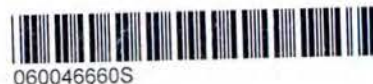


FOOD SECURITY AMONG MALE AND FEMALE-HEADED HOUSEHOLDS IN EDEN DISTRICT
MUNICIPALITY OF THE WESTERN CAPE, SOUTH AFRICA



SINAH MODIRWA

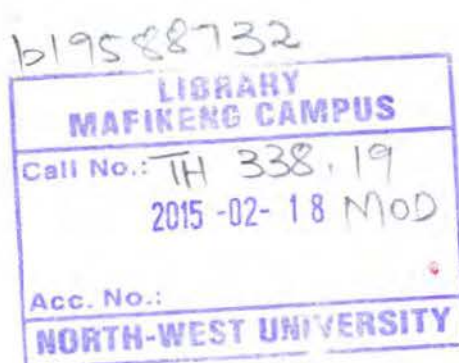
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MAY 2011



DECLARATION

I, Modirwa Sinah, declare that this dissertation, submitted to the North West University, Mafikeng Campus, is my own work and has not been previously submitted to any university. All the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

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ABSTRACT

The study presented food security situation among farming male and female headed households in Eden District Municipality of the Western Cape, South Africa was conducted in 2010. The study was conducted among 31 male and 19 female headed farming household heads, selected proportionate to the size of each group. The household heads were selected via simple random sampling procedure. Data for the study were elicited from the respondents using structured questionnaire. The analytical tools used include the Mann-Whitney test to determine if a difference in food security exists among the two groups, a Wilcoxon test was used as an alternative for indicating the differences in food security. Frequency tables indicated the percentage distribution of respondents based on demographic characteristics. Out of the 12 food security constraints identified, both males and females viewed poor storage, poor market, and lack of credit and land tenure as the constraints that highly affect their household food security. The result showed that 58 percent of the females were between 41-50 years and 42 percent of the males were above fifty years of age. The percentage of male headed households that studied up to college level (16.1) was slightly higher than those of females (15.8). Most of the household heads had between 2 to four years farming experience (77.4 males and 64.4 females respectively), with 90.3 males farming on 3 to 4 hectares and females on 78.9 hectare. Most of the farmers do not have any co-operative or farmer society. A significant difference existed in their food security status ($Z = 2.115$, $p = 0.034$), with higher mean rank for males (28.44) than for females (20.71). This confirms that food insecurity incidence was higher in female headed households than male headed households.

Key words: Food security, Food insecurity, female headed households, male headed households.

DEDICATION

This thesis is dedicated to my parents, the late Mr. Koos and Mrs. Phyllis Tladi who worked hard and sacrificed a lot to ensure that we, their children got descent education.

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This research project would be impossible without the help of God. I am indebted to many individuals who have been instrumental in making this study possible. It is impossible to make mention of all individuals but only a few will be mentioned.

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Finally, I wish to thank the extension officer who assisted in identifying the prospective participants and the farmers who willingly gave up their time to answer the questions.

ACRONYMS

FAO	United Nation's Food and Agriculture Organization
WFP	World Food Programme
UNICEF	United Nations Children's Fund
HSRC	Human Sciences Research Council
IFPRI	International Food Policy Research Institute
INP	The Integrated Nutrition Programme
IFSS	The Integrated Food Security Strategy
CASP	Comprehensive Agricultural Support Programme
MAFISA	Micro Agricultural Finance Initiative of South Africa
NDA	National Department of Agriculture
DFI	Development Finance Institute

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CHAPTER 1

1.1 Background of the study

Food security has been used to explain whether people have both physical and economic access to good quality and quantity food all year round. This term goes hand in hand with food insecurity which implies a lack of access to sufficient food or a lack of adequate food in terms of nutritional value, resulting in under nutrition or malnutrition, World Health Organisation (WHO, 2006). These two may be affected by factors, such as, among others, poor access to market, harsh weather, poor health conditions, storage facilities, rising food prices, the global economic recession being faced by the global market and lack of access to production factors. However, the state and causes of food in/security differs from country to country or from region to region depending on the resources available, World Health Organization (2006).

Having sufficient good quality food available for the household consumption depends on various factors. Household production is one way to ensure that there is food within the household at all times, but producing sufficient of a variety of good quality food in the home garden and in the fields requires access to adequate resources, including land, water, seeds, tools, knowledge, skills and labour. Roads and transport to markets are necessary for buying and selling food and other essentials. Household members also need access to other commercial and government services, and off farm employment during periods of low agricultural production.

In communities with no or insufficient income, the ability to produce enough foods in the home garden or on the farm, without having to purchase, means the household or community is food secured. Household food security depends on a regular and sustainable food supply throughout the year. In many communities, households often face food shortages because crop production is seasonal and at times inadequate to feed the entire family.

In response to some of the factors affecting food security, governments have put in place good programmes that aim at curbing the problem. The challenge remains ensuring adequate and sustainable production of food, proper distribution to ensure equitable access, as well as knowledge to ensure a balanced diet in terms of nutritive value.

Improved food security is important for global reduction of hunger and poverty, and for economic development. One of the aims of the Millennium Development Goals is to reduce the proportion of people suffering from hunger by half by 2015. Currently FAO, (2009), estimates that 1.02 billion people worldwide are undernourished. This represents more hungry people and a worsening of the unsatisfactory trends.

Thus the World Food Summit target of reducing the number of undernourished people by half will not be reached if the trends continue.

The concept of food security has deeper historical roots; it evolved in the last thirty years to reflect changes in official policy thinking (Heidhues et al, 2004). Relevant literature offers different definitions of food security. The first formal definition of food security was provided by the United Nations (UN) World Food Summit in 1974. The Summit concluded that food security is the “availability at all times of adequate world food supplies of basic foodstuffs to sustain a steady expansion of food consumption and to offset fluctuations in production and prices” FAO (2006).

In 1983, FAO’s analysis focused on food access, leading to a definition based on the balance between the demand and supply side of the food security equation: “Ensuring that all people at all times have both physical and economic access to the basic food that they need” (FAO, 2006)

The definition was revised to include the individual and household level, in addition to the regional and national level of aggregation, in food security analysis. In 1986, the World Bank Report on Poverty and Hunger focused on temporal dynamics of food insecurity, the report introduced the distinction between chronic food insecurity, associated with problems of continuing poverty and low incomes, and transitory food insecurity, which involved periods of intensified pressure caused by natural disasters, economic collapse or conflict (FAO 2006).

“Food security exists when all people at all times have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life”. This widely accepted definition also reinforces the multidimensional nature of food security which includes:

Food access: Is ensured when households and all individuals have adequate resources (entitlements) for acquiring appropriate foods for nutritious diet. Entitlements are defined as the set of all commodity bundles over which a person can establish command, given the legal, political, economic and social arrangements of the community in which they live (including traditional rights such as access to resources FAO (2008c). This entitlement can come about through owning the food a person has produced himself, having the purchasing power to buy it in the market, or having some other recognized claim to the food, such as being a family member entitled to shared household resources or being included in a relief agency’s list of those qualifying for food aid FAO (2008c).

Food availability: The availability of food is achieved when sufficient quantities of good quality food are regularly available to all individuals within a country. Such food can be supplied through household production, other domestic output, commercial imports or food assistance (FAO, 2006).

Food utilization is the proper biological use of food, requiring a diet providing sufficient energy and essential nutrients, potable water, and adequate sanitation. Effective food utilization depends in large measure on knowledge within the household of food storage and processing techniques, basic principles of nutrition (FAO, 2006).

Stability: To be food secure, a population, household or individual must have access to adequate food at all times. They should not lose access to food as a result of sudden shock (e.g. economic or climatic crisis). The concept of stability can therefore refer to both availability and access dimensions of food security (FAO, 2006).

Many communities do not have year-round access to adequate amounts of either fresh or processed staple foods, and their access to fresh vegetables and fruits tend to be seasonal. Household sell food because they need cash. They use different strategies to ensure continuous access to a variety of nutritious foods. Livelihood approaches are now fundamental to international organizations' development programmes.

The United Nation's Food and Agriculture Organization recently convened the World Food Summit in Rome on 16 -18 November 2009 whereby world leaders discussed the total eradication of hunger from the planet. The FAO has stated its aim to put in place a more coherent and effective system of governance of world food security. The aim of the summit was also to make sure that developing countries have a fair chance of competing in world commodity markets; to mobilize substantial additional public and private sector investments in agriculture and rural infrastructure; to agree on more effective mechanisms for early reaction to food crises, and to ensure that countries are prepared to adapt to climate change and mitigate negative effects. The FAO further states, "the global food insecurity situation has worsened, food prices remain stubbornly high in developing countries, while the global economic crisis is aggravating the situation by affecting jobs and deepening poverty irrespective of the commitments made by governments on the right to food" (World Food Summit, 2009).

Further, the Ebony Consulting International (ECI, 2002) argues that people cannot be food secure if they lack insufficient income to purchase food. Similarly, people cannot be food secure if they do not have access to food. The notion of food access encompasses the notion of entitlements to food, such as the entitlement to the financial means to purchase food. Finally people cannot be food secure if they cannot correctly utilize food to which they have access.

