals and preparing compost requires skill and labor.

Environmental Constraints

Climatic variations towards both extremes especially during the most important seasons of agricultural activities cause peasants to loose confidence in crop production. Lack of or extremely low rainfall which is termed (drought) by peasants, and excessive rainfall have been source of risk to peasants' crop production.

Climate triggered factors that affect household food availability in the study *woreda* are erratic rainfall distribution and shortage of rain. As many parts of the country, these climatic shocks are one of the causes of food insecurity. As the key informant interview with the Woreda Food Security Desk Experts illicit, the major aggravating factors of food insecurity in the study *kebeles* are recurrent drought and erratic nature of rainfall which leads to heavy soil erosion during rainy seasons. These were also major phenomena which led to asset depletion of many rural households in the study area.

The effect of these environmental adversities on the livelihood of poor peasants especially those of female-headed households who have limited asset possession are quite unbearable compared to the well off rural households. This is because missing one season's harvest or having a considerably low harvest due to such kind of climatic shocks can leave these households with nothing to fall back on.

5.4.2 Livestock Production Constraints

Despite the contributions of livestock in farming, supplementing food needs and adding to the income of households through sale in the study area, the number of livestock possession has remained very limited. In this regard, economic factors such as lack of financial capital and other external elements including shortage of grazing land, water and animal diseases have remained major constraining factors for livestock production in the study sites.

Lack of Financial Capital

One of the reasons for limited number of livestock possession such as plough oxen among the surveyed households is lack of purchasing capacity of households. As the interview with the Woreda Agriculture and Rural Development Office, Livestock Department expert revealed, livestock possession has largely declined due to de-stocking by many poor households and lack of cash to purchase on the market. Among these poor

households are many female-headed households in the study area as it has been elaborated in the previous section.

The other constraining factors which are common to all of the households in the study area are lack of grazing land and adequate pasture, shortage of water, and animal disease and poor veterinary services.

From personal observation at both study sites, the public pasture lands have lost potential for grazing and are heavily degraded due to uncontrolled grazing. Moreover, shortage of animal feed in the study sites is triggered by the increasing trend of conversion of grazing lands by crop lands, which in turn reduced the productive capacity of many pasture lands. Therefore, some well off male-headed households are forced to purchase animal feeds while opportunities for those who couldn't afford to buy were very limited. Some households mainly depend on crop residues to feed their livestock and some try to cope shortage of animal feed by storing food for bad times.

The other major problem of livestock rearing in the study area is shortage of water as both *kebeles* are water deficit. The small rivers in the study sites are only able to provide water during rainy seasons while it is dry for many months in a year.

In general, the aforementioned predicaments render unfavorable condition for the possession of livestock in the study area. This condition is even more challenging for poor female-headed households, thus register poor performance with respect to keeping domestic animals. Therefore, owing to the above factors their ability to cope with seasonal food shortages by selling animals is highly constrained.

4.4.3 Non-Farm Income Constraints

Livestock diversification is the process by which rural families construct an array of diverse activities and social support capabilities in their struggle for survival and in order to improve their standard of living (Ellis 1998 as cited in Devereux and Maxwell, 2000).

Degefa (2005), on the other side also explained getting access to work in any non-agricultural activity does not guarantee the attainment of food security in many rural households . The same author also explains whether or not the non-agricultural activities lead to food security in rural settings depends, among other things, on the type of activity, the amount of income to be obtained and the sustainability of the activity.

Households who engage in non-farm activities in the study area as identified from the participants of the focus-group discussions are those households who are unable to meet their food requirements and other needs through sell of their own production. Therefore, the income obtained through such ventures help to augment their family' needs.

Even though there was no accurate data obtained from surveyed household regarding the income they earned from various ventures, some of the non-farm activities pursued by the study population are mainly petty trading involving sell of firewood, sell of traditional drinks such as *araki* and *tela*, sell of *kita* and *kolo* and sell of consumer products such as salt and soap. Besides, wage labor through safety net program is also considered as non-farm activity perused by households in the study area.

As depicted in table 8, in the study area sell of consumable goods, such as salt and soap, is the most common income generating activity in both female and male-headed households. Nearly 78 percent of both female and male-headed households engage in selling of consumer goods such as salt and soap. Around 33 percent of female-headed households engage in daily labor to supplement their income while 42 percent of male-headed households take part in daily labor activity to obtain income to fulfill their family's food and other needs. In addition to these, female-headed households involve in sell of fire wood (16.7 perceent), sell of *araki* and *tella* (8.5 percent) as well as sell of *kita* and *kolo* (8.5percent) as the most important means of income to purchase food during seasonal food shortages.

