

**Impact of Agricultural development projects on poverty alleviation
In Amajuba district municipality (KZN)**

BY

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DECLARATION

I **Siphesihle Merit Mabaso**, student number **201006282** hereby certify that, unless specifically indicated to the contrary in the text, this dissertation is the result of my original work and that I have not previously submitted it at any University for a degree.

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DEDICATION

My special dedication goes out to special people in my life who have been role models in different capacities.

Firstly, To my mother and my twin sister “I love you always” especially for taking care of my son Zibusiso while I was away studying for three full years, I thank God for granting you WISDOM to see me through and realise my personal dreams. Be blessed always.

Secondly, Tomy family members and relatives, thank you very much for the love and support. Throughout every milestone along the road, your encouragement kept me going until the end.

To all my friends, I thank you for the moral support that you provided throughout the study period, I always had a family away from home.

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Abstract

The study determined the impact of agricultural development projects on poverty alleviation at Amajuba district municipality. Data was drawn from 100 respondents, projects were purposively selected in line with the focus of projects members and non-projects members in Dannhauser under Amajuba District municipality to access and investigate the impact of agricultural development projects on poverty alleviation. The study presents the results of assessing those that are in groups and those that are working individually on agricultural production to alleviate poverty. The data was captured using a questionnaire which was administered through face-to-face interviews. Descriptive statistics and binary logistic regression model were used to analyse and compare the level of livelihood and variables between project and non-project members.

The results show that project members are more productive than non-project members. Project members had more access to funding, training, markets and extension services compared to non-members. However, the results further showed that being a project member attracts some rewards which end up improving the living standards as well as alleviates the poverty levels of farmers, whereas working as an individual limits the farmer(s) from receiving reasonable government assistance such as funding and extension services delivery.

The descriptive results indicated that members of most rural households were relatively old, married, literate but unemployed. Non-project members were dependent on remittances, social grants and pension funds because the farming strategy could not meet all their household needs. However, The major crops that were grown for income and food security to maintain their livelihoods include: maize, potatoes, onions, butternut, carrots, cabbage and dry beans. Factors that had significant influences on outcomes were extension services, grants, pension and remittances, land productivity, market accessibility, output difference and livelihood. The available opportunities for

project members were access to land, funding, markets, infrastructure, inputs and support services from government institutions, as well as NGO's.

Key words: Poverty alleviation, project members, non-project members, agricultural production, and development

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List of Acronyms and Abbreviations

CSIR: Council for Scientific and Industrial Research

DAEA: Department of Agriculture and Environmental Affairs

DoA: Department of Agriculture

FAO: Food and Agricultural Organization

ICRA: International Centre for development oriented Research in Agriculture

IFAD: International Fund for Agricultural Development

NDP: National department of Agriculture

USAID: United States Agency for International Development

SPSS: Statistical Package for Social Science

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

In South Africa and in many other developing countries, the transfer of technology model has been the prevalent practice for developing and spreading innovations. It is based on the assumption that a transfer of technology and knowledge from scientists to farmers will trigger development and alleviate poverty in the rural areas where most of them live. Farmer- to- farmer advice and learning by doing can also be a successful tool (Agritex, 1980). South Africa has a two tier agricultural economy that is characterised by the existence of a well developed commercial farming with a subsistence-oriented sector largely based in deep rural areas. Agricultural activities ranges from intensive to extensive crop production, of cattle rearing in the grasslands and sheep farming in the arid regions utilizing both winter and summer rainfalls (Seti, 2003). An estimated million people in South Africa engage in smallholder agriculture for various reasons, and the majority of these people are in the former homeland areas (Baiphethi, 2004).

In South Africa, the economic importance of maize, as the staple crop is essentially its nutritive value and has displaced most indigenous cereal crops such as sorghum (*Sorghum bicolour*), since it is prepared and consumed in wide variety of ways. Moreso, maize is a staple diet and income earner for the commercial and small holder farmers in South Africa. The industry is a mainstay of agriculture and of the national economy itself (Shimbo, 2008). South Africa has made notable progress towards recovering its self-sufficiency in the production of this national staple crop (The Conservation Farmer, 2007). Government grants, loans and extension services have been crucial to the country's self-sufficiency in maize production (ROA, 2009). Though most of the South African blacks reside in the previously marginalized rural areas called homelands, they depend mostly on agriculture for self-sustenance. It is also expected that agriculture will continue to play a pivotal role in poverty alleviation (DOA, 2002).

In KwaZulu-Natal, the majority of people are engaged in smallholder agriculture for various reasons, and the majority of these people are in the rural and also in urban areas. They involve themselves in agriculture because poverty has been persistent in South Africa, as a result they are also engaged in cheap labour to improve their livelihood. However, they tend to depend on a combination of livelihood strategies for living. These include agricultural projects, social grants, remittances as well as cheap labour. Moreover, a lot of challenges and constraints have been faced by both project members and non-project members when it comes to agricultural production which in many cases results to less improved poverty alleviation. These challenges that project and non-project members encounter include lack of information, lack of skills, lack of funding, poor infrastructure, and poor market. This means that poverty alleviation in Amajuba district is less improved as agricultural development is stagnant.

Extension has normally promoted blanket recommendations for most agricultural technologies. However, the farmers environment is highly diverse with patches of high and low fertility, different soil types, microclimate and other variables which influence the performance of technology causing differences on vegetation and grazing types. According to Agritex (1980) the optimal management of such spatial diversity is only achieved if farmers themselves are knowledgeable about appropriate technologies and capable to adopt them to their conditions. Transferring blueprints does not help in managing environmental and social complexity, but farmer-to-farmer advice and learning by doing can be successful (Agritex, 1980). In Agricultural sector, the most common group in subsistence farming are those for food security. This group comprised mostly women who have access to a piece of land on which they can till and produce food while their husbands left home for work in the mines (Adams, 1981). This results in a large number of rural inhabitants migrating to cities like Durban and Johannesburg in search of better job opportunities and life in order to alleviate poverty. Sometimes the quantity of food produced is not adequate for the household's requirement due to inadequate resources. The female farmers who farm for this purpose insist that they will continue to do so, so that they avert hunger and reduce poverty (Baiphethi, 2009). The

South African government proposed to improve agricultural sector through provision of adequate extensionist and subsidies to the communities. In rural areas, the main driver for the poor livelihood alleviation is agriculture. People in rural areas grow crops and raise livestock. Livestock provides milk, wool, hides, manure, meat and other non-commercial outputs like payment for lobola and transportation of goods using donkeys and oxen (Shackleton *et al*, 1999)

Agriculture has proven to have the highest potential for growth and poverty alleviation in the short and medium terms in many developing countries in the region as the majority of the poor live in rural areas where their main thrust of livelihood is derived from agriculture. South Africa is a signatory to international agreements on implementation of sustainable development and is one of the countries that adopted Agenda 21 at Rio Summit in 1992. Agenda 21 is a political commitment to sustainable development and is a programme for formulating long term action plans for sustainability. Lack of resources for agricultural production demotivated the communities who have interest and zeal in farming towards transformation of their livelihoods.

Municipalities are therefore expected to adopt a development model that is people oriented with a focus on meeting the basic needs of the community that uses integrated planning and promotes sustainable development (Mniki, 2006). Municipalities in South Africa are reported to be failing to deliver basic services to communities and to implement sustainability principles (Rukuni *et al*, 2006). According to ASGISA, without intervention directly addressed at reducing South Africa's historical imbalances, growth is unsustainable. Interventions to address deep seated inequalities and that target the marginalized poor are interventions to bridge the gap with the second economy, ultimately eliminating the second economy, (RSA Government gazette, 2006). Local government is centrally placed close to communities with the vision of working with local communities to find sustainable ways to meet their needs and improve the quality of their lives. The constitution provides that local government should:

- ✓ Provide democratic and accountable government for local communities.

- ✓ Ensure that the provision of services to community in a sustainable manner.
- ✓ Promote social and economic development.
- ✓ Promote self and health environment, encourage the involvement of communities and community organization and the matters of local government.

(World Bank, 2007) noted that agricultural production is important (while also noting the inherent challenges) for food security as it is source of income for the majority of the rural poor, especially due to the highly variable nature of domestic production, limited tradability of food staples and foreign exchange constraints in terms of the ability to purchase imports. Rural areas are the most marginalized, they are characterized by poverty, food insecurity, unemployment, inequality and lack of important socio-economic services (Alemu, 2011).

South Africa has adopted different macro-economic frame works since the new political dispensation in 1994. These include the Reconstruction and Development Programme (RDP) in 1994, the National Growth and Development Strategy (NGDS) in 1996, the Growth Employment and Redistribution strategy (GEAR) in 1996, and recently a Medium Term Strategic Framework (MTSF). The MTSF is anchored on the basic ideals of a development were implemented (Alemu,2011). A number of legal and policy frameworks with direct focus on rural development were implemented. To name a few – abolition of Security of Tenure Act, 108 of 1991; Restitution of Land Rights Act, of 22 of 1994; Development Facilitation Act, 67 of 1995; Constitution Act, 108 of 1996; Extension of Security of Tenure Act, 62 of 1997; Transformation of certain Rural Areas Act, 94 of 1998; Communal Land Rights Act of 2004 (Alemu, 2011).

1.3 Problem statement

Before 1994 women in South Africa faced social, economic and ideological barriers to fully and adequately participate in the economy. They were perceived in terms of their domestic and reproductive roles. They were characterized by low wages and poor

working conditions as a result many women were forced to make a living outside the formal economy. Today women have access to land and credit facilities (Baiphethi, 2004). Food and agricultural policy in South Africa has historically placed national self-sufficiency as the central objective, in part because of the threat of sanctions. Within the Reconstruction and Development programme (RDP), In 1994 the ANC agricultural policy was designed to ensure that all rural people in South Africa are able to establish and maintain a life of quality by improving access to sufficient food, infrastructure, services, resources for production and jobs with equitable conditions of employment and to resources for production. In the time since then, not much has been done, looking at the period since RDP has been in operation, and to what extent it has managed to achieve its goal of putting the majority of black people at work, building RDP houses, children and elderly grant, there have been protests, strike action, dissatisfaction and disgruntlement, that have to complete the realization that the pace is much slower than what people have wanted, anticipated or thought. Much has been achieved since 1994, a lot still remains to be done and improved and by some accounts poverty has increased since 1994 among the black people, poverty rate has been the highest.

Food insecurity is most prevalent in rural areas, highlighting the need for improving production and income-generating activities. The inability of the majority of rural people to produce a marketed surplus or even meet their subsistence needs is a reflection of their limited access to land, water, credit and markets, and the failure of research and extension services to provide appropriate technology (Macro Economic Report and Recovery Plan, 2010). The ANC introduced measures to improve rights to land through the Land and Reform programme, and access to credit and other resources to improve smallholder productivity and food security. They recognize the crucial importance of appropriate co-operative structures that will assist in the creation of sustainable urban, peri-urban and rural development. Whites who are engaged in agriculture has been cosseted by grants, subsidies and cheap credit provided by the state. These benefits have distorted the spatial profile of rural areas, the form of rural towns, rural job opportunities and agricultural production to their present unsustainable forms. Through

the mechanisms of the Marketing Control Boards, the Agricultural Credit Boards and other statutory creations, black people were effectively excluded from involvement in co-operatives and lost access to rich resources of agricultural finance (Baiphethi,2004)

Agricultural extension has in the past focused on the upper management on farms. In providing extension to subsistence farmers, education and training will raise productivity and open new opportunities for them. The government today is ensuring that subsistence farmers and smallholder agriculture have a right of access to technical training. Because literacy is so important in achieving improved training. The Ministry liaised with the Ministry of education to ensure that in its basic adult education programme, farmers are targeted (Baiphethi,2004).In South Africa with its high levels of racial inequality, inequality in income distribution is especially large and persistent for an upper-middle income country (in terms of GDP per capita and economic structure), South African social indicators (e.g. life expectancy, infant mortality or quality of education) are closer to those of lower-middle income or even low income countries. This reflects the unequal distribution of resources and opportunities. A small group of high-income earners sharply increases average incomes, but has little impact on average social indicators, which are low because of this very same inequality (World Bank, 1997). It is common to ascribe South African inequality and even poverty to racial discrimination and in particular to apartheid. Unemployment rate is high in South Africa today because of lack of education; people are poor and also suffered from pandemic diseases. Unemployment is also caused by foreigners who accept cheap labour at lowest wage. Labour laws in South Africa make it very difficult to dismiss or retrench workers, so people are employed by self-employed contractors and commercial farmers because they don't register for tax, they are shown as unemployed in the system.

