PROSPECTS AND CHALLENGES FACING WOMEN FARMERS IN ENSURINGING FOOD SECURITY IN SELECTED COMMUNITIES IN THE WA MUNICiPALITY OF THE UPPER WEST REGION

A THEISIS SUBMITTED TO THE DEPARTMENT OF PLANNING AND MANAGEMENT, UNIVERSITY FOR DEVELOPMENT STUDIES IN PARTIAL FULFILMENT FOR THE AWARD OF A MASTER OF PHILOSOPHY DEGREE (MPhil) IN DEVELOPMENT MANAGEMENT

BY

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DECLARATION

I, Nuhu Ahmed Tijani, author of this study, declare that, this thesis entitled:

PROSPECTS AND CHALLENGES FACING WOMEN IN ENSURING FOOD SECURITY IN SELECTED COMMUNITIES IN THE WA MUNICIPALITY OF THE UPPER WEST REGION,

Was done solely by me as part of my master of philosophy (M.Phil) in Development Management Degree program with the University for Development Studies, Wa- Campus.

I hereby declare that except for references to other people's work which have been duly acknowledged, this work is a result of my own research and that it has neither in part nor in whole been presented elsewhere for another degree.

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DEDICATION

This document is dedicated to my late mother, my wife and children for their encouragement and support. May the Almighty Allah replenish all their effort.

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ACRONYMS

ADB----------	Agricultural Development Bank
AU ----------	African Union
AAFS ----------	All African Fertilizer Summit
CEPA ----------	Centre for Economic Policy Analysis
CAADP ---------	Comprehensive African Agricultural Development Programme
CDS ----------	Centre for Skills Development
F.A.O ----------	Food and Agriculture Organization
GDHS ----------	Ghana Demographic and Health Survey
GDP ----------	Gross Domestic Product
GFDC ----------	Ghana Food Distribution Corporation
GHS ----------	Ghana Health Service
GLSS ----------	Ghana Living Standards Survey
GNP ----------	Gross National Product
GSS ----------	Ghana Statistical Service
GATT ----------	General Agreement on Trade and Tariff
IFAD ----------	International Fund for Agriculture Development
IFDC ----------	International Fertilizer Development Centre
IFPRI ----------	International Food Policy Research Institute
ISSER ----------	Institute of Statistical Social and Economic
IRRI ----------	International Rice Institute
MOFA ----------	Ministry of Food and Agriculture

MDG's ----------	Millennium Development Goals
NEPAD ----------	New Partnership for African Development
NCWD ----------	National Council on Women and Development
NGO ----------	Non-Governmental Organization
SAP ----------	Structural Adjustment Program
SPSS ----------	Statistical Package for Social Sciences
UDHR ----------	Universal Declaration on Human Rights
UN ----------	United Nations.
UNDP ----------	United Nations Development Programme
USAID ----------	United State Agency for International Development
WFP ----------	World Food Programme
WHO ----------	World Health Organization

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ABSTRACT

Food is a basic human right. The United Nations Universal Declaration on Human Right (1948) and the International Covenant on Economic, Social and Cultural Rights (1966) stress the right of every one to adequate food and specified that the fundamental right of every one is to be free from hunger. Achieving food security is thus viewed as a step toward the more general objectives of poverty alleviation and sustainable, broad-base economic growth. This research is an examination of the prospects and challenges of women in ensuring food security in the Wa Municipality of the Upper West Region. The study adopted Yins (2006) multi-case study approach. Data collection techniques such as focus group discussions, group discussions and questionnaire administration applied and data analyzed based on the use of the Statistical Package for Social Sciences (SPSS). The study results revealed that about 95% of women farmers from the study communities produce to feed their families and 5% of them produce to sell. Women also go the extra mile of keeping various kinds of animals alongside their farming activities in a bit to ensure food availability all year round. In spite of all these laudable contributions by women and the tentative interventions made, they still face a lot of constraints, which stand as a bulwark to their progress. That notwithstanding, the study revealed that women farmers have ensured food security in the study communities and for that matter Wa Municipality. In the light of the above, there is the need for a more thorough research into the socio-cultural and other factors which hinder the productive capabilities of women farmers. It is equally important for government to initiate a food security policy that is broader in scope and which will focus very much on the constraints faced by women farmers in the Municipality and beyond. Lastly, there is also the need for a collaborative effort of all institutions and development actors with well-intentioned interventions such as the Ministry Food and Agriculture (MOFA) and Non-Governmental Organizations (NGOs), to seek to enhance women farmers' production abilities.

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CHAPTER ONE
INTRODUCTION

1.1 Background

Food is a basic human right. The idea that the basic needs of all should be satisfied before the less essential needs of a few are met is in principle widely accepted (Spore, 2007). As a result, efforts by governments and the international community have been geared towards meeting the basic needs of the society. Of the components involved in meeting basic needs, food occupies a central place in many households and is critical for peace, survival and prosperity. There can be no development without the creation of sustainable and regenerative food systems for all people. The United Nations Universal Declaration on Human Right (1948) and the international covenant on Economic Social and Cultural Rights (1966) stress the right of every one to adequate food and specify that the fundamental right of everyone is to be free from hunger.

The concern for global food security became intensive after 1974, when the whole world experienced large scale food shortage and hence, attracted the attention of international community to ensure global food security. Improving household food security is therefore an issue of supreme importance to many millions of people worldwide who are suffering from persistent hunger and under nutrition and to others who are at risk of doing so in the future including coming generations. Achieving sufficient food supply is a necessary condition for food security and making it sustainable that is keeping pace with growing food needs remain a global challenge.

During the FAO World Food Summit (1996) and its subsequent Rome Declaration and the plan of Action, the role of women in food security was highlighted to give an impetus to governments to take the needs and constraints of women farmers into consideration. Globally, food security is one of the major

targets of the U. N Millennium Development Goal due to the frequent food insecurity that hit some parts of the world. Ghana adopted this Goals and aim at attaining a middle income status by 2015. Many women's organizations have argued that the attainment of the Millennium Development Goals depends largely on women's empowerment and gender equality. This was based on the Statement at the Asia-Pacific NGO Forum On Beijing + 10 on 3rd July, 2004 in Salaya, Nakompathom, Thainland (Bunch, 2005).

The right of women to economic resources cannot be underestimated. Women generally play a very vital role in most families worldwide. In sub-Saharan Africa, women are known to be making significant contributions in ensuring food security (Bunch, 2005). Women also contribute to the incomes of their families through the production of goods and services either at the primary or secondary sectors of the economy. Women's chances of entry and level of participation in the socio-economic system vary (Apusigah, 2004).

As a result of the above situation, halving hunger and extreme poverty by 2015 is the first priority of the Millennium Development Goals (MDGs). However, persistent hunger is still prevalent worldwide especially in Sub-Saharan Africa. This is ultimately slowing down the progress towards all other Millennium Development Goals (MDGs). The focus of international community was then on increasing domestic agricultural production and creating international grain reserves. This however, never yielded the required results as the concern for food security remained till date, with many people in the world continuing to suffer hunger, famine and malnutrition in various forms. Governments and other development partners throughout the world continue to battle with this precarious food situation.

According to Kees (2007) the environment continues to deteriorate, social and economic inequality is increasing and globalization is sweeping across the world, largely leaving Africa behind. Over seventy percent of the food insecure

population in Africa lives in the rural areas. Food availability is achieved when sufficient quantities of food are consistently available to all individuals within the country. Such food can be supplied through domestic output, commercial imports, existing stocks or food assistance. Food access is ensured when households and all individuals within them have adequate resources to obtain appropriate food for a nutritious diet.

According to the Food and Agriculture Organization (2009) women produce between sixty to seventy percent of the food in most developing countries and are responsible for half of the world's food production. The studies confirm that while women are the mainstay of small-scale agriculture farm labour force and day-to-day family subsistence they have more difficulties than men in gaining access to resources such as land and credit and productivity enhancing inputs and services.

In Sub-Saharan Africa, micro level studies have shown that women play a crucial role in many aspects of crop production. While men are often responsible for land clearing, burning and ploughing, women specialize in weeding, transplanting, post- harvest work and in some areas land preparation and both take part in seeding and harvesting (F AO 2009).

Moreover, women in Sub-Saharan Africa have played a very significant role in household animal-production enterprises where they tend not only to have the primary responsibility for the husbandry of small animals and ruminants but also take care of large-animal systems, herding, providing water and feed cleaning stalls and milking. In all types of animal-production systems, women have a predominant role (WHO, 2009). In many African countries women are also responsible for fishing in shallow waters and in coastal lagoons producing secondary crops, gathering food and fuel wood, processing, storing and preparing family food and for fetching water for the family. Available statistics revealed

that, in the World women produce more than fifty percent of the food grown (FAO, 2009).

Hunger dulls intellects and thwarts productivity keeping the entire societies from realizing their potentials. For poor families in developing countries hunger related illness adds to household costs and increases the burden of care for healthy family members often already struggling for subsistence. When this hardship is multiplied by millions of families worldwide, it creates a devastating ripple effect that imperils global development.

1.1.1 Food Security Situation in Ghana

In Ghana, women play prominent roles in the economic development of the nation. Women constitute over half of the total population and forty-seven percent of the labor force. Women account for about seventy percent of the total food production. Subsistence farming is predominant and shifting cultivation remains important in nearly all tasks associated with subsistence food production performed by women. Given women's crucial role in their contribution to food security, any efforts to reduce food insecurity world-wide must take into consideration factors and constraints affecting women's ability to carry out these roles. Improving productivity will depend to a great extent on ensuring that women farmers as well as men farmers have sufficient access to production inputs and support services. Studies have shown that when women farmers have access to resources they are actually more productive than men farmers (FAO, 2009).

Admittedly, improved and sustained adequate food security for all individuals and social groups is one of the greatest challenges in West Africa and on the continent at large. For instance, a former president of Ghana His Excellency Flt Lt J.J Rawlings, in 1998, in his opening address at the University of Ghana-Legon on eradication of hunger and malnutrition states the challenge directly that 'every man, woman and child has an inalienable right to be free from hunger and malnutrition in order to develop fully and maintain his/her physical and mental faculties and dignity'.

Despite ample food production and large surpluses in developed and in some developing countries, millions of people still struggle for their daily bread. For instance, the United Nations Food and Agricultural Organization estimated that, one out of every eight people in the world, suffers from chronic malnutrition (World Bank, 2008).

1.2 Research Problem

Food insecurity is increasingly becoming a serious problem in the world and for that matter Ghana. It is reported by Food and Agriculture Organization (2008); about 80million people globally do not have enough food to meet their basic nutritional requirement. The problems of hunger' and food insecurity are likely to persist and even increase dramatically in some regions in the world unless urgent action is taken to provide for the anticipated increase in the world's population and the stress on natural resources.

Women all over the world and particularly Ghana play a pivotal role in agriculture. This is true not only of food production, which has been recognized as men's activities such as cash cropping and of livestock production. The International Labor Organization (ILD), 1990, estimated that 78% of women in Africa are actively engaged in agriculture compared with only 64% of the men

During the World Food Summit organized by FAD in 1996, and it's subsequent the Rome Declaration and the plan of Action' the role of women farmers was taken into consideration. During the summit it came to light that women are usually responsible for processing and they make a major contribution to food storage, transportation and marketing. Although women seldom control revenue generated in some parts of society, Ghanaian rural women tend to work at longer hours than men (Millar, 2004). Women also provide an important income buffer to the household as they contribute to health and school expenses and procure most of the food for the family. They buy most of their own clothes, and respond to some social demands, such as funerals and outdooring (Millar, 2007).Agriculture is the dominant sector of the Ghanaian economy, representing 43% of Gross Domestic Product (GDP), 50% of export earnings and 70% of employment (Millar, 2007). The evidence available in Ghana: Ministry of Food and Agriculture *(MDFA,* 2008) points to the fact that the agricultural sector's

main contribution to GDP comes from growth in cocoa production and timber/forest products. Food crop production has either stagnated or increased minimally.

Apart from so much emphasis given to the production of exportable crops to the decline in food crop production, unfavorable climatic conditions, poor soils, and inadequate boost to food crop production, account for the decline in food crop production in Ghana. According to a World Bank Report (2004), the organic matter content of the soils in Ghana is low, particularly in the savannah. Much of the land has limited capacity to sustain plant life without periodic incorporation of additional organic or inorganic fertilizer. The report further indicates that, efforts to compensate for the decline in the soils natural fertility by adding fertilizers and modifying cropping systems have not so far been successful.

Despite agriculture's overwhelming importance to the economy of Ghana, there has been minimal systematic analysis of Ghana's agriculture problems. Inadequate information exists to guide governments, planners and policy makers. Statistics released in 2008, by the United States Department of Agriculture (USDA) indicated that sub-Saharan Africa is the only region in the world where per head food production has declined over the past two decades. Institutional weaknesses and inappropriate policies pursued by various political leaders with bias and neglect of food crop sector and women's role in crop production are factors blamed for this situation. In fact, in Northern Ghana especially the Upper West Region where 9 out of every 10 people is considered poor, food crop production does not meet the food needs of the people most of the years. Internal supplies are normally sought from other parts of the country (Ghana Statistical Service, 2008).

Notwithstanding the above, conflicts especially in northern Ghana are major contributory factors to food insecurity. The 1994 Dagomba-konkomba war, the recent Bawku conflicts have not only affected agriculture production and other

economic activities but have also destroyed properties including food. Civil conflict and weather vagaries have led to serious famine and hunger in West Africa, Pervasive malnutrition has not only prevented people from active participation in developmental activities but has also caused serious morbidity and mortality crises especially among women and children.

In the case of the Upper West Region of Ghana, this precarious situation of food shortage and the trauma it poses to human life is even more severe and particularly noticeable in the Wa Municipality where adequate food for all is nothing good to talk about. Most households in the municipality do not only rely on highly unbalanced and one sided carbohydrate diets, but also at times eat once a day, particularly from May to July, when grains are not only scarce, but also highly costly to acquire.

Though several attempts have been made country wide in assessing women's role in food production, there has not been any intensive research conducted on the topic particularly the role of women in ensuring food security in Wa and its environs. Despite their growing responses for agricultural production, their contributions to farming, forestry and fishing are usually underestimated. Considering the great potentials women in the Municipality have towards agriculture, this study therefore seeks to investigate the capabilities of women farmers as well as the constrains/ challenges they face towards ensuring a sustainable food security in the Wa Municipality of the Upper West Region. The research therefore, seeks to answer the ensuing questions:

What are the major roles which women play towards ensuring a sustainable food security for the Population in the Wa Municipality?