Food Insecurity

Food insecurity can be targeted at global, regional, national and household levels. All these levels are inter-related, the issue of regional food security cannot be properly analysed without the due consideration being given to individual and households, as well as national levels. Global agriculture currently produces enough to provide the entire world's people healthy and productive lives. However, food is not distributed equally to regions, countries, households and individuals. Food aid can help meet a fraction of the needs of the poor. However, improved access to food through increased agricultural productivity and incomes is essential to meet the food needs of the world's growing population. Agricultural productivity include measures of the food system which reduce food costs in real terms and increase incomes WHO (2006).

Rising incomes will result in increased effective demand for food, and, in turn, increased production. In a world where there are already many food insecure people, this process will create additional uncertainty about food supplies for the poor, especially if food prices also rise. However, it also means there is real potential for expanding the incomes of the poor if ways can be found to improve their productivity both on and off the farm.

1.2 The socio-political context of gender and food insecurity

The definition of food security as indicated earlier is "the physical, social and economic access to sufficient, safe and nutritious food by all Africans at all times to meet their dietary needs and food preferences for an active and healthy life". If this definition is accepted, then the African continent as well as the Caribbean countries has not been able to achieve food security (Rupiya, 2004). Rupiya, further states that since the mid-1970s, the continent has not been able to sufficiently feed itself and is unlikely to do so in the future unless radical policy changes are made to apply to the current situation

Rena (2005) outlines the case of Eritrea, where malnutrition and transitory food insecurity are pervasive. In some cases, a shift to neoliberal agricultural policies has also affected the non-market distribution of products such as maize in rural Zambia, including bartering for goods and labour, resulting in increased risks of food insecurity (Sitko, 2006). Vogel and Smith (2002) have warned against an emerging food crisis threatening in Southern Africa (with Angola, Lesotho, Malawi, Mozambique, Zambia and Zimbabwe possibly facing massive food crises), largely due to structural vulnerabilities (lack of resources and political instability), as well as through factors (such as droughts, flooding, pestilence). Further, In the case of Botswana, environmental and socio-economic factors also impact on food security.

South Africa faces the same difficulty as other sub-Saharan African countries; not producing and not having enough food available to feed its own population (The Presidency, 2008b). For example, approximately 14 million people in South Africa are estimated to be vulnerable to food insecurity, while 1.5 million children under the age of 6 years are stunted by chronic malnutrition (The Presidency, 2008a). Thus the percentage of hungry people increases every year.

Lean-Heng (2008) estimates that women presently constitute 75% of the world are poor. In South Africa, as elsewhere in the world, men dominate and women are subordinated despite their contributions to both economic and social life. Despite the South African Constitution's attention to gender equality and a non-sexist society, inequality and the sexual exploitation of women continue, and often are not easily addressed by constitutional protections. For example, most recently, South Africa was ranked 20th in the World Economic Forum's Gender Gap Index (Hausman et al., 2008). The index measures the size of the gender gap in 128 countries in four critical areas of inequality: political empowerment, economic participation, educational attainment, and health and survival. South Africa is the only African country to feature in the top 20.

The Global Gender Gap Report (2009) praises South Africa, attributing the country's firm position to its performance on such criteria as political empowerment, and to slight improvements in the participation of women in the labour market and a move to close the wage gap. However, the report also acknowledges that no country in the world has reached total equality between men and women in all spheres of life. Even in countries which have made the most progress, women remain generally dominant in the informal sectors and are, therefore, more subject to poverty. Thus, in centre for poverty employment and growth HSRC, in spite of the representation of women improving in the various institutions that constitute South African society, true gender equality continues to be elusive. This is due to such factors as the rural-urban divide, women's relatively poor access to and low levels of success in education and skills development, HIV/AIDS, gender-based violence, and low levels of access to the labour market presenting challenges particularly for women.

1.3 Problem statement

Food is a basic necessity of life. Its importance is seen in the fact that it is a basic means of sustenance and an adequate food intake, in terms of quality and quantity is a key to healthy and productive life. On the other hand food insecurity is recognised as a severe and a major development challenge by government, as stated in the constitution of the republic of South Africa. Agriculture and food production offer stable livelihood options and food security to rural communities, particularly developing countries. The right to food is the right to have regular, permanent and unrestricted access, either directly or by means of financial purchases, to quantitatively and qualitatively adequate and sufficient food.

In Eden District of the Western Cape Province, South Africa, the governments have put in place food security programmes aimed at curbing the problem of food insecurity, and help people sustain their lives. However, households seem not to be benefiting. Food problem is one of the characteristics of the developing countries. Poverty and social deprivation, unemployment and job creation especially amongst the youth and serious skills shortages are the characteristics of Eden District of the Western Cape Province. This indicates that while the country may appear to be food secured, a large numbers of rural households within the country are found to be food insecure.

Several factors have been identified by researchers as determining the food security status. Drimie and Mini (2003) reported population growth, unemployment, debilitating debt levels and political insecurity to affect food security Mbaya (2003) indicated that lack of access to food affects food security. The Presidency (2008a) opined that food security is determined by limited food availability, due mainly to the (under) performance of the agricultural sector, he further states that key factor contributing to the food insecurity is gender inequality in families, communities and society as a whole.

A major factor in recent food security literature is the issue of household head as determining food security. This is predicated on the fact that the type of household headship will determine access to production factors and other variables associated with food security.

This research study proposes to provide answers to the following questions:

- What is the status of food security among male and female headed households in Eden District of the Western Cape?
- Are males more secure than females in having access to food?
- What factors might be responsible for the differences in food security between male and female headed households in Eden District?

1.4 Objectives of the study

The main aim of the study was to assess food security among male and female headed farming households

The following objectives were outlined to address the specific problems of the study.

1. To identify personal characteristics of farming households.
2. To determine the level of food security in male and female farming households
3. Ascertain constraints in achieving food security.
4. Determine the government intervention to food security.

1.5 Significance of the study

Food security exists when all people at all times have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life. It is about the individual or household and his / her capabilities and means of earning a living; including income and assets (an asset could be property, livestock, equipment etc). A household become food secured when it has access to good quality and quantity food throughout the year, obtained through purchase or home production.

Food security policies failed to address the core livelihood risk Ruivenkamp and Windfur, (2005), therefore, an understanding of factors affecting food security will be of value to policy makers to formulate appropriate policies that will enhance sustainable food production. They further stated that the government's land reform programme failed to equitably redistribute land and this is a key factor affecting food security in many communities and families, hopefully this study will assist the government in restructuring its land reform programmes.

Adequate understanding of the factors affecting food security among male and female headed households will help the researcher to develop a model which will enhance food security in order to uplift and improve economic development in the farming and agricultural industry. The findings of the study might again assist the community to identify their needs and sustain their livelihoods.

1.6 Research Question

The purpose of the study was to contribute to the understanding of food status among male and female headed households at household level in Eden District of the Western Cape of South Africa. The study sought to find answers to the following questions:

- What are the personal characteristics of the farming households?
- What is their level of food security?
- What are the constraints in achieving food security?
- Do socio-economic characteristics of farming households determine their food security?

1.7 Hypotheses

The following hypotheses served as the guiding research assumptions for the investigation.

1. There is no significant relationship between socio-economic food security status of male and female households in Eden District of South Africa.
2. There is no significant difference in the food security status of the male and female headed households in Eden District of South Africa.

1.8 Definition of terms

An explanation of the key concepts and what they mean in the context of this study is necessary for better understanding of the literature reviewed. Certain key concepts need to be clarified to ensure that their meaning in the context of this study, which may be different from their meaning in other context, is clearly understood.

Food security is defined by the World Bank as a condition whereby people have at all times physical and or economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. This study describes food security as the ability of household members to provide themselves with adequate food (through whatever means) throughout the year.

Food insecurity is a condition whereby people do not have access to food to meet their food preferences.

Household: In the context of this paper a household is defined as a group of people who live together, share a common source of food or contribute from a joint economy, reside within well-defined and observable locations, and function well together.

1.9 Outline of chapters

This study is divided into five chapters, which are linked together where applicable.

Chapter 1: Introduction

Chapter one begins with a descriptive definition of the main concept of this study, namely food security. The chapter follows with a discussion of the background to the study, the research problem, the research methodology, research question, objectives, and hypothesis to be tested and lastly discusses the contribution which the study can make to a specific academic field, profession, or particular community.

Chapter 2: Literature Review

This chapter explored conceptual and theoretical issues around food security.

Chapter 3: Research methodology

This chapter will give the description of the study area and the overall design of the study as well as the rationalization for data collection methods. The chapter starts by describing the physical location of the Western Cape Province, including the district and local municipalities before dealing with the methods used to collect the data.

Chapter 4: Presentation / discussion of research results

This chapter presents the results of the study by discussing the socio-economic factors affecting the achievement of food security.

Chapter 5: The findings and recommendations

Chapter five analyses the findings and recommendations of the research results conducted in Eden District municipality of Eden district of the Western Cape.

1.10 Conclusion

This chapter has provided the background to the study. It discussed the motivation for selecting this research topic, and went on to discuss the statement of the problem and research methodology, as well as presenting the outline of the study. It has set the stage for the in-depth discussion of the chapters that follow, in which the issues mentioned in this chapter are dealt with in more detail and recommendations made accordingly.

2.1 Introduction

The aim of this chapter was to familiarise readers with the theoretical literature reviewed on food security. This was done by articulating and clarifying definitions of food security and other relevant terms. To understand the context of food security, the literature reviewed the status of food security in the world, food security status in South Africa, causes of food security and hunger and lastly the government intervention on food security.