Rural development and Land Reform Minister "Gugile Nkwinti" in his budget speech indicated that government had only achieved just over a quarter of its target to redistribute 30% of South Africa's agricultural land by 2014. Both ANC and the government have agreed that the willing buyer, willing seller principle as enshrined in the constitution has not worked (Mail & Guardian, 2012). Therefore this research seeks

to evaluate the effectiveness of agricultural development projects as a driver for poverty alleviation.

1.4 Objectives of the study

The study seeks to determine the impact of agricultural development projects on poverty alleviation at Amajuba district municipality. To complement the main objective, the study pursued the following specific objectives:

- To examine the demographic characteristics of the respondents.
- To identify poverty alleviation projects for development by the government departments in the District.
- To investigate on the livelihood strategies by smallholder farmers in Amajuba district municipality
- To assess the impact of poverty alleviation strategies in place in the district

1.5 The research questions

- What is the impact of agricultural development projects on poverty alleviation?
- Which of the poverty alleviation projects that the government departments are assisting?
- Which are the livelihood strategies being used by the smallholder farmers in Amajuba District Municipality?
- Which poverty alleviation strategies are in place in the District?

1.6 Hypothesis

The hypotheses of the study are:

- There are no impacts of agricultural development projects on poverty alleviation
- There are no poverty alleviation projects for development rendered by the government.

1.7 Justification of study

This study is a descriptive study of the impact of agricultural development project on poverty alleviation in Amajuba District Municipality. There is a very high level of poverty in the District and majority of people are less developed. However, unemployment rate is very high especially those that do not have tertiary education. Some of the people are pressured by the circumstances that they are living under to accept cheap labour from the Chinese factories surrounding Amajuba District municipality to try and alleviate poverty. As a result, they tend to depend on the combination of different strategies for livelihood. These strategies include agricultural, social grants and remittances. There is no impact of agricultural development projects on poverty alleviation; therefore this study will generate more information on the causes of poverty in the District, the strategies that will assist to reduce poverty and also on how poverty can be alleviated.

1.8 Significance of the study

We are carrying out this research to help in the identification of the viability & effectiveness of agricultural development projects being implemented within the district as a measure in poverty alleviation.

1.9 Outline of the Thesis

The dissertation is organized into six chapters.

Chapter one

Chapter one of the study discusses the introduction and background of the study. The research problem, objectives, hypothesis, justification of the study and the significance of the research is also discussed.

Chapter two

Chapter two provides a comprehensive literature review of an impact of agricultural development projects on poverty alleviation.

Chapter three

Chapter three describes the study area where the study has been conducted, researchdemographic information, geographicarea of the study, agricultural potential in the area and infrastructure.

Chapter four

Chapter four describes the methodology, researchdesign, research techniques, sampling procedure, and data collection procedures.

Chapter five

Chapter five provides the descriptive results of the research results and the analysis as well as the interpretation of the data collected from the study

Chapter six

Summary, Conclusion and recommendations of the study are discussed in chapter six.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

Agricultural development projects and programmes have many strategies available to ensure that the community members and groups that are below poverty line and less advantaged are assisted. Extension officers visit every member of the community especially those who are keen to work to develop themselves, but they become more interested to help those people who cannot help themselves because of inadequate resources. The research has shown that poor people are both in rural and urban areas and live in places with weak and strong economies, the government has tried for years to intervene in poverty alleviation but they feel neglected (Bradshaw, 2006).

2.1.1. Poverty Caused by Individual Deficiencies

This is a theory of poverty which blames individuals as responsible for their poverty situation (Bradshaw, 2006). Politically theoreticians criticise community members that are in poverty for their own situation, and argue that if they worked harder and had better choices poverty could have been avoided to solve their problems. Some people say individual theory of poverty is because of lack of genetic qualities such as intelligence that are not easily overturned (Bradshaw, 2006). According to Weber (2001) states that the belief that poverty stems from individual deficiencies is old, Religious principle that equated wealth with the favour of God and being blind, crippled, or deformed with the punishment from God for either their parent's sins. Rainwater (1970) emphasises that "the poor are badly affected with the mark of cain, they meant to suffer and they must suffer because of their moral failings, they lived in a deserved hell on earth". The economic theory states that the poor lack encouragement for improving their own situation which is a frequent matter in articles that hold responsible the welfare system's kindness on the maintenance of poverty (Rainwater, 1970). Government departments

have introduced programmes that look to develop agricultural projects for food security and job creation because it has been proven by different departments and municipalities that agriculture is one of the programmes that the government should fund because it brings community together to work and learn from each other. Thus, in spite of the widespread view that individuals are responsible for their own poverty, Extension officers and community development workers need to look to other theories for more positive approaches, and fortunate enough this kind of theory is not considered here in South Africa because of the apartheid regime that took place prior 1994. Anti-poverty programs in community development is against the strategies that punish and try to change individuals as a solution to poverty, though working with individual needs and abilities is a constant objective (Bradshaw, 2006).

2.1.2. Poverty Caused by Cultural Belief Systems that Support Sub-Cultures of Poverty

This theory states that poverty is created by the shift over generations to generations because of their beliefs, values, and skills that are socially generated but individually held (Bradshaw, 2006). Community members are not to blame because they are being affected by the dysfunctional culture and subculture. According to Bradshaw (2006) the culture of poverty is a subculture of poor people in the rural areas and squatter camps where they develop a shared set of beliefs, values and norms for behaviour that are separate from but embedded in the culture of the main society. Once the culture of poverty exists it tends to carry on itself, by the time children are ten they are used to the basic attitudes and values of their subculture. Therefore they are psychologically immature to take full advantage of altering circumstances or improving opportunities that may develop in their future (Scientific American, October 1966 quoted in Ryan 1976). The culture of poverty theory explains how government antipoverty programs recompense people who maneuver the policy and continue on welfare.

The Anti-poverty programs from a culture of poverty perspective, Socialization as a policy states that from a community development perception if the reason for poverty

rely in norms, values and beliefs, transmitted in subcultures of neglected persons, then local anti-poverty efforts need to intervene to help change the culture (Valentine,1968). If one thinks of the culture of the poor as a dysfunctional system of beliefs and knowledge, the approach will be to replace that culture with a more functional culture that supports rather than undermines productive work, investment, and social responsibility. (Goetz, 2003; Goering, Feins, and Richardson, 2003). Another approach to the culture of poverty is to try to work within the culture to redefine culturally suitable strategies to improve the group's well being. The Extension officers can improve and build upon cultural values with the subcultures of the poor which can become possessions for economic development.

2.1.3. Poverty Caused by Economic, Political, and Social Distortions or Discrimination

Theorists do not see this kind of a theory as a source of poverty but they look to the economic, political, and social systems which make people to have limited opportunities and resources with which to achieve income and well being. Much of the literature on poverty now suggests that the economic system is structured in such a way that poor people fall behind regardless of how competent they may be. Partly the problem is the fact that minimum wages do not allow single mothers or their families to be economically self sufficient (Jencks,1996). The problem of the working poor is increasingly seen as a wage problem linked to structural barriers preventing poor families from getting better jobs, complicated by limited numbers of jobs near workers and lack of growth in sectors supporting lower skilled jobs (Tobin 1994). Interestingly research is showing that the availability of jobs to low income people is about the same as it has been, but wages workers can expect from these jobs have fallen. Fringe benefits including health care and promotions have also become scarce for low skilled workers. These and related economic changes documented by Blank (1997) and Quigley (2003) show the way the system has created increasingly difficult problems for those who want to work.

Abolition of structural obstacles to better jobs through education and training have been the focus of widespread manpower training and other programs, generating essential numbers of successes but also perceived failures. However, in spite of apparent importance of education, funding per student in less advantaged areas setback than which is spent on richer students, teachers are less adequately trained, books are often out of date or in limited supply, facilities are few, and the culture of learning is under blockade. This systemic failure of the schools is thus thought to be the reason poor people have low achievement, poor rates of graduation, and few who pursue higher education (Chubb and Moe, 1996). A similar obstacle exists with the political system in which the interests and participation of the poor is either impossible or is misleading. Recent research has confirmed the relation between wealth and power, and has shown how poor people are less involved in political discussions, their interests are more defenseless in the political process, and they are excluded at many levels. Coupled with racial discrimination, poor people lack influence in the political system that they might use to mobilize economic benefits and justice.

An anti-poverty program from a structure of poverty perspective states that if the problem of poverty is in the system rather than in the poor themselves, a community development response must be able to change the system. This is easy to say but hard to do, which may explain why so many policy programs regress to trying to change individual behavior. How can one get more jobs, improve schooling for the poor, equalize income distributions, remove discrimination bias from housing, banking, education, and employment, and assure equal political participation by poor persons? None of these tasks are easy and all require interventions into the systems that create the barriers that block poor persons from gaining the benefits of society.

Changing the system can take from a grassroots level, where social movements can apply pressures on vulnerable parts of the system to force desired change. Although most studies show a decline in support for poor people's social action, Rank (2004) argues that change could be mobilized to support better jobs for the poor and a more effective system. Unions can increase wages and gain employment for persons

systematically excluded. Civil rights movements have had a strong impact on breaking down formal barriers, as has the woman's movement. Another strategy within community development for changing the system involves creating and developing alternative institutions which have access, openness, innovation, and a willingness to help the poor gain well being. This strategy is at the cornerstone of most community development corporations which aim to provide alternative businesses, housing, schooling, and programs. Finally, change can occur through the policy process (Page and Simmons, 2000). The range of federal and social policies that can be adjusted to accomplish poverty reduction include providing jobs, raising wages, expanding the safety net, assuring effective access to medical care, and coordinating social insurance programs. In order to protect these programs in an era of governmental retrenchment, it is increasingly clear that the poor and their advocates need to be more politically mobilized. Legal changes to enforce civil rights of the poor and to protect minority groups are needed.

2.1.4. Poverty Caused by Geographical Disparities

The study indicates that Researchers and policy makers collect or construct geographically disaggregated indicators that provide information about the spatial distribution of inequality and poverty within a country (Deichmann, 1999). The study indicates that there is rural poverty, ghetto poverty and developing countries poverty, and third world poverty. According to Slaw (1996), the geography of poverty is a spacial phrase of the capitalist system, hence, space is not a backdrop for wealth but it contributes to the system's survival. Morrill and Wohlenbery (1971) embrace disinvestment, closeness to natural resources, population density, diffusion of innovation, and other factors. According to them, geographical location has much to do with poverty as much as the control or lack of individual skills. This theory entails that responses need to be directed to solving the key dynamics that lead to decline in depressed areas while other areas are growing. However, Instead of focusing on individuals, businesses, governments, welfare system, or cultural processes, the geographical theory directs community developers to look at places and the processes

by which they can become self-sustaining (Bradshaw, 2000). Various people who outlook poverty as a regional function made some proposals around the 80s to persuade out migration under the premises that it would reduce poverty to have people in a place where there was a growing economy. Instead, literature reveals that the rural poor, moving to the city became urban poor, with much the same hopeless situation. It has been said that much of urban poverty is actually displaced rural poverty (Bradshaw, 2000).

2.1.5. Poverty Caused by Cumulative and Cyclical Interdependencies

This theory of poverty is the most compound and to some extent it constructs on mechanisms of each of the other theories, Moreover it looks at the individuals and their community at large as trapped in a coil of prospect and problems, which leads to that once problems govern, they shut other opportunities and build a mounting set of problems that make effective response nearly impossible, (Bradshaw, 2000). This repeated explanation openly looks at individual situations and community resources as equally dependent, with an uncertain economy, for example, creating individuals who lack resources to participate in the economy, which makes economic survival even harder for the community since people pay fewer taxes (Myrdal, 1975).