Do women in the study area carry out processing and preservation activities which also contribute to food security in the study area?

Are there other economic activities that women farmers engage in which help increase food availability in the study area?

What are the possible constraints and challenges faced by women farmers in their farming activities?

How can women farmers overcome some of the above challenges so as to be able to contribute more effectively to food security in the study area?

What policy recommendations can be made towards enhancing women's capabilities in agricultural activities in the Municipality?

1.3 **Research Objectives**

1.3.1 Major Objective

To examine the prospects and challenges facing women farmers in ensuring a sustainable food security in the Wa Municipality.

13.2 Sub- Objectives

a. To identify women's role in agriculture (food crop production, animal rearing and dry season gardening) in the Wa Municipality.
b. To determine the performance of women farmers in food processing and preservation which help augment the food basket in the study area.
c. To examine the contribution of women in other economic activities which help increase food availability in the Municipality?
d. To find out the challenges that confronts women farmers in the study area and the possible solutions to those challenges.

e. To suggest policy recommendations towards enhancing women's capabilities in agricultural activities.

1.4 Relevance of the study

The role of food in the daily lives of people or individuals cannot be overemphasized. Adequacy of food forms the core of the well-being of any nation. Recently there have been global food crises. It is reported that over 800 million people globally do not have enough food to meet their basic nutritional needs and women and children are the hardest hit (F AO, 2008).

This study therefore will be relevant to policy makers and planners on the need for effective participation of women in food production through the formulation of policies, programmes and projects design for stable and equitable growth. It is also to make significant contribution to strategies and policy decisions involving the efforts women put in ensuring food security. Lastly, the research will serve as a guide for further research into similar topics.

1.5 A Brief Profile of the Wa Municipality

1.5.1 Population Location, Ethnicity Size and Ethnicity

The Wa Municipality has a population of 98,576 (Ghana Statistical Service, 2000) with a population density of about eighty-four persons per kilometer which is higher than the regional average of twenty- four.

The Municipality is located in the North Western part of Ghana, stretching from Longitude twenty-eight degrees North to forty degrees North and Latitude 10

degrees west to 10 degrees West. It shares boundaries with Nadowli District to the North, Wa- East District to the East and Wa- West District to the South and West.

The entire Municipality covers an area of approximately 234.74km representing 1.3% of the region. Significantly, Wa serves both as the capital of the Municipality and the Upper West Region. The major ethnic groups in the Municipality are the Wala and Dagaabas even though other tribes such as the Chakali, Sissale and Lobis among others abound too.

1.5.2 Climate and Vegetation

The Municipality lies within the Savannah high planes with a rather short rainy season, which is from May- September each year. The erratic pattern of the rainfall impacts poorly on crop production. The vegetation is of the Savannah grassland type. The tree- species commonly found in the area include the Shear tree, Dawadawa, Kapok and Baobab. Mango and Cashew trees are also found in the Municipality in significant numbers.

Education

The Municipality is home to several higher institutions of learning. These include the Faculty for Integrated Development Studies (FIDS)-UDS, the Wa Polytechnic and several other Second- Cycle Institutions. Illiteracy rate is quite high in the Municipality as well as the entire region. The national Statistics have established that the percentage of illiterate women stood as 58.8%, whilst that of the UWR is as low as 29.8%. (Ghana Statistical Service, 2000).

1.5.3 Economic Activities

With the exception of Wa, the remaining settlements are predominantly rural, with about 80% of the people engaged in Subsistent farming. The main crops grown are maize, millet, sorghum, groundnut, cassava, cowpea and yam.

1.5.4 Commerce and Industries

Commercial activities like Shear butter extraction, local soap manufacturing, Pito brewing, weaving, dressmaking, blacksmithing, masonry, carpentry, vehicle repairs are largely located in and around Wa town.

1.5.5 Settlement and Household Size

Owing to the farming habits of the people, generally, the communities are loose groupings, with a minimum of about 100 to 200 people in a village except in a few cases. With the exception of Wa, in most of the communities, the people live in compound houses which are surrounded by permanent compound farms. With a family-head who heads each compound which ranges from 20 to50 people. The compound forms the nucleus of the family around which socio-economic activities evolve. It comprises smaller units based on the number of closely related adult married men (father, sons and brothers). Essentially, the head of the family controls the resources of the community.

Below is the map of Wa Municipal showing the four (4) communities where the research work has been conducted. The Municipal is made up of twenty-eight (28) farming communities, including Wa - the capital of the Upper West Region.

Busa happened to be the largest community among the four that have been purposively selected. It is about 14 kilometers away from the capital Wa, and is situated in the south-eastern comer of the District. It is predominantly a farming community with a population of about five hundred (500).

Kperisi is the second largest. It has a numerical strength of about three hundred (300), and is about six (6) kilometers away from the regional capital- Wa. It is located in the North-eastern part of the Municipality, with farming as their major occupation.

Siiru and Jinkpan communities are all situated in the southern part of Wa Municipal and are about five (5) and four (4) kilometers respectively from the regional capital Wa. They are typically farming communities with population close to one hundred and fifty (150) and one hundred (100) respectively.

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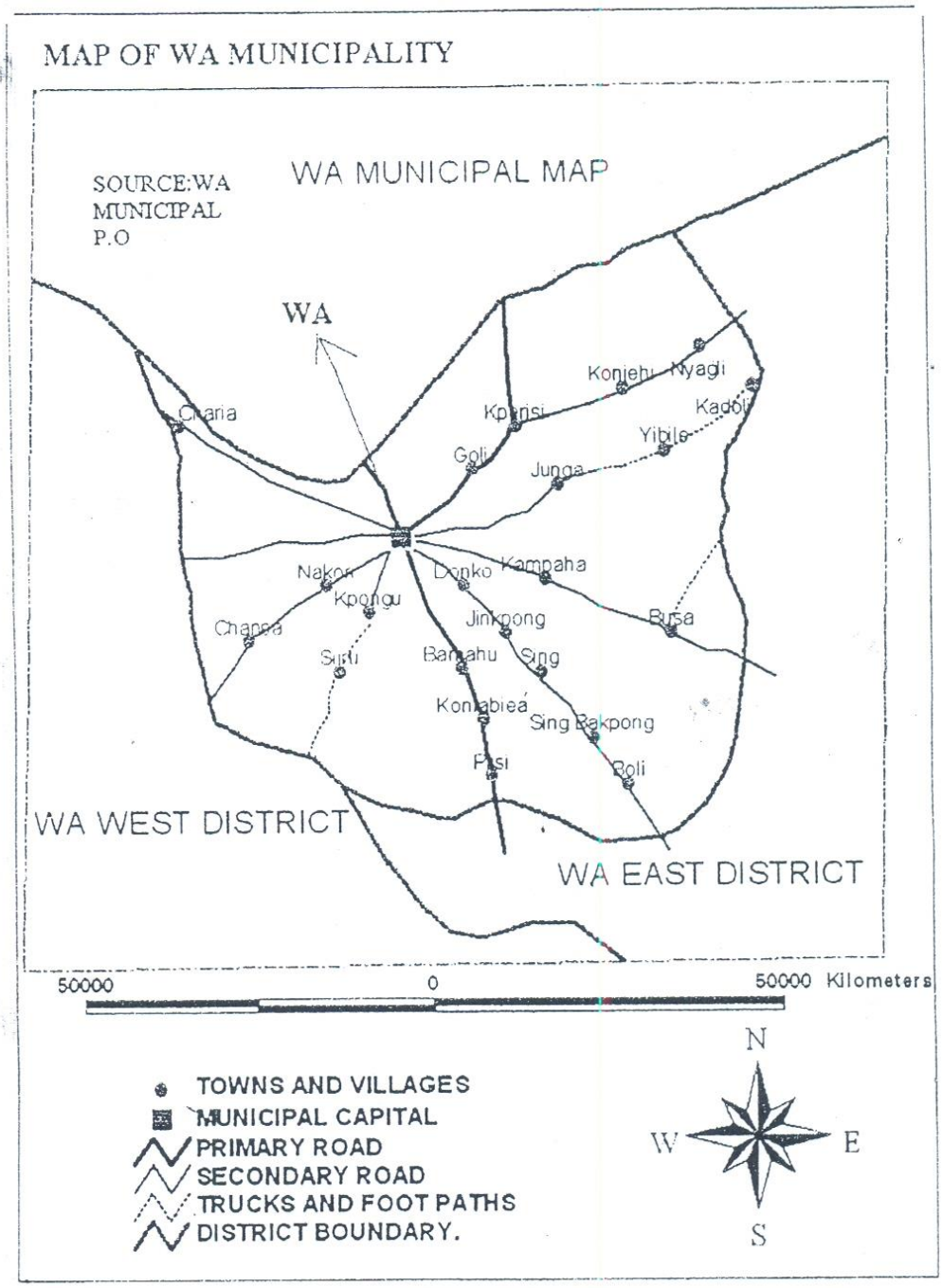


1.6 Organization of the Study

The research is organized in five (5) chapters for an orderly and clear presentation of issues.

Chapter one gives a general introduction to the study. In this chapter, the problem statement research questions and objectives as well as the relevance of the study and a brief research location as well as the profile of the study area are clearly stated.

In the second chapter, the study reviewed relevant secondary data and also defining issues in the perspective of the study. Theories, concepts and debates on food security issues were discussed in the context of the study.

Chapter three unfolds the research methodology employed in the investigation of the research issues in chapter one. In this chapter, the research design including the various research approaches, methods and techniques of data collection and analysis used is reported.

Chapter four contains details of the main findings and discussions of the research.

Chapter five (5) ends the thesis with summaries, conclusion and recommendations on the findings of the study for policy- making, research and development practices.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter reviews the works of others with regard to women's role in agriculture and other economic activities which is geared towards ensuring food security. The methodology and analytical tools used are critically reviewed and examined to demonstrate whether or not the attention given to women in agriculture is commensurate with their crucial role in ensuring world food security. This aspect of the study looks at literature on the subject in order to have an idea about the problems and issues under investigation; the researcher critically examined previous studies conducted into the problem or related issues. In pursuit of this aspect of the study both local and foreign literature has been reviewed with the aim of putting the study in its perspective. Lastly, the various concepts, theories and debates of food security and policies on food security have been thoroughly looked at.

2.2 The Extent of Global Food Security

Halving hunger and extreme poverty by 2015 is the first priority of the Millennium Development Goals (MOGs). While a national increase in production generates more food and income; it does not always deliver food for everyone. Food production and affordability is also important. Many regions of the world such as south Asia have progressed towards achieving food security since the Green Revolution.

Sub-Saharan Africa is the only developing region where food security has worsened in recent decades. Recently a Kenya report says drought has caused

untold hardship on the citizens as many farm lands have been devastated. Although it appears that this situation is changing, much effort is still required to see to it that the African continent does not continue to lag behind in agriculture production. Some African leaders and development partners are once again recognizing the importance of agricultural development towards achieving economic growth, poverty reduction and food security.

This is one reason African leaders gathered in Nigeria in June, 2006 for a summit titled, 'All African Fertilizer Summit'. At that very crucial gathering. African leaders, among other things, recognized that fertilizer has an important part to play towards solving the food crisis in the region. However, it appears the New Partnership for African Development (NEPAD) seems to have fallen short in this regard as there appears not to be any mechanism in place to monitor the implementation of the outcomes the afore-mentioned summit on food security (African Union Summit Report 2006).

The Comprehensive African Agricultural Developments Programme (CAADP), a policy document developed by NEP AD, was adopted in its entirety by the African leaders, as a framework for the restoration of agricultural growth, food security and rural development in Africa. CAADP sets a target of achieving at least six percent annual growth in agricultural production in order to attain the UN's MDG of halving poverty and hunger by 2015.

Currently in Africa, a review of the importance of the agricultural sector, in terms of its contribution to GDP, export earnings and employment, reveals the unchallenged prominence of the sector in the economies of most African countries. For the continent as a whole, the agric sector accounts for approximately 60% of the total employment, 20010 of total exports and 15% of GDP. Accelerating agriculture growth in African countries is therefore crucial not only for achieving food security and reducing hunger but also for generating employment and trade.

NEPAD's Comprehensive African Agriculture Development Programme (CAADP), which has been adopted by African Heads of states and Government, provides a common frame work for fostering broad based agriculture-led economic growth in African countries. Almost all African countries, with varying degrees of commitment and success, have identified food security as an important policy goal. The African Union (AU) is concerned by the fact, despite this commitment; too many Africans continue to be food insecure (i.e, without physical and economic access to sufficient and safe food to lead a healthy and productive life).

Given the importance and critical situation of food security to Africa, the 4th ordinary session of the AU Heads of state and Government in Abuja, Nigeria called on the AU Commission to prepare a 'status of Food Security Report' and present it to the Assembly every July. The report is not supposed to be all exhaustive report but should present a brief descriptive and analytical general overview of the state of food security in Africa. Though there have been some pockets of success in African agriculture such as NERICA Rice, high yielding CaAfricava varieties, etc; the goal of food security in Africa has remained elusive for many decades.

As is well known, the current food security or 'hunger situation' in Africa, is significantly worse on average than it is in other parts of the developing world, as these latest estimates from F AO indicates that twenty-seven percent of the African population is estimated to be 'under nourished' or hungry and this percentage has only declined by two percent (from29%) over the ten year period of 1990/1992-2000/2002.Since Africa's total population has increased from 589 million to 764 million over the same ten year period, the estimated absolute number of under nourished people has risen from 176 million to 210 million, a 20% increase. UNICEF estimates that 390le and 29010 of African children less than five-years were stunted and underweight respectively, over the 1995-2002 period.

However, Africa is not homogenous and one must not generalize across the large and diverse African continent with its diversity of physical environments and socio-economic conditions among sub-regions and among the 53 countries of the AU. The food situation varies enormously across the five sub-regions. The table below shows the performance of African sub-regions in Reducing Hunger (in million and percentages), 1990/92-2000/2002.

From the table, it is seen that the percentage of the population that is undernourished is estimated to be only 4% in the north, which have not changed substantially over the past 10 years. For the affected people this is a situation that is likely to be characterized by periodic hunger rather than life-threatening malnutrition. Experience from a number of developed countries indicates that this level of persistent food insecurity, although generally not life-threatening is hard to totally eradicate even when government food assistance of one kind or another is provided.