2.2 The state food security in the world

FAO (2008c) estimated that worldwide there were 848 million undernourished people in 2003 – 2005. The undernourished population in developing countries increased from 824 million in 1990 – 1992 to 382 million in 2003 – 2005, on the other hand high food prices increased the number by 79 million in 2007 and 40 million in 2008, when it reached 963 million (FAO, 2008c). The number of undernourished people is increasing; this is evidenced by FAO (2009) in its State of food security in the world document that 1.02 billion people are undernourished worldwide. This represents more hungry people and a worsening of the unsatisfactory trends, hence, jeopardizes the prospect of reaching the Millennium Development Goal of halving the number of hungry people in the world by 2015.

The numbers of the hungry people in the world differ from country to country or region to region. For example, Asia and Africa contain more than 90% of the World's hungry, with China and India accounting for 42% and Sub Saharan Africa for a quarter (FAO, 2008c). Although undernourishment has declined in South Asia, this region still has the highest overall prevalence of underweight children in the world, at 42 % of those under 5.

Sub-Saharan Africa with 28% (UNICEF, 2008). Most of the literature indicates that the majority of hungry people live in rural areas.

According to the United Nations Millennium Project Task force on Hunger (2005), about half of the hungry are small holder farming households who are unable to grow or buy enough food to meet their family requirements – the latter estimates that roughly two – tenths of the hungry are landless rural poor. Rural poverty is high in areas far from roads, markets, schools and health services; this is evidenced by a survey conducted in the United States of Tanzanian Republic, which found a significant correlation between child nutrition status and access to major roads (Alderman et al, 2006). The study further revealed that in areas where transportation costs are high, there is also a high prevalence of underweight children, but

where roads and infrastructure are present and well connected, as in South Africa, the prevalence of underweight children is low.

Underweight rates in rural areas of developing countries are on average twice those of urban areas (UNICEF, 2007). This is linked with lower access to health services, safe water and sanitation in rural areas. In Burundi, for an example, skilled health personnel attend 83% of births in urban areas, but only 16% in rural areas (Sahn and Stifel, 2003). Dietary quality is also much lower in rural than in urban areas (Ahmed *et al.*, 2007).

Poverty then becomes increasingly urbanised because of high level of migration by poor people from rural areas to urban areas (Ravallion, Chen and Sangraula, 2007). Urban population can face food access challenges because they depend on markets. The urban poor are particularly vulnerable to high food prices. For an example the 1997/98 financial crisis in Indonesia, showed that micronutrient deficiencies can grow rapidly in urban areas when staple food prices increase (Block, 2004). Across the world, high food prices have helped provoke demonstrations and riots in urban areas, where political mobilization is much easier.

2.3 Food security in Africa

In Africa, food has become the most important item in any discussion of development during the past decades. To this end, there has been varying degrees to find effective ways of ensuring that all Africans have access to good quality food at all times. In spite of this intentions, and great emphasis on food production sector, food shortage remains a problem in Africa. As a result the number of hungry and undernourished people increases.

Food nutrition and security is still prevalent in almost all parts of Africa. Africa is the only region in the world currently facing chronic food insecurity and persistent hunger Dittoh (2003). The most insecure environment in Africa are arid and semi-arid zones, where draught is a major recurring factor. Benson (2004) points out that food and nutrition security remains Africa's most fundamental challenges for human welfare and economic growth. Many people in the continent are unable to acquire and utilize at all times the food they need for a healthy life. Under nutrition is the major risk factor underlying most death in Africa Benson (2004).

The causes of food crises in Africa are many. Clover (2003) indicates that analysts generally Believe that Africa's current food emergencies are a result of a combination of problems. He further argues that the reason why action plans to address food security have continued to fall short can be attributed to faulty analysis and faulty actions by the government and non-governmental actors involved in

food security interventions. What is needed is an understanding to work more strategically in developing and implementing effective international, national and regional policies. Availability, access and affordability are all elements of food security, complex issues that encompasses a wide range of interrelated economic, social and political factors, internal and external, which challenge Africa's ability to address food security Clover (2003).

Although progress has been made in reducing insecurity globally, estimates of reductions in malnutrition have been an unfortunate exception of these trends (de Onis et al, 2004). Over the period 1980 to 2000, stunting rates in Africa declined by less than four percent, so that with population growth, the actual number of stunted children actually increased by more than 12 million. Both relative and absolute number of underweight children in Africa increase the same period. The African continent is now receiving food aid with many people requiring emergency food aid.

Benson concludes that food and nutrition security and nutrition insecurity is a critical constraint to economic growth in Africa and an immediate cause of widespread suffering. Million of Africans seek enhanced food and nutrition security. The national governments can do a great deal on many different scales to facilitate and ensure that citizens access the tools that will allow them to meet their food and nutrition requirements

2.4 Food security in South Africa

In South Africa the cause of food insecurity is not due to a shortage of food but rather an inadequate access to food by certain categories of individuals and households in the population, Vogel and Smith (2002). Food insecurity is not an exceptional, short-term event, but is rather a continuous threat for more than a third of the population, Human Science Research Council (2004). The HSRC further states that the majority of South Africans buy their staple foods from commercial suppliers, rather than growing it themselves, and are therefore dependent on having (direct or indirect) access to cash.

Among the unemployed in South Africa the main sources of cash are insecure piece jobs, the government's old age pension and child support grants and private transfers from working relatives and neighbours. In addition to cash, households need to have access to land for producing food to supplement insufficient cash they receive. Accessing natural resources for the harvesting of wood fuel, wild food and livestock production is also an important factor.

Other entitlements include access to family and community networks for sharing available food.

South Africa ranks among the countries with the highest rate of income inequality in the world. It has extremely high levels of poverty. The South African government has committed to halving poverty by 2015. Achieving household food security is a critical component in meeting that objective (HSRC, 2007).

While South Africa may be a food secured nation, large numbers of households within the country are food insecure. It is important to understand household food security status in this country and investigate how the households access to food. There are food accessibility problems that need to be understood. In order to address food security, employment opportunities need to be expanded by enhancing incomes. Employment has expanded substantially since the mid-1990s, but not enough to meaningfully address income poverty. Income security is an essential ingredient to address food insecurity. The evidence shows that social grants have played an important role in improving household food security since 2001, (Aliber 2009, Van der Berg 2006). But that being the case, the improvements in employment status also need to be addressed.

In the context of large scale poverty and unemployment, as well as the present economic recession, it is feasible that people will keep on relying on grants. In a highly unequal society with high unemployment rate, this redistribution through income transfers is essential. However, it makes poor households vulnerable to national policy choices and politics. It is essential that creative and meaningful solutions are found to drawing marginalised work-seekers into economic participation as part of a long term poverty reduction and food security strategy (Aliber, 2009).

As part of this effort, a third potential contributor to food insecurity might be small scale agricultural production. It is not easy to promote subsistence or small scale agricultural production in a semi-industrialised economy like South Africa. However, many countries have successfully supported small scale production in Europe and in Japan and Indonesia, often as partial contributors to household food baskets and livelihoods. Because South Africa has invested so little in this area, it deserves investigation. However, the potential contribution of small scale farming to household food security is the subject of some controversy (Aliber, 2009).

There are numerous challenges in identifying strategies for household food security. Food security is multidimensional in nature and changes over time, making accurate measurement and policy targeting a challenge. There is sometimes confusion between national food security and the actual experience of households of obtaining food. Access to adequate food at a household level increasingly depends on how food markets and distribution systems function rather than only on total agro food output. Moreover, there is no clear composite measure that defines food security to enable the setting of food security goals and monitoring systems.

Food security cannot be understood in isolation from other developmental questions such as sources of income, rural and urban development, changing household structures, health, access to land, water and inputs, retail markets, or education and nutritional knowledge. Livelihood patterns and sustainable asset accumulation along with structural dynamics are increasingly important determinants. The multiple factors that influence access to food are not well understood, and these impacts negatively on the ability to identify appropriate policies to improve individual and household access.

These gaps restrict the ability of policy makers to address food insecurity. Policy makers are constrained in their ability to identify interventions appropriate to different situations and needs. There are also deep institutional barriers to successfully translating policy into implementable programmes. This is exacerbated by weak links between government, the private sector and civil society organisations (Aliber, 2009).

The problem of household food insecurity is further exacerbated by a range of additional factors that have recently come into play and drive the cost of food. Domestic electricity supply constraints and rising oil prices are examples of important factors in this regard. The price of electricity is rising every time. Even if the oil price declines for a period, the advent of peak oil is expected to cause a long term rise in prices. This will affect the supply of fertiliser because petroleum is an input for chemical fertiliser, and agro-food transport costs. Other factors that are increasingly affecting food prices are bio-fuel production (which results in the reallocation of resources and outputs to the supply of feedstock), speculation in commodity markets and the power of agents within the agro-food chain, namely supermarkets, processors and distributors.

Rising food prices, particularly of maize and wheat which are the staple diet of the poor in South Africa, pose serious problems for the urban and rural poor as most are net buyers of food. Recent information from the Food and Agricultural Organisation (FAO 2009) supported by Heady and Fan (2008) suggest that food prices will increase steadily over the next decade even if there are some fluctuations and the occasional drop in prices (Evans 2009). Given increasingly strong linkages between the local level and national and international commodity chains and economic networks, even remote rural households in South Africa are affected by changes in these networks. Unless there are new policy directions, poor households will increasingly be forced to allocate a greater proportion of their expenditure to food, with the result that diets will become less diverse, lower in quality, and energy intake will drop as people try to cope with the situation. Most severely affected will be the chronically urban and rural poor, the landless and female headed households (FAO 2009).