2.2. Importance of household agricultural production

Household production always forms a significant role of the living strategy of rural household in developing countries. In the rural areas of kwaZulu-Natal maize is the most important produce that the majority of households produce as it can be consumed and feed animals, while vegetables grown at home have a very high nutritive value. This means that, irrespective of low yields, home production has some level of importance and this needs to be explored and theory of a small-scale farmer investigated. The Government of South Africa is focusing further to link the gap between emerging farmers and commercial farmers in agriculture with its crucial aim of bringing a sense of togetherness and end this division among the farmers. (NDA, 2001). Hemson *et al.*

(2004) also repeat what has been reviewed in the South African Agricultural Policy, that the rural areas of South Africa are in anticipation of a proposal to bring the rural poor into modern services through new forms of non-farm activities and the reinforcement of agriculture. Hemson *et al.* (2004) revealed that one of the interests of South Africa is that the rural people do not see agriculture as a breakthrough to their difficulties. The reality that South Africa's rural poor do not see agriculture as an answer to their problems needs to be investigated and measured.

2.2.1 Poverty alleviation

The study emphasizes the importance of home production for home consumption because that alone reduces the level of poverty (Vink and D'Haese, 2003). Involvement in agricultural projects could reduce the high level of poverty and the migration of youth and men the cities for greener pastures that are not accessible in rural areas (Ashley and Maxwell, 2001). As land is an available resource in rural areas, the scarce resource is money for purchasing inputs for production. The research has found that small-scale farming has assisted in employing and to generate income in South African rural areas as agriculture is only a marginal force in the economy of this country (Lipton *et al.*, 1996). From an international perspective, small-scale agriculture has been proven to generate employment and income opportunities in rural areas. According to Kirsten and Van Zyl (1998) small-scale farmers are potentially competitive in certain activities and, with proactive policy support these opportunities could be developed into viable functions for the future smallholder segment. The challenge in South Africa is to remove the structural constraints that restrain the growth of an animated commercial smallholder sector.

2.2.2 Poverty Alleviation Concept

Poverty is a challenged concept, the exact meaning of which depends on the conceptual and political framework within which it is used. However, in the comprehensive sense it can be generally understood as the lack of, or inability to attain,

a socially acceptable standard of living, or the control of insufficient resources to meet basic needs. It is created and disseminated by different processes and social relations in different locations, and is experienced and regarded differently according to context.

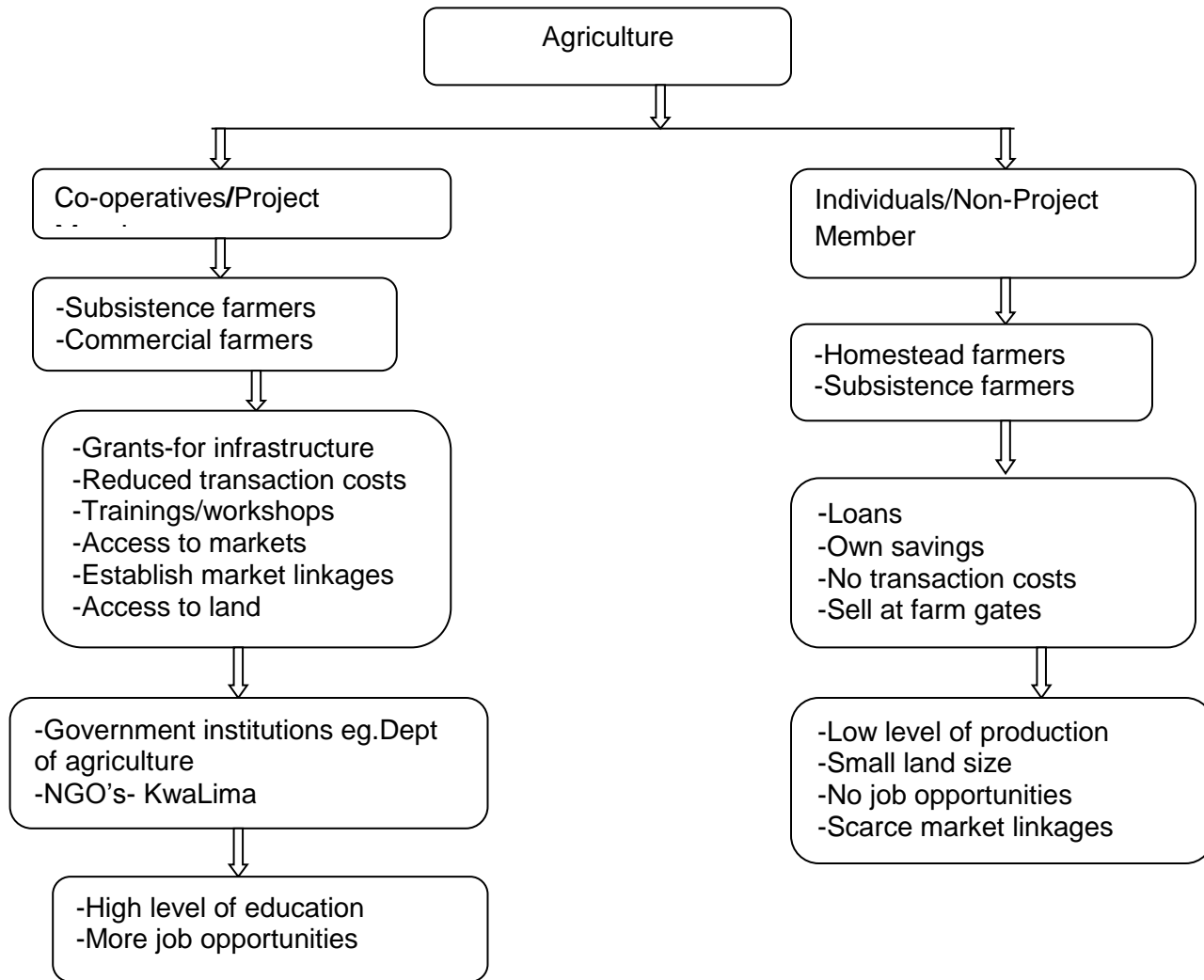


Figure 2:1 Agricultural Development projects and Poverty Alleviation Framework

Figure 2.1 above accentuate that agriculture plays a pivotal role in alleviating poverty both in rural and in urban areas. The framework further illustrate that co-operatives and those working in groups get more attention from government and from other institutions for funding and support than those who are working individually. However, those farmers working in groups get access to huge communal lands from chiefs and municipalities than those working individually. The framework also stipulate that those who are in co-

operatives get reduced transaction costs and access to market their produce easily because of the support and exposure they get from different institutions like the department of Agriculture in KwaZulu-Natal. Those who are working in groups produce more products and of good quality because of the trainings that they often receive from extension officers and close monitoring, hence, those working individually produce less because of the small size of land that they are producing into, they don't receive reduced transaction costs, they fail to create job opportunities because of the size of land and the quality of produce that they produce as they don't get trainings like those in cooperatives.

Poverty is a wide concept which includes aspects of wellbeing and inequality which disclose the lived experience of being poor more realistically. It focuses on assessing people's access to adequate food and income to provide for all their household needs, therefore poverty can be defined as the measure of people's ability to secure basic necessities (HSRC, 2006). Poverty is more continual in rural areas particularly in the former homelands. The majority (65 percent) of the poor are found in rural areas and 78 percent of those likely to be chronically poor are also in rural areas (Machethe, 2004). Ashley and Maxwell in their 2001 study cited in Machethe (2004) agree with the fact that poverty is not only common in rural areas, but most poverty is rural and yet this core problem appears to be neglected.

The issue of poverty is associated with a decline in resource flows to the rural households which applies more to agriculture than it does to other sectors. Rural households depend on agricultural projects in order to cope with poverty which is constant in rural areas of South Africa. The potential of agriculture in this regard is linked to economic growth (Khan, 2001). This means that poverty cannot be reduced if agricultural projects do not occur. The economic conditions faced by the rural households are affected by a variety of resources (and the returns on them) held at the household. The poor's physical resources include natural capital (private and common property rights in land, pastures, forest, and water), machines and tools and structures, stocks of domestic animals and food, and financial capital (jewellery, insurance,

savings, and access to credit) (Khan, 2001). The rural household does not own much of the necessary assets and do not have the ability to develop new technologies to enhance agricultural production. This is infuriated by the limited access to markets and infrastructural development. Hence, agricultural development projects for economic growth should be taken into consideration in order for the rural poor to be able to escape from poverty through agricultural production.

2.2.3. Employment creation

Migration for employment remains an important aspect of many rural people's lives as does the dependence of the rural household upon a share of the migrant's income in the form of remittances (May, Undated). This means that, even though agricultural production projects is claimed to be the major method of reducing poverty and improving food security for the rural poor, it does not do much in terms of job creation at a subsistence level.

Past policies, including the Land Acts of 1913 and 1936 and the Administration Act of 1927, which supported white farmers, disallowed people in the rural households from becoming economically independent. White commercial farmers are being recognized and were given subsidies to enlarge production and there was no fair distribution of land between black and whites. Black farmers became subsistence farmers, with no access to markets and with no proper equipment to continue with production. Hence, they were forced to produce mainly for home consumption and not for the market. As a result, their activities are low yielding, and according to Catling and Saaiman (1996), it was indicated that a small farmer working to provide for family needs and not producing for the market was a failure. The reality that subsistence farming put in to household food security but produces little for the market was ignored. Few people recognise subsistence farming as a step in advancing towards commercial farming (Catling and Saaiman, 1996). The labour involved in production is unpaid since it is supplied by the household. Some of the products produced by the household are directly consumed within the household without monetary transaction. As no monetary transactions occur

for goods and services that are produced and consumed within the same household because there are no prices that are generated (Diewert W.E. *et al*, 2009). Yet, there should be some way of measuring household production: in terms of either the time taken to produce or the number of workers, the value of inputs or outputs.

Household agriculture is characterised by intensive use of labour which is composed of family members (Pote, 2008). The research reveals that rural household farmers have limited resources and poor (Dold & Cocks, 2001), therefore they cannot afford external farm inputs, as they are faced with limited usage of labour (Pote, 2008). Very little employment is created by households agriculture because agricultural production contributes less to people's livelihoods in terms of job creation (Pote, 2008).

2.2.4 Unemployment and food insecurity

South Africa has high unemployment rate especially in the rural areas of the former homelands and these areas also have a high poverty rate relative to the rest of South Africa (Vink and D'Haese, 2003). South Africa is divided into two economies, which is the rich and that of poor people. A Gini coefficient of 0.593 shows that there is a vast gulf between rich and poor in the country (Vink and D'Haese, 2003). There is a large rural population and a poorly educated and largely unskilled workforce (Lipton *et al*., 1996). These factors indicate that agriculture could play a key role in uplifting people. According to Rockefeller (1969), agriculture can play a role in uplifting the standard of living of the people in the former homelands. The majority of people who migrated to urban areas originally resided in rural areas. Most of the young rural men and women left their home districts in search of employment in the mines and factories (Vink and D'Haese, 2003). Studies revealed that, historically, rural households produced most of their own food, whereas urban households purchased most of their food, which has changed over time. Studies by Maxwell *et al* (1998) and Ruel *et al* (1998) indicated that the dependence for both urban and rural households has increased.

2.2.5. Food security

According to Du Toit (2009) originally, the term “food security” was used to describe whether a country had access to enough food to meet dietary energy requirements. South Africa put much attention on food security after 1994 when South Africa became a democratic country. The right to access to sufficient food was set in in Section 26 and 27 of the South African Constitutional law of 1996, which states that every South African has a right to sufficient food and water; and social security. The World Food Summit, held in 1996, declared that best food security involves the global population, whereby all people have access to sufficient, safe and nutritious food, encircling both the physical availability and the economic access (WHO, 2011) .This is in line with South Africa’s millennium development goal which aims to halve the proportion of people who go hungry from 1990 to 2015 and also to halve poverty and unemployment by 2014. The Minister of Agriculture in KwaZulu-Natal had come up with the food security programme of giving out seeds and seedlings to homestead farmers which is called One home One garden with the intension of alleviating poverty.