Table 1. The State Of food insecurity in the world

African Sub-Region	Number Of Persons Under-Nourished (Millions)		Percentage Population Under-Nourished		Percentage Change In 10 Years.
	1990/1992	200012002	1990/1992	2000/2002	1990/1992-2000/2002
North	5.4	6.1	4	4	0
Central	22.7	45.2	36	55	+19
East	76.4	86.2	46	40	-6
Southern	34.1	35.7	48	40	-8
West	37.2	36.4	21	16	-5
Africa	175.8	209.6	29	27	-2

SOURCE; Food and Agricultural Organization (2004).

Mackie and Carnes (1983) also observed that, twenty years ago, developing countries were self -sufficient in food but now they import eighty million tons of food grain each year- ten percent of total consumption and could reach 145 million tons by the end of the 1980. This was attributed to the desire for foreign exchange by developing countries and the influence of multinational companies on much of their investment policies which led to the neglect of domestic food production in favor of cash crop production. However, Mackie and Carnes (1983) observation was not extensive due to the fact that it did not cover all aspects of the causes of food insecurity in these countries.

Anyane (1988) observed the poor performance of agricultural industry in relation to rapidly growing population in the sub-region and established that food production in West Africa has gone through an unstable phase between 1960 and 1980. Anyane (1988) attributed this to weather instability, subsistence farming and liberation wars. The results revealed that total food production in West Africa decreased from 2.1% to 1.7% between 1961-1970 and 1970-1978. This intense recurrent food shortage especially in the sachet according to Anyane (1988) has resulted in acute suffering and deaths from starvation. This fact confirms the prevalence of food insecurity in the sub region, Ghana not an exception. Anyane objective was to critically examine the economic organization of agricultural industry before and after independence of the West Africa states to draw lessons and proposals to improve the agricultural industry from the subsistence to export agriculture. As a result he explored many areas of agriculture and observed many problems facing the industry. These include land usage, storage, marketing problems and institutional weakness.

Nativated Yabut- Bernardino (2000) in describing the state of agriculture in the Philippines noted that importation has stepped up since General Agreement on Trade and Tariff (GATT) and local production drastically declined. According to him in 1998, the key sector of agriculture suffered steep declines in real gross

value, notably rice and com, the country's stable food rice production dropped by 24% from 1996 to 1998 and com production by 20%.

Also, according to Todaro (2003) the picture for agriculture production in Africa is very dismal, and per capita food production steadily declined since the 1970s.It is clear that the average African suffered a fall in the level of food consumption over the past decades. Because food consumption constitutes by far the largest components in typical African's standard of living, the sharp decline in per capita food production and consumption means that the region as a whole was becoming even more under developed during the period 1970 to 1994.

About eight hundred million people in the developing world currently face food insecurity and the challenges of meeting their food and nutritional needs is likely to become greater in years ahead.

2.3 WOMEN AND AGRICULTURAL PRODUCTION

Sustainable production of food is the first pillar of food security. In every region of the developing world but perhaps mostly in Africa, millions of women work as farmers, farm workers, and natural resource managers. In doing so they contribute to natural agriculture output, maintenance of the environment and family food security. They make these contributions despite unequal access to land to inputs such as improved seeds and fertilizer and to information. A growing body of evidence indicates that if male- female access to inputs were less unequal, substantial grains in agriculture output would occur benefiting both women and men (FAO, 2009).

Women in the study communities have limited access to resources and their insufficient purchasing power are a product of a series of interrelated social, and cultural factors that force them into a subordinate role, to the detriment of their own development and that of society as a whole. The international initiatives and efforts developed especially since the 1975 world conference on women in

Mexico have contributed to a greater recognition of women's key participation in rural and other domains of development (FAO, 2009).

In Sub -Saharan Africa, for instance micro level studies have shown that women play a crucial role in many aspects of crop production. While men are often responsible for land clearing, burning and ploughing, women specialize in weeding, transplanting, post-harvest work and in some areas land preparation and both take part in seeding and harvesting. The United Nations estimates the share of women in food production for the family stands at 80% in Africa (Snyder, 1990). Nevertheless, men often obtain most food in times of food shortages, followed by the children, among whom boys take precedence over girls. Women take the very last place. The income of the women on family health is 4-5 times higher than that of the man's income, and in the survival chances of a child, the effect is almost 20 times as high, Snyder (1990). By directing their earnings to family needs, women become the key to ending hunger.

Moreover, women in Sub-Saharan Africa and the Middle East play a major role in household animal-production enterprises where they tend not only to have the primary responsibility for the husbandry of small animals and ruminants, but also take care of large- animal systems, herding, providing water and feed cleaning stalls and milking. In all types of animal-production systems women have a predominant role in processing.

In many countries in Africa, women are also responsible for fishing in shallow waters and in coastal lagoons, producing secondary crops gathering food and fuel wood, processing, storing and preparing family food and for fetching water for the family. Rural women play a major role in the food-security concerns of vulnerable groups. In addition to agricultural tasks in the fields and their special responsibility for household food security, women also have to take care of their homes and their children (fetching clean water, collecting firewood, preparing food, caring for the family's health, carrying out artisan tasks as making butter, cloths or pottery).

Although the figures vary from country to country and from region to region according to World Health Organization (WHO, 2009) women make considerable contribution to agriculture production. World-wide women produce more than 50% of the food grown. Besides being involved in weeding, transplanting and post-harvest activities in many countries women have the primary responsibilities for small animal, processing food, among others. In recent years this contribution has been gradually increasing. The growing dominance of women in agriculture production may also be due to male-out-migration from rural to towns and cities for more lucrative occupations leaving the women behind to take the sole responsibility for agriculture production. Research evidence suggests that women's contribution to on-farm; off-farm and non-farm activities are highly acknowledged by governments, donors and Non-governmental Organizations (NGOs) but not fully talked at policy-making levels.

In Ghana, women play prominent roles in the economic development of the nation. Women constitute over half of the total population and 47% of the labor force. Women account for about 70% of the total food production. They process and market nearly all grains and starchy staple food (Apedey, 2000). In Ghana where subsistence farming is predominant and shifting cultivation remains important nearly all task associated with subsistence food production are performed by women.

In Ghana, according to Dolphyne (2002) in a book entitled the Emancipation of women: an African perspective, observed that, farming is a major economic activity of women living in rural areas. Most of the women have small farms on which they grow staple crops and vegetables, primarily for feeding the family but they sell the extra produce to supplement the family income. To her, the women have full control of the money they earn. However, this is not necessarily the case in most rural communities in Northern Ghana.

The author stated that, there are women entrepreneurs who do commercial farming usually of maize and oil palm but these are very few.

The National Council on Women and Development (NCWD) identified access to land and access to credit as the major problems facing small-scale farmers. Dolphyne indicated that while women entrepreneurs can obtain lease on large coverage of land to do commercial farming and can also provide the necessary collateral to obtain loans from the banks to hire tractors and labour, the small-scale farmer had no collateral hence not in the position to expand her farm.

In Asia, the F AO plan of Action for women and development 2002 - 2007 upon conducting a survey revealed that in almost all rice cultivating areas, men do only land preparation, ploughing and leveling of the field. The rest of the work sowing, transplanting weeding and crop processing are usually done by women. In Latin America, the survey indicates that female participation in agriculture fieldwork range from twenty-five to forty-five percent in Colombia and Peru. The Plan of Action also observed that rural women in developing countries have knowledge in agricultural system for food production, seed selection and production of agro-biodiversity. They have knowledge about plants for food, fuel and health and in the preservation of plant species. The role of women in livestock production and in harvesting and processing livestock products for both home consumption and for sale as well as their role in fruit gathering and its relevance to balanced diet have also been acknowledged by the advancement of women and are translated into concrete achievement and resource capabilities of the Food and Agriculture Organization.

The FAO Plan of Action for women in development 2002 - 2007 observed that women street food activities represent an important contribution to food security in Togo. It plays the role of providing income for women for the family consumption and in supplying appropriate low cost food to poor segments of the society and this represents an important contribution to food security.

The fact that women play an active role in food security cannot be over emphasized as revealed on the literature reviewed. However, the literature still points out that women face a lot of constraints that hinder their contribution towards ensuring food security.

2.4 CONSTRAINTS / CHALLENGES FACED BY WOMEN FARMERS

Achieving food security in its totality continues to be a challenge not only for the developing nations, but also for the developed world. The difference lies in the magnitude of the problem in terms of its severity and proportion of the population affected.

Despite women's growing responsibility for agricultural production, their contribution to farming, forestry and fishing are usually still underestimated. Much of their work in producing food for the household and community consumption as important as it is for food security is not recognised. In spite of women's importance in agriculture production; they usually have lower levels of physical and human capital than men. These disparities persist because of legal, social and institutional factors that create barriers for women. Some of the challenges that confront women include the following;

2.4.1 Weak Land Rights

The laws governing women's rights to land differ widely in various parts of the world. Some religious laws forbid female land ownership. Even when civil law gives women the right to inherit land, local custom may rule otherwise. In Sub-Saharan Africa, where women have prime responsibility for food production, they

are generally limited user (or usufruct) rights to land, and then only with the consent of a male relative.

Women's land status is fundamentally determined by the socio-anthropological nature of women's condition through the regulation of power between women and in society (Wanyeki, 2003) It is often assumed that security of land tenure will enable the poor to improve their livelihoods as well as increase their food supplies, raise rural employment and foster more sustainable agricultural practices (Duncan, 2004). In an area ,such as Northern Ghana, where farming activities dominate as an economic activity, those who have secure access to land have social, economic and political power. When you have control over land it provides you with the courage to participate in group discussions-making processes (Duncan, 2004).

Land is usually assigned to the (male) household head (Sweetman, 1996). This situation is not strange in the Wa Municipality. It is based on the view that when it comes to sharing land, women are left out of the process that this study has been undertaken and hopes to unearth the existing relationship between land ownership and women. Women are allowed use rights on their fathers' or spouses' land. However, these rights are precarious in that they can be lost in cases of divorce or widowhood. It is observed that most women are bread winners of their families. While the men do little or nothing for the upkeep of the family. Women need land as much as men do especially for economic and social activities. To deny women control of land therefore limits them tremendously. This affects their social, economic and religious lives.

As stated by Burnt and Jennie (2003), in Wolof tradition a woman, whether married, divorced or widowed, cannot own land. She is entitled only to the right to use land. Thus all lands belong to husbands, who could redistribute some fields of land for their wives use. The scenario is not different from what pertains in the Wa Municipality.

2.4.2 Lack of Equipment and Appropriate Technology

Female farmers generally own fewer tools than men. Since farm capital contribute positively to yields female farmers are likely to have lower yields than male farmers. Moreover, new technology has often been inappropriate to women's needs. Inventions of machines that reduce the drudgery of tasks largely performed by women and that fit women's ergonomic requirements. For instance rice mills, direct seeding equipment, transplanters and thrashing machines are invented by International Rice Research Institute (IRRI).

2.4.3 Limited Contact with Agricultural Extension

Despite women's prominent role in agriculture, they do not get an appropriate share of agriculture extension advice and other services (such as seeds, fertilizer and credit delivered through the agric extension system). Evidence from a number of Sub-Saharan African countries however, suggest that male farmers have greater contact with extension services than do female farmers.

2.4.4 Lack of Access to Credit

Women face a number of barriers to obtaining credit property that is acceptable as collateral especially held by men and formal financial institutions often deem the types of valuables held by women (such as jewelers) unacceptable. The social and cultural barriers emanated from; women's lower educational levels, exclusion from local groups as well as the production of low-return crops.

2.4.7 Barriers to Market Access

Access to markets is the second hurdle that smallholders have to overcome. The problem is many-fold; poor infrastructure· and barriers in penetrating the market caused by their limited resource base, lack of information, lack of or inadequate support institutions and poor policies in place among other factors. Poor infrastructure literally limits the markets to which farmers can profitably take their produce by increasing the cost of transportation, and hence also acts as a barrier to market penetration.

2.4.8 Disease and Infection

Disease and infection continues to plague women in Africa and for that matter women in Ghana. Diseases such as malaria, tuberculosis and HIV / AIDS not only reduce the man-hours available to agriculture and household food acquisition, but also increase the burden of household in acquiring food. In Sub-Saharan Africa, AIDS is the leading cause of adult mortality and morbidity. The Food and Agriculture Organization of the United Nation (F AO), estimates that by 2020 the epidemic will claim the lives of 20 percent or more of the population working in agriculture in many African countries.

2.4.9 Marginalization of Women Farmers

The Ghanaian Times, Friday 9th April, 2010 edition reported an issue about women farmers being marginalized in Ghana. It was about a research conducted by City and Guides centre for skills Development (CDS).They came out with the findings that, over half of the world's agriculture producers are women, yet men still receive more and better training. The report highlighted the need for agricultural and enterprise training for women smallholders to ensure that poverty is reduced in developing countries. The research attested to the fact that giving

2.4.5 Lower Levels of Education

In the early 1980s average literacy rates for men in developing countries were over 50%, while over two-thirds of women still illiterates. This disparity continues to be larger in rural areas, where educational attainment is lower. The gap has serious implications for agriculture productivity and incomes. Better-educated farmers are more likely to adopt new technologies and to have access to extension services.

2.4.6 Women's Absence in Agriculture and Environmental Decision Making Bodies

Women are overlooked as decision makers both at the farm level and at the policy level. For too long, much agriculture research has issued the on-the- ground reality of farming system and farmer preferences, resulting in lost opportunities and miscalculated priorities.

The FAO Plan of Action for women in development indicated that, women do not have access to credit facilities and other services. This was attributed to many factors. That women are usually not involved in development projects, women have inadequate knowledge in institutional credit and that extension programs are oriented mainly to men agricultural co-operatives and farmers' organizations where many agricultural activities were for men farmers. However, women were observed to have limited access to such cooperatives and organisations. They are restricted by laws, land ownership status or gender bias. The National Council on Women and Development (NCWD) also identified access to land and access to credit as the major problems facing small scale farmers.

women fanners the same inputs and education as men, they could increase yields by twenty (20%); despite this women continue to receive only a small proportion of the appropriate training compared to men.

Carr (1991) observed that despite the significant contribution women make to Zambia's agricultural production, women fanners in the country have less access to basic resources and agricultural services than men due to their relative poverty, low educational levels, some cultural practices and attitude have also resulted in a number of institutional constraints on rural women. In 1984, only five percent (5%) of agricultural loans were granted to women and the amount lent was very low. Carr (1991) also observed that the focus of agriculture extension services has been primarily on commercial fanners and on well off fanners who can better afford modem agricultural inputs.

Further, women fanners do not have access to extension services. That apart, most agricultural research focus on improved methods of cash oriented crop production and very little has been done' on staple food crops that are mostly cultivated by women. An F AO global survey in 1989 showed that women receive only five percent (5%) of all agricultural extension services worldwide and this affected women's ability to maintain environmental quality and sustainable use of resources.