South Africa faces a structural household food insecurity problem, the prime causes of which are widespread chronic poverty and unemployment (HSRC 2007). Real solutions to household food insecurity lie in growth and structural change; the population cannot wait for that to happen. People are hungry today and must eat today, they cannot wait until tomorrow. The future growth and development depends on an inclusive path based on effective human development. Access to sufficient nutritious food and clean water underpins human development.

2.5 Food insecurity and hunger

Food insecurity causes hunger. It is therefore of vital importance to identify the necessary conditions of food security in order to understand hunger and its causes. FAO (2009), in its document “Hunger and Markets define hunger as a condition in which people lack the required nutrients for an example energy / protein and vitamins / minerals – for a healthy, productive and healthy lives. Hunger can either be chronic or acute. On the other hand, food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and preferences for an active and healthy life.

Increased food supply is necessary though not sufficient condition for eliminating hunger and poverty. The food security of any region is not simply a question of producing enough food to meet demand; it is influenced by a multiple factors both natural and human-made. Increased food supply does not automatically mean increased food security for all. What is important is who produces the food, who has access to the technology and knowledge to produce it and who has the purchasing power to acquire it.

2.6 Causes of food insecurity

2.6.1. Availability of food (lack of consistent access to food)

Enough food may be produced in a region, but food security may persist for those who do not have the resource to buy or produce it. Farmers may be able to produce or buy enough food for their families after harvest but may be food insecure at other times of the year (Benson, 2004).

2.6.2. Natural capital (Degraded natural resources and practice of mono-cropping)

A degraded natural environment, such as poor soil quality, eroded landscapes or inadequate water resources, will compromise food production in an area. Further mono-cropped systems are less likely to promote food security than diverse agricultural systems, which are more resilient to stresses.

2.6.3. Social capital (community and group issues)

Where there are poor links within and between the communities, with limited networks, partnership, trust and collective action, credit and responsibility, communities are likely to cope with and to be able to help each other in times of hardship such as draughts, food shortages and conflicts. Food insecurity and ill-health is likely to be greater in areas with lower social capital.

2.6.4. Human capital

Lack of education and knowledge, ill-health and diseases): Lack of education and agricultural / nutritional knowledge can affect farmers' capacity to adapt to change or to cope with food production stresses. In addition malnourished people are not able to produce food as those who are well fed. The prevalence of diseases such as HIV / AIDS has had serious impacts on food security and nutrition. When family members become ill or die from virus, households are less able to produce or buy food, Rosegrant et al., (2005). In Sub-Saharan Africa, 11 million children are orphaned by HIV / AIDS, FAO (2002). Mortality and Morbidity in HIV / AIDs infected households has led to decreased farm sizes, loss of income at household level, a higher dependency on ration and a general increase in food insecurity, (Wagah, 2005).

2.6.5. Gender issues

Women are mostly the major agricultural labour force. However, as they are not always recognised for this, they may not control household budgets and often have poor education. Where men are in control over the household income, less money is spend on food when compared to those where women have control over incomes, (Benson, 2004).

2.6.6. Physical capital

Poor infrastructure & Lack of access to appropriate technologies for an example roads, communications and markets) affects food security. On the other hand lack of appropriate agricultural knowledge, technologies, methods and inputs can affect food security. (Benson, 2004).

2.6.7. Financial capital

Poverty remains the root cause of hunger and malnutrition in the world, International Food Policy Research Institute (IFPRI, 2005). As well, lack of access to markets means that farmers and communities can neither sell their surplus nor purchase food in times of shortage. This leads to inconsistent food availability thus contributing to food insecurity.

2.6.8. Land tenure issues

This can contribute to food insecurity in various ways. For an example, in some areas if a husband dies, the wife cannot continue to farm the land and the land goes to other members of the family. In other areas all of the male children inherit the land after the death of the father and share it between them, which mean that each person owns increasingly smaller plots, making it hard to sustain enough food for the household, (Benson, 2004).

2.6.9. Political issues

Political problems, including corruption and nepotism, can significantly inhibit attempts to tackle food insecurity, (Rosegrant et al., 2005). According to the United Nations Millennium Task Force on Hunger (2005), food security is said to be concentrated in remote, resource poor rural areas. Ahmed et al (2007), indicates that barriers to access to productive assets by women are important drivers of food insecurity. Williamson (2003b) suggests an even distribution of assets because households utilise them to increase their wealth and wellbeing.

Poor and hungry people often face social and political exclusion; they are unable to demand their rights. Further they have little access to education, health services as well as access to safe drinking water, United Nations Millennium Project Task Force on Hunger (2005). They suffer an extreme lack of economic, political and social freedom. These deprivations are deep rooted and prevent people from lifting themselves out of the poverty trap.

2.7 The Government interventions to food security

Policies that intervene in targeting poverty and food security specifically in South Africa are influenced by policies at the regional and global level, Thege (2009). Such policies are listed hereunder:

2.7.1. The international policy context

The United Nation's Food and Agriculture Organization convened the World Food Summit in Rome on 16 -18 November 2009. World leaders discussed that the developing countries have a fair chance of competing in world commodity market, to mobilize substantial additional public and private sector investment in agriculture and rural infrastructure to agree on more effective mechanisms for early reaction to food crises, and to ensure that countries are prepared to adapt to climate change and mitigate negative effects, with an immediate view of reducing the number of undernourished people to half their present level no later than 2015. FAO and WFP (2009). The central problem identified was that total eradication of hunger and food insecurity has global dimensions and are likely to persist, and even increase, unless dramatic action is taken.

The indicators of the challenge to food security motivated were inadequate access of food supplies despite the substantial increase in food supplies; inadequacy of household and national incomes to purchase food; inadequacy of household and national incomes to purchase food, instability of supply and demand; natural and man-made disasters; conflict and terrorism; corruption; environmental degradation; and poverty.

The declaration suggests that a peaceful, stable and enabling socio-political environment forms the basis for enabling nation states to give priority to food security and poverty eradication. Such stability, an es-



sential ingredient for sustainable development and food security, is dependent on concrete democracy, as well as on the promotion and protection of human rights and fundamental freedoms, including the right to equality and participation for men and women. To facilitate achievement of its targets, the states need to adopt policies facilitate employment and income generation, the promotion of equitable access to productive and financial resources, and overall sustainable development, FAO (2006).

The complex character of food security was recognised, and that effective international efforts are required to supplement and reinforce national action. To this end, a number of commitments were identified, to be undertaken nationally and internationally, including:

- _ ensuring political, social and economic stability to create the best conditions for the eradication of poverty and for durable peace, based on the full participation of men and women to achieve sustainable food security;
- _ the implementation of policies targeting the eradication of poverty and inequality to improve physical and economic access by all;
- _ pursuing participatory and sustainable food, agriculture, fisheries, forestry and rural development policies and practices in high- and low-potential areas, which are essential to adequate and reliable food supplies at the household, national, regional and global levels that combat pests, drought and desertification;
- _ ensuring that food, agricultural trade and overall trade policies are conducive to fostering food security through an equitable and market-oriented world trade system;
- _ ensuring prevention of and preparedness for natural disasters and socially induced emergencies and to meet transitory and emergency food requirements in ways that foster recovery, rehabilitation, and development;
- _ promoting optimal allocation and use of private and public investments to foster human resources, sustainable food, agriculture, fisheries and forestry systems, and rural development in high- and low-potential areas;
- _ implementing and monitoring a Plan of Action at all levels, in cooperation with the international community.

These commitments were translated into objectives and action plans in the form of the Special Programme for Food Security (SPFS). The Special Programme for Food Security Plan of Action was reviewed in Rome in 2003 (5– 9 May) and this process highlighted several gaps that had become evident since the implementation of the Rome Declaration.

These gaps included:

Widespread misconceptions about the Special Programme for Food Security; Lack of systematic impact assessment; Insufficient systematic oversight of national Special Programme for Food Security projects; Weaknesses in constraints analysis; Insufficient application of participative approaches in Special Programme for Food Security design implementation; Limited impact on national policies for food security; Lack of clarity on scaling-up processes and Insufficient targeting. (FAO,2006).

One explanation for these gaps may lie in the absence of interventions targeting gender inequality or improving the status of women as a strategy for addressing food insecurity. Without such a focus, the root causes of food insecurity may not be understood. In response to The South African government appointed a Food Security Working Group to investigate options for achieving food security in South Africa.

Furthermore, the Rome Declaration was reinforced a few years later by the Millennium Declaration which aims to halve the proportion of people suffering from both poverty and hunger by 2015. The Millennium Development Goals have measurable targets that collectively aim to make definite improvements in the lives of the world's poor, and require coordinated action. An emphasis on the elimination of hunger, poverty, and maternal and child mortality requires an emphasis on promoting healthy, productive individuals.

The MDGs have committed to ensuring among other things the eradication of extreme poverty and hunger, and specifically, by 2015, to achieving three targets which are: To halve the proportion of people whose income is less than \$1 a day, to achieve full and productive employment and decent work for all, including women and young people. To halve, between 1990 and 2015, the proportion of people who suffer from hunger. Complementing Millennium Development Goal-1 are seven other MDGs that also seek to improve the lives of communities across the globe.