According to the WHO (2009) food security is defined as a situation where all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life. However, food insecurity should be seen not simply as a problem of inadequate food supply but also as a problem of inadequate purchasing power given the assumption that if the purchasing power of rural households is improved it is most likely that their food security situation will improve as well (Abalu, 1999). This is due to the fact that at the household level there are food insecure populations that spend 50 to 60 percent or more of their income on food (USAID, 2010). The research indicate that food security has always been dependent on the performance of the agricultural sector, because it is the sector that supplies both food as the main source of livelihood for over one-third of the world’s population (FAO, 2008) and among the 90 per cent that live in the rural areas, between 70 and 80 per cent derive their livelihood from the agricultural production (Abalu, 1999). The rising of food prices, particularly of maize which is the staple diet of the poor in South Africa, causes serious problems for the rural poor as

most are net buyers of food (Altman, Hart & Jacobs, 2009). South Africa is largely reckoned a food secure country that produces enough staple foods and also having the capacity to import food in order to meet the basic nutritional requirements of its population (FAO 2008). Hart *et al* (2009) supported the argument that South Africa seems to be food secure at national level but the same cannot be said about households in rural areas. A FAO report (2004) emphasised that agriculture is a key to food security in many parts of the world. The report indicates further that agriculture contributes to poverty alleviation by reducing food prices, creating employment, improving farm income and increasing wages.

Baiphethi & Jacobs in their 2009 study noted that poor households access their food from the market, subsistence production and transfers from public programmes or other households, while in the past rural households produced most of their own food. Recent studies have shown an increase in dependence on market purchases by both urban and rural households, in some cases reaching 90% of the food supplies. One of the causes of the growing dependence of rural households on the market for food purchases could be the fact that the existing agricultural potential is underutilized and this twisted version of the communal system of land tenure inherited from the government programme such as betterment and rehabilitation programmes which acted as the major discouragement to invest in agricultural production (Hendricks & Fraser, 2003).

2.2.6. Contribution to household income

In South Africa these days, income is the main determinant of household food security (Kirsten, *et al.*, 2003). However, the majority of rural households in South Africa depend on agriculture, agricultural production is normally not sufficient to sustain the basic needs due to low incomes, as a result, 30 to 50% of the population has not enough food and is exposed to an imbalanced diet (Makhura, Kirsten & Mathye, 1999). The contribution of agricultural development projects to black rural household income is high due to labour shortages, expensive inputs, limited access to traction for ploughing,

easy saturation of local markets, inability of households to compete with commercial farmers and the incidence of diseases and weather risks (Hendriks, & Lyne, 2003). However, households respond by engaging in agricultural production activities to supplement the deficit of working in the factories and the unreliability or nonexistence of the jobs in the markets, hence in most rural areas of South Africa, agricultural projects income contributes far more than nonfarm income in the total income (Makhura, Kirsten & Mathye, 1999; Hendriks, & Lyne, 2003).

For monetary income South African Black rural households mainly depend on sources other than agricultural production, including social grants, wage earnings, and remittances. The monetary income from agricultural production contributes more than 30% to total household income. Agricultural production is the third most important livelihood tactic used in rural areas after remittances and wages from low-skilled jobs (May, Undated). Although agricultural production makes such a small contribution to household income, over one third of rural households continue to engage in agricultural production. According to the rural survey reports by SSA (1999), 25% of rural households take agriculture as the main source of income (May, Undated). However, agricultural projects are not the only source of economic income, it can also provide income in kind, in the form of food for home consumption, thereby enhancing household food security (Van Auerbeke & Khosa, 2009). Therefore, agricultural development projects can be used for the accumulation of wealth.

2.3. Market participation

Market participation is critical in reducing poverty and it leads to market-oriented production where households specialise in the production of those commodities for which it holds comparative advantage, thereby rapidly increasing productivity and technological change derived from trade (Rios, Shively & Masters, 2008; 2009). For example, the demand for livestock products is expected to increase by about 60% from 1995 to 2020 due to increased incomes and population growth and this is attributed to developing countries (Bahta & Bauer, 2007; Ahuja & Redmond, 2001). This expected

increase in demand for livestock products has profound implications for food security and poverty alleviation among rural people in Sub-Saharan Africa (Bahta & Bauer, 2007). It presents the expanding market opportunities for poor household livestock producers, therefore improving access to markets of these producers can help them benefit and their welfare gains can improve as well (Bahta & Bauer, 2007).

Production in rural households is mainly for subsistence purposes and to a lesser extent marketable surplus due to limited access to developed production technologies (Pote, 2008). Output from households agricultural projects constitutes a great proportion of their total livelihoods, therefore, in most cases rural households produce mainly to meet households' survival needs (Pote, 2008). Therefore, in order to participate actively in the markets, households require adequate access to production technologies and infrastructure (Rios, Shively & Masters, 2009).

2.3.1. Determinants of market participation

Participation of rural households in domestic markets in most developing countries remains low due to the constraints such as poor market access, therefore improved market access are of critical and immediate importance to rural poor households as a prerequisite for enhancing agriculture-based economic growth (Jagwe, Ouma & Machethe, Undated). This can be achieved by improving the competitiveness of farming enterprises and improving rural incomes (Jagwe, Ouma & Machethe, Undated).

2.3.1.1. Market access

Households have a high potential to obtain living from market-oriented agriculture (Magingxa & Kamara, 2003). However, households are faced with a number of obstacles which include physical access to markets (distances and costs); structure of the markets (asymmetry of relations between farmers, market intermediaries and consumers); and producers' lack of skills, information and organisation (understanding of the market, prices, bargaining etc) (IFAD, 2003). Households also lack business and

negotiating experience, and a collective organisation to give them the power they need to interact on equal terms with other stronger and larger market intermediaries (Magingxa & Kamara, 2003). Deregulation of agricultural market in South Africa brought net welfare gains for commercial agriculture and therefore for the entire nation, which does not mean that households have enjoyed these gains because of a number of constraints that obstruct household access to agricultural markets in South Africa (Vink & Kirsten, 2000). Vink & Kirsten (2000) identified the usually theorized problems which include infrastructure, credit, organizational structures, suitable technology and managerial capacity of the households.

2.3.1.2. Market information

Access to market information is one of the operation costs which negatively affect market participation by households. Households that presently do not participate in the markets might respond positively if they could have reasonable access to information about markets, via close proximity to the markets, proper contacts with extension officers, or radio and television (Makhura & Mokoena, 2003). They have insufficient knowledge of technologies and distant markets, not enough volume to make much difference in the markets and often are unable to coordinate among themselves. The study states that their access to distant markets depends much on traders, processors and exporters present in local areas and the commercial strategies of these players, and therefore they can only bring their products to local markets but not to distant markets (Van der Meer, 2005).

2.3.1.3. Infrastructure and technological change

Rural households of South Africa are characterised by undeveloped production technology, as a result, they use traditional production techniques, and hence their productivity levels are often low (Pote, 2008). This can be explained by the fact that rural household agricultural production is labour intensive with minimal use of machinery

(Pote, 2008). This is supported in Jari's (2009) study that the smallholder farmers are characterized by poor access to resources such as machinery and credit facilities, as well as minimal government support.

The shortage of necessary infrastructure such as power, water and reliable roads has been one of the major blockages to households. As a result, only projects which are funded by the different stakeholders have been developed in most rural areas (Chuta & Sethuraman, 1984). Marketing services in the households are often poor and sometimes does not exist, due to the fact that roads, telecommunications, marketing infrastructures and financial services (Van Schalkwyk, *et al.*, 2003) are not reliable and not in good condition. Achieving rural economic growth will require the participation of households in various markets such as land, credit, input, product and contractor services, as well as including the government policies, education, knowledge and access to capital are important factors in market participation by households in Third World countries (Matungul, *et al.*, 2001).

Jari & Fraser (2009) highlighted that in South Africa, less developed rural economies and small scale farmers find it difficult to participate in formal markets due to a range of technical and institutional constraints such as lack of market transport, insufficient expertise on grades and standards, inability to have contractual agreements and poor organizational support have led to the inefficient use of markets.

2.4. Conventional view of constraints to households agricultural production

Even though Agricultural development projects are regarded as an important way of improving household food security, the productivity of household agricultural production is minimal and, in some cases, is given as the reason for the abandonment of agricultural production by both urban and rural households and their dependence on non-farm sources of income (Baiphethi & Jacobs, 2009). Growth of rural household agriculture cannot be achieved without access to farmer support services (Machethe, 2004). This section is going to look at the constraints to rural household agricultural

production which include access to credit, asset ownership, extension services, access to and ownership of land, infrastructural development and veterinary services.

2.4.1 Access to credit

According to FAO, (1998) Agricultural finance and investment to rural areas is a vital part of addressing food security and poverty reduction in developing countries. This is mostly achieved when Extension officers help the farmers to get agricultural finance through the projects that they are rendering in the communities according to the budget allocated by the Department of Agriculture for the District office. In the case where the farmers initiated a broiler project and they do not have funding to build a poultry house, the Extension officer assist those farmers with funding from the Department to build a broiler house, feeds, equipments and 200 day old chicks to start the project. This kind of funding happens also in other kinds of projects depending on what the farmers need that time and also if the District budget allows that on that particular time and year. After the projects have been funded the extension officer of that area is liable to make a close follow-up visit on those projects to ensure that they continue to work because the research shows that some of the projects fall because of conflicts among group members and mistrust. In the case where farmers are able to stand on their own after being sponsored by the Department, then the extension officer assists them to expand and grow their business by guiding them on drafting a business plan for loans from the banks, such as Land Bank. Agricultural financing for farmers is enhanced by Extension officers who disseminate information and act as advisers to farmers. This reduces poverty and enhances food security consequently improving rural livelihoods.

Formal credit is not available to homestead farmers especially gardens, primarily because of the sizes of plots that the subsistence farmers are operating at, however, the governments departments and the banks prefer to fund Cooperatives than individuals as they are promoting that farmers should work together. Credit that was previously provided through the Agriculture and Rural Development Corporation (ARDC), a parastatal, was terminated in 1998 as a result the government provision of

credit for inputs was reduced since then leaving the Land Bank as the only formal bank which accepts Permission to Occupy, the prevailing land ownership arrangements in communal areas, as collateral (Hedden-Dunkhorst, Mathonzi & Mphahlele, 2001). However, rural households still find it difficult to access this credit because of a number of reasons which include the fact that the Land Bank currently offers loans under conditions that are much more unfavourable for farmers compared to previous conditions, lack of information by rural households and distance to bank branches (Hedden-Dunkhorst, Mathonzi & Mphahlele, 2001).

According to DoA (2008) a specific programme that was introduced and managed by the Department of Agriculture, Forestry and Fisheries which is called the Comprehensive Agricultural Support Programme (CASP). The intension of this programme is to provide effective agricultural support and services to the targeted different levels of clients inside the farming field. The need for CASP is to enable the conditions for the beneficiaries of the land reform programme who require loan finance (DoA, 2008). The purpose of the comprehensive agricultural support programme is therefore to establish financing mechanisms that align service delivery within the spheres of government. According to the conditions of the programme 10 % of the budget allocation to Provincial Department of Agriculture (PDA) should be directed to food security programmes. The budget should also include a specific amount to support skills development of farmers and extension officers (DoA, 2008).

2.4.2 Asset ownership

Ownership and control over assets such as land and housing provide direct and indirect benefits to individuals and households. These benefits come in the form of a secure place to live, the means of a livelihood, protection during emergencies, and collateral for credit that can be used for investment or consumption, hence assets are important for reducing poverty and reducing the risk and vulnerability from natural disasters, illness or financial crises (Doss, Grown & Deere, 2008). Ownership of assets has a positive impact on market access meaning that market difficulties are reduced when households

own assets such as farm machinery and equipment such as tractors, motor vehicles, storage facilities, etc (Pote, 2008).

2.4.3 Extension services

The financial cut backs on credit that was offered by governments, especially the reduction in transport allowances for extension officers which hampered involvement of the extension officers with farmers. This impacted on production and also resulted to lack of marketing advice which extension officers offered (Hedden-Dunkhorst, Mathonzi & Mphahlele, 2001). Support through extension services has a negative influence on market access and extension services in South Africa have often not been timely and incomplete, thus contributing to low productivity of rural households in the country. Farmers that have been empowered with farming techniques by extension officers are likely to achieve high production and high productivity (Pote, 2008).