The objective of Carr (1991) was to examine in-depth, the factors that might influence the successful introduction and diffusion of improved food technology to women. In view of this women's technology in agricultural production, food storage and processing were examined. Carr (1991) found that most of the agricultural activities in Malawi are done with rudimentary tools. Women use predominately the traditional hoe and the tinged hoe in land cultivation and in most cases, seedlings are transplanted by using hands while in the harvesting time machetes and sickles are major tools used.

Carr (1991) also found that women use indigenous techniques and equipment in processing food including mortar, pestle, grinding stone, pots of various sizes and shapes, baskets and mate. Cereals, fish, flour and vegetable are usually dried by placing them on the ground in the open house compounds and on road side. This exposes the food to contamination. In storage, cereals such as maize, rice and sorghum as well as vegetables and fruits are stored in grannies, sacks, baskets, barns and clay pots. Carr (1991) observed that due to the use of these indigenous technologies; women generally spend many hours than men in farming operations and food processing. This could be attributed to the time they need for cooking, boiling and other kitchen works to ensure the welfare of the house hold.

To investigate the different occupational opportunities for rural and urban women, Ewusi (1987) studied three localities of varying sizes and at different levels of development in the Eastern Region, of Ghana. The results show that rural women face more constraints than urban women in terms of agriculture and trade. In Kwamoso, a village of 772 people, women farmers and traders complained that they face problems of lack of capital, extension services and marketing of farm produce. This has affected the productivity of women in agriculture and their ability to expand their trade.

2.4.10 Conclusion

The analysis of food security situation in the world, and the giant efforts which women have exerted towards ensuring food availability, accessibility and utilization all year round in this study suggest that not all is gloom and doom. Although there are formidable challenges ahead, progress need to be made in addressing those nagging problems so as to bring synergy into women food production in the study area if not the entire world.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Research methodology is an important component of any study and provides the framework on which the whole process is based (Brown, 1996). It is vital that the methodology is sound and conducted thoroughly to produce accurate and precise data in order to achieve the research goals and objectives. The choice of a suitable research methodology is guided by the theoretical underpinning of the study goal and objectives, nature of the research problem, the way data would be analyzed interpreted and presented as well as definition scope of the study. Thus in this research the choice of methodology is informed and shaped by the research goal thus; the prospects and challenges of women in ensuring food security. It has been motivated by the efforts of earlier writers and the resourcefulness of women farmers whose potentials in this area have not been tapped (Titilola, 1994; Rolings, 1990; Carlier, 1987).

3.2 Ethical Concerns

Ethical concerns do not only border on confidentiality and anonymity but also researchers location and bias (Apusigah, 2002). Appropriate consent and the protection of the information are research ethics. The study ensures that the purpose of the interaction was well explained to respondents. The study also assured the information that under no circumstance will the findings/ revelations be pinned to the source. It also sought permission or consent prior to the commencement of the interaction, and respondents were given the option to answer a question or not. As much as questions were asked, it ensured that personal preconceptions, prejudice, or desire did not color the observed facts or influence the interpretation of those facts.

3.3 Validity and Reliability

Here, the researcher will repeat a number of questions at different sessions under instrumentation as a means to determine the consistency of respondents with their responses. In ensuring that questions are unambiguous, the validity of the data had to be improved. According to Kumar (1996) the ability of an instrument to measure what it is designed to measure in a consistent, stable, predictable and accurate manner is important. Reliability is the consistency of a measurement or the degree to which an instrument measures the same way each time it is used under the same condition with the same subjects; the repeatability of a measurement. A measurement is considered reliable if a person's score on the same test remains the same at all times.

Validity lies on the strength of my conclusions, inferences or propositions. More formally, it is defined as the 'best available approximation to the truth or falsity of a given inference, proposition or conclusion. The real difference between reliability and validity is mostly a matter of definition. Reliability estimates the consistency of a measurement or more simply the degree to which an instrument measures the same way each time it is used under the same conditions with the same subjects. Validity, on the other hand, involves the degree to which you are measuring what you are supposed to measure or more simply, the accuracy of the measurement. The researcher depended on validity more than reliability since the former reflects accuracy and the latter consistency.

3.4 Methodological Frame Work

This section deals with theory that is relevant to the subject matter. The purpose of this is to provide a framework for the issues of concern to the study. In developing countries, tremendous efforts in terms of projects had been put in

place to deal with diversities among farmers and thus promote agriculture development even though with limited success (Millar, 1992).

3.5 The Research Strategy

The study combined both quantitative and qualitative approaches in data collection and analysis. Most methodological commentators (Twumasi 2001; Brown 1996; Brannen, 1992; Strauss and Corbin, 1990) seem to agree that, in so far, two distinct approaches (quantitative and qualitative) can be said to exist, but the most important difference is the way in which each tradition treats data. The central issue that faces social science research is the choice of the appropriate research approach or strategy and method to investigate the specific problem (Bacho, 2001).

Proponents of the quantitative approach contend that human behavior in the social sciences, just as physical phenomena in the natural sciences, is quantifiable in attributes and subject to generalization that have universal applicability (Bacho, 2001). According to Brown (1996), where the research issue is clearly defined and the questions require unambiguous answers, a quantitative approach may be appropriate.

On the other hand, where the research issue is less clear-cut and the questions to respondents are likely to result in complex, discursive replies, quantitative methods are appropriate. The question therefore is, whether there are ideal or pure situation of exclusively "qualitative" and "quantitative" data. One might use qualitative data to illustrate or clarify quantitatively derived findings; or, one could quantify demographic findings or, use some form, of quantitative data to partially validate one's qualitative analysis (Strauss and Corbin 1990).

Therefore in the light of the above arguments, perhaps, it is safer to argue for research situation that one could combine the two approaches without ignoring

completely the other. In view of the above a combined strategy was adopted to facilitate the use of mixed methods and the use of quantitative and qualitative techniques. The selection of this methodology is motivated by the efforts put in developing countries with little if there is success at all.

3.6 Research Design

For any investigation, the selection of an appropriate research design (form or structure that provides complete guidelines for data collection and analysis) is crucial in enabling one to arrive at valid findings. Hence, the research design that has been adopted for the study was the Descriptive and Quantitative survey Research Design (Yin, 1993; Brown, 1996).This survey Research Design looks at small population (samples) to discover the relative incidence, distribution, and interrelations of variables. It relied upon the questioning of a selective group (sample) of a population and analyzing data in order to answer or describe set characteristics (Saunders et. al; 1997). Two main sample techniques/means, (probability sampling and non-probability sampling) were adopted and applied for the study. Back ground information with respect to certain characteristics such as rurality as opposed to urban-ness was also employed. In this study, the entire population was not worked with but a sample which is a representation of the population.

The Wa Municipal consists of twenty-eight (28) communities including Wa (the capital of the Upper West Region). In each area council, simple random sampling was employed. The total number of communities was written on a piece of paper, wrapped and seven (7) children were made to pick the first four (4) communities at random that will constitute the sample communities. At the end of the day, these communities were Busa, Siiru, Jinpkan and Kperisi.

The researcher's choice of the sample size was influenced and informed by the following factors;

The size of the population of the entire municipality, which was considered a vast and with a dispersed kind of settlements and the fact that one would not have been able to bear the cost of the entire study area.

3.7 Sampling Procedure and Techniques

Sampling is the process of selecting a subset of population for the purpose of study (panneerselvam, 2007; Dooley, 2007).The rationale is to make generalization or to draw inferences based on the study of the samples about the parameters of population from which the samples are taken (Yin 2003). Sampling approaches include probability sampling in which all segments of the population have equal chances of selection normally gotten from a sampling frame (Panneerselvam, 2007, Osuala, 2005) and also non probability sampling in which subsets of population to be studied are selected on unequal chances basis like Snow balling (Dooley, 2007; Schwagert, 1998). In non-probability, sampling units are chosen not by chance but for a purpose (Maxwell, 2007).10 this study, a blend of both probability and non-probability sampling approaches was adopted as described in the ensuing.

3.7.1 Selection of Study Region and Communities

Purposive Sampling is defined by Maxwell (1997) a type of Sampling in which, "particular settings, persons, or events are deliberately selected for the important information they can provide that cannot be often as well from other choices". A purposeful Sampling technique was used in e selection of the study region. The Region is largely a rural region with a poverty prevalence rate of 88% and majority of its inhabitants are food croppers, who d pend largely on land for their livelihoods. (Ghana Statistical Service, 2000; Song ore and Denkabe, 1995). It is based on the above that the region was purposively chosen for the study.

3.7.2 The study District

The Wa Municipality was purposively chosen because it is largely a rural and agricultural region with about eighty percent (80%) poverty rate (song sore and Dankabe, 1995; GPRS I & II Upper West Regional Coordinating Council, 2006).The sample size for the study was one hundred and sixty (160) made up of eighty (80) women and eighty (80) men in the study communities. The largest among the four was Busa, which attracted Sixty (60) questionnaires. In the remaining communities, forty (40) went to Kperisi, thirty (30) for Siiru and another thirty (30) for Jinkpan. At the end of the exercise, only one-twenty (120) structured questionnaires and forty (40) semi-structured ones were successfully completed in all the four communities.

3.8 Data Collection Strategies and Instruments

Based on the epistemological and ethical considerations as well as chosen design, the researcher found it appropriate to approach the research from both quantitative and qualitative approach. Quantitative approach, with proper sampling, allows for the measurement of respondents' reaction to a set of questions with answers. The qualitative approach gives an in-depth experience and the real life in its many variations of the respondents. According to Creswell (1998) it provides greater and more innovative. The researcher adopted the qualitative approach or method in gathering information for the research but as much as possible, representative samples was worked with so as to effect generalization even though in real life situation, life is not that general. As much as possible, the researcher used more than one method in data collection from the primary sources since this afforded me triangulation and these were interviews, observation and focus group discussions.

3.8.1 Interviews

Karma (1999) defined interview as any person-to-person interaction between two or more individuals with a specific purpose in mind. Interviews are classified into unstructured and structured. The two classifications were adopted in the study. In using the unstructured interview approach, also known as the in-depth interview (focus group discussion), a framework was developed to guide the interview process. This made it possible for me to collect data among key informants (men and women). Face to face discussions were held with respondents and interaction was more informal than formal especially during the group discussion and this disposed respondents who talked freely. Four communities thus Busa, Jinkan, kperisi and Siiru were randomly selected and visited in April 2010.

3.8.2 Questionnaire

Questionnaires consist of well-formulated questions to probe and obtain responses from respondents (Twumasi, 2001; Karma, 1999). They can be divided into structured and semi-structured questionnaires. While structured questionnaires provide predetermined close-ended answers for respondents to choose from, in semi-structured questionnaires, open-ended questionnaires are used and respondents are at liberty to give any answers (Karma, 1999, Twumasi, 2001).

In this research, both structured and semi-structured questionnaires were used to ascertain generic views about how food security was ensured in the study area. Structured questionnaires were also used to solicit information from both state institutions as well as the traditional ones. The use of structured questionnaire for heads of both formal and informal institutions to get deeper insights from them about food security issues. Household heads were also administered with both the structured and unstructured questionnaires in the study communities. In all, 120 structured questionnaires and 40 semi-structured questionnaires were administered in the study.

3.8.3 Focus Group Discussion (FGDS)

Focus Group Discussions (FGDs) are deep interactions with people of a homogenous group of between 6 and 12 persons which enable the researcher to obtain information in a particular area of interest that would be difficult if not impossible to obtain using other methodological procedures. (Krueger, 1998; Kumekper, 1996). It allows the researcher greater insights into why people think or hold certain opinions. Krueger (1988:18) outlines the features of a FGD as interviews with people numbering between seven (7) and (12) who possess certain characteristics (relatively homogenous and unfamiliar but knowledgeable on the topic concerned). FGDs, are therefore purposive discussions with a particular group who appear knowledgeable in a topic to solicit information from the view point of the focus group. Indeed, the advantages of FGDs is captured by Family Health International (2005:64) as that which yield a large amount of information over a relatively short period of time and because it seeks to illuminate group opinion, the method is especially well suited for socio behavioral and cultural specific research that will be used to develop and measure interventions that meet the needs of a given population. According to Lloyd Evans (2006), FDGs are good methods' of assessing groups' viewpoints and perceptions heightening. In. this research, this technique was used to solicit views on how efforts are made towards ensuring food security in the study area. FDGs were therefore held with women, chiefs, migrants, pastoralists, youth leaders, teachers among others.

Table 2. A Matrix of discussions held with the various groups in the study communities.

Community	Group discussions	Number in group	Gender
Busa	Chiefs And Opinion Leaders	12	All Men.
	Family/Clan Heads	7	All Men.
	Women Farmers Associations	12	All Women.
	Youth Group	12	5 Men And 7 Women.
	Teachers	5	2Men3 Women
	Total	48	
Jinkpan	Elders	6	All Men.
	Family Heads	10	All Men
	Women Group	12	All Women
	Total	28	
Siiru	Chief And Elders	7	All Men.
	Family Heads	6	All Men.
	Women Association	12	All Women.
	Total	25	
Kperisi	Chief and Tendamba	8	All men.
	Women Farmers Association	12	All men.
	Youth group	"8	3 men and 5 women.
	Total	28	

Source: Field work, April 2010.

3.8.4 Observation

Karma (1999) defined observation as a purposeful, systematic and selective way of watching and listening to an interaction or phenomenon as it takes place without asking the respondent.

He further outlines the basic conditions under which it is most appropriate to observe as in learning about interactions, functions and behaviors in a group. This is more so, relevant in situations where accurate information cannot be elicited by questioning. The rational for using this approach is to enable me collectively engage with a group of respondents within which questions can be formulated and asked spontaneously as the interview progress. This approach also allows the respondents to freely express their opinion. This therefore, support Yin, 1993's view that a good interview is one in which the interviewee takes over the control of the interview situation and talk freely.

3.8.5 Desk Review

Stewart and Kamins (1993), as cited in sounders et al (1997), argued that in using secondary data, the researcher has advantage over a researcher using primary data because the data already exist and you can evaluate them prior to use. In the light of this, earlier works done on the subject matter were used for the review purpose. The major source included documentary review the documents include; magazines, books, journals and the internet on the subject matter. This is because it saves a lot of time.