It can be argued here that in the study area there is limited option of non-farm income generating activities and non-farm employment options as most households are only

involved in small ranges of petty trading activities. Despite the crucial importance of non-farm income generating activities for the study population, these activities are constrained by many factors. Lack of start-up capital and supporting rural infrastructure were among the most stressed challenges for the study population.

Lack of Start-up Capital

Some non-farm activities such as petty trading require a sizable amount of cash to start the business. However, due to shortage of financial capital in most poor households, in the study area, many households are unable to diversify their livelihood by engaging in various non-farm income generating activities.

For female-headed households who are unable to meet their family food needs from their small farm land, non-farm activities such as petty trading may offer an alternative opportunity to augment their income to purchase food. However, as the FGD with the female heads of households showed such kind of income generating opportunities are constrained by their limited financial capability.

Rural credit could be an important source of cash for households, however, according to the FGD and interview with the Woreda Extension Team Leaders, there is no formal financial credit giving institution functioning in both *kebeles* since the past four years. Government financial credit giving institutions such as Omo Micro finance Credit Institution has failed to function in the two study sites as most peasants were unable to pay back their credit on time. The other credit and micro finance institution which was giving service to the near by town, Netsanet Micro Finance Institution, requires high amount of down payment by the loan taker, thus, poor households are unable to benefit from such kind of services due to lack of required assets. Only few relatively better- off male-headed households are able to involve in such credit giving institutions as they fulfill the necessary collateral (land/ oxen and other assets) to take loan.

Lack of Supporting Rural Infrastructure

Lack of basic rural infrastructures such as suitable road, grinding mills and potable water has rendered a huge impact on the livelihood activities of rural households. The fact that women are overburdened with multiple household chores such as food processing, collecting fire wood and fetching water, coupled with their responsibilities to bring additional income to their home, highly requires them to travel long distances with in a day. However, the presence of poor infrastructures in the study sites has multiplied the hardship of many rural women particularly of female-headed households who face serious labor shortage. As women participants during the FGD explained the absence of basic infrastructures in the study sites has a huge impact on their households' food security situation as they are unable to save time to engage in various farm and non-farm activities that add to the improvement of their families' livelihood.

Limited Knowledge and Lack of Skills

As discussed in the previous sections, the majority of household heads particularly of female-heads of households are illiterate and heavily depend on agriculture as the main source of their livelihood. As it has been made clear from the FGDs with both female and male head of households, household heads mostly do not have a clear understanding of the viability of various non-farm activities and do not have the necessary skills on how to pursue those activities. Therefore, sensitizing and providing peasants with various non-farm income generating ventures is vital to improve their livelihood.

4.5 Coping Strategies of Households

In times of food shortages households pursue different strategies. However, the types of strategies used at the initial and later stages of food shortages are different. Respondents were asked to list strategies they pursue at the initial and later stages of food insecurity. Accordingly, they identified coping mechanisms such as limiting size and frequency of food, borrowing and gifts from relatives and friends, mutual support mechanisms, selling

of livestock, selling of firewood, off-farm income, cash for work and relief assistance as the main coping strategies. On the other hand, in the later stages of food shortage, households mainly adopt strategies such as asset sales and farm land rental. However, other strategies which are pursued at the early stages of food shortages such as off-farm income, sale of firewood, loans and gifts are also simultaneously used as coping mechanism. Out migration is considered as a last option in times of critical food shortages.

4.5.1 Mutual Support Arrangements

Mutual support provides greater flexibility to poor households facing food shortages through reciprocal obligation and inter household transfer (Webb, 1994). Mutual support systems are frequently exercised among food insecure groups, such as landless and subsistence farmers who are food deficit, low income farmers (cash\food crop), and drought prone dwellers. These are often households, which are headed by females (Dagnew 1994, FAO, 1998).

The main mutual support arrangements used in the study areas are borrowing and accepting gifts, *idir* and *debo* (social work). Nearly 66 percent of female-headed households are engaged in such kind of activities to cope with fluctuations in household food and income. On the other hand, nearly 55 percent of male-headed households are engaged in these mutual support arrangements. (refer to table 16)

Table 16 Mutual Support Arrangements used by Households (multiple responses)

Mutual support arrangements	FHH		MHH		Total	
	No.	%	No.	%	No.	%
Borrowing & Accepting gifts	31	53.4	23	26.1	54	37
Idir	7	12.1	5	5.7	12	8.2
Dobo	27	46.5	26	29.5	53	36.3
Total	65	-	54	-	-	-

Source: Own survey, 2008

The survey depicted female-headed households that account to 53.4 percent against 26.1 percent of male-headed households use borrowing either in a form of cash or grain from neighbors and relatives while 46..5 percent of them involve in types of social work arrangements such as *debo to* withstand times of food shortage in their household. However, the contribution of *iqub* (rotating credit among groups) to raise fund in cash and in kind is absent in the study sites. According to the key informants, due to lack of cash\income, they are unable to establish *iqub* and it is uncommon to find households who are involved in cash saving in formal institutions such as *iqub* in the study area.