Communal farmers tend to be cooperatives and farm on small-sized projects initiated or supported to varying degrees by the provincial departments of agriculture's extension services. They tend to farm their own small plots on these projects and usually get help from the extension officers in terms of technology transfer, access to inputs such as plant material, agrochemicals and irrigation. Often this support is improper due to local natural and other resource constraints (Hart and Vorster 2007). Occasionally they get local market access through the extension officers. Most of these groups are dominated by females and the elderly, and usually receive technology support in the form of conventional inputs and practices. According to FAO (1996), Extension is an informal educational process directed toward the rural population. This process offers advice and information to help them solve their problems. Extension also aims to increase the efficiency of the family farm, increase production and generally increase the standard of living of the farm family (Rogers, 1996). The objective of extension is to change farmers' outlook toward their difficulties. Extension is concerned not just with physical and economic achievements but also with the development of the rural people themselves. This involves helping farmers to improve the productivity of their agriculture and also

developing their abilities to direct their own future development. Agriculture will remain for many years a major contributor to the economies of most developing countries (Anderson, 1998). Extension has an important role to play here by making visible the interdependence between stakeholders and the extent to which the resource unit on which they depend has been destroyed by their uncoordinated action and extension can be especially effective. (Atieri & Yurjevic, 1992). Extension needs to go beyond technology transfer to developing skills and knowledge of farm families for sustainable agriculture and rural development.

2.4.4 Access to and ownership of land

In South Africa, land is one of the barriers to agricultural development in the rural areas, hence there is a need for government to raise the budget for the land redistribution programme. The scarcity of land in these areas means there is no possibility for black entry into the commercial sector (Hendricks & Fraser, 2003). About 12% of South Africa's surface area is suitable for crop production. However, during the apartheid era blacks had access only to 13 percent of the total of the country's surface area of land. This portion made up the former homelands and much of it was overcrowded and not suitable for agricultural production (Lahiff & Cousins, 2005). The types of agricultural land can be categorized into two: arable and grazing land.

There are roughly 100 million hectares of agricultural land in South Africa of which 14 million receive sufficient rainfall for viable arable farming. The rest of the land is used for extensive grazing (72 million hectares), nature conservation (11 million hectares), forestry (1 million hectares) and other (7 million hectares) (Feynes and Meyer 2003: 24). Land is noticeably a crucial resource in agriculture and it has an influence on income distribution. For example, in Latin America land ownership is highly polarised and this is reflected in the high levels of income inequality that are evident throughout much of that region, while in those parts of the developing world where land is relatively more equally distributed (in many Asian countries, for example), income tends to be relatively more equally distributed too (Stockbridge, 2007).

2.4.4.1. Arable land

Access to arable productive land for agricultural development in Africa has been in decline due to the pressure of growing population trends and worsening land degradation as a result of climate change (FAO, 2010). The former homelands were limited to 13% of the land in which only a small proportion was suitable for arable agricultural production, with only a miniscule area under irrigation (Lahiff & Cousins, 2005). The degree of cultivation of arable land in the subsistence areas ranges between 20 and 80 per cent of the area available because of the stagnation of arable production in these areas (Agergaard & Birch-Thomsen, 2006). On top of stagnation of arable production, rural households are faced with a shortage of capital which makes them unable to finance the purchase of intermediate inputs or the purchase/hire of draft animals or tractors where available and a shortage of labour at crucial moments (Agergaard & Birch-Thomsen, 2006).

2.4.4.2. Grazing land

Livestock production is a major component of Southern African rural agriculture and it remains prevalent with wide variations between households and regions (Schwalbach, Groenewald & Marfo, 2001). However, black farmers desperately need grazing land and rainfall for livestock production business. About 80% of South African agricultural land is suitable for extensive livestock farming and livestock is kept in other areas in combination with other farming enterprises and the numbers vary according to weather conditions because stockbreeders concentrate on developing breeds that are well adapted to diverse weather and environmental conditions (SA yearbook, 2010). The communal areas occupy about 17% of the total farming area of South Africa and hold approximately 52% of the total cattle population, 72% of the goats and 17% of the sheep Angora (Palmer & Ainslie, Undated). According to Lahiff & Cousins (2005) between one-quarter and one-half of households own cattle, with only a few households owning herds of 50 cattle or more and the great majority of herds have fewer than ten

animals, while small stock are probably owned by slightly more households. Livestock is less important than cropping; however, it contributes to households in wide variety of ways, including food, draught power, bride wealth and savings (Lahiff & Cousins, 2005; Schwalbach, Groenewald & Marfo, 2001).

There is a concern about the growing population of both people and livestock which arises from the fact that the incorrect rate of stocking may result to overstocking, the mismatch of the number of animals with the long term carrying capacity of the natural rangelands, consequently leading to overgrazing (Duvel & Afful, 1996). Consequently, overgrazing leads to continued degradation of the natural resource base, comparatively low yields from animal production, and unacceptably high levels of topsoil erosion (Baber & Nieuwoudt, 1992).

2.4.5 Infrastructural development

Meyer, *et al.*, (2009) classify infrastructure as either economic (e.g. roads, electricity, bridges and railways), social (e.g. health and education) or institutional (e.g. farmers cooperatives and agricultural institutions). Economic infrastructure produces services for facilitating economic production or to serve as input in production (Meyer, *et al.*, 2009). Infrastructural development is one of the main challenges that developing countries face (Makhura & Wasike, 2003). While the cities and sophisticated industrial areas of the KwaZulu-natal are well served by infrastructure, its rural areas still battle with huge backlogs left by apartheid (KZNDC, 2004).

High transaction costs are one of the major constraints on the growth of household agriculture in African countries and are attributable to poor infrastructure (Chaminuka, *et al.*, 2008). This situation is no different in South Africa, particularly the former homelands (Chaminuka, *et al.*, 2008). Even though the South African government endeavoured to improve the quality and quantity of infrastructure in the rural areas through programmes such as Community Based Public Works Programme, the Consolidated Municipal Infrastructure Programme, the Poverty Relief and Infrastructure

Investment Fund and the Comprehensive Agricultural Support Programme, a large proportion of rural households continue to lack access to basic services because these programmes have registered limited impact on the lives of many rural people (Chaminuka, *et al.*, 2008). The shortfalls in the delivery of infrastructural services are attributable to, among others, biased and flawed priorities, poor management and resources scarcity (Makhura & Wasike, 2003). In South Africa, these are particularly severe in rural areas that still receive less attention despite efforts made to self-finance their infrastructure in the past, thus, rural households continue to face poor access to infrastructure services, particularly social services (Makhura & Wasike, 2003). The types of infrastructure which are taken into consideration in this study include road, irrigation infrastructures as well as storage facilities.

2.4.5.1. Road infrastructure

Rural infrastructure plays a vital role in accelerating agricultural development projects and produce for marketing. Road infrastructures especially in rural areas makes it difficult to get to the farmers who are in remote areas because of the gravel and bumpy roads, which makes it difficult for extension services to be rendered especially during rainy seasons in summer (Bembridge, 1991). Road infrastructure play a vital role in delivery of farm inputs to the farmers and in taking their produce to the market, that enhance spatial agricultural production and distribution thereby expanding the distribution of agricultural goods and opening up additional opportunities for agricultural trade (Inoni & Omotor, 2009).

Under normal circumstances, the extent of infrastructural development will determine the economic activity in a particular region. For example, access to road transportation determines households' demand for production and consumption goods and services and if agricultural inputs and output markets are more accessible, rural households will tend to use these services more, leading to improved productivity (Chaminuka, *et al.*, 2008). Poor road conditions, high transport costs and distant markets have been identified as factors that hamper improved market access for emerging farmers in South

Africa (Makhura & Mokoena, 2003). Factors that determine access to input and output markets include distance to the markets, the state of the roads, the cost of transportation and the frequency of visits to these markets and rural services centres and nearby towns and cities are often an important source of inputs for rural households, and also provide a market for farm produce (Chaminuka, *et al.*, 2008).

2.4.5.1 Storage facilities

Agricultural projects especially broilers and pigs projects, those that are funded by the department of agriculture and other government sectors have adequate storage facilities for inputs and stock (KZNDoA,2010).Agricultural products are characterized by being bulky (they cannot be carried around easily), perishable (they cannot remain long on the way to the final consumer without suffering loss and deterioration in quality, however some crops such as rice retain their quality for long time) and seasonal in nature. This necessitates storage and transport facilities to be more specialized (Veres & Mortan, 2008). This is because buyer's attention and the producer's competitive edge are commanded and given by the ability to deliver a quality product to the market and ultimately to the consumer (Jari, 2009).

Most, if not all, of the rural households practice organic farming - the type of farming which excludes the use of synthetic fertilizers and pesticides and it has an advantage of increased production (Katundu, *et al.*, 2007). Despite opportunities to increase production which may result to increased income offered by organic farming, rural households are faced with the challenge of maintaining good quality produce and minimizing post-harvest losses of perishable horticultural products such as potatoes because most of them do not have access to adequate storage infrastructure (Jari, 2009). This is due not only to lack of storage facilities, but also results from the lack of access to markets. Crop storage ensures domestic food supplies. About 30% of the South Africa's population find it difficult to access enough food at all times to ensure a healthy and active life, even though the country has adequate food supply (Thamaga-Chitja, *et al.*, 2004). This arises from the fact that, because they are seasonal in nature,

agricultural products have to be harvested at a specific point in time, but are consumed year-round, thus proper post harvest handling and storage contribute in ensuring quality maintenance for perishable agricultural produce, thereby ensuring sustainable food supply (Jari, 2009).

2.4.5.2. Irrigation infrastructure

Department of Agriculture in KwaZulu-natal has funded a number of irrigation schemes for poverty alleviation programmes. It funded cooperatives because it becomes easier for the extension officers to train them and to do follow up visits in a group rather than to an individual (Bembridge, 1991). In South Africa irrigation is by far the biggest single user of run-off water and it has substantial potential to make a significant socio-economic and social impact on rural society (SA yearbook, 2010). Irrigation farming is currently one of the major consumers of electricity in agriculture with approximately 50% of the country's water utilised to irrigate approximately 1.3 million hectares of land (Meyer, *et al.*, 2009). Major constraints to new irrigation development in South Africa are limited water resources and high cost of irrigation schemes. The former homeland areas, which cover a total of 100 000 hectares have limited information on cropping patterns which could be one of the impediments of these areas to development of irrigation infrastructure given the fact that the key to improve irrigation lies in more efficient use of water and the use of more cost effective technology (Meyer, *et al.*, 2009).

2.4.6 Veterinary services

Rural households are resource-poor farmers, therefore have limited access to veterinary care in terms of support services from both the state and private veterinarians as well as animal technicians, information about the prevention and treatment of livestock diseases, and preventative and therapeutic veterinary medicines which result to reduced productivity and in livestock diseases and deaths (Dold & Cocks, 2001). Therefore the department of agriculture becomes available for render free services to

the community either urban or rural, and that reduces livestock and mortality rate. The departmental veterinary technicians promote agricultural development projects as they encourage and visit projects for monitoring and progress. These include health and production services such as clinical care, preventive health and provision of pharmaceutical supplies, feeds and fodder supply, artificial insemination, vaccination, extension services like trainings, and other market services such as credit, insurance, and delivery of market information, output marketing (Ahuja & Redmond, 2001). Good support services are critical for enhancing animal productivity and for enabling the poor to gain access to expanding markets (Ahuja & Redmond, 2001) as the lack of access to such services becomes a great burden on poor households, that can least afford the loss of their animals (Dold & Cocks, 2001).

2.4.7 Knowledge, education and skills

Knowledge is one of the critical factors in agricultural development projects and rural households, as they are often characterised by little marketing knowledge and selling skills as well as little recognition of opportunities for product diversification (Pote, 2008). Education as well is one of the key components of human capital and provides a quality dimension to the simple availability of labour. It is also a key input determining household ability to access higher return activities whether in agricultural or outside and escape poverty (Zezza, *et al.*, 2007).