3.8.6 Pre-Testing Of the Instruments

Pre-testing is the trying out of an instrument under instrumentation (e.g. questionnaires) on similar interviewers with respondents to be used in the study. Pre-testing offers the opportunity for the standard of clarity, adequacy and lays out an easy administration of the instrument (e.g. questionnaires) to be determined. Pre-testing helps the researcher to assess whether the interviewers do understand and can administer the instrument effectively and whether the target respondents find the schedule adequate and to its purpose. The pre-testing provides the opportunity to estimate the time duration to administer completely one instrument to each category of the respondents. Pre-testing therefore provides an opportunity for necessary changes to be made on the instruments and thus addressing the above concerns.

After having trained the research assistants, the pre-testing in four (4) communities Busa, Jinkpan, Siiru and Kperisi in the Wa Municipality, posed a serious challenge to administration and interpretation of the questionnaire. Preceding this revelation, initial visits were made to familiarize, establish linkages and rapport, and build relationships with the four communities. This was followed by a second round of visits in February, 2010 during which the administration of the questionnaire, the purpose of the interaction, was discussed with respondents (5 persons: 3 women and 2 men). The assurance of anonymity and then the consent for the questions to be asked was solicited from the respondents. Having had an affirmation, the interaction commenced.

In two communities Busa and Kperisi, the interaction took quite some time; questions had to be re-asked for better understanding and interpretation. The outcome of this pre-testing informed the conduct of the research. Eight (8) trained research assistants (two for each community), were used but closely monitored after having taken them through the questionnaire for enhanced understanding. This had improved the data collected.

3.9 Data Analysis and Techniques

Karma (1999) referred to data analysis as the computation of certain measures along with searching for patterns of relationship that exist among data groups. In analyzing data in general, Yin (1993) also states that a number of closely related operations are performed with the purpose of summarizing the data collected and organizing them in such a manner that they answer the research question. The data analysis study entails the employment of both qualitative (descriptive) and quantitative approaches to examine key issues at stake in the research work. The analysis, however, was heavily skewed towards qualitative descriptive analysis.

In the light of the above, qualitative data analysis was made during the data collection process and after the overall data was collected. This goes to support Yin's (1995) view that data analysis should not be a separate step coming after data collection but a continuous and simultaneous process. In the data collection process, qualitative field notes were captured on daily basis on events, conversations, interviews and stories in relation to Prospects and challenges of Women in ensuring Food Security. These and other issues during group discussions and interactions were analyzed after each day's work. During the data collection, issues' were noted and cross examined for validation, information. Based on the outcome of the informal interactions, the issue was discussed at the group and/or individual levels. The rationale was to keep track of important events/issues that cropped up in the day's work and to take note of them. It is also to look for consistencies and inconsistencies between knowledgeable informants and to find out why informants agree or disagree on important issues on the subject matter (Bernard, 1990).

The analysis involved the employment of the constant comparative method, content analysis, sorting and tabulating, simple percentages and tables' techniques. The constant comparative analytical techniques were used to examine and analyze descriptive data across issues and groups. Responses to the main issues of the research by individuals, groups and communities were identified and these were then compared with that of other individuals, groups and communities. Content analysis was employed to arrive at the age limits and ranges of the respondents. Sorting, which entailed categorization and tabulating was employed. Respondents were categorized into men and women from whom their responses were identified for tabulating. Simple percentages were also employed and this facilitated the aggregation of responses for easy comparison.

3.9 Stages of Research

3.9.1 Reconnaissance Stage

This stage involved reading and discussing broad issues on food and how available it is all year round in the study area. It is at this stage that I made preliminary visits to some communities which culminated in the choosing of the study communities. It also included the writing of data collection instruments as well as pre-testing of the instruments as well as the review of literature.

3.9.2 Main Survey Stage

The Main survey stage involved the actual collection of data from the study communities and institutions. It was essentially the primary data collection stage but it also included preliminary data analysis in the form of daily field data collection and summaries.

3.9.3 Analysis Stage

This is the stage where all data collected were systematically analyzed to bring to light the relationships between the various variables in the study. Qualitative data collected were coded and imputed in the Statistical Package for Social Sciences (SPSS) for analysis. Primary data were organized into themes according to the objectives of the study for analysis and presentation.

3.10 Short falls from Research Plans.

In the researcher's effort at collecting data from the study communities, few changes occurred. The study had previously been planned for the whole of the Wa municipality. However, it was discovered later on that the Wa Municipality was large with as many as twenty-eight (28) communities and with dispersed

settlement which I would not have been able to cover. This therefore necessitated the sampling of the four (4) communities to be used as representation of the entire District. The planned sample size of 180 questionnaires was not met. Instead only 160 questionnaires were administered in all the four study areas.

CHAPTER FOUR

ANALYSIS AND DISCUSSIONS OF FINDINGS

4.1 Introduction

This chapter focuses on the analysis and discussion of prospects and challenges of women in ensuring food security. The data obtained in the study were summarized and organized on a coding sheet to make the analysis easier. The appropriate software of analysis such as statistical package for social scientists, simple tables and as well as percentages are used to present the quantitative data while a critical and comparative analysis used to generalize and draw conclusion on findings. The data have been discussed under various sections.

4.2 Characteristics of the Respondents

Though information was obtained from cross section of men and women through the use of focus group discussions and key informant interviews, the target population of this study was women within the various women-farmers' groups. As such the sample population was drawn from the women farmers. The age grouping of the respondents indicates that 35% and 37% of women and men respectively fall under the age group of 35-39 years. This has been the age group with highest population of the respondents. The age 65+ is the lowest with only 2% and 3% for women and men respondents respectively. In general about 95% of the respondents fall under the economically active population that is between 25 - 59 years. This compared with the economically active population of the region (41.8%) is a potential that can be exploited to the advantage of the women groups in the study communities in general.

Table 3. The Age Grouping of Respondents

	Women		Men	
25-29	8	10.0	6	7.50
30-34	10	12.5	8	10.00
35-39	28	35.0	30	37.50
40-44	10	12.5	12	15.00
45-49	8	10.0	6	7.50
50-54	6	7.5	5	6.25
55-59	4	5.0	5	6.25
60-64	4	5.0	3	3.75
65+	2	2.5	3	3.75
Total	**80**	**100**	**80**	**100**

Source: Field survey, March, 2010

Over 75% of the respondents are married, 18.75% are widowed, while 6.25 % are with a partner respectively. This is shown on the table 4.2 below;

Table 4.2 Marital Status of Respondents

Marital Status	Number of People	Percentage (%)
Married	120	75.0
Widowed	30	18.7
With Partner	10	6.3
Total	160	100.0

Source: Field survey, April, 2010.

4.3 Major Occupation of Respondents

The results of the interview and focus group discussions have shown that out of the 160 respondents sampled in the study communities, sixty (60) women and forty-five (45) men were engaged in farming representing 75% and 56.25% respectively. The results of the data also revealed that sixteen (16) women and twenty (20) men were involved in trading, thus representing 20% and 25% respectively. While those who do not fall in either of the above categories recorded 4 women and 15 men hence, representing 5% and 18.75% respectively. This analysis shows that majority of women in the community have farming as their major occupation. In other words, this has demonstrated a high population of women farmers in the study area and within the active age range. This agrees with Nikoi (1998) that women living in the rural areas are predominantly peasant farmers although they are disadvantaged regarding access to production of resources and support services. The sustainability of these occupations will to a large extent show how food security can be ensured in the study area.

This information is illustrated in the table below.

Table 5. Major Occupation of Respondents.

Major Occupation	Number of Women	Percentage	Number of Men	Percentage (%)
Farming	60	75.00	45	56.25
Trading	16	20.00	20	25.00
Others	4	5.00	15	18.75
Total	**80**	**100**	**80**	**100**

Source: Field survey, April 2010.

4.4 Level of Education of Respondents

A study about the sex and level of education of respondents revealed that a total of Seventy-five percent (75%) of them never had any form of education. Though about 55 % of respondents ever attended adult literacy classes, majority of these so called adult literate cannot spell their names. Only close to 38% of respondents attended primary school, 25% of the respondents had education up to the Junior High School level, whiles 13% attained up to the Senior High School level respectively.

Table 6.0 The Educational Status of Respondents

Level of Education	Female Respondents	Percentage (%)	Male Respondents	Percentage (%)
Primary	12	15.0	18	22.5
Junior High	6	7.5	12	15.0
Senior High	2	2.5	8	10.0
Vocational/Tech	-	-	6	7.5
Adult Literacy	12	15.0	24	40.0
None	48	60.0	12	15.0
Total	80	100	80	100.0

Source: Field Survey, April 2010.

Even though the general education level of the community is low, that of the women is even more deplorable. As evident on the table above, about 60% of females had no form of education at all as compared to 15% of the male respondents. However, there were no significant differences in opinion between men and women in the study.

The general low level of education is a concern for rural development and to the adaptation of and improvement of food availability all year round for the qualitative and quantitative improvement wellbeing of the people in the Wa Municipality. The FAO and the UNESCO have rightly recognized education and

training as the most important weapons in the fight against rural poverty and development. With education, the folk are better equipped to make more informed decisions in promoting the economic, social and cultural dimensions of development (FAO/UNESCO, 2003).

4.5 TYPES OF CROPS CULTIVATED

A cross- tabulation of the data by sex and crop-type revealed differences. It revealed that in these communities, twelve crop were being cropped. The data, which was drawn from interviews revealed male dominance in all the twelve type of crops. However, the gap between the male and female farmers was relatively small. For the 80 men 80 women met, their responses in terms of crops are indicated and the calculation is based on the 80 respondents/sex.

Table 7. Types of Crops grown by Respondents

Type of crop	Men (n=80%)	Women (n=80%)
Millet	80 (100)	40 (50)
Sorghum	80 (100)	40 (50)
Groundnuts	80 (100)	75(99)
Maize	80 (100)	75 (99)
Rice	80(100)	40 (50)
Bambara- Beans	80(100)	60(75)
Soya bean	75(99)	60(75)
Yam	70 (89)	to (13)
Cotton	70 (89)	10(13)
Cowpea	20 (25)	12 (15)
Sweet potato	20 (25)	0(0)
Cassava	15 (19)	5 (6)

Source: Field data, April, 2010.

In Jinpkan and Siiru communities, in the Wa Municipality all the crops (except cowpea, cassava), were cropped at a low scale by both men and women. The difference in women's involvement to the cultivation of some crops is low. This could be could be attributed to the difference in resources in terms of land and time availability (to the women).

In Kperisi and Busa for instance, there is more land as compared to Jinkpan and Siiru communities. This agrees with Millar (2004) that they also contribute to this situation. Participant during the interaction confessed that 'women are generally not strong enough to work on virgin lands that are usually full of shrubs'. One of the women said 'we do not even have much time at our disposal to do that'.

This notwithstanding, the study revealed that women have the potential of cropping all the known crops but for land, time and labour. This is indicative of the differential cropping scale between men and women. With the exception of sweet potato, all crops are done by women but on a smaller scale compared to men. Women's involvement in groundnuts and maize is of higher scale especially the cropping of maize which agrees with Millar (2004) that it is an important crop for subsistence.

4.6 The Role of Women in ensuring Food Security

4.6.1 Food Crop Production and Storage

The major crops cultivated in the Wa Municipality include cereals such as maize, millet, sorghum, rice, Soybeans, groundnuts, cotton, and tubers like sweet potatoes yams and cassava are grown in relatively small quantities. Whereas crops like millet, maize and sorghum are the major staples that provide household food, others like rice groundnuts and Soya beans can also be cultivated as cash crops in addition to household consumption needs. These findings were revealed from

both focus group discussion organized with both men and women groups of fanners in separate meetings and key informant interviews. They were further confirmed by personal interviews with selected women in the four communities. For fanning in the communities in general, land acquisition is a major aspect. Many fanners do not have enough farm lands except a few who belong to the Tindana (Landowners) families. These are individuals belonging to the clan that is believed to be the first people to have settled in the communities and are therefore entitled to the land. Some fanners especially those belonging to other clans have to consult members of the Tindambas clans for farm lands. The land can be given based on share cropping agreement, inheritance, given out as gift, hiring or for free. When the land is given free to the fanner, he or she buys local gin (Akpeteshi) or cola nuts for the land owner to show his or her appreciation.

Women fanners in the community grow almost all the various crops mentioned above.

However, they face the problem of scarcity of farm lands than the men. About 78% of the women interviewed do not have their own plots for fanning. This is shown on the table 8 below.

Table 8 Responses (female) as to whether respondents have their own farm plots for farming

Response	Number of people	Percentage
Yes	32	40
No	48	60
Total	80	100

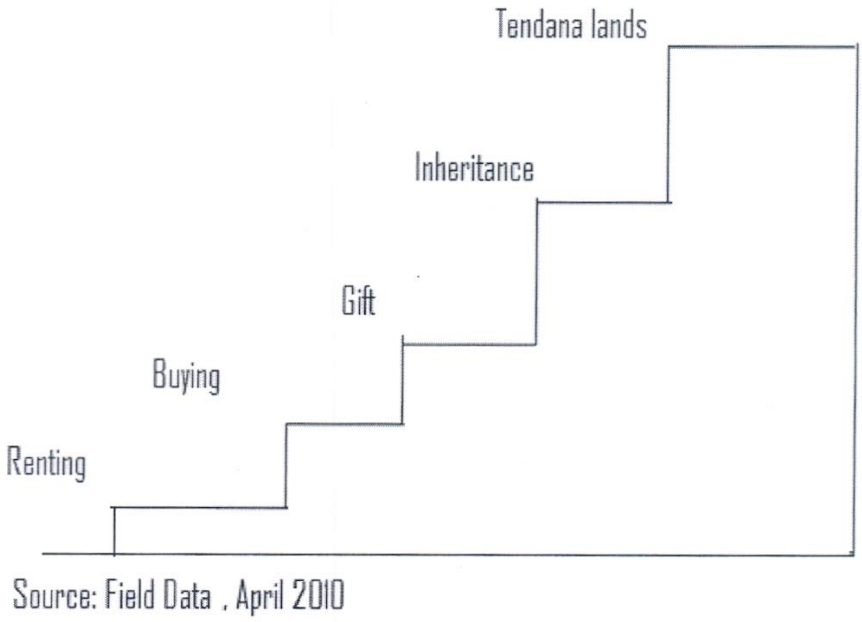
Source: Field survey, April, 2010.

This sixty percent (60%) of the respondents have to consult land owners every year or rely on their husbands or fathers before they can get farm plots for cultivation.

4.6.2 Respondents views about Land Acquisition

Tendamba lands are the community commons and parcel of which can be given to both migrants and indigenes. These lands are given in consultation with community leaders. Most migrants prefer acquiring part of the Tendana lands because it is said to be the most secured. Migrants prefer acquiring part of the Tendana lands because they are normally not family or lineage lands they are free from competition. Secondly, they could finally hold usucaptionary rights (land owning rights by long use) to such lands. Therefore most women farmers acquire their land through reefing.