In general, as the survey result on table 16 Showed, mutual support arrangements are largely pursued by female-headed households in the study area as these activities require less asset possession and simply depend on social networking.

4.5.2 Changes in Consumption Pattern

Food rationing and new consumption arrangements are widely practiced among households during the peak food insecure seasons. Female-headed households which account to 88.1 percent responded children are given priority in food rationing among household members during times of food shortages. Moreover, reducing the amount and frequency of food per day as well as eating cheaper foods are what many female-headed households identified as seasonal coping strategy during shortfalls. Even though maize is the major staple food in the study sites households usually consume bread made with maize together with other vegetables such as cabbage and tomatoes in good days. Few well to do households also eat the traditional *injera* made of *tef* with varieties of *wot* (made from beef, lentil and cheek peas). However these types of consumption patterns change at times of food shortages in the study sites. From the FGD result it was revealed that households usually purchase and store grains such as maize, sorghum and wheat during *bega* season when prices for these grains is generally low. Hence, at times of food shortages it is common to eat *nifro* and *kolo* which are prepared by mixing these grain varieties.

Table 17 Types of Changes in Consumption pattern used by Households (multiple reponses)

Types of food consumption arrangements	FHH		MHH		Total	
	No.	%	No.	%	No.	%
Eating cheaper foods	47	79.7	61	69.3	108	73.5
Reduce amount of frequency of food intake per day	50	84.7	42	47.7	92	62.6
Giving better food to children	52	88.1	32	36.3	84	57.1
Seeking support from relatives	9	15.3	6	6.8	15	10.2
Total	158	-	141	-	-	-

Source: Own survey, 2008

One female-head key informant also explained that she usually sells high value grain such as *teff* from her products and in turn buys cheaper grain varieties such as maize to with stand seasons of food shortages in her household.

On the other hand, even though to a lesser degree compared to female-heeaded households, households headed by male also practice eating cheaper food, reducing the amount and frequency of food per day. However, it is less likely in male-headed households that children are given better food compared to adults.

In general, coping household food shortage through changing consumption patterns is widely practiced in the study sites. The comparison between male and female-headed households showed more female-headed households tend to shift to changing their consumption pattern both in terms of frequency and kind of meals as these are considered easier alternatives to withstand shortage of food.

4.5.3 Diversification of Non-Farm Activities

Despite their limited role in the total economy, non-agricultural economic activities are important income sources that enable households to cope with limited and variable food and cash resources at their disposal. These activities are more important for poorer households who are more likely to use them to buy food. Their access to this type of income however is constrained by shortage of labor, skill and other inputs.

In the study area, peasants favor farming over non-agricultural income-earning, as the only sure and respectable basis of livelihood. Petty trading is perceived as unprofitable, and wage-labor, as well as the collection and sale of wood and charcoal as a sign of inadequacy as a farmer. Peasants see this as survival mechanisms for households lacking adequate agricultural resources like land and oxen.

Resource-rich households earn a greater amount of income from activities which require inputs, such as grain processing and liquor-making. Poor households which have a greater need for such income are constrained by the extreme cash and grain shortage they face in the late pre-harvest months.

Many farm households of the study *kebeles* engage in these non-farm activities in order to meet critical cash and grain deficiencies. These activities are important source of cash for the purchase of necessary items from market such as salt, pepper, coffee, and clothes.

Moreover, these activities are highly performed by poor-households through out the year as they use the additional income they get from these activities to purchase food, pay tax, *idir* fees and the like.

As depicted in table 8, there is also gender difference in that greater percentage of female-headed households compared to male-headed households engages in many of the activities such as sell of consumable goods (77.6.3 percent), sell of *kita* and *kollo (*8.5 percent) and sell of firewood (16.7 percent). However, greater percentage of male-headed

households that account to 42 percent as compared to 32.8 percent of female-headed households are engaged in daily labor activities to diversify their income. These households mainly depend on grain purchased from market as home production is insufficient to cover the food needs of their family for more than 8 months of the year.

4.5.4 Risk Minimizing Activities

Households also cope with food shortages by risk minimizing practices. These practices mainly include asset creation for disposal at critical periods. (refer table 18)

Table 18 Risk minimizing Activities used by Households (multiple responses)

Risk minimizing Activities	FHH		MHH		Total	
	No.	%	No.	%	No.	%
Keeping cows	27	46.6	56	63.6	83	18.6
Keeping oxen	13	22.4	55	62.5	68	15.2
Keeping sheep and goats	27	46.6	64	72.7	91	20.4
Keeping pack animals	21	36.2	41	46.6	62	13.9
Keeping poultry	15	25.9	53	60.2	68	15.2
Storing grain for bad times	26	48.8	49	55.7	75	16.8
Total	129	-	318	-	-	-

Source: Field survey, 2008

As depicted in the table, in all types of risk minimizing activities, there is a significant difference in the proportion of users between female and male-headed households. Attributing to their less possession of assets, the proportion of female-headed households who keep smaller, larger and pack animals to minimize risks later during food shortage seasons is lower than that of their counterparts. In relation to this, The proportion of female-headed households who rely on keeping high value assets such as oxen is even much lower compared to smaller and pack animal possessions.

Although animal sales can be an important source of additional grain supplies, they are not always a reliable mechanism for coping with seasonal food shortages. Animal sales either yield low return or are not possible when food supplies start to run out. Households

face feed shortages for their cattle during the last part of the dry season. This is the period when the pervious years hey and straw are running out, and the grazing area is insufficient to provide adequate nutritional requirements for livestock. The physical condition of animals decline to its lowest level, which has a very depressing effect on their selling price. Therefore, poor households, in most cases sell animals during the pre-harvest seasons when the animals are not in good condition.

Asset disposal, especially, sell of larger animals such as oxen is rarely practiced in female-headed households when they are unable to cope the food shortage taking other alternatives. In this regard, 19 percent and 41.4 percent of female and male-headed households respectively sold larger animals to cope critical food shortages.

Interview with the Woreda Food Security Desk Team Leader has also revealed that there is limited possession of farm animals such as oxen in the *kebeles* as people de-stock their animals following dry seasons. Therefore, such households who have lost all of their domestic animals are being supported through safety net program.

The other important point here is a very limited practice of intercropping major crops with various types of cereals and vegetables to ensure the availability of food at different periods of the year in the study population. As interviews with peasant households revealed most farmers are unable to grow different varieties of crops simultaneously on their farm land due to the poor potential of the soil and variable moisture situation in the most areas. Therefore, most households only grow one type of crop following the rainy seasons which in turn increases their vulnerability to food shortages in case of crop failure.

4.5.5 Formal Asset Transfer

Many food insecure households in the study area are being supported through food aid by International Aid Organizations working in the *woreda* and the government Productive Safety net Program. In relation to this, out of the surveyed households, 32.2 and 42

percent of female and male-headed households, respectively, are getting support through the Productive Safety net Program. However, it seems like large number of female-headed households are not benefiting from such programs. (refer to table 19)

Table 19 Formal Asset Transfer by Households (multiple responses)

Type of formal asset transfer	FHH		MHH		Total	
	No.	%	No.	%	No.	%
Food aid	3	5.1	9	10.2	12	17.6
Food for work payment	19	32.2	37	42	56	82.4
Total	22	37.3	46	52.3	68	100

Source: Field survey, 2008

Based on the discussion made with the respective *kebele* chair persons, due to a large number of poor households in the study sites, it was difficult to equally distribute the benefits of the safety net program to all poor rural households. Therefore, only the 'poorest of the poor' are made to benefit at this level due to quotas provided from the Woreda Agriculture and Rural Development Office.

In general, dependence on formal transfers either through direct food aid or cash for work program have become one of the major coping strategy of poor female and male-headed households in the study sites.

CHAPTER FIVE
CONCLUSION & SUGGESTIONS

5.1 Conclusion

It can be asserted that, ensuring food security has remained the greatest challenge in the history of Ethiopia. Despite the complexity in the interrelationship of factors that attribute to the predominance of the issue for ages, the problem of food insecurity that the country faces can be simply conceptualized through understanding of the prevailing situations of smaller land holdings, rapid population growth, poor soil fertility, recurrent droughts and limited off-farm employment opportunities for the rural population that limit diversification and migration option, leaving people trapped in increasingly unviable agriculture.

The findings of the study on the surveyed households revealed that female-headed households are more food insecure and less self- sufficient compared to male- headed households. Access to resources is crucial in improving agricultural productivity of both men and women farmers hence contributes to household food security. However, it has been proven in the study area that while both smallholder male and female-headed households lack sufficient access to agricultural resources, female-headed households generally have much lesser access and control over resources. It has been also revealed that female-headed households are concentrated among the poorer strata of society and often have lower incomes than male-headed households.

Female-headed households compared to male- headed households lack important productive assets such as land, labor, plough oxen, and capital which play a critical role in the food security of households.

The study proven that female-headed households similar to male-headed households are made to have access to land. However, it has been also showed that even though the law has confirmed women's basic right to land there are customary practices and local traditions that work against women's land rights.

Moreover, owing to the plough- based agriculture which is customarily practiced by male labor in many parts of Ethiopia, lack of male labor in female- headed households as compared to male-headed households to perform agricultural activities such as ploughing are the major causes to their lagging behind in terms of total agricultural production and food availability for household consumption.

Women also face shortage or lack of plough oxen which is as crucial as the access and control over land and labor in many rural settings in Ethiopia. Consequently, their access to rural credit is largely hampered as possession of oxen usually serves as a main form of collateral. Lack of access to rural credit in turn has limited the potential of many female-headed households to engage in various non-agricultural ventures to diversify their income and cope with seasons of food shortages.

Use of agricultural inputs that are used to improve productivity such as improved seeds and fertilizer is very limited in female- headed households as the utilization of such inputs requires the availability of financial capital. Therefore, given the poor productivity potential of the soil and poor agricultural management practices in the study area, the production obtained from such degraded lands could not sustain the food requirements in many female-headed households.

With respect to coping strategies, even though, female headed households use various coping mechanisms such as involving in petty trading and mutual support mechanisms, they could not meet their family's food requirements as the sustainability of these ventures is constrained by various factors such as limited capital and labor, poor supporting rural infrastructure and uncertain market condition. Besides, the coping strategies that have long been used in the study area are being exhausted due to the persistence of drought, seasonal food shortages and thus poor households with limited asset possession are increasingly becoming dependent on external sources of assistance.

Finally, an important point to underline here is that ensuring availability of small piece of agricultural land necessarily cannot guarantee food security in female-headed households as these households are highly constrained by shortage of critical factors of production

such as labor. As it was clearly demonstrated in this study, given the shortage of male-labor in many female-headed households, the plough-based cultivation in many rural parts of Ethiopia, and the traditional and cultural norms that prohibit women to undertake important agricultural activities such as ploughing, female-headed households are unable to benefit from their plots as they often give their land away to sharecroppers. To sum up, the limited access and control over productive assets such as land, labor, oxen and credit in many female-headed households as compared to male- headed households in general have a far reaching implication on their potential to improve their productivity as well as to diversify their income through engaging in various non-farm income generating ventures and thus has increased their vulnerability and fragility at times of critical food shortages.

5.2 Suggestions

Addressing the issues of rural women, particularly those of female-headed households within the context of this study requires intensive integrated planning and intervention at all levels. These may involve the participation of the Government, NGOs, donor organizations and the local community.

Based on the findings of this thesis and the conclusion that is drawn, the researcher has forwarded the following suggestions that might contribute to narrow the gender gap that has been shown in the study.

The stereotypic thinking of the society about the roles of men and women in the study sites has rendered a huge pressure on poor rural women restricting them not to decide over crucial issues affecting their lives such as issues of divorce and resource management utilization. Thus, the writer of this thesis recommends actions such as gender sensitization activities and empowerment of rural women to reduce the existing gender biased traditional attitudes and customary practices in the study area to enable rural women in general and those of female heads of households in particular to have a better say in the community. These could be realized through expanding gender

education or promoting the establishment of independent women organizations that work at kebele level.

The other critical constraining factor that hindered the productive capacity of female-headed households in the study area is lack of working power especially male power to perform important agricultural activities such as poughing. Thus, other alternatives should be explored to lessen their dependence on this factor of production. One alternative could be assisting women to perform ploughing by themselves by creating access to easily applicable, labor saving farm technology to replace the high labor demanding oxen-ploughing system.

Female-headed households in the study area are also highly constrained by lack of financial capital to possess the most important factors of production. Hence, credit facilities would play a multiple role in this case. Getting access to such credit institutions in most cases requires some asset base as a form of collateral which most poor female-headed households lack. Therefore, enabling environment should be created to involve poor female-headed households in financial credit institutions to enhance their asset base so as to sustain better livelihood for their families.

Lack of essential rural infrastructures such as road, potable water and energy source have a serious impact on the livelihood of rural households. The impact on poor female-headed households is even multi-fold as most female-headed households suffer from shortage of man power. Thus, improving the existing rural infrastructures and ensuring sustainable supply of energy in the study area would contribute in improving the livelihood of households as such facilities help rural households save time for other productive tasks.

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APPENDEX A

HOUSEHOLD SURVRY QUESTIONNAIRE

Part I Questions Related to Demographic Aspects

1.1 Name:_____

1.2 Sex: 1.Male_____ 2. Female_____

1.3 Age: 1. 15-25 2. 26-36 3. 37-47 4. 48-58 5. 59-69

1.4 Religion

1. Orthodox 2. Protestant 3. Muslim 4. other (specify) _____

1.5 Marital Status: 1. Single 3. Divorced 5. Abandoned
2. Married 4. Widower/d 6. Other specify_____

1.6 Educational status:

1. Illiterate 3. Primary level (1-8) 5. Senior Secondary School (11-12)
2. Writing and Reading 4. Junior secondary school (9-10) 6. Above Senior Secondary School

1.7. How many members do your household have?

1. 1-3 2. 4-6 3. 7-9 4. 10-12 5.>12 6. no children

Part 2 Questions Related with Causes for Female Headship (allowing only Female Heads).

2.1 How did you become head of household?

1. Divorce 2. Death of husband 3. Unmarried 4. Other (specify)_____

2.2 If your answer is "1" in Q2. 1, what factor led you to divorce?

1. Bigamy
2. Conflict over household resources utilization and management.
3. Frequent dispute between couples for various reasons
4. Health problem of a wife or husband
5. Other Specify_____

Part 3: Questions related to Household Heads Access to Productive Resources.

3.1 Do you have farm land? 1. Yes 2. No

3.2. If "No" to Q3.1, what is your major livelihood (allowing multiple responses)?

1. Share cropping 3. Sale of Fuel woods and grasses 5.Others_____
2. Sale of local drinks 4.Handicraft products

3.3 If your answer is "yes" for question 3.2 what is the size of your farm land?_____(in Hectar)

1. <1 hectare 2. 1-2 hectare 3. 3-4 hectare 4. >5 hectare

3.4. How do you rate your farm land in terms of soil fertility?

1. Fertile 2. Moderate 3. In-fertile

3.5. Do you use high yielding input to improve soil fertility so as to enhance your farm production? 1. Yes 2. No

3.6. If "yes" to Q3. 5, would you tell the type of inputs you used last year (allowing multiple responses)?

1. Herbicides 2. Fertilizers 3. Improved seeds 4. Pesticide
5. Irrigation 6.Other (specify)_____

3.7. If "No" for Q3.5, what are the reasons for not using agricultural inputs (allowing multiple responses)?

1. High price inputs 3. Lack of finance/credit 5. Small size of land
2. Lack of awareness 4. Lack of labor 6.Other(specify)_____

3.8. Do you have farm animals? 1. Yes 2. No

3.9 If your answer is "yes" for question 3.8 fill the following table.

Category	**Types of Livestock**	**Number of livestock owned**
cattle	Oxen	
	Cows	
	Calves	
Pack animals	Donkeys	
	Mules	
	Horses	
Small Ruminants	Sheep	
	Goats	
	Chicken	

3.10 How do you see the trend of livestock ownership in your household for the last 3 years?

1. Increasing 2. Decreasing 3. No change

3.11. Do you have shortage of oxen? 1. Yes 2. No

3.12. If "yes" to Q3.11 what measures are used to overcome the problem? (allowing multiple responses)

1. Oxen exchange 3. Oxen-hiring
2. Use relative friends oxen 4. Other (specify)_____

3.13 For what purpose do you use domestic animals?

1. for sale only 3. For sale and for food
2. For food only 4. For farming purpose 5.Others(specify)_____

3.14 What kind of problems do you face while raising livestock? (allowing multiple responses)?

1. Shortage of grazing 3. Animal Disease
2. Lack of water 5. Others (specify)_____

3.15 If your answer is lack of grazing for q 3.14, how do you cope up with shortage of Fodder/grass?

1. Selling animals 3. Slaughtering them for food
2. Purchasing animal feed 4. Storing feed for dry seasons
5. Converting farm land in to grazing land 6. Other (specify)

3.16. Do you have access to formal credit institution? 1. Yes 2.No

3.17. If "yes" to Q 3.16, would you tell the name of the institution? (Allowing multiple responses)

1. Woreda Agricultural Institutions 3. Rural Credit Institution
2. Commercial Bank 4. Others (specify) _____

3.18. Do you have access to informal credit institution? 1. Yes 2.No

3.19. If your answer is "yes" to Q 3.18, would you tell the type of institution (allowing multiple responses)?

1. Idir 3. Equb
2. Local association 4. Other (specify)

3.20. Have you faced shortage of labor during the last agricultural season?

1. Yes 2. No

3.21. If "yes" to Q 3.20, what strategies did you use to overcome the labor shortage (allowing multiple responses)?

1. Hire labor 3. Relative/ friend labor
2. Labor exchange 4. Other (specify)_____

Part 4: Questions related with the Role of Households in attaining Food Security.

4.1 Do you participate in domestic activity? 1. Yes 2.No

4.2. If your answer is "yes" to qn.4.1, would you tell the type of domestic activities that you engage in (allowing multiple responses)?

1. Wood collection 3. Food preparation
2. Fetching water 4. Production of local drinks 5. Other (specify)_____

4.3. Do you participate in agricultural activities? 1. Yes 2. No

4.4. If your answer is "yes" to Q 4.3, fill out the following table.

Type of activity	Yes/No ✓ / x
Preparing farm land for sowing	
Ploughing	
Sowing	
weeding	
Harvesting grain	
Separating the stack	
Transporting grain	
Gardening	
Feeding livestock	
Milking	
Cleaning barn	
Other(specify)	

Part 5. Questions Related with Food Sources of Households

5.1 How many types of crops are you growing in your farm land?

1. One 3. Three 5. More than four types

2. Two 4. Four

5.2 In relation to food sources of households fill out the following table?

Type of crop	Use of crop		
	For food only	For sale only	For food and sale
Barley			
Teff			
Maize			
Wheat			
Haricot bean			
Sorghum			
Pepper			
Chat			
Coffee			
Onion			
Sugar cane			
Fruits and Vegetables			
Others(specify)			

5.3 For what purpose do you use the income obtained from sale of crops?

1. To pay tax 2. To buy improved seeds and fertilizers

3. To buy food 4. To pay for Idir and other fees 5. Others (specify)_____

5.4 How much did you produce in the year 1999EC?	<one quintal	1-3 quintal	4-6 qt quintal	7-9 quintal	10-12 quintal	13-15 quintal	15-17 quintal	18-20 quintal	>20 quintal

5.5 What does the 1999 E.C crop production look like compared to three years ago?

1. Increasing 2. Decreasing 3. No change

5.6 What are the major problems that you face during crop cultivation (allowing multiple responses)?

1. Poor soil fertility
2. Crop disease and pest
3. Shortage of farm land
4. Heavy rain
5. Others (specify)_____

Part 6: Questions related with sources and amount of cash income earned by sample households

6.1 Fill the following table regarding the source and amount of cash earned in your household.

Types of Activities	**Yes /No** ✓ /X	**Amount (in Birr)**
Selling of grain		
Selling of livestock and their products		
Selling of fruits, roots and vegetables		
Working in individuals' farm land		
Selling of fuel woods		
Selling of grasses		
Mat, basket and spinning		
Bamboo work		
Weaving		
Tannery		
Black smithing		
Selling Areki, Tela		
Selling Kolo and Kita		
Selling of consumer goods (salt, soap etc)		
Food aid		
Food- for-work		

6.2 Have you faced problems to engage in non-agricultural activities?

1. Yes
2. No

6.3 If your answer is "yes" to question 6.1, what are the major constraints to non-agricultural employment activities (allowing multiple responses).

1. Lack of market
2. High price of raw materials
3. Lack of capital
4. Highly competitive market
5. Lack of suitable conditions
6. Limited opportunities
7. Low pay
8. Other (specify)_____

Part 7: Questions Related with Food Security Status of households in the Study area.

7.1 Was your production enough for your household to satisfy your family's food need through out the year?

1. Yes
2. No

7.2. If your answer is "No" for Q7.1, for how many months did your household face shortage of food in the last three years?

1. 1-2 months
2. 3-5 months
3. 5-8 months
4. More than eight months

7. 3 How many times does your family eat during a day for the last six months?

1. One time
2. Two times
3. Three times
4. More than three times

7.4 How do you evaluate your household food security status?

1. Food secure
2. Seasonally food insecure
3. Chronically food insecure
4. None

7.5 What are the major causes for food insecurity in your household (allowing multiple responses)?

1. Low and variable rainfall
2. Large family size
3. Absence of credit service
4. Low production
5. Other(specify) _____

Part 8. Questions related with Household's Coping Strategies

8.1 How do you cope early food shortage seasons in your household? (allowing multiple responses)

1. Limiting size and frequency of food,
2. Borrowing and gifts from relatives and friends
3. Cash for work and
4. Relief assistance
5. Selling of livestock
6. Selling of firewood
7. Other (specify)_____

8.2 How do you cope with the late stages of food shortages in your household?

1. Limiting size and frequency of food,
2. Borrowing and gifts from relatives and friends
3. Cash for work and
4. Relief assistance
5. Selling of livestock
6. Selling of firewood
7. Asset disposal
8. Migration
9. Other (specify)_____

Appendix B

Interview Guides for Focus Group Discussions

The following questions were used as a guide to the Focus group discussions held with female and male heads of households.

1. Questions related to Productive Resources of Households
    - How do you describe your household possession of farm land, labor, and draft oxen?
    - Do you sharecrop your land?
    - What problems did you face while you sharecrop your land?
    - Do you think small farm size is a constraint to your agricultural production?
    - Do you face shortage of labor in your households to undertake agricultural activities?
    - Do you face shortage of labor in your households to undertake agricultural activities?
    - What measures do you take to alleviate the problem of labor and ox shortage?
    - Are you involved in formal micro finance and credit institutions in your kebele?
    - What are the forms of credit giving institutions in your locality? Are you involved in informal credit giving institutions in your kebele?
    - What kind, of problems do you generally face to involve in formal and informal credit giving institutions in your kebele?
    - Do you farm inputs such as fertilizers and improved seeds on your farm land? Are there constraints to apply farm inputs?
2 Questions Related to Activities which are important to food Security
    - Identify the main women and men productive or domestic activities in your area?
    - In which productive activities do both male- and female- headed households equally participate (rank at least 3 or 4 activities)
3. Questions related to own-farm Production and Non-Farm Activities.

- Is there any change in the size of farm land in your area for the past three years? If "Yes" is it increasing or decreasing? And Why?
- How do you see the fertility of soil in your area? If there is loss of soil fertility in your area what are the reasons?
- What mechanisms you do you use to improve soil fertility?
- How do you see the amount of agricultural production since the last three years?
- What are the major problems most households face in increasing crop production?
- How do you see the trend of livestock possession at household level?
- Are there any constraints in raising livestock? Discuss.
- What are the major non- farm activities households perform?
- Are there problems in getting access to non-agricultural employment? If there are, would you specify them?

4. Questions related with the food self-sufficiency and food security status of households
    - How do you describe food self-sufficiency in the local context?
    - What are the main causes of food self-insufficiency at household level?
    - What factors contribute for food insecurity at household level?
5. Questions Related with Coping Strategies pursued by households?
    - What coping strategies do you use at the early stages of food shortage?
    - What coping strategies do use at the last/severe/ stages of food shortage?
    - Are there any peculiar consumption arrangements that are pursued to cope with food shortage seasons at household level? Discuss.

Appendix C

Interview Guides for Key informants

The following questions were used to guide the interview held with key informants such as the Woreda Agriculture Office Food security Desk team Leader, respective kebele Development Agents and Woreda Agriculture Office Extension Team Leaders.

1. What are the main types of crops produced in the two kebeles?
2. What are the main crop producing seasons/plough seasons in the study Kebeles?
3. How do you evaluate agricultural production (crop and livestock production) compared to the last three years.
4. What is the average land size in the kebeles?
5. How do you explain food security situation in the woreda?
7. What causes seasonal food shortage in the kebeles?
8. Are there any special programs designed for female headed household to assist them to be better producers and improve the food security status of their family.
9. What is being done to rehabilitate environmentally degraded areas in the two kebeles?
10. How much is the coverage of basic infrastructures such as clean water supply, road, health centers, schools etc in the study kebeles? How does it affect rural households in their struggle to attain food security of their households?
11. What is being done to rehabilitate environmentally degraded areas in the two kebeles?.
12. What aggravates food insecurity situation in female headed households?
13. Are there any formal credit giving institutions which are currently giving service to the study kebles? If there are, what are the names of these institutions?
14. Are rural households in the study area benefiting from any of the formal credit giving institutions? How many are currently benefiting?

Declaration

I, the undersigned, declare that the thesis is my original work, has not been presented for a degree in any other university and that all sources of material used for the thesis have been duly acknowledged.

Declared by:

Mesay Kebede

Candidate

Confirmed by:

Yigremew Adal

Advisor