Education is the knowledge or skill obtained or developed by a learning process (Anonymous, 2006). There is knowledge that can only be passed down to people through the education system. Young people in rural areas need role models to motivate them and must be given a usable education and skills in order for them to understand and know farming activities better. Motivation is one of the tools that can be used to boost the self confidence and provoke positive attitude to rural people especially the youth to be involved in farming in order to produce own food. According to Bonti-Ankomah (2001) a sound educational background can reinforce natural talent; it can provide a theoretical foundation for informed decision. In most cases the individuals that

are educated (having high levels of education) think that own food production (being involved in farming in rural areas) is for people that are not educated and not affording to purchase all food products from markets.

2.4.8 Household income

Most development projects members are highly dependent on social grants and wage incomes in addition to own food production. This is also evidenced in the 2009 study of Van Averbek & Khosa where the researchers indicated that agricultural production is not the only source of monetary income. For monetary income, South African rural households mainly depend on sources other than agricultural production, including claims against the state, wage earnings and remittances by kin that live and work elsewhere. Employment levels in this case tend to influence poverty trends and hence food insecurity and this means that the fewer the jobs, the lower the household incomes. This is because even those that are employed wages tend to be too low to sustain them and their families (Bonti-Ankomah, 2001).

Changes in income alter the quantity of foods consumed by a household (Jacobs, 2009). The amount of money a project member have determine the quantity of food a household should have. Individuals have sufficient access to food when they have adequate incomes or other resources to purchase food (Ziervogel, *et al.*, 2006). For a household having better or good income will also be able to purchase agricultural inputs so that household can grow or produce its own crop and keep livestock with the purpose of getting food for the family. When a household is in good financial status, that household can even hire people for agricultural production process.

2.4.9 Household size

There normally exist a positive relationship between household size and agricultural production in the cases where the essential family labour is available during the planting times. The larger the household size, the more likely the household is to produce more

as the project members will tend to participate in agricultural activities. However, it should be noted that in as much as larger household size contributes positively to agricultural production, the members have to be available when needed and must be old enough to perform their respective tasks in the agricultural development production process. Again, this does not mean that households are characterised by a smaller household size which cannot be productive. The size of the household sometimes can be large, but if the essential household members do not have knowledge on how to produce then the size become insignificant. According to Bonti-Ankomah (2001) a small household size may mean limited availability of labour thereby leading to declines in crop varieties and livestock production may become less intensive, the extent of weeding may be reduced as well. This could significantly reduce the size of harvest affecting food production.

2.5. HIV/AIDS on Agriculture

The study indicates that most severely affected people will be the persistently 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). Urban agriculture is often done mainly by middle-aged and elderly women and is limited to the production of crops in home gardens, open urban spaces and group gardens. Thus, interventions that promote urban agriculture should be geared especially to addressing the needs of women, this is extremely valuable for the women involved in these projects. South Africa is reported to have the highest number of HIV-infected persons in the world, with about 5.5 million people living with HIV (UNAIDS & WHO 2007). Females from food insecure households appear to be more vulnerable to infection, as food insecurity may increase the likelihood that women and girls engage in transactional sex in order to generate an income to purchase food for their families.

The vast majority of the populace in the countries most affected by HIV/AIDS live in rural areas (FAO,2001) .The HIV/AIDS pandemic which directly affects a household's

ability to produce agricultural produce and often removes the primary source of income (DoA,2002). Therefore, the important impacts of the HIV/AIDS epidemic on agriculture are loss of income from household members who are employed in the sector, and food insecurity caused by the reduction of production (FAO, 2001). HIV/AIDS distress agriculture in different ways which involve Absenteeism influenced by HIV-related illnesses and the loss of labour from AIDS-related deaths which lead to the reduction of the land under cultivation, also to declining yields resulting in reduced food production and food insecurity. Thus declines in from more labour-intensive systems to less intensive systems crops may result in a less varied and less nutritious diet (DoA, 2002). The reduction in labour supply through the loss of workers to HIV/AIDS at crucial periods of planting and harvesting could significantly reduce the size of the harvest, affecting food production. Loss of knowledge about farming methods will occur as members of rural households are struck by the disease and are not able to pass on their know-how to succeeding generations (FAO, 2001). Loss or reduction of remittances is likely to occur where agricultural active members look after their family with profit after sales. When the workers become sick, they can no longer earn money to support their families.

2.6. Rural Poverty

Rural areas are more exposed to poverty as compared to urban areas. According to Irz, Lin, Thirtle and Wiggins (2001), poverty-alleviation has played a huge role in improving agricultural projects and growth especially in the Rural areas. With regard to food security, the studies conclude that growing in the agricultural sector is the primary channel for achieving household food security, unless agriculture reaches some degree of commercialization. The impact of agricultural growth on food insecurity and poverty alleviation is limited. Another important observation from the studies is that households (in the rural sector) have engaged themselves in agricultural activities that tend to be less poor and have better nutritional status than other households (FAO, 2004). Poor households need to be involved in the agricultural development projects and select on the one's that are suitable for their areas with the help of the extension officer. Yet their

needs are often abandoned. Living far from big cities and often illiterate, rural poor people are seldom asked to take part in the development of policies or the structure of services (IFAD, 2001). In rural development literature, agriculture is considered as the best vehicle to reduce rural poverty. In most developing countries, agriculture and agriculture-related activities provide most of the employment in rural areas (IFAD, 2001)).

In developing countries most people usually live in rural areas, and many of them are involved in subsistence farming, where they only produce enough to feed themselves and their families (Education and Training Unit, 2002). They usually do not produce anything extra that can be sold to generate an income, so for the community to be engaged in agricultural projects, that will bring extra income in the family and the livelihood will improve. According to the Government's poverty reduction strategy paper in the world, low productivity and poorly functioning markets for agricultural outputs are among the main causes of rural poverty (IFAD, undated). Small-scale farmers lack the technologies and inputs, such as fertilizer and improved seed, which would increase yields. Land degradation poses a long-term threat to farmers' livelihoods and incomes (IFAD, undated).

CHAPTER THREE

DESCRIPTION OF THE STUDY AREA

3.1 Introduction

The overall objective of the study was to look at the impact of agricultural developments on poverty alleviation. This chapter describes the selection of the study site where the research was conducted. This was done on the basis of demographics, geographical location and agricultural background of the district municipality.

3.2. Description of the Study Area

The study area for this research was purposively selected in the KwaZulu-Natal Province of South Africa. The Amajuba District Municipality was selected for conducting the study and one local municipality of Dannhauser local municipality was selected on the basis of demographic structures, types of agricultural farming practiced, and also on agricultural water use practices. The study was mainly based in Milford and Naas farm communities located in Ward 4 and Ward 8 according to municipal boundaries in Dannhauser local municipality

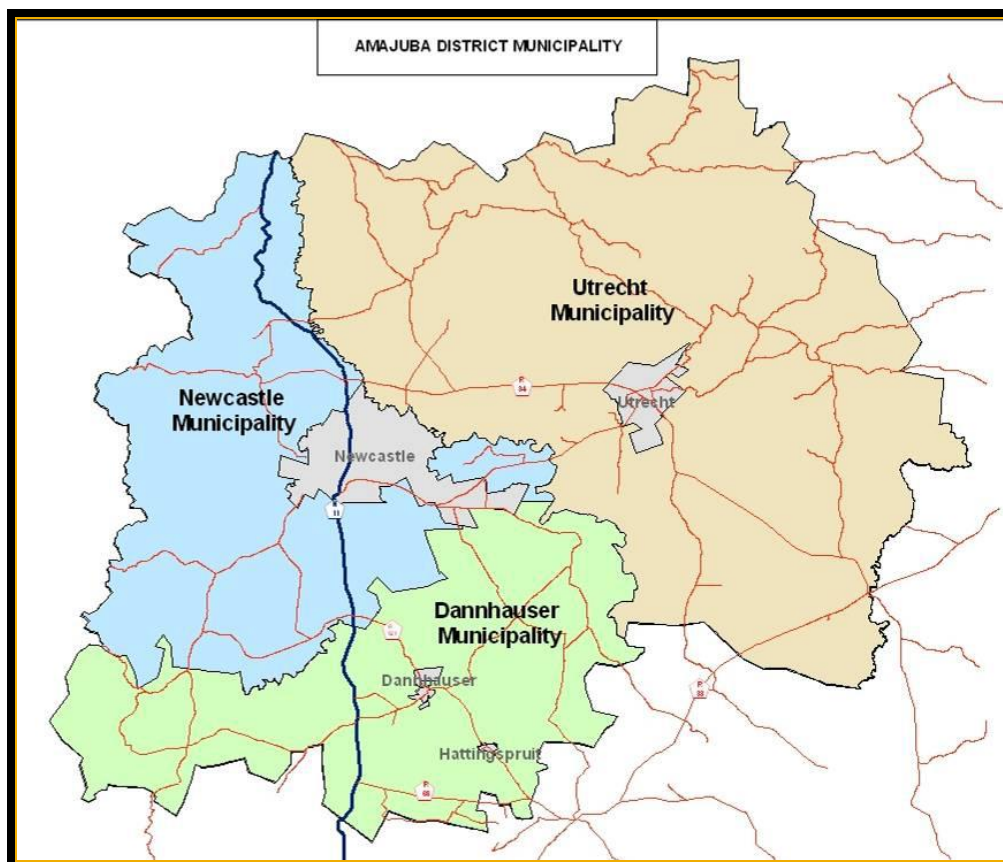


Figure: 3.2 Map of the study area

Source: Amajuba District Municipality IDP (2012-2013)

3.2.1 Historical Background

Dannhauser Local Municipality is an administrative area in the Amajuba District of KwaZulu-Natal in South Africa. The municipality is named after Renier Dannhauser, a German settler who in 1872 purchased four farms in the area from the then owner, the Natal government (Dannhauser Local municipality IDP, 2011). The major economic sectors within Dannhauser are agriculture and mining. Mining is however, undergoing a movement away from large scale operations to smaller operations. The Amajuba District Municipality is located in the North-Western corner of KwaZulu-Natal and comprises of three local municipalities of Newcastle, Utrecht and Dannhauser. The Amajuba district municipality is 6910km² in size with Utrecht occupying the largest area of 3539km², Newcastle 1855km² and Dannhauser occupying 1516km² (Amajuba District

Municipality Integrated Development Plan, 2012-2013). The main transportation routes linking the District to its surrounds includes the N11 road, which is the alternative route to Johannesburg from Durban, and the railway line which is the main line from the Durban harbour to Gauteng. The R34 also bisects the district in an east-west direction and provides a linkage from the port city of Richards Bay to the interior.

Amajuba is positioned within a region that is rich in terms of natural resources which includes Ncandu and Chelmsford Reserves at the foothills of the Drakensberg. It also comprises of a commercial and industrial centre (Newcastle, situated within the Newcastle Local Municipality) which has its main markets within the northern of KZN as well as parts of Free-State and Mpumalanga. The agricultural sector fairly exists mainly in the form of livestock (cattle), horticulture and vegetables farming. None of these have been fully exploited for the material well-being and development of the local communities in an equitable manner. Some of the villages has benefitted from formal spatial planning processes while others have not and this has a potential to compromise uniformity as advocate by the KwaZulu-Natal Planning and Development Act No. 06 of 2008 (Amajuba district municipality Integrated development plan 2012-2013). Dannhauser local municipality where the study was conducted is situated at 28.0189° S, 30.0569° E (Dannhauser local municipality IDP, 2011).

Dannhauser normally receives about 671mm of rain per year, with most rainfall occurring mainly during mid-summer. It receives the lowest rainfall (1mm) in June and the highest (133mm) in January. The monthly distribution of average daily maximum temperatures for Dannhauser range is from 18.5°C in June to 26.2°C in January. The region is the coldest during July when the mercury drops to 2.1°C on average during the night (Dannhauser local municipality IDP, 2011).