Figure2 ... Land Acquisition Methods and Security Levels



Source: Field Data , April 2010

4.6.3 How women farmers prepare their field

In farm operations bullock services are very vital for the farmer. Bullocks are used to plough the farm land before sowing. Most women in the study community make use of the few bullocks that are available in the study communities. However, some women farmers who do not own bullocks and as a result really find it very difficult and in most cases have to exchange their labour for bullock services where they help the bullock owners in weeding. The only option opened to them is either to hire bullock services with money or to seek such services from their husbands, fathers, relatives and so most of the time their farms are ploughed late. This makes the women vulnerable -to crop failure in the event of early stoppage of the rains. Tractors sometimes come to the communities the women with the help of their associations mobilize themselves and hire the tractor services to plough their farms. According to the focus group discussions conducted fifty-five (55) women in the study communities have ever hired tractors to plough their farms.

Due to the scarcity of farmlands, the plots available have been cultivated continuously over the years. Fertilizer has therefore become a major requirement for farmers in most of the communities. About eighty-three percent (83%) of the respondents confirmed that they have ever used fertilizer on their farms while 72.5% have used fertilizer during the last farming season. The table below provides this picture.

4.6.4 Responses on the Use of Fertilizer

Table 9 (a) Have you ever used some fertilizer before?

Response	Number of people	Percentage
Yes	66	82.5
No	14	17.5
Total	80	100

SOURCE: Field survey, April 2010

Table 9 (b) Used some during last farming season

Response	Number of people	Percentage
Yes	58	72.5
No	22	27.5
Total	80	100

SOURCE: Field survey, Apri12010.

However, the women find it very difficult to afford fertilizer. For animal manure, a cross section of the women interviewed claimed they use it but on a very low scale. In addition to the above, considering the rise in the cost of fertilizer and the fact that one has to pass through long procedures these days before acquiring it, women most often than not are in a disadvantageous position. These revelations, so far confirmed Carr (2006) observation of Zambian women farmers that despite the significant contribution they make to the country's agricultural production, they have less access to basic resources and agricultural services, as compared to their male counterparts in the society. The women work extra hours on their personal farms after the normal hours of work on their husbands' farms. However, majority of them do not get labour assistance from their husbands on their

personal farms, Sixty percent of the respondents do not get labour assistance from any quarters, while majority of the remaining forty percent (40%) get such assistance from their children, brothers or friends rather than their husbands. Throughout the study it was revealed that the women in the study communities belong to farmer's co-operatives. The FAO plan of action for women in Development (2005 - 2008) saw agricultural co-operatives and farmers' organization as helping tools' in production, marketing and many agricultural activities for farmers.

4.6.5 Farmers Access to Credit Facilities

Women farmers who form groups do get assistance in the form of loans from the existing credit union to improve upon their farming activities in the study area. Some Community Base Organizations (CBOs) as well as Non- Governmental Organization (NGO), existing in the area all render assistance to farmers in various ways. Despite the above strives, only a few of the farmers are reached out to. The study established that despite women's effort at contributing to food security, majority of them do not have access to credit facilities and other agricultural extension services. Only thirty-six (36) out of the total number of women interviewed ever had a loan. Twenty out of the thirty-six women had their loans from credit union while the remaining sixteen from CBOs and NGOs in the study area. Those among the women farmers who desire a loan facility thought that a credit facility could enable them buy fertilizer, hire farm labor and expand their farms so as to improve production and hence ensure food security. This is clearly depicted on the tables (a) and (b) below.

4.6.4 Response on Access to Credit Facilities

Table 10 (a) Whether or not respondent gets a loan

Response	Number of people	Percentage
Yes	36	45
No	44	55
Total	80	100

Source: Field Survey, April 2010

Table 10 (b) Whether or not respondent needs a loan

Response	Number of people	Percentage
Yes	68	85
No	12	15
Total	80	100

Source: Field survey, March, 2010.

About 68% of the women interviewed have never had any extension service from any quarters. Only 32% said that they ever had advice from agricultural extension officer some years ago. Apart from these constraints, weather and domestic conditions also present problems for farming in the area as well as erratic and insufficient rainfalls and poor soil fertility are common phenomenon in the area. It was also revealed from the focus group discussion that the farmers do not get good market and or adequate prices for their produce. In a study of three localities in the eastern region of Ghana, Ewusi (2005) found that in such an event of marketing problems, women farmers are exposed to the vagaries of the market situation, due to their inability to provide adequate storage facilities as compared

to the men. This is not different from the situation of the women in the community because they cited problems such as lack of storage facilities, weevils, rodents and caterpillars as the frustrations they face during the post-harvest period.

4.6.5 Farming Activities

Like any other community in northern Ghana, farming is regarded as an activity for all in the study areas. However, the field survey revealed that the various sexes have major farming activities they engage in. These activities include clearing of the land, sowing, weeding, harvesting, storage and transporting of the produce to the market centers.

In the survey, 60% of the respondents reported that clearing of land was done by males while 40% indicated that it was done by females. The study revealed that a high number of females carry out the sowing activities, thus 70% as compared to 30% by men. The study also revealed that 60% of the respondents described weeding as male activity while 40% said it was done by females. The percentage of females who carry out the harvesting activity far out weight that of men in the study area. This was clearly shown when females recorded 85%, while 12% of the respondents said it was done by males. 65% of respondents reported that women do transporting of the produce to marketing centers, while 35% said it was done by men. Storage of produce was reported by 70% to be female activity while 30% said it was done by men.

Table 9. Fanning Activities

Activity	Male (n=80)	percentage	Female (n=80)	percentage	Total
Clearing of land	48	60	32	40	100
Sowing	24	30	56	70	100
Weeding	48	60	32	40	100
Harvesting	12	15	68	85	100
Storage	24	30	56	70	100
Transporting produce to Home / market.	28	35	52	65	100

Source: Field survey April, 2010.

An inquiry into factors that influence the performance of these activities by the sexes was made and the following results were obtained. Sixty-five percent (65%) of the respondents believe the activities were carried out based on custom / belief system. The remaining 35 % said it was due to the physiological make up of two sexes. Thus men are stronger than women and can better do the labour intensive activities. Notwithstanding the above, the various activities performed by women in agriculture particularly in the study area make their role and contribution to food security real and requires public attention.

4.6.6 What Women Farmers Do With Their Farm Produce

As to what women farmers do with their farm produce, it was revealed that about 95% of the respondents produce mainly to feed their families. This explains that food security for families in the community is a responsibility for both men and women and women's role in particular is highly noticed. As indicated in the table above, 95 % of farmers in the study communities do not produce for any commercial purpose but rather to satisfy family needs. This subsistence tendency is attributed to the fact that several challenges face women in their agricultural endeavors, such as access to land, credit facilities and capacity building deficiencies. Only 5 % of the sampled women farmers produce to sell. And income generated from this is mainly used.to purchase foodstuff and other related livelihood facilities. All these women farmers only sell small amount of their produce to purchase clothes, funeral expenses and to purchase inputs for the next season's activities.

Table 10 what women farmers do with their farm products

Uses of product	Number	Percentage (%)
To feed family	76	95
For sale	4	5
Total	80	100

Source: Field Survey April, 2010.

4.6.7 Response to Time Management

An interview with respondents revealed that women apart from the various farming activities outlined, there are a number of household or domestic chores that women perform. This is indicated on the table below;

Table 11. Time Management

Question	Yes		No		Total	
	No	%	No	%	No	%
Do you do domestic chores before going to farm	32	92.5	3	7.5	80	100
Does domestic work affect your work as a farmer	32	92.5	3	7.5	80	100
Do men assist you at home	5	12.5	35	87.5	80	100

Source: Field survey, April, 2010.

From the table above, 92.5% indicated that women farmers do domestic chores before going to farm, while 7.5% said they do not do any domestic work before going to the farm. The results also indicated that 92.5% reported that the domestic chores affect their work as farmers. Also 87.5% reported that men do not assist in

their household or domestic chores. This illustration shows that women are overburdened in terms of working for the family outfit.

4.7 Type of Livestock Reared

Like crop production, women farmers in the study communities are also engaged in livestock rearing to supplement their family incomes and food needs. Animals reared include cattle, sheep, goats, guinea fowls, fowls, ducks, turkeys, donkeys and pigs. During focus group discussions and personal interviews, it was found that domestic animals give recognition to individuals and households who possess them. This is due to the numerous uses to which domestic animals can be put.

The importance of rearing animals cannot be overemphasized. This is because at the village level donkeys serve as major means of transport by the use of the donkey cart. They are used to transport products to and from the market, firewood for domestic uses, carry farm produce from farms and fetch water. Rearing of cattle, sheep, pigs and goats has economic, customary and other social implications. Not only are these animals sold to supplement household food in times of hunger but also they are used for dowry, sacrifices, naming ceremonies, funeral rites and for ploughing their farms. This information was revealed from one of the focus group discussions.

A cross-tabulation of the data by sex and crop-type also revealed striking differences. It was revealed that in these communities, nine (9) animal types were reared. The data, which was drawn from interviews revealed male in all the 9 animal types as shown in the table below. .

Table 12. Distributions of Respondents by types of livestock Reared

TYPE OF ANIMAL	MAN (n= 80) (%)	WOMAN (n= 80) (%)
Cattle	65(81.3)	20(25.0)
Sheep	65(81.3)	40(50.0)
Goats	65(81.3)	60(75.0)
Guinea-fowls	65(81.3)	20(25.0)
Fowls	65(81.3)	60(75.0)
Ducks	60(75.0)	15(19.0)
Turkeys	40(50.0)	15(19.0)
Donkeys	10(13.0)	5(6.3)
Pigs	30 (38.0)	20(25.0)

Source: Field data, April, 2010. (Note: Percentages are in Parenthesis and in multiple responses)

From the table above, all the nine types of animals were reared by both men and women farmers but the scale of involvement differed. This difference in scale of involvement has been greatly influenced by the culture of the respondents.

All the animals are reared in larger scale except donkeys and pigs which are reared on a very low scale. From the study, the percentage of fowls reared was (75%), goats (75%), sheep (50%) among others. Religious beliefs were attributed to the rearing of pigs (25%).During focus group discussion, it was revealed that almost all the study communities were Muslim dominated areas. Apart from the

Table 13 An interview whether or not the respondents rear livestock

Dagaaba settlers in these communities who engage in the rearing of pigs, no Muslim who was interviewed has shown interest in rearing these prolific animals. Also donkeys rearing (6.3%) was on a very low scale due to its nature as traction animal and the fact that it is used in carting goods. In both cropping and rearing, the pattern in terms of scale and species is greatly determined by the culture of the people and this agrees with (Millar et. al, 2004) that the traditional knowledge, skills and values direct or dictate the behavior of farmers.

Also, out of the eighty (80) women respondents interviewed, only nineteen (19%) had neither livestock nor poultry. This is shown on the table below;

Response	Number Of People	Percentage (%)
Yes	65	81
No	15	19
Total	80	100

SOURCE: Field survey, April, 2010.

Basically two major methods of animals rearing were engaged in the study communities. One is the free-range system where animals are allowed to move freely during dry season in search for feed and may either come back to their houses or sleep outside. The other system is where animals are either intensively or semi-intensively kept during the farming season to prevent crop destruction. The difficulty in animal rearing therefore comes during the farming season when farmers have a great task of feeding the animals alongside their cropping activities.

Population increase has led to increase in demand for farmlands, thereby reducing the size of lands, which were hitherto used for animals grazing. Disease and predators also sometimes attack animals. It was discovered during the personal interview that factors that accounted for the low number of animals reared by women farmers in the community include inadequate starting capital, management related problems such as housing and feeding of animals especially pigs. Also, because animals are mainly kept under the extensive system, they are exposed to pest and diseases.

Despite these challenges associated with the animal production, it was revealed that women still have the zeal to rear animals due to the numerous advantages they enjoy. However, women farmers suggested that, many benefits could be derived from animal rearing if credit facilities in the form of loans, housing and feeding could be provided to enable them increase production.

4.8 **Food Processing**

Closely related to domestic work is food processing. Many of the foodstuffs and farm produce as well as ingredients require special treatment before they can be stored for use. Women do a major part of this work. The women use several preservation methods to ensure that their produce are well preserved.

During the rainy season, fresh groundnuts, early millet and rice are harvested amidst rainfall. To ensure that the rains do not destroy these products. Women are often charged with the responsibility of preserving early millet for seeds during the next sowing season. They thrash the millet with sticks, winnow it, and mix the grains with ash to avoid caterpillars' distraction.

Apart from farm produce or foodstuff, the women process vegetables of various kinds, which they store for use in the dry season. These vegetables include okro, and baobab tree leafs. The women have various methods of preserving these

vegetables, which become an important source of food during the lean season. Due to farm work and other activities during the rainy season, the women do some of these preservation activities in the night. For instance, some of the vegetables need to be parboiled before drying them. Also when the okra is plucked from the farm they are trimmed before drying. The women do all these activities in the night when others are asleep.

The table gives a summary of the processing procedure of some selected foodstuffs and vegetables in the community, as well as tools used for persevering.

Table 14. Processing procedure and the major tools used in the processing.

Foodstuff	Processing procedure	Tools involved
Millet	Beaten - winnowed - mixed ash or chemical stored in sacks or clay pots and dried from time to time	Sticks, bowls, calabash, brooms and baskets
Rice	Beaten – winnowed, dried and stored in sacks or pots and ordinary rooms	Sticks, basins bowls, baskets calabash, broom
Cowpea	Threshed mixed chemical or ash stored in sacks or pots and left over the sun or dried from time to time	Sticks stones, bowls, calabash, basins broom
Beans	Threshed roasted or mixed chemical stored in pot or sacks	Mortar, pestle, sticks, bowls
Flour	Dried on plates or on the floor. Stored in pots, sacks, basins or gourds	Plate, broom basin, bowls, rubber bags
Tomato	Heated or grinded and mixed salt solution stored in bowls at sack pans	Grinding pot, grinder, spoon and rubber

SOURCE: Field survey, April, 2010.

Carr (1991) has observed that women in Malawi use indigenous techniques and equipment in food processing and storage: For most staples the basic equipment used in processing food includes mortar, pestle, grinding stone, pots of various sizes and shapes, baskets and mats. This observation has been confirmed by the research as indicated on the table above. Carr further observed that due to the use of this indigenous technology, women generally spend more hours than men in farming operations and food processing and this would affect the time women need for cooking and other domestic activities that are necessary for the welfare of the household.