Among these are MDG-3, aimed at improving gender equality, and MDG-5, aimed at improving maternal health. Food insecurity is one of the greatest obstacles facing the Southern African Development Community (SADC), as all member countries, including South Africa, have populations experiencing malnutrition and famine. Key among interventions aimed at addressing this challenge are policies and programmes targeting food production and costs.

2.7.2. The South African policy context

In South Africa there has been a concern within government policy formulation about the connection between gender (as a social force which shapes the roles of men and women differently), gender inequalities (in terms of an analysis of power relations between women and men in specific contexts), and poverty. Based on this, current debates and discussions on inequalities and policy strategies disclose a complex set of questions about how gender dynamics are integrated into the design of programmes targeting women, and how they are understood as central to the economic and social deprivation experienced by millions of South Africans.

Evidence shows that access to electricity, sanitation, water and housing has improved for the general population, but life expectancy have reduced (Dorrington & Tootla, 2007; Seekings & Nattrass, 2005). The South Africa policy interventions that target poverty and food security are guided by the Constitution of the Republic of South Africa (Act 108 of 1996).

In his inaugural speech as President, Nelson Mandela made clear the national commitment to gender equality:

“It is vitally important that all structures of government, including the President himself, should understand this fully: that freedom cannot be achieved unless women have been emancipated from all forms of oppression”. (Mandela, 1994).

With regard to gender equality the South African policy context is informed by the document formally titled South Africa’s National Policy Framework for Women’s Empowerment and Gender Equality, and more commonly known as the Gender Policy Framework (Office of the Status of Women, 2009). Guided by “a vision of human rights which incorporates acceptance of equal and inalienable rights of all women and men” (Office of the Status of Women, 2009) the country has defined goals and identified steps to be taken towards the achievement of gender equality, an ideal that is a fundamental tenet under the Bill of Rights that forms part of the Constitution. In terms of its vision, the Gender Policy Framework seeks “a society in which women and men are able to realise their full potential and to participate as equal partners in creating a just and prosperous society for all. (Office of the Status of Women, 2009:40).

As such, the framework offers guidelines for interaction among individuals and groups as well as for developing gender equality interventions in organisations and institutions. It proposes and recommends an institutional framework that facilitates equal access to goods and services for both women and men. It seeks to address such challenges as unequal gender relations, poverty, and access to basic resources, access to employment, violence against women and access to land.

The framework advances several guidelines and principles for integrating gender concerns into interventions aimed at transforming communities. Among others, these include ensuring that:

- _ there is equality of all persons and that non-sexism and non-racism be enshrined in the Constitution of South Africa;

- _ there is an understanding that women are not a homogenous group. This principle must inform all policies and programmes that will lead to the implementation of Gender equality. Distinctions according to race, class, sexuality, disability, age and other variables should not to be overlooked or taken for granted. However, similarities should also be used to strengthen initiatives designed to reverse past gender discrimination;

- _ Women's rights be seen as human rights;

- _ Customary, cultural and religious practices be subject to the right to equality;

- _ Economic empowerment of women be promoted; and

- _ Serious attention be placed on changing policies and practices which have hitherto hindered women's access to basic needs, the economy and decision making (Office of the Status of Women, 2009). The Gender Policy Framework is intended to inform and permeate all other policies developed in South Africa, including those targeting poverty and food security. This is premised on the notion that the right of access to sufficient food is enshrined in section 27 of the South African Constitution, indicating that every citizen has a right to sufficient food and that "the state must by legislation and other measures, within its available resources, avail to progressive realisation of the right to sufficient food".

Hendricks (2005) points, out food insecurity is likely to increase with rising food prices, increased reliance on cash food purchases, and the erosion of household coping strategies due to the impact of HIV/AIDS. In terms of gender inequality, while the vision of the Integrated Food Security of South Africa reflects noble intentions, it also reflects a gap in relation to the role played by gender in ensuring such access.

On the one hand, the IFSS (2008) acknowledges that "within the household, food insecurity often affects the more vulnerable members of the family, namely children and women" and that the "costs associated with food-insecurity at the intra-household level relate to slow educational development (often of female children), stunting, etcetera". On the other hand, the programmatic and policy interventions it recommends do not particularly use gender as a tool for analysis and development. For example, while the IFSS recommends improving household food production, trade and distribution, the policy interventions it suggests are non-specific and broad, and do not take into consideration the complex ways in which gender, together with race and class and other social identities, interact to impact on women's (and girl-children's) access to safe and nutritional food in households and communities; as such, they do not outline ways in which programmes might address the challenges created by gender inequality in food pro-

duction, distribution and access. In addition, while it refers to universal access to resources and to the need to eradicate inequalities, unless the gender dimension is explicitly spelled out and a clear link is made to the Gender Policy Framework, these concerns cannot be assumed to include addressing gender inequality.

2.8 Programmes aiming at addressing food insecurity

To attain universal physical, social, economic access to sufficient, safe and nutritious food by all South Africans at all times to meet their dietary and food preferences for an active and healthy lifestyle is supported by the bill of rights in the constitution of the Republic of South Africa Act 108 of 1996, the constitution clearly states that, everyone has the right to have access to sufficient food and water and that the state must take measurable legislative and other measures, within its available resources, to achieve the progressive realization of each of these rights to eradicate hunger, malnutrition and food insecurity is achieved by 2015.” (FAO, 2006).

The government’s main response to these challenges has been to develop a framework of action to combat food insecurity. The framework was accepted by the government of national unity in 1994 and later revised and formed part of policy documents such as the Agriculture White Paper (1995). In the last decade we have seen various government departments attempting to combat food insecurity, malnutrition and poverty within a context of a decline in farm and urban employment, the continuing decline of the remnants of subsistence agriculture, the HIV/AIDS pandemic and continuing social and family dysfunctions (Senefeld and Polsky, 2005). This situation raises serious concerns as to whether this framework and associated strategies are still relevant today.

The government departments implemented three strategies to address the food insecurity issues. The objectives, target population and approaches in each of these strategies were identified. In assessing each strategy the following questions served as a guide:

- Have community interests & priorities been put first in these strategies?
- Would more use of participatory and rural appraisal methods have helped gather better baseline data to inform these strategies?
- Are the requirements of adequate professional coordination, meticulous and comprehensive planning and the availability of the resources of time, labour, finance, etc. available to implement and monitor these programmes?
- Have appropriate and realistic development methods and indicators been set to achieve the programme goals?

- How would one go about modifying these interventions to accommodate for long term sustainability?
- How does government ensure that other institutions, such as NGOs, get informed about its food security programs and
- Does government create a network with other stakeholders where they can learn from and share findings on these programmes?

2.8.1. The Integrated Nutrition Programme (INP)

The Integrated Nutrition Program was one of the key strategic health programs to decrease morbidity and mortality rates as well as to prevent and manage mal-nutrition. The programme was formed from the recommendation of the Nutrition Committee, appointed by the former Minister of Health Dr NC Zuma (Dept. Health, 2005). The overall vision of the programme was to optimize nutrition for all South Africans; the INP achieved the following:

Implemented primary health care (PHC) and facilitated a coordinated inter-sectoral approach to solving nutrition problems in South Africa by using a conceptual framework which explains malnutrition as the outcome of interrelated, complex basic, underlying and immediate causes and nutrition programming as an ongoing process of assessment, analysis and action, (the so-called Triple A Cycle) at all levels in any given context.

Promoted household food security, food service management and the treatment of specific disease specific nutrition and counselling, Department of Health (2005).

The INP was preceded by the formation of a National Nutrition and Social Development Programme. The Primary School Nutrition Program then followed this, which was relatively successful until corruption and mismanagement of resources dismantled it.

2.8.2. The Integrated Food Security Strategy (IFSS)

The worldwide food and security summit held in Rome the amalgamation of 185 countries in the expedition of halving poverty by the year 2015, one of the eight Millennium Development Goals (MDGs). Since then the South African government fabricated the Integrated Food Security Strategy (IFSS) making use of a partnership of existing experienced members of the national, provincial and local government; universities, NGOs and community based structures.

The objectives of the IFSS were:

- Increase household production and trading
- Improve income generation and job creation opportunities
- Improve nutrition and food security

- Provide capacity building

A somewhat hierarchical structure was devised to put in to practice the strategy which tried to provide production resources for those who are food insecure or, where that was not possible, stimulating economic activities that would give people more purchasing power to buy nutritious and safe food. FAO, (2006).

2.8.3. The Comprehensive Agricultural Support Programme

The Comprehensive Agricultural Support Programme (CASP) was an initiative involving a range of government departments and incorporates the Household Food Production programme, which was targeted at those households that fail to access surplus food. The programme spent R22 million of the R30 million budgeted for the 2005-6 financial year on 273 projects with just over 17 000 beneficiaries receiving surplus food aid. CASP also focused on skills and knowledge transfer and financial and marketing advice with the aim to promote wealth through agriculture and improve national and household food security, amongst others FAO (2006).

2.8.4. The Micro Agricultural Finance Initiative of South Africa (MAFISA)

MAFISA was launched in 2005 by the National Department of Agriculture (NDA) and the Development Finance Institution of South Africa (DFI) and was put in to operation in the 2006 with a budget of R150-R200 million in the period of 2005-6 to 2006-7 respectively, as a pilot in KwaZulu-Natal, Eastern Cape and Limpopo provinces. By providing credit to aspiring black farmers and the working poor, it was hoped that the effect would be evident in improved livelihoods, reduced poverty and viable business ventures. FAO (2006)

2.8.5. One home one garden

The programme supplies seed and fertilizer packs to households, provides agricultural training as well as financial advice to cooperatives. The intention is to encourage every household to produce some food for consumption purposes with a long-term goal of producing enough food to sell at local markets FAO (2006).