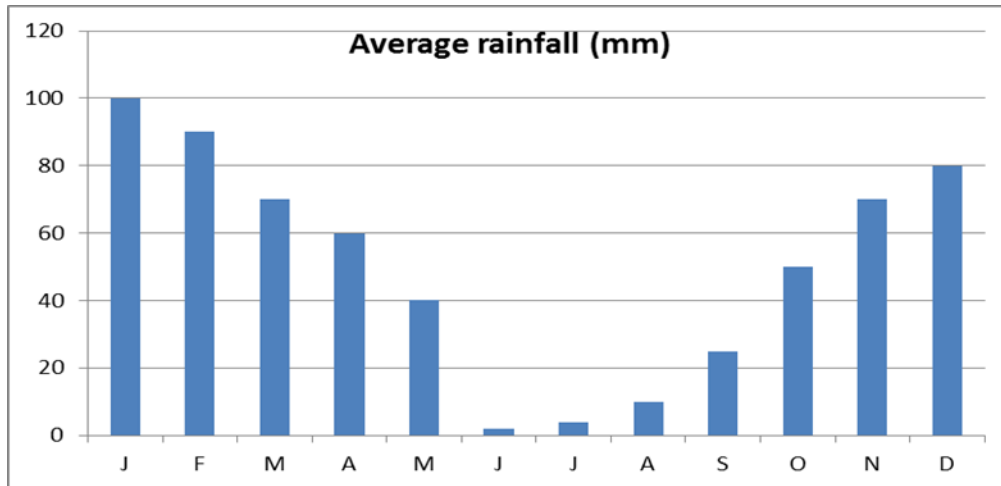


Figure 3.2. Location of the study municipality
Source: Amajuba District Municipality IDP (2012-2013)

3.2.3 Demographic information

Dannhauser local municipality is 98% rural, it is dominated by rural areas and farms. According to Statistics South Africa, community survey 2011, Dannhauser has 68 villages under its jurisdiction and a total population of 105164 made up of 18395 households and an average size per household of 7.6. Dannhauser is a very small town with one supermarket, two service stations, two schools which is primary school and high school and a lot of small shops which are being operated by the Indians and the foreigners. The majority of people travel to Newcastle which is a biggest town as compared to Utrecht and Dannhauser which is about 30km from Dannhauser to have access to different banks and big shops. The area is also characterised by massive poverty, service backlogs and areas with marginal production potential. The latter coincides with areas occupied by the majority and previously disadvantaged rural communities or villages (Dannhauser Local Municipality IDP,2011).

3.2.4 Employment Status

Dannhauser is a small town that depends on both the commercial and agricultural sectors. This town is alleged to have high poverty rate of 82% and an unemployment rate of 77% (Dannhauser Local Municipality IDP, 2011). The majority of these people are highly dependent on social grants and many of them produce agricultural products. Therefore, there is no major development in the formal economy and there are no formal jobs currently available. About 82 percent of the population earns R1600/month or less whilst 46 percent of the population earns nothing and only 9 percent of the population earns more than R2000/month. This is wide spread poverty and economic stagnation (Dannhauser Local Municipality IDP, 2011). It is therefore not a large employment generator. Residents of the municipal area rely on the larger urban centres of Dundee and Newcastle for employment opportunities and higher order goods and services. Investment in commerce has growth prospects.

3.2.5 Agricultural Potential

Vast land in Dannhauser comprises of Arenite and small portions are covered in Dolerite and Shale. The major soil types covering Dannhauser Local Municipality are Loam Soil, Sandy Clay Loam, Silt Loam and Silty Clay soils (Amajuba District IDP 2012-2013). Dannhauser has a very high farming potential as the majority of people are unemployed and dependant on farming for living. Crops such as maize, dry beans, soya beans, and potatoes are the ones which boosts the economy of Dannhauser. The agricultural potential of the municipal area varies ranging from High potential to very low potential land. About 65% of the land constitutes high agricultural land. These are located on the western segment of the municipal area while portions of the mid-northern sections and the south eastern areas. The rest of the eastern portions of the municipal area, which constitutes about 23% of the land, covering mostly the eastern half of the area, are considered as moderate agricultural land, hence 12% of land is for coal mining. Dannhauser has agricultural development programmes which mainly target livestock improvement, massive food production, vegetables production in tunnels and

also in irrigation schemes are taking place in different communities surrounding this area. The natural vegetation has been vastly transformed by grazing practices. Even though certain parts of the vegetation have been degraded and show evidence of severe veld mismanagement, especially with the presence of alien plants, a greater portion of the region is in an environmentally superior state and the region is favourable for livestock and crop production.

The Municipality undertakes a range of land reform projects which promote improved understanding of land reform process and also promote Intensification of Agricultural production. Department of Agriculture is establishing irrigation schemes in order to promote small scale farming and expand agricultural services as 85% of the farmers are still subsistence farmers to alleviate poverty. Small-scale farmers in DLM face a variety of constraints (Dannhauser local Municipality Integrated Development Plan,2011), such as:

- a) Shortage of draught animals and/or mechanical draught power;
- b) Shortage of arable land;
- c) Shortage of grazing land;
- d) Overstocking and land degradation;
- e) Decline in carrying capacities;
- f) Shortage of labour;
- g) Lack of capital for both agricultural inputs and services;
- h) Lack of access to financing, which might counter the lack of own capital;
- i) Insufficient access to markets for products and input suppliers;
- j) Lack of transport to markets;
- k) Problems of reliability in supply and quality of produce; and
- l) Poor roads.

Several studies suggest that socio-economic factors limiting or constraining smallholder farmers to become viable and productive farmers include lack of access to capital, inappropriate irrigation schemes, poor roads structure, technology adoption, loan repayments, and lack of non-farm incomes (Delgado, 1999; Ashley et al., 2001). This implies that challenges faced by small scale famers in rural areas within DLM are not unique; however, these challenges are appropriate to DLM and serve as an obstacle to agricultural development in DLM. Nonetheless, DLM constitutes a major market for agricultural produce. Newcastle and Dundee provide a potential market for many basic food crops that could be produced locally even by small-scale farmers and the principles of sustainability suggest that from many points of view, reliance on locally produced goods is the most appropriate.

3.3 Infrastructure

3.3.1 Road network

The road network is one of the key components of the transportation system. A large percentage of DLM's road infrastructure is being restructured in a better condition. Major rehabilitation is required in rural areas as the roads are gravel and their conditions becomes bad especially in summer when rainfalls are heavy, where road infrastructure play a major role in transporting inputs and produce to markets. A large proportion of the roads in these areas is gravel and will over time require surfacing (Dannhauser local municipality IDP, 2011).

3.3.2 Water services

UThukela water has been designated as a Water Services Authority for Amajuba District municipality and has in place a Water Services Development Plan (Amajuba

District Municipality, 2012-2013). The continued management of drinking water quality by the Amajuba Water Services Authority is remarkable. The municipality, however, notes that the commitment of uThukela Water to maintain excellence in drinking water quality management from the Ngagane and Biggarsberg water treatment works, recognised by Blue Drops in the Newcastle and uMzinyathi municipalities to points of use, in respectively in the Alcock and Hattingspruit supply systems, is highly remarkable. Overall drinking water quality management practices were evaluated exceptional within the Rural: Buffalo Flats supply system. While it is recognised that the system also receives water from the Blue Drop Ngagane treatment works (Dannhauser Local Municipality IDP, 2011).

According to Dannhauser local municipality, IDP (2010), a majority of rural areas have access to communal water supply by municipality to a radius of about 10 families and there are also sanitation facilities for every household that was supplied by the municipality. This makes life easier for rural households, especially smallholder farmers who use water at regular basis for irrigation.

3.3.3 Electricity

Eskom is the main supplier of electricity within DLM area both in urban and rural areas (Dannhauser Local Municipality IDP, 2011). The electricity network in DLM is currently in an unfavourable condition. This is as a result of load shedding and a load of electricity supply that Eskom has to cover because almost every household is having electricity in spite of being poor or rich and either from rural or urban areas, which forces Eskom to cut down the supply of electricity now and again. There are non-technical challenges which are currently a problem within the DLM such as illegal connections, theft of electricity and meter tampering; however, the installation of meters in strategic points will help identify areas with such problems (Dannhauser Local Municipality, 2011).

CHAPTER4:METHODOLOGY

4.1 Introduction

According to Saunders, Lewis and Thornhill (2003) research methodology refers to the method by which data is gathered for a research project. Cooper and Schindler (2006) emphasise that it is of great importance that a scientific method be followed in carrying out a research study. Methodology shows how the study is conducted in a particular field. Methodology is also a set of practices. This term may be used to refer to practices which are widely used across a scientific discipline, the techniques used in a particular research study, or the techniques used to accomplish a particular project. This chapter looks at the way that the methodology is carries out. Firstly this chapter looks at the description of the study area, where the study area is situated. This chapter also focuses in analytical framework that is model description, data, sampling procedure, data collection and data analysis.

4.1.1 Research design

According to Hair, Wolfinbarger,Ortinau and Bush (2008) the research design process entails drawing up the research approach, that is, determining how data will be obtained and also it provides answers to often asked questions such as: what techniques will the researcher employ to gather data? How to overcome time and cost constraints without compromising the quality of data?

Ghuri and Gronhaung (2005) state that there are three basic types of research designs namely: qualitative, quantitative and a hybrid of the two. The choice of the research design centres on the nature of the research, the setting, the possible limitations and the underlying paradigm that informs the research project. This study used the quantitative design which Ghauri and Gronhaung (2005) describe as “studies whose

findings are mainly the product of statistical summary and analysis". The main characteristic of quantitative research is the heavy reliance of the researcher on statistical data analysis to arrive at findings.

4.1.2 Research Technique

Self-administered questionnaires were handed out to the selected respondents. The respondents to the questionnaire were farmers who are working in groups (co-operatives) and those who are working individually at Amajuba District Municipality in Dannhauser local municipality. Self-administered questionnaires are research questionnaires personally delivered to the respondent with no involvement on the side of the researcher (Cooper & Schindler, 2003). Self-administered questionnaires were preferred because they reduce interviewer bias, preserves confidentiality, as well as allows completion of the questionnaire at the respondent's own convenience. They also allow more accurate and honest responses since the respondents can respond at their own time. Self-administered questionnaires save time and money which are the main resource constraints in any research project. It also caters for large number of respondents at a time (Cooper and Schindler, 2006).

4.1.3 Target population/Sample frame

The target population is any group of people that is subject to research interest (Goddard & Meleville, 2001). Given such a case, it is necessary to make the general findings based on the study of only subsets are normally used. The sample size is 100 which comprises of farmers who are in different agricultural projects for development and the study is concentrated on those that are working in groups (cooperatives) and those that are working individually for poverty alleviation. The farmers were interviewed about household characteristics and socio-economic characteristics. The questionnaire was used to gather all the information about the agricultural development projects in those selected areas.

4.1.4 Sampling procedure

According to Cooper and Schindler (2006) sampling is a process of selecting some elements from a population to represent the target population in conducting a research survey. The purpose of sampling is to make generalisations about the whole population which are accurate and allow predictions and also allow the researcher to draw conclusions about the entire population. Sampling can be classified as probability and non probability. Both purposive and random sampling was used. According to De Vos (2002) probability sampling is where each potential respondent in the population has a same known probability of being selected and non-probability is sampling in which each person in the population does not have the same known probability of being selected. on-probability procedure was employed to sample the farmers. According to Bless and Smith (2000), non-probability sampling refers to a situation in which the probability of including each element of the population in a sample is unknown. Non-probability was used because the study focused on respondents who were willing to be interviewed. Again, non-probability sampling was used because of limited budget and time, as it is applicable when doing research on a large population since it is often impractical to study every single member of the population. The study in question was conducted through the census .In a census, each member of the population is supposed to be included and to be classified in terms of biographical variables (Welman, Kruger & Mitchell, 2005).

4.2 Data Collection

A structured questionnaire was used to obtain further information about the impact of agricultural development projects at Amajuba District in KwaZulu-Natal specifically in Dannhauser and Newcastle local municipalities. Two villages were selected for the study

4.2.1 Primary data collection

Out of the three primary data collection methods (observation, experiment and survey) the study used survey research. And out of the four major types of surveys (personal interviews, telephone surveys, mail surveys and self-administered) pointed out by Gerber-Nel, *et al* (2005), data for the research was gathered through self-administered questionnaires.