The above observation was confirmed in the study. During the farming season, most households in the community take supper as late as 8:00 o'clock to 9:00 **O'** clock pm due to the lot of work the women have to do in addition to their domestic roles. They either return from farms late or delay in the borehole or well where they wait on a long queue to fetch water or they spend some minutes to trim the okra they might have brought from the farm before cooking.

4.9 OTHER ECONOMIC ACTIVITIES

4.9.1 The Role of Women in Petty Trading.

The various economic activities of the women have been examined including petty trading. In the personal interview with the respondents 12% of them mentioned petty trading as their major occupation. However, some of the women who mentioned farming as their major occupation also do petty trading alongside farming. If all these are considered, the total number of petty traders is 25% out of the 80 respondents. This represents 10% of the respondents. The commodities sold by petty traders include provisions such as hacks, biscuit, chewing gum, soap, sugar etc as well as commodities like sheabutter, dawadawa, ingredients, foodstuffs, pito and cooked food. Commodities such as foodstuffs, provisions and

ingredients are sold on retail bases while women themselves process dawadawa and sheabutter.

4.9.2 Women Activities in Petty Trading

As mentioned above, the commodities sold by the petty traders include sheabutter, Dawadawa, Foodstuffs, Ingredients, Pito among others. The table below gives a picture of the various commodities sold by the women. Shearbutter extraction recorded the highest percentage, thus 40%, Dawadawa 30%, foodstuff recorded 20% ingredients 10% and the commodity that recorded the lowest percentage is pito (10%). Below is the table showing the types of commodities sold by petty traders in the study communities.

Table 15 Type of Commodities Sold by women

Commodities	Number of Women into The Trade	Percentage
Sheabutter	32	40%
Dawadawa	24	30%
Foodstuffs	16	20%
Ingredients	8	10%
Pito	4	5%
TOTAL	80	100

Source: Field survey, April, 2010.

During the survey, two (2) of the petty trading businesses were discovered to have the potential of improving the conditions of the women. These include; sheabutter and dawadawa fruits. The women also possess the appropriate skills needed in the processing or extraction of these commodities. Apart from these advantages, these commodities have a large market coverage compared to other commodities. Majority of the women involved in these businesses send their commodities to Wa and other near-by market centers to sell.

In spite of the effort made by the women in petty trading, sourcing financial capital to start a business is a problem for the women. The initial capital for their businesses mostly comes from the sale of their farm produce. Some women in Siiru community in a focus group discussion told me that their initial capital comes from the little savings they make with Susu collectors, while few rely on local money lenders or their husbands. Majority of the women were unsatisfied with their initial capital. About 80% of the women needed enough capital to start their businesses. The table below illustrates the response given by women in the study communities on their initial capital.

4.9.2.1 Respondents View on Their Initial Capital for Petty Trading

Table 16. Was your initial capital enough to start with

Response	Number of people	Percentage
Yes	16	20
No	60	75
No Response	4	5
Total	80	100

Source: Field Survey, April, 2010.

Apart from the difficulty involved in getting the initial capital, expansion of the business or trade is very difficult because they do not operate under favorable

business environment. The common practice among the women is spending business income and profit on household food and this makes some of the businesses to survive on a fixed capital. It is therefore not surprising that some of them expressed their views that if they had gotten any food aid from either government or NGOs they would have done better in the petty trading since their profits will be reinvested instead of being spent on food.

On the question of labour, about 60% traders have their relatives or family members assisting them in one way or the other. In the case of those who process dawadawa, sheabutter or brew pito, their relatives or family members help in fetching water, looking for fire wood or taking part in some aspect of the processing,

Assistance from family members also take the form of door-to-door sales where children especially carry goods round houses to sell. However, 45% of the petty traders do not get any form of labour assistance from any quarters. The fact is that the businesses of a good number of the traders are so small, that they do not even need such labour assistance. This explains why over 90% of them expressed a dire need for a loan to enable them expand their trade. Apart from the above limitations, transportation is another serious problem the women face in the trade. Pito brewing, Dawadawa processing and sheabutter extraction involves the use of plenty water and firewood. Carrying this water and firewood on the head is not only difficult but also time consuming.

Also the women find it difficult carrying their commodities to the market centers due to the poor road net-work linking the communities to the regional capital Wa. As a result of the above, therefore vehicles cannot ply the road throughout especially during the rainy season. Ewusi (2008) found that women in trade accounted for 84.6% of the total employment in the commercial sector. In the commercial sector generally 368,900 women were employed in the sector in 2006 as compared to only 67,000 men.

This observation has reflected to some extent in this study. Though the comparison between men and women employment in the sector cannot be done in this research due to the fact that men's activities have not been examined, but the fact that 80% of the women are engaged in petty trading implies that trade has absorbed a good number of the women.

The involvement of women in trade may" be due to several factors. In the rural communities, farming is the major occupation which involves manual work. Women are naturally weaker than men and will find farming difficult than trading in terms of the manual work involved. They may find it easier doing trading from which they can earn profit to hire labour for their farm work. Another reason may be that the women can use relatively small amount of money to start a business as compared to men. Men may find it unprofitable involving in petty trading such as sale of ingredients, fried groundnuts and such petty items.

The FAO Plan of Action for Women in Development 2006-2008 observed that women strict food activities represent an important contribution to food security in Togo. It provides income for the Women for their family consumption, and supplies appropriate low cost food to poor segments of the society. This observation emphasizes the role of women in petty trading in ensuring food security.

4.9.3 Major Challenges and Constraints faced by women farmers in the study area

During the study, a total of eighty (80) women and eighty (80) men were interviewed. The female respondents consisted of members and staff of the women associations, key informants, as well as opinion leaders in the study area. 15% of the respondents identified the unavailability of a wire net to fence their dam and irrigation land as a problem. Also, inadequate credit facilities as well as illiteracy constituted 35% and 22.5% of the sample population respectively. Also,

the problem of inadequate cultivation land and the inadequate farm imputes and implements (such as fertilizer, tractor-services, improved seeds, good animal breeds, among others). These make up 17.5% and 10% respectively. The table below outlined the problems women farmers faced in the study area.

Table 17. Responses about challenges faced by farmers in the study area

Challenges/Constraints Of Farmers	Number Of Respondents	Percentage
Lack of wire netting	12	15.0
Inadequate credit facilities	28	35.0
Illiteracy	18	22.5
Inadequate cultivable land	14	17.5
Inadequate farm-inputs	8	10.0
TOTAL	80	100

Source: Field Survey, April, 2010.

4.9.4 Summary of the Research Findings

The results revealed that women have contributed immensely toward ensuring food security. Women's activities in agriculture such as the cultivation of food and the rearing of animals and their engagement in other economic activities such

as petty trading contributed significantly to household food provision in the communities. Throughout the study, it was found that 95% of the women interviewed cultivate their food crops for only household consumption purpose. Eighty percent (80%) of the petty traders also confirmed that they spend much if not all their profit from petty trading on household food. They pay for grinding flour, buy ingredients and millet or flour to prepare food. Women farmers also go in to dry season gardening during off season periods to supplement the already existing food that have been cultivated in the past raining season. The study revealed that women provide an important income buffer to the household as they contribute to health and school expenses and procure most of the food for the family. They buy most of their own cloths, and respond to some social demands, such as funerals and other social events.

One other interesting pattern about female participation in farm activities is that, due to changing economic conditions in the country men are no more able to provide adequate food for the family or they are no longer interested in food crop production but rather cash crops such as cotton, soya beans among others which has gained attention of most men due to the monetary value attached to the cash crop. More importantly, the recognition women have gained in recent times from NGOs and other agencies for their contribution towards ensuring food security in various ways. Female participation is therefore increasing from the previous low level. As one respondent from Kperisi community said, "Women were not farming until recently". Another characteristic of the agriculture practice in the study communities were that, there appears to be a strict pattern not only in the division of labour but also in crop cultivation.

Certain activities like the clearing of the land and weeding are a form of labour reserved for men, whereas, sowing, harvesting, storage and transportation of the products to the market centers are dominated by females. In terms of crop production, crops like okro, pepper and soya beans are reserved for women while yam, cassava and cowpea are in male domain. However, the study shows that

women farmers in the research area have demonstrated their can do spirit by participating in the most difficult jobs that have been previously perceived to be

For food processing, the study revealed that women do major part of this work. They engage in beating the millet with sticks, winnow it and mix the grains with ash to avoid the invasion of weevils for storage purposes. They also process vegetables of various kinds which they store for use in the dry season. These include okra, pepper, baobab tree leafs among others which are another step towards ensuring food availability all year round.

It was revealed that women in the study communities also rear various kinds of animals. Animals such as cattle, sheep, goats poultry, and pigs among others have been reared either by the free-range system (animals allowed to move freely) and or intensive/ semi-intensive way (where animals are kept under close-watch). Some of the benefits derived from these animals include; the payment of dowry, sacrifices, naming ceremony funeral rites, ploughing their farms and most importantly they are sold out and moneys used in either buying food or used in cultivating their farms. This has been clearly revealed in the study communities. The only difficulty in this effort is that during farming seasons feeding of animals becomes cumbersome since women farmers have to engage in cropping activities. Also, diseases and predators sometimes serve as obstacle to animal rearing.

Throughout the study apart from the prospects chalked by women, it has also been clearly revealed that women in the study communities face a lot of challenges and constrains. Such constraints as lack of credit facilities, lack of equipment and appropriate technology, weak land right, limited contact with extension services among others were revealed. Ninety-five percent (95%) of the respondents do not have any source of loan to invest on their farms. However, 80% of them expressed their dire need for financial credit which they think could be of great help to them. this observation also confirms the second aspect of the study that,

women contribute significantly towards ensuring food security but are seriously bedeviled with ecumenical problems which otherwise would have raised them to the pedestal height in terms of food production.

CHAPTER FIVE

CONCLUSION AND POLICY RECOMMENDATIONS

Conclusion

Inadequate food within a household, a community or a nation is a sign of serious social and economic stress and also impedes future development. To avert this untold situation, successive governments have formulated policies and strategies to promote food security in Ghana. The study showed that the search for food security in the study area has been sought through mainly agriculture (cultivation of crops and the rearing of animals) as well as economic activities of women. The researcher arrived at the conclusion that there is food security in the study area, considering the efforts women have been making towards food production and other economic activities.

A Re- Visit to the Study Objectives

The overall objective of the study was to examine the major prospects and challenges women face towards ensuring a sustainable food security in the Wa Municipality. In this regard, women farmers in the study communities have made efforts in cultivating food crops, reared domestic animals, engaged in other economic activities just to ensure food availability all year round. The study therefore concludes that there is food security in the study area. In looking at the first objective, which seek to identify women's potential in agriculture (food crop production, animal rearing and dry season gardening) and its effect on food security in the District. The study revealed that women's contribution to food crop production as well as animal rearing in the study communities increased the food basket in those areas in the past years. It was revealed in the study that twelve (12) different crops were cultivated by both men and women. Even though there are differences with regard to women's involvement; this could be attributed to

The difference in resources in terms of land and time availability (to the women this notwithstanding, women have the potential of cropping all the known crops. Available data revealed that majority (95%) of women farmers produce to feed their families, and few (5%) produce to sell. However, the income generated is used to purchase foodstuff and other related livelihood facilities (cloths, cooking utensils etc.).

Women farmers in the study communities are also engaged in livestock rearing to supplement their family incomes and food needs. Animals reared include cattle sheep, goats, guinea fowl, ducks, and turkeys, among others. The study revealed that the rearing of some of these animals have economic, customary and other social implications. Not only are these animals sold to supplement household food in times of hunger, but also they are used for dowry, sacrifices, naming ceremonies, funeral rites and also for ploughing their farms. From the study, all the nine types of animals were reared by women famers but the scale of involvement differed. This difference in scale of involvement has been greatly influenced by the culture of the respondents.

The second objective was to determine the performance of women farmers in food processing and preservation which help increase the food basket in the study area. Food processing has been one of the major areas that engaged the attention of women farmers. The study revealed that after harvesting crops the women occupy themselves in preparing the farm products for storage. Cereals such as millet, guinea-com, rice, soya beans and Bambara beans are thrashed by the use of sticks and are later winnowed. Others such as maize are de-husked and shelled. The grains are mixed with ash and sometimes with insecticides to prevent the invasion of weevils and other predators. 'Not only the above but also, women farmers process vegetables of various kind, which they store for use in the dry season. These vegetables includes; okra, pepper, Baobab leafs among others. These have very significant contribution to food security in the municipality.

The third objective bothered on the contribution of women in other economic activities which increase food availability in the study area. Throughout the research, women farmers were found engaged in economic activities such as petty trading, sheabutter extraction, dawadawa processing, and pito brewing among others. During the survey, two of the petty trading businesses (sheabutter extraction and dawadawa processing) were discovered to have the potential of improving the conditions of the women farmers. This explains why the two commodities were ranking high, thus 40% and 30% respectively. Proceeds from the sale of these commodities are either used in buying food to supplement that of the household or they are reinvested into their agricultural activities.

Also, women's role in the upkeep of the household is significant and their activities have been examined in food production, storage, food processing, animal rearing, petty trading and domestic work. They also contribute to the health, education and clothing needs of the families.

The fourth objective was to find out the possible challenges that confront women farmers in the study area. Despite the prospects or successes chalked by women farmers, they also faces a lot of constraints some of which have been revealed by the research as follows; The women do not have unconditional access to the means of production, such as land, credit, labour and other agricultural inputs. Women producers are excluded from control over and title to land they till. Credits is virtually unsustainable for all but a selected few women associations. They have no control over their labour. There is also low price for their produce, pest and diseases of crops and animals and lack of farmer's co-operatives. These coupled with the lack of deliberate policies which discriminate against women have hindered women's food production capabilities.

The fifth objective set was to review state policies which could address food security issues, and to suggest policy recommendations that could enhance women's capabilities in agricultural activities. The study revealed that successive

Ghana and for that matter the research area. The study showed that the 'search for food security has been sought through mainly agriculture and macro-economic policy reforms. A review of agriculture policy indicates that since 1983, when the incidence of food insecurity and poverty was very high in the country, government through MOF A has enacted series of policies to address the food situation in the country.

Governments have formulated policies and strategies to promote food security in

Later, FASDEP also came as a policy. It has been instituted to necessitate the urgent need to modernize the agricultural sector in line with government's vision of making Ghana a leading agro-industrial country in Africa by 2010.The policy outlines the urgency in achieving food security as it foremost targeted some selected communities for achieving its ultimate objective.