At a national level, the South African government has clearly set strategic objectives to either reduce or eliminate poverty and mal-nutrition in the country. The above-mentioned programmes highlight the progress that has been made by government institutions towards achieving food security for all. However there is little evidence made available to the public to suggest that these national food security programs have been implemented and have achieved successful outcomes. The government websites do not provide the public with detailed reports about these programs. It would be useful to get feedback about the opportunities and constraints, which arise from implementing these programmes.

The NGOs and other community-based organizations involved in food security initiatives should interact and share information on the implementation and monitoring of the food security programmes to avoid duplication. This occurs where both government and NGO staff work in one community to achieve the same project objectives without being aware due to lack of networking.

Government staff must be more engaging in the field, share information about their programmes and provide detailed programme information for the target group, using all the communication methods applicable. There have been cases where there is no information available about how, where, when and by whom a food security programme, for instance, is going to be implemented. For instance, giving people starter packs when they do not know how to grow seeds and how to utilize the harvest to ensure food security.

Government has been adequately addressing food insecurity and mal-nutrition at all levels and so has other civil society organizations. It is time to join hands, share information, and learn from each other for the benefit of the poor masses.

2.9 Case studies of countries affected by the economic crisis (source: The State of Food Security in the World, 2009).

2.9.1. Ghana

Ghana is a West African country of 24 million people that has achieved significant progress in reducing poverty and hunger. Household purchasing power has been reduced as a result of lower prices for selected cash crops, declining remittances and rising inflation, including of food prices. Fortunately, the price for Ghana's main cash crop, cocoa, has remained relatively high. Unskilled labourers' livelihoods are affected by declining volumes in industries such as timber. With their reduced incomes, unskilled labourers who have moved away from home are sending fewer remittances to their families elsewhere in Ghana and are trying to find alternative employment opportunities. Three percent of households in Ghana rely mainly on unskilled labour for their income.

The Ghanaian Government has a broad safety-net system, which includes a targeted cash transfer programme (Livelihood Empowerment Against Poverty, or LEAP), national health insurance, an education allowance, school feeding and a national youth-employment programme. The Government has also created a working group on social protection, which is coordinating interventions to monitor and respond to the effects of the economic crisis, The State of food Security in the World (2009).

2.9.2. Zambia

Zambia is a landlocked country in Southern Africa with a population of about 12 million people. Overall poverty rates in Zambia declined from 70 percent to 64 percent in 2006. Despite this progress, half of the population is still considered extremely poor, with 14 percent classified as moderately poor. The staple food is white maize. Zambia needs a sustained economic growth rate of about 7 percent if it is to meet the Millennium Development Goals by 2015, but as a result of the global economic crisis, projections for economic growth have been revised downward from 6 percent to 4 percent for 2009. Zambia is particularly vulnerable to the economic crisis because it relies so heavily on mining, particularly of copper. Inflation, particularly of food prices, is on the rise in Zambia, *State of food Security in the World* (2009).

The mining sector in Copper belt Province directly employed an estimated 30 000 individuals in 2008. Approximately 8 000 have already been retrenched and this figure was predicted to reach 10 000 by June 2009. In terms of overall unemployment, this is an underestimate as it does not account for retrenchments by contractors, suppliers and service providers for the mining companies, *The State of food Security in the World* (2009)

The loss of health benefits has been difficult for many people, particularly those on anti-retroviral medication for HIV/AIDS, which is a major problem in Zambia. The private clinics and hospitals established by the mining companies were not only providing drugs but also the necessary high protein diets. Now, many retrenched workers depend on public health systems that do not necessarily have the capacity to absorb the additional caseload. Thus, already weak public health facilities are becoming further strained, resulting in both reduced quality of care and poor coverage for all. This is a critical issue for a country that has one of the world's highest HIV/AIDS prevalence rates, *The State of food Security in the World* (2009).

Most of the retrenched miners are still residing within the mining communities in the expectation that the situation will soon improve and they will be re-employed. Some retrenched workers want to practice agriculture but find themselves ill-prepared and ill equipped, with neither the skills nor the resources to acquire land and pay for the inputs.

The Government has not allocated any funds specifically to the crisis, but it has increased spending on agriculture, health and education. These expenditures are aimed at a range of programmes, including increased fertilizer use in agriculture, enhanced treatment of HIV/AIDS and malaria, hiring of new teachers and construction of new schools, *International Food Policy Research Institute (IFPRI, 2009)*.

2.10 **Conclusion**

This chapter has provided an analysis of food insecurity status in the world and in South Africa and it continued outlining its causes the interventions of the government in addressing food security. Finally outlined the food security status in Ghana and Zambia and how the government intervened in their food security status.

3.1 Introduction

Chapter three outlines the research procedure and, more specifically, the methodological approaches employed in the gathering of data and analysis. It begins with the choice and the description of the study area, followed by the population, sampling procedure, the design of the questionnaire and its administration, including the definition of variables. Finally, the statistical techniques used in the analysis of data are described.

3.2 The study area

This study was conducted in Eden district of the Western Cape. Western Cape is one of the provinces of South Africa; its capital is the city of Cape Town. It is located on the 34° Latitude South of the Equator and 20° Longitude East of the Greenwich Meridian. It is bordered on the north by the Northern Cape, on the east by the Eastern Cape, on the south by the Indian Ocean, and on the west by the Atlantic Ocean. The Western Cape Province is divided into six district municipalities: The Cape Metropole, Overberg, West Coast, Cape Winelands, Central Karoo and Eden districts Municipalities.

Eden District Municipality is located along the South Eastern coast of the Western Cape Province. It stretches from 350 km along the Indian Ocean Coast, from the Bloukrans River in the East to Witsand and the Breede River mouth in the South. The adjacent municipalities are South Cape Municipality, Western Cape (north), Plettenberg Bay Municipality, Western Cape (east) and George Municipality, Western Cape (west).

Eden district is characterised by a myriad of social and economic challenges ranging from poverty and social deprivation, unemployment which is driving people away from the area. Furthermore job creation and serious skills shortages especially amongst the youth. The shortage of skills results in uncoordinated planning and development in the area, Eden Municipality Report (2007).

Figure 1: Map of the Western Cape with municipalities labelled



wikipedia.org/wiki/File:Map_of_the_Western_Cape_with_municipalities_labelled.svg

Figure 2: Map of the local municipalities in the Eden district



wikipedia.org/.../File:Map_of_the_local_municipalities_in_the_Eden_district.

3.3 Population

The total surface area is 1,059km². Generally 65 045 people reside in the area of which 32 895 are males and 32 150 are females (farming and non-farming). The total number of households is 14,733. The number of households involved in food security projects during the time of survey was 215; from this number 100 were found to be household heads of which 62 were males and 38 were females, Eden Municipality Report (2007).

3.4 Sampling procedures and size

Sampling is a method of obtaining information about a large group by examining a smaller, randomly chosen selection of group members. If the sampling is conducted correctly, the results will be representative sample.

A list was obtained from the extension officer from which the household heads were selected.

The extension officer assisted in identifying the prospective participants, this entails making available all the names of the households heads involved in farming. In order to get a well represented sample, one must know how many household heads are in that particular area to make an even distribution between males and females. From the list of farming households provided by the extension officer, 50 percent was calculated from each category: (Males $62 \times 50 / 100 = 31$ males), and (38 $\times 50 / 100 = 19$) females respectively, were selected for the interview. The actual number of household heads interviewed was 50.

3.5 Limitation of the study

The survey could not capture the views of all individuals within the households due to limited resource of time and finance availability; therefore only household heads were interviewed. The head of the household was taken to be any person who was considered by other members of the household as their head. It was assumed that household heads would be able to provide more informed opinion and are more influential over other members.

3.6 Data collection

Following the survey and subsequent problem conceptualization, an interview schedule was drafted. This study acknowledged the direct involvement of the local people in the research development process. Local people involvement encompasses allowing the local people to engage through the data gathering, by encouraging their participation in the discussion enables the researcher to gain an in-depth understanding of the problem and in this way the participants also feels the ownership of the project.

In exploring the best possible approach to use in gathering data for this study, both primary and secondary methods were used. In designing the methodology used to conduct this research, a feasibility study was undertaken to familiarise the researcher with the study area. The researcher held, at random, casual discussions with a few households in the study area including the area extension officer. The households were passionate in responding to the questions asked by the researcher. In this way the researcher benefited from the input of all relevant stakeholders. This assertion is in line with the recommendation by Greenwood and Levin (2007) that research be conducted with the people and not for the people.

The secondary data was collected from various official reports of government which included Department of Agriculture, Knysna local municipality reports, Space-Time research document (2007) version 2, and on research documents and related books. A structured questionnaire was then designed and implemented to gather information on food security among male and female farming household heads in the Eden district municipality of the Western Cape. The questions were set in English but due to the fact that Afrikaans was the most familiar language used in the study area, an extension official assisted with the translations. The questionnaire contained the same questions; Close ended questions were mostly used.

3.7 Definition of variables

The dependent variable for this study was “food security”. In this study food security referred to describe whether household heads have both physical and economic access to food all year round. Food security was measured using a two point scale which consisted of “Yes and No”.

The independent variables were, among others gender of each respondent, i.e. male or female household head or the sex of the household head. Male was coded 01 while female was coded 02.

Age of households: Age of the farming household was operationally defined as the chronological age of the household head. It was measured on a continuous scale of < 40, 41- 50 and above 50.

Marital status: The respondent’s marital status at the time of data collection. It was expressed in terms of legal status, it was measured on a 3 point scale, 1 denoting single, 2 denoting married and 3 denoting divorced.

Education: The level of formal education the households have completed. Education was measured using values, 1 – 3, with 1 denoting Primary level, 2 denoting High School level and 3 denoting College level.

Farming experience: Period of involvement / engagement in farming or number of years in the farming industry, measured using a 3 point scale that is 1= less than 2 years, 2 = 2 to 4 years and 3 = 5 to 10 years.

Farm size: This referred to the number of acres of the land possessed by the household head. This ranged from 1 -2 hectares and 3 – 4 hectares.

Farmer group member: This referred to farmer’s willingness to participate in trainings, meetings and try improved agricultural innovations. It was measured in a scale of 2 i.e. 1 = YES and 2 = NO.

3.8 Data processing and analysis

The collected quantitative data was coded and entered in to a computer for analysis. The Microsoft Excel Data Tool was used to capture the data. The data was analysed using the Statistical Package for Social Sciences (SPSS) for windows version 17. This was done in order to obtain descriptive statistical data and representation of results.

The principal procedures employed and the statistical techniques used for data analysis were, Frequency distribution and a non parametric statistic test, the Mann Whitney U and Wilcoxon tests were also used was used to find out if the different in food security exists among male and female headed households.

3.9 Conclusion

This chapter focused on the methodologies used in collecting data for this research. It explained the advantages of using participatory approach as a method of research, as it gives the respondents an opportunity to participate actively in the research, hence increasing the validity of the data. The chapter also highlighted the use of primary and secondary methods of data collection methods. It went further to define the variables and concluded with processing and analysis of the data for the study.

CHAPTER FOUR: RESULTS AND DISCUSSION

4.1 Introduction

This chapter presented the results of the study and this will be aligned with the specific objectives.

4.2 Demographic characteristics of the respondents

Before discussing the research findings, it is important to note that in order to obtain a sample which allows the results to be evenly distributed between males and females, some statistical representation was taken from both males and females. However, this caused a variation in the proportion of the sample depending on the population. This discussion involves a descriptive analysis of the various socio-economic characteristics of respondents. Among the several features presented and discussed are: age, marital status, educational level, farm experience, and farm size and farmer group member.

4.2.1. Gender

Normally the head of the household is responsible for the co-ordination of the household activities. The percentage distribution of male and female households in Eden district municipality on selected demographic characteristics as presented in Table 1 below. Of the 50 household heads interviewed, 62% of the households were headed by men. In rural areas of South Africa, the male headed households tend to migrate to the urban areas for wage employment. In their absence wives are left to take many decisions about household matters. Thirty eight percent of the households in the sample were headed by women.

The implication from the survey results is that there is the need to empower women for household food security; their socio-economic conditions play a significant role in food security. The high percentage of male headed families observed in the study suggested that participation of farmers in the study area depends on the perception by the male members of the community.

4.2.2. Age of household head

The other factor that is considered to be crucial in farming is age, since it determines whether the household benefited from the experience of an older person, or has to base its decisions on the attitude of a younger household. The male headed households in Eden district (42%) were above fifty years of age whereas only 21 percent were female headed and also above fifty years of age. According to Dlova et al, 2004, age is one of the factors that affect the probability of a farmer being successful in farming; because younger farmers are more ready to adopt modern technology and may be more adaptive and more willing than older people to try new methods. The study conducted by the Human Science Research Council (2009) indicated that, young people are not interested in farming, of which is not the case in the study

area. Result from this study concluded that older farmers are less capable of carrying out physical activities while younger ones are capable.

4.2.3. Marital status of household heads

There is a similar distribution of households along marital status categories. The majority of the household heads are married, 87,1% males and 63,2% females respectively. This may imply that they both (male and female) are responsible to provide food for their household and determine the type of food, quality and quantity to prepare.

4.2.4. Educational level of household head

Another attribute of importance pertains to the level of education attained by the heads of the households, who, normally, are the decision-makers. Education encompasses teaching and learning specific skills. Low level of education can be a constraint to improvement of agricultural practices. The percentage of households that went up to primary level was 51.6 males and 63.2 females respectively. This implies that farmers in the study area can read and write, further the percentage of those who attended college level was low (16.1% and 15.8).

A study by Rwigema and Venter (2004), suggests that a sound educational background can reinforce natural talent; it can provide a theoretical foundation for informed decision, they further observed that success in farming requires knowledge of aspects like marketing, purchasing, finance etcetera. In addition education is likely to improve managerial ability in terms of better formulation and execution of development programmes, and acquiring better information to improve marketing ability.

This study suggests that education should go hand in hand with training because the probability of a farmer becoming successful improved when a farmer had some type of vocational training, further such training should continue through extension support.

4.2.5. Farming experience of the household head

Conversely, while the majority of farmers in Eden have farming experience of 2 – 4 years (77.4 male headed and 68,4 % female headed), there are those who worked for five to ten years (19.4%) but this pertains to only male headed households.

4.2.6. Farm / land size

Land is the most important assets in agrarian rural societies. Insufficient land constitutes one of the most constraining resources facing households in South Africa, it is lacking in both ownership and size. There are restrictive and administrative social structures such as land tenure that need to be improved. Most households in the study area have limited access to production land as they use it for both residential and production sites.

Table 1 shows the disparity in the study area regarding land size which ranges from one to four hectares. This study shows that in reality, the households have access to very small pieces of land. However the problem of access to land was found to be common in all households. The maximum area found in the study was four hectares and a minimum of one hectare. The results reveal that 90.3 percent of the male households had land area within the range of 3 - 4 hectares and only 9.7 percent had 1-2 hectares. On the other hand 78.9 percent of the female headed households own 3 - 4 hectares and 21.9 own 1 - 2 hectares.

4.2.7. Farmer group member

Table 1 further indicates that 80 % males and 79% females do not belong to any of the cooperatives. This might be attributed to the understanding that the government through its programmes assist farmers with farming inputs. Cooperatives were found to be the way to provide a stable place to sell what they grow, to provide a living or sustainable income but it looks like the respondents do not get a competitive and dependable place to sell their crops or they basically produce for consumption, it is for this reason that only a small percentage are members of the cooperative (19 male headed and 21 female headed) respectively.

In working through small groups, farmers can reduce the cost of accessing inputs, production technologies, information and markets by sharing these costs amongst all members of the group. For example by bulk purchasing inputs through groups, farmers obtain bulk sale discounts from suppliers and can share transport costs. Through groups, farmers can open group savings and/or credit accounts offered by financial institutions at reduced individual expense and marketing farmers can share storage, processing, transport and selling costs. This study suggests that extension officials need to encourage farmers to join farmer groups.

Table 1. Percentage distribution of respondents based on selected personal characteristics.

Variable	Male (n=31.)		Female (n=19)	
	Frequency	Percent	Frequency	Percent
Age				
Less than 40	7	22.6	4	21
41 – 50	11	35.5	11	58
Above 50	13	42.	4	21
Marital status				
Single	4	12.9	3	15.8
Married	27	87.1	12	63.2
Divorced	0	0	4	21.
Education				
Primary	16	51.6	12	63.2
High School	10	32.3	4	21
College	5	16.1	3	15.8
Farm Experience				
Less than 2 years	1	3.2	2	10.5
2 – 4 years	24	77.4	13	68.4
5 – 10 years	6	19.4	4	21.1
Farm size				
1- 2 hectares	3	9.7	4	21.1
3- 4 hectares	28	90.3	15	78.9
Farmer group				
Yes	6	19.4	4	21.1
No	25	80.6	15	78.9

Table 2. Mann-Whitney test showing the level of food security among male and female headed farming households.

Variable	Groups	No	Mean Rank	Sum of Rank	MWU	WW	Z	P
Food security	Male headed	31	28.44	881.50	203.500	393.500	-2.115	.034
	Female headed	19	20.71	393.50				
Total		50						

Table 2 presents the difference in food security among male and female headed households in Eden District Municipality. A significant difference in food security among male and female headed households was determined. The result showed that a significant difference existed in their food security level ($Z = -2.115$, $p < 0.05$); with higher mean rank for males (28.44) than females (20.71). This further confirms that male headed households were more food secured than female headed households. This may be attributed to bias in resource ownership and allocation among men and women.

Table 3. Mann-Whitney test showing the socio-economic constraints to food security among male and female headed households.

variable	Groups	No	Mean Rank	Sum of Rank	MWU	WW	Z	P
Poor storage facilities	Male headed	31	26.32	816.00	269.000	459.000	-.590	.555
	Female headed	19	24.16	459.00				
Poor market for produce	Male headed	31	24.77	830.00	255.000	445.000	-.942	.346
	Female headed	19	23.42	445.00				
Lack of information on agricultural development processes	Male headed	31	30.56	947.50	137.5000	327.500	-3.457	.001
	Female headed	19	17.24	327.50				
Lack of credit	Male headed	31	27.03	838.00	247.000	437.000	-1.824	.068
	Female headed	19	23.00	437.00				
Land tenure systems	Male headed	31	25.50	790.50	294.500	484.500	.000	1.000
	Female headed	19	25.50	484.50				
Harsh weather	Male headed	31	32.47	1006.50	78.500	268.500	-4.654	.000
	Female headed	19	14.13	268.50				
Wild Animals damaging crops	Male headed	31	27.34	909.50	17.500	365.500	-3.047	.002
	Female headed	19	19.24	365.50				
Crime / farm pilfering	Male headed	31	29.19	905.00	180.000	370.000	-3.438	.001
	Female headed	19	19.47	370.00				
Poor access to farming inputs	Male headed	31	26.63	825.50	259.5000	449.500	-.761	.446
	Female headed	19	23.66	449.50				
Diseases	Male headed	31	50.53	946.50	138.500	328.500	-3.543	.000
	Female headed	19	17.29	328.50				
Poor Soil fertility	Male headed	31	24.55	755.00	259.000	755.000	-.833	.377
	Female headed	19	27.37	520.00				

Table 3 provides information regarding the output of the actual Mann-Whitney U test. It shows the mean rank and the sum of ranks of the two groups tested as shown above. This table is useful as it indicates the difference in the constraints to food security among farming households (male and female headed farming households). It was assumed that since household food security is gender sensitive, about eleven constraints were hypothesised to influence the level of food security and hence household level food security to discriminate between male and female headed households.

The table further shows the actual significance value of the test. Specifically, the “test statistics”, U, value as well as the significance. The result showed the difference on how this constraints impacted on the two groups. Poor storage, ($Z = -.590$, $p=.555$, with higher mean rank for males (26.32) than females (24.16). Poor market, $Z = -.942$, $p=.346$, with higher mean rank of 26.77 males and 23.42 females. Lack of credit, Z

= -1.824. p .068, with the higher mean rank:27.03 males and 23.00 females. Land tenure, Z = 000, p 1.000, both males and females have the same mean rank of 25.50.

Table 4. Mann-Whitney test showing participation in government programmes.

variable	No	Mean Rank	Sum of Rank	MWU	WW	Z	P
CASP 1	31	24.79	768.50	272.500	768.500	-.508	.611
2	19	26.66	506.50				
ILIMA 1	31	26.21	815.50	272.500	462.500	-.508	.611
2	19	24.34	462.50				

Table 4 indicates the participation of farming households in government programmes. Of the seven programmes identified the households only participated in only two, that is the Comprehensive Agricultural Support programme and Ilima Letsema. The Comprehensive Agricultural Support Programme aimed at empowering all small scale, subsistence and LRAD (Land Redistribution for Agricultural Development) farmers through buying them inputs for farming whereas Ilima Letsema was also offered to subsistence farmers. The funding was also used to buy inputs for them. Other programmes did not cater for the farmers in the study area since loans were offered to farmers who have assets.

4.3 Conclusion

The paper has clearly indicated that female headed households are food insecure as compared to male headed farming households. The paper report that out of the eleven constraints identified males are less affected while more constraints affected females. This is believed to be partly due to bias in resource ownership and allocation among men and women. To increase the level of food insecurity among male and female headed households, among others, the educational level, size of land cultivated, credit facilities should be improved.

5.1 Introduction

This chapter discusses the results of the study in relation to the research question. The aim of this study was to assess food security among male and female farming households through determining the following (i) The characteristics of the farming households (ii) The level of food security among the farming households, (iii) Their constraints in achieving food security (iv) To find out whether the socio-economic characteristics of the farming households determine their food security.

Both male and female headed households were selected to participate in the household survey. In order to attain the study objectives, various sources were used to generate the necessary data from the farming households, that is through both primary and secondary data. The main method of acquiring primary data was through a structured questionnaire. Departmental documents, Eden District Municipality reports and Space- Time research document (2007) contributed the source of secondary data. Methods of data analysis included tables.

5.2 Findings

The study reveals that food insecurity is higher in female headed households than in their male counterparts partly due to uneven distribution of resources.

The farming households are dependent on a narrow livelihood base since most of them consume a larger proportion of their farm produce at household level.

A large number of the respondents went up to primary level, and low levels of education could sometimes be associated with failure to perform some basic managerial tasks (Cronje et al, 2003).

Lack of access to credit and small piece of land were impediments to food security perceived as detrimental to household food security by sampled households because they hinder domestic production.

The study revealed that farmers do not keep records of their farm practices and hence no indication of their farm income.

It was observed from this study that most of the households are not taking part in farmer groups. The formation of farmers groups to create awareness as the way forward to enhance the farmers' performance is recommended. Programmes that increase the access of food insecure households and communities to resources such as land, environmental sustainable technologies, credit, training and markets should be introduced.

5.3 Recommendations

Increasing food availability is crucial to ensure sustainable. However, this has been affected by various socio-economic and infrastructural constraints. This means that food security interventions need to be built around these constraints. A primary measure to address food availability among the farming households in the study area is to promote sustainable production system at household level. In view of this, the following issues need to be considered by the department of agriculture to address food availability problem in the study area:

- Introduction to adaptive and high yielding production technologies.
- Supporting small-scale production system

The study further recommends that to reduce the level of food insecurity, ownership and allocation of production resources should be evenly distributed among male and female headed households.

Extension services should encourage households in developing the small food production business that would raise them out of a subsistence level existence.

It is recommended that issues related to farm management, keeping of farm records, agricultural technology and production skills should be emphasised in the training programmes by the Extension services on a regular basis.

Due to difficulties encountered the research never got detailed information on livestock, therefore the study focused more on crops to investigate household level of food availability. More comprehensive studies, with adequate time allocation and adequate consideration on both crops and livestock based food sources are required for a better understanding of the household food security situation in the whole Eden District in the future.

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APPENDIX 1:

QUESTIONNAIRE

FOOD SECURITY AMONG FEMELE AND MFARMING HOUSE

This questionnaire aimed at determining factors affecting food security among farming households with the aim of finding out how the overall food security of the households can be improved.

1. Age

2. Gender

1 Male

2 Female

3. Marital status

1 Single

2 Married

3 Divorced

4. Religion

1 Christianity

2 Bahai

3 Hinduism

4 Islam

5 Others.....

5. Occupation

1 Farming

2 Civil servants

6. Education

1 Primary

2 High School

3 College

4 University

7. Sources of land

1 Personal

2 Rented

3 Allocated

4 Other

8. Farm size

9. Are you a member of farmers group?

Yes

No

10. If yes name them

.....
.....
.....
.....

11. Do you have contact with extension agent?

Yes

No

12. If yes how often?

- 1 Regularly
- 2 Occasionally
- 3 Rarely
- 4 Never

13. Is the extension officer from

- 1 Government
- 2 Non-governmental NGO
- 3 Parastatals (CASIDRA/ARC)

14. What are your labour sources?

- 1 Self
- 2 Family
- 3 Hired

15. What is your farm income

16. How long have you been farming.....years

17. What is your household size..... Persons

18. How many dependants do you have..... Persons

19. Total number of people in the household:

- 1 Males
- 2 Females

20. Do you engage in non farming income generating activities

Yes

No

21. If yes name them

.....
.....
.....

22. Fertility status of land

- Poor ☐
- Intermediate ☐
- Fertile ☐

23. Do you have access to Farm credit

Yes

No

24. If yes indicate the amount and the season received.

Source	Amount	Every season	Not every season
Bank			
Personal saving			
Money lenders			
Relatives			
Remittances			
Friends			
Pension			

25. Do you use improved seed

Yes

No

26. If yes what are the sources

- 1 From seed stock producers
- 2 Open pollinated varieties from own granary
- 3 Anything from donors
- 4 Other

27. Do you have irrigation facilities

Yes

No

28. If yes which type

- 1 Drip
- 2 Overhead
- 3 Central Pivots

29. What farming system do you use?

Livestock based	crop based	mixed
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30. Indicate the livestock s in which you are engaged

Livestock	Number	income
Cattle		
Buffalo		
Sheep		
Goat		
Poultry		
Camels		
Fish		
Bees		
Pig		

31. Indicate the crops in which you are engaged

Grain crops	size (ha)	incomecultivate every season Y / N
Wheat,		
Barley,		
Maize,		
Canola		
Seeds,		
Rape seed		
Horticultural crops		
Potatoes,		
Onions,		
Tomatoes		
Fodder crops (Lucerne		
Rye		
Grass,		
Lupines		

32. Was the production enough to meet you daily needs?

Yes

No

33. How much was consumed?

34. What was the surplus? (Tonnes / kg)

35. How much of the produce did you sell? (Tonnes / kg)

36. How much of your produce did you give as handouts (tonnes / kg)?

37. Indicate the impact of these constraints on food security

Constraints to food security	High	medium	low
1.Poor Storage facilities			
2.Poor Market for produce			
3.Lack of information on agricultural development processes			
4.Lack credit			
5.Land tenure systems			
6.Harsh weather			
7.Wild animals damaging crops			
8.Crime, farm pilfering			
9.Poor access to farming inputs			
10.Diseases and sicknesses			
11.Poor soil fertility			

38. Please indicate your awareness of government programmes on food security and state their impact.

	Awareness		Participation		Impact on food security		
	Yes	No	Yes	No	high	medium	low
1 MAFISA							
2 CASP							
3 Rural Development Program							
4 ME / Food Security							
5 Land Care							
6 LRAD							
7 Ilima Letsema							