4.2.2 Secondary data collection

Secondary data collected for use in this study consisted of an initial review of literature to collect data to provide theoretical foundation on an impact of agricultural development projects on poverty alleviation. Aaker, Kumar and Day (2006) define secondary data as data that is readily available, because it was collected for some other purpose other than the problem at hand. This study made use of books and internet sources.

4.3 Data Collection Instrument

This study made use of questionnaires as the research instrument for data collection. Hair, Wolfinbarger, Ortinau and Bush, (2008) assert that a questionnaire is a document consisting of a set questions and scales to gather primary data. A questionnaire is advantageous due to the following reasons, which are that:

- A range of relevant information can be collected;
- It is relatively cheaper in terms of ,money and saves time; and
- The use of questionnaire enables the respondents to remain anonymous and be honest in the response.

4.3.1 Survey Questions (Questionnaire)

Gerber-Nel *et al* (2005) states that there are two basic types of survey questions from which to choose: open-ended and closed-ended. For open-ended question format,

respondents use their own words to respond to certain questions or statements. There are no response options given to respondents. It entails that respondents are not influenced by a predetermined set of alternative responses. Wheather and Cook, (2000) stated that closed-ended questions specify the permitted responses and make information available to the respondents. For self-administered questionnaires, respondent cooperation is improved if the majority of questions are structured.

Researcher made use of both open-ended and closed-ended questions, mainly to improve reliability and validity of the study as well as to ameliorate respondent cooperation. The questionnaires were administered by the interviewers to avoid the difficulties of misinterpretations or misunderstandings of words or questions by respondents. And the advantage of this data collection method was that an interviewer was in a position to probe for more information from respondents. The respondents were sampled by using availability sampling whereby the households were sampled based on their availability by the time the interviews were carried out and the interviews were done only to those who are project members and to those who are non-project members but practicing agriculture with no special characteristics except that the interviewee had to be the member of the project or having an individual project.

4.4 Data Analysis and Presentation

The objective of this section is to indicate how the collected data will be analysed by the researcher. According to Tustin *et al*(2005) the first step in analyzing data in completed questionnaire is known as data preparation and involves three operations:editing,coding and data capturing. Once data has been captured and coded, the data analysis process can start (Tustin, Martins & Van Wyk, 2005).Data analysis usually involves the reduction of accumulated data to a manageable size, developing summaries, looking for patterns and applying statistical techniques. According to cooper and Schindler (2006) data analysis also includes the interpretation of research findings in the light of research questions, and determines whether the results are consistent with the research hypotheses and theories. The purpose of data analysis is to interpret and draw

conclusions from the mass of collected data. Data analysis was done using the Statistical Package for Social Sciences (SPSS) version 20.0 for windows. All the information from questionnaires were coded in Ms Microsoft excel.

Due to the fact that the data collected for the research are mostly qualitative, the study made use of graphs, tables and descriptive statistics to analyze data. Descriptive statistics was used in the analyses of personal and household information (Demographic information) while graphs and tables are also used to analyze other relevant information. Descriptive analysis will be performed to calculate Averages/mean, percentages, frequency distribution, standard deviation, median and mode scores are also used to analyze the data (Gerber-Nel,et al.,2005).The analysis will involve tabulation and cross-tabulation of the data to explain relationships.

4.5 Reliability and Validity

Zikmund (2003) indicates that, reliability refers to the extent to which measures are error free and therefore should be able to yield consistent results. A study is said to be reliable if the same results can be obtained from a follow up similar study. Therefore reliability refers to consistency of measures and results. A questionnaire for example, is said to be reliable if the measurement can produce similar results if used in similar circumstances. In this study, the reliability was ensured by consulting the supervisor and other experienced researchers minimizing the inclusion of open-ended questions and performing a thorough review of the literature in the field of study.

Validity is whether a measure accomplishes its claim. According to Zikmund (2003), validity is concerned with the ability of an instrument to measure what it is supposed to measure, given the context in which it is applied. Cooper and Schindler (2006), further reiterate that validity is the extent to which a test measures what the research is intended to measure. Two types of validity, internal and external validity are often implemented used in the field of research.

4.5.1 External validity

According to Cant *et al.*, (2005) external validity refers to the extent in which results can be used in the normal routine way of living or the extent in which the information is obtained in a natural setting. Cooper and Schindler (2006) also state that external validity refers to the data's ability to be generalized across persons, settings and time. To ensure the external validity of the study, self-administered questionnaires was used to the respondents which allow high response rate.

4.5.2 Internal Validity

Internal validity is when the conclusions drawn about a research study truly implies the cause (Cant *et al.*, 2005). It measures the degree of confidence placed in the causes and effects of the relationships between variables. In order to ensure that internal validity, the binary regression model was used to determine whether any relationship between the variables existed.

4.6 Ethical Considerations

De Vos Strydom, Fouche and Delport,(2005) state that ethics is a set of moral principles which is suggested by an individual or group, is subsequently widely accepted, and which offers rules and behavioral expectations about the most correct conduct towards experimental subjects and respondents, employers, sponsors, other researchers and assistants. The researcher applied for an ethical clearance certificate that was issued by the Fort Hare's Research Ethics Committee (UREC). In the process of conducting research, researchers kept general ethical obligations towards participants who provide data in their research studies which aimed to ensure that no person is harmed in any way possible. Cant *et al.*,(2005) proposed guidelines which a researcher has to implement in order to ensure that no one is harmed during the execution of the research study. The guidelines receive attention in the sections that follow.

4.6.1 Participants should be comfortable

The study avoided the use of embarrassing and inquisitive questions in the research instrument. Respondents were reminded that they could refrain from answering questions which they were not comfortable with.

4.6.2 Participants should not be deceived

The study did not deceive respondents through misidentification and falsification of the research purpose.

4.6.3 Participants should be willing and informed

The researcher made sure that respondents were willing and fully informed about the study being conducted.

4.6.4 Data should be held in confidence

Best practices of professionalism were maintained throughout the research and all answers were kept confidential.

4.7 Data

Primary data was used for the study. Variables examined in the study are presented in Table 3.1 below. Data focused on issues related to livestock production, socio-economic factors, farming system and livestock ownership.

Table 3. 1: Variables examined in the study

Variables	Description of variables	Type of variable	Hypothesis sign
Dependant variables			
Membership	Project member or non-project member	Dummy	+/-
Output/production	Gross value of crop production	Continuous	+/-
Independent variables			
Employment	Employed or not employed	Categorical	+/-
Household Income	Actual amount	Continuous	+/-
Gender	Female or male	Categorical	+/-
Marital status	Married, single, widowed or divorced	Categorical	+/-
Age	Actual years	Continuous	+
Household Size	Actual number	Continuous	+/-
Educational level	Attendance of the formal school	Categorical	+
Land for Agric purposes	Allocation of land	Categorical	+/-
Land Usage	Land is used or not	Categorical	+/-
Land size	Measured by the hectares that the household have access on	categorical	+
Stakeholders involved	Exact stakeholders involved	Continuous	+/-
Challenges	Project challenges mentioned	Continuous	+/-
Funding	Actual sources	Continuous	+/-
Water	Actual sources	Continuous	+/-
Contribution	Improved or not	Continuous	+/-
Commodities produced	Actual	Continuous	+/-
Governmental assistance	Received governmental assistance or not receive	Categorical	+/-
Reason of production	If the farmer is selling or for consumption	Dummy	+/-

Target market	Local community,shops,contractor,hawkers	categorical	+/-
Training obtained	If the farmer received training or not	Dummy	+/-
Crops grown	By the number of tons/kg's obtained from the produce	continuous	+/-
Equipment	Available equipment	categorical	+/-
Extension services	Knowledge of the existence of services, access to the services and the services provided	Dummy	+/-
Source of water	Measured by its availability.	continuous	+
Type of water source	Type of irrigation used	Continuous	+/-
Land size	Measured by the hectares that the household have access on	Continuous	+/-
Institutional support services	Loans, government grants , personal savings	Dummy	+/-
Market access	Measured by the availability of market, and the ability to market the produce successfully.	Dummy	+
Marketing Constraints	Availability of constraints or not	Categorical	+/-

Source: Field Survey, (2013)

Gender- This variable is intended to show whether the project members are a male or female. Agriculture in rural areas is usually practiced more by women than because men tend to move from rural areas to urban areas to look for paid employment. So that means women are responsible for farming in rural areas to a much greater extent and especially in subsistence agriculture, as well as in livestock keeping and food processing (FAO, 2001).

Age of the Respondent- Age is an important variable that determines the commitment of the farmer in agricultural practices. The older the farmers the more chances there are to have more resources at their disposal (Musemwa *et al*, 2008). This variable is expressed as the factual number of years.

Size of the household- This is the number of people living together in one household (house). Increase in household size lead to the more availability of the labour which enhances farm production in rural areas. Large household size may cause the farming system to be more labour intensive to take advantage of cheaper labour.

Educational level- This means the highest education level a project member or household head has. Education is an important attribute to agricultural production, as it contributes to the knowledge of many aspects in agriculture. Education is also important in decision making.

Employment status- This variable measures whether project members are employed or not employed. Employment has effect on agricultural practices, because households do not devote sufficient time for agriculture due to their unavailability.

Land usage- Land usage is an important variable because it has an impact on agricultural production. Some of the households let the land to lay fallow for quite a long time or let the land to become grazing camps for livestock.

Land acquisition- This is how the land is required. In most rural areas of KwaZulu-Natal, households acquire land for agricultural purposes through traditional laws, inheritance, and freehold, communal tenure or by purchasing on the land market.

Land size-Is the total size of the land owned by the household measured in hectares. Land size has the impact on agricultural production. The larger the land size, the higher the production level.

Household income—This looks at the total amount of money a household receive per month, whether it is from social grants, remittances or non-farm income. FAO (2001) reported that employment in off-farm and non-farm activities are essential for diversification of the sources of farm households' livelihoods.

Marketing constraints-This variable focuses on challenges faced by project and non-project members in marketing their produce. Small-scale producers generally lack the knowledge, information and resources to meet quality standards and formal markets' specifications.

Governmental Assistance-This variable measures whether the households get the required governmental assistance or not. Government can assist project and non-project members in rural and urban households in many ways like providing inputs, providing funds and providing extension services.

4.7.1 Binary Logistic Model

The study made use of a binary logistic model. This is a statistical technique in which the probability of a dichotomous outcome is related to a set of explanatory variables. Katwijuke (2004) notes that it is a statistical tool used to determine the influence of independent variables on dependent variables. Of the same view, Homser and Lemeshow (2000) pointed that the logistic regression model is a best fitting model to describe the relationship between an outcome (response) and a predictor variables. The model can be used to predict a dependent variable based on continuous and categorical independent variables. Hence, Hesketh and Everitt (2000) notes that the model can be used to determine variables explained by the independent variables. The model was recently used by Ngwenya (2013) when measuring the factors affecting household willingness to participate in irrigation scheme in Nkonkobe Municipality.

In this study, farmers' membership in projects is influenced by utility maximisation. That is, farmers would be part of a project when the utility obtained from being a member is

greater than non-membership in agricultural projects. Therefore, the dependent variable in this case is binary. The binary model is as follows:

$$\text{Prob(Event)} = \text{Prob}(Y_i = 1, \text{ represents } i\text{th farmer membership to a project, and 0 otherwise}) \dots \dots \dots (1)$$

Let X_i represents the set of parameters which influence membership of the i th Farmer. Z_i is a direct utility from being a member of a certain project, which is a linear function of k explanatory variables (X) which is expressed as follows;

$$Z_i = \beta_0 + \sum_{k=1}^n \beta_k X_{ki} \dots \dots \dots (2)$$

Where β_0 is the intercept, $\beta_1, \beta_2, \dots, \beta_k$ are coefficients associated with explanatory variables. X_1, X_2, \dots, X_k . Factors in a vector X explain the membership to a project or the probability of the i th farmer to be a member of an agricultural project:

$$P_i = \frac{e^{Z_i}}{1 + e^{Z_i}} \dots \dots \dots (3)$$

Where, P_i denotes the probability that the i th farmer membership