Drawing from the above conclusions and also re-visiting the research objectives, the research revealed that women have contributed very significantly toward ensuring a sustainable food security in the study communities. Women farmers' despite their successes also faced a lot of challenges in their agricultural activities. It is an undeniable fact that the importance of every research is its ability to contribute to theory, policy-building and the development of society (Bacho 2001, Yin 2003).

Policy Recommendations

It is in the light of the above that the following recommendations are made; first and foremost, land availability and acquisition for farming in the study area is a major problem particularly to women farmers. There is therefore the need to review the land tenure system in Ghana and the study communities in particular. This should aim at making lands accessible to the women farmers.

Areas where lands are accessible, women farmers sometimes find it difficult ploughing it. Government should therefore assist in acquiring bullocks to enable them plough their fields in good time and faster too to avoid losses through late cropping. The women farmers can be put into manageable groups to make the assistance possible.

Policy makers in the municipality should consider adopting and expanding existing groups so as to use them to access credit. There is the need to turn the existing groups particularly the women Associations in the study communities into co-operatives to enable them have access to credit, land, agricultural inputs and extension services.

An alternative agricultural activity for the arid and semi-arid zones is livestock breeding. Women in the study areas are involved in poultry, sheep, goats, pigs and cattle breeding and can be assisted in many ways. With the introduction of new breeds of pigs, goats, sheep and poultry birds this can be introduced to the women farmers to increase productivity. Farmers should also be given enough veterinary services to assist them in the management of livestock.

It is realized that, water for domestic uses and agricultural activities is the most devastating problem facing the women particularly in dry seasons. The provision of a small-scale irrigation dam and boreholes for portable drinking water is suggested as a measure to address this problem. The Municipal Assembly and the non-governmental organizations in the study area should take up this challenge to ensure efficiency in women's cultivation.

The role of women in other economic activities such as petty traders is worth commending. It is therefore necessary to strengthen this sector. The government initiative in the poverty alleviation fund is an appropriate tool in strengthening the capacity of especially rural petty traders. Giving this fund in the form of moderate loans to petty traders should be accompanied with special training by the National

Board for Small Scale Industries (NBSSI) on effective management of own businesses.

The provision of protective clothing such as blankets, and rain coats will not only facilitate their food processing activities, but will also spare them the hell of being beaten by rain on their farming activities. Finally, there is the need for further research into the socio-economic and other factors which hinder the productive capabilities of women farmers in general.

All in all, the study recommends an active collaboration of all stakeholders in food security policies, its review and implementation at the communities through to the national level.

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APPENDIX ONE (A)

REEARCH PROTOCOLS

A: QUESTIONNAIRE FOR INDIVIDUAL FARMERS 0N THE PROSPECTS AND CHALLENGES OF WOMEN IN ENSURING FOOD SECURITY:A FOCUS OF SOME SELECTED COMMUNITIES IN THE WA MUNICIPALITY OF THE UPPER WEST REGION:

INTRODUCTION:

Dear Respondent,

This survey is to solicit your opinion on the above topic with the view of exploring and or ensuring the contribution of women in food security.

Women all over the globe have been making lots of efforts to boost agricultural production with the intention of addressing hunger and also ensuring food security. Despite the giant efforts that is put in place, hunger and perennial food shortages is all over the place.

I would therefore like to ask you some questions to know your opinion about these efforts. It is towards the award of a master of Philosophy Degree in Development Management. Kindly be assured of your confidentiality in the responses you give. Thank You.

A. General Information;

Name of interviewer ----------

Questionnaire Number ----------

Date of interview ----------

District ----------

Name of community ----------

Name of interviewee ----------

B. SOCIO-DEMOGRAPHIC CHARACTERISTICS:

1. SEX---------- Male [ ], Female [ ]

2. Age----------Below 30 years [ ], 30-55 years [ ],

56-70 years [ ], 70+ years [ ].

3. Marital Status; Married [ ], Divorced [ ], Never Married [ ].

4. Residential Status; Native [ ] Migrant/ Settler [ ].

5. Status in the Community; [ ], Tendaana [ ], Clan heard [ ], Magazia [ ] House heard; [ ], Others Specify----------

Occupation, Tick where applicable; Farming---------- [ ]

Hunting ---------- [ ]

Fishing ---------- [ ]

Others (Specify) ---------- [ ]

SECTION TWO (2)

WOMEN'S ROLE IN AGRICULTURE.

A. THEIR CONTRIBUTION TO CROP PRODUCTION AND STORAGE:

1. Who owns farm in your House? ----------

2. How do you acquire your farm land? ----------

3. Are there some traditional beliefs and customary practices that affect women's involvement in agric in this community? Yes [ ] No [ ]

Explain your answer ----------

4. How do you acquire land in this community? ----------

5. How do land ownership and control by women promote agricultural productivity in your country? ----------

6. What is the farm size women can own? ----------

7. How do you benefit from the incomes that accrue from your farm? ----------
---

8. a, Do you get service from agriculture Extension Officers? Yes ( ) No ( )

b. If yes, how have these services affected your yield? ----------

9. a. Do you get any assistance from your husband or wife in your farming activities?

b. If yes what type of assistance is it? ----------

10. What is your source of income? ----------

11. a. Do you have any reason for the establishment of the women association in your community? Yes ( ) No ( )

b. If yes, what are the reasons? ----------
---

12. a. Do you participate in the activities of the association? Yes ( ) No ( )

b. If yes, what do you participate in? ----------

13. comparing your individual farm and the women associations which one contribute more to the food insecurity problem in your community? Give reasons
---.

14. How beneficial are the women associations to you and your family? ----------

15. What Crops did you produce this year? Give the type of crops and the quantity of acres you produce.

	Type of crop	Quantity of Acres.
1		
2		
3		
4		
5		
6		
7		
8		

16. Do you have storage facilities? If yes what ----------

17. What problems do you generally face in crop production and storage ?

A. Crop production .....

B.Storage ----------

B. ANIMAL PRODUCTION:

1a. Do you or keep poultry? Yes ( ) No ( ).

1b. If Yes how many and for what? ----------

2a. Do you think these animals you have can help solve the food insecurity problem in this community. Yes ( ) No ( ).

2b. If Yes in what way? ----------

3. How do you use your animals or poultry? ----------

4a. what problems do you think hinders your production? ----------

---

4b. what causes these problems? ----------

5. What do you think can be done to solve these problems? ----------

6a. Do women associations play a role in animals or poultry production? Yes ( ) No ( ).

6b. what role do they play? ----------

MANY THANKS FOR RESPONDING TO THE ABOVE QUESTION

APPENDIX TWO (B)

PROSPECTS AND CHALLENGES OF WOMEN IN ENSURING FOOD SECURITY. A FOCUS OF SOME SELECTED COMMUNITIES IN THE WA MUNICIPALITY OF THE UPPER WEST REGION.

SOLICITING THE VIEWS OF INTERVIEWEES- (WOMEN ASSOCIATION).

There have been lots of efforts on the part of farmers including our forefathers and other actors e.g. Non-Governmental Organization (NGOs) and Governments (Ministry of Agriculture- MOFA) to boost agricultural production. This is intended to address huger and enhance our economic well-being. Inspite of these tremendous efforts, hunger and poverty are still staring at us. I would therefore like to ask you some questions to know your opinion about these efforts. I would appreciate it very much if you answer these questions since the information you would provide will be very useful; for you will be adding a voice to how earlier and present efforts may be enhanced (produce desired results). Your responses are extremely valuable and will appreciate it if all the questions are answered. However, I will gladly accept your decision if you do not want to answer a particular question.

I assure you that your responses will be confidential and completely anonymous (you will not be identified in any way). Whatever information you provide will only be used for the purpose of this research and thus will not be used for any other purpose. It is also towards the award of a master of Philosophy Degree in Development Management.

1. Sex ---------- Age ----------
2. Educational Status; Basic ( ) Secondary ( ) College ( )
Tertiary ( ) others (specify) ----------
3. What role do you play in this women association? ----------

4a. Do you have any idea on the reasons for the establishment of the association?

4b. If yes, what are the reasons? ---

5a. In your view, do you think this association is contributing positively to the food insecurity situation in the district? Yes ( ) No ( ).

5b. If no why? ---

5c. If yes how (provide statistics for some number of years if any) ---

---

6a. What are the problems faced by this association?

6b.What attempts have been made to solve them? ---

---

7. What do you think can be done to make the association more beneficial to the community and the nation as a whole? ---

---

---

8. What is your source of funding? ---

---

9. How do women acquire land for farming in this community? ---

---

10. Do you find the mode of acquisition satisfactory to women? Give reasons -----
---
---

11. Do you get satisfactory yields and income from your farms? Yes ( ) No ( ).

Comment ---

12. Comparing your individual farming and farming within the association which one of the two contribute more to your food requirements? Give reasons ----------
---

12a. Is the association beneficial to you and your family? Yes ( ) No ( ).

12b. If yes, how? ---

13a. Do you experience food shortages during any part of the year? Yes ( ) No ( )

13b. If Yes, give reasons ---

---

14. Describe how your marriage influences your work. (in farming) ----------
---
---

15. What improvement would you like to see made for women farmers? ----------
---

----------16. What other job would you like to undertake in place of farming? Give reasons ----------
---

THANK YOU FOR YOUR TIME.

APPENDIX THREE) (C)

Household Questionnaires on Women and Crop production in Wa Municipality PROSPECTS AND CHALLENGES OF WOMEN IN ENSURING FOOD SECURITY. A FOCUS OF SOME SELECTED COMMUNITIES IN THE WA MUNICIPALITY OF THE UPPER WEST REGION.

Dear Respondent,

This survey is to solicit your opinion on the above topic with the view of exploring into food security and prospects and challenges that comes the way of women. The study is geared towards the award of a master of Philosophy Degree in Development Management.

Kindly be assured of your confidentiality in the responses you give. Thank You.

PERSONAL PROFILE OF RESPONDENT:

1. Name of Household ----------

2. Sex Male [ ] Male [ ]

3. Age ----------

4. Marital Status; Married [ ] Single [ ] Divorce [ ].

5. Number of children ----------

6. Occupation ----------

7. Education level ----------

a. No school/ Education [ ] b. Primary [ ] c. J.H.S/ Middle school [ ].

d. Secondary [ ] e. Tertiary [ ] f. Others (Specify) ----------

9. ACCESS TO FARM INPUTS;

* Do you own a plot of land besides what your husband uses? Yes [ ] No [ ].

*If yes how did you acquire it?

a. Tenancy [ ].

b.Gift from relative [ ]

c.Husband [ ]

d.Share Cropping [ ]

e. Others Specify ----------

If no why? ----------

---------- ----------

---

10. List five (5) major crops that are grown on your farm?

a. ----------

b.----------

c.----------

d.----------

e.----------

11. Do you apply fertilizer on your farm? Yes ( ) No ( ).

If yes how do you access it?

a. Buying ( ) b. Husband ( ) c. Relatives ( ) d. Others Specify ---------

---

12a. What was the quantity of fertilizers applied in your farm for the past farming season?

12b. If no why? ----------

----------What are the main sources of labor? a. Own labor ( ) b. Hired Labor ( ) c. Others Specify

---

13. How did you obtain your initial capital to start farming?

a. Friends [ ]

b. Husband [ ]

c. Personal [ ]

d. Loan [ ]

e. Others Specify ----------

14. Do you have access to any form of credit? Yes [ ] No [ ].

15. If yes what is the source? ----------

16. Are the process involved cumbersome? Yes [ ] No [ ].

THE PRODUCTIVITY LEVEL PER A WOMAN;

17.In a week how many times do you go to farm?----------

18. Mention the house hold chores you undertake before you go to farm? ----------

19. Are you satisfied with the time you spend on the farm? Yes [ ] No [ ].

20. If no why? ----------

21. What is your output per acre of the crops cultivated in the five (5) major crops cultivated for the past farming season?

CROPS	OUTPUT/ACRES.
a. ----------a----------	
b. ----------b.	----------
c. ---------- c.	----------
d. ----------d..	----------
e.---------- e.	----------

22a. Are you satisfied with your output? Yes [ ] No [ ].

22b. If no why? ----------

SOCIAL-CULTURAL PRACTICES AND CROP PRODUCTION:

Indicate who carries out the following activities in crop production;

ACTIVITY	MALE	FEMALE	BOTH
CLEARING OF LAND			
SOWING			
WEEDING			
HARVESTING			
STORAGE			
TRANSPORTATION TO MARKET			

Are the activities in the above influenced by custom / beliefs? Yes [ ] No [ ]

If yes mention four (4) of them ?

a ----------

----------b. ----------

----------c.----------

----------d----------

Do you think the above activities are still relevant? Yes [ ] No [ ]

Give reasons for your answer ----------

---.

APPENDIX FOUR (D)

KEY INFORMANT INTERVIEW GUIDE:

1. What are the crops cultivated in this community?

---

2. How do people in this community use the animals they rear?

---

3. Who own land in your community?

4a. Are there equal opportunities for both sexes when it comes to land allocations?

Yes [ ] No [ ].

4b.If yes specify ----------

---

5. What customs guide the distribution of land in your community?

---

6. Do you think there is enough food in this community through-out the year?

---

7. What copping strategies do you think the people use to survive after they have finished their farm produce till the next harvest season? ----------

---

---.

8. What role does the women association play in combating problems of food insecurity in this community? ----------

---

---

9. What do you think are the major causes of food shortages in this community?
10. How do you think this problem can be solved?

MANY THANKS FOR YOUR TIME.

APPENDIX FIVE (E)

ACTION PLAN FOR RESEARCH (2008/2009/2010)

ACTIVITY	DURATION												WHO	WHERE
	J	F	M	A	M	J	J	A	S	O	N	D		
Search and review of Literature (2009)	x	x	x	X	x	x	x	x	x	x	x	x	Student	Wa
Submission of proposal											x			Wa
Drafting of questionnaires	x													Wa
Preliminary visit to communities and identification of target respondents (1st phase2009).	x				x							x	Student	Busa Sing Jinpkan Kperisi
Pre-testing of instruments e.g questionnaires (2010).	x	x											Student	Study area
Reconstruction of instruments to meet realities			x										Student	Study area
Conduct interview (2nd phase 2010)			x										Student	Study area
In-depth study (3rd phase)				X									Student	Wa/Study areas
Data Analysis and write up				X	X								Student/Supervisor	Wa/Tamale
Presentation of first draft						x							Student	Wa/Tamale
Redrafting and correction of findings							x						Student/Supervisor	Wa/Tamale
Final write up and submission (2010)								X						Tamale/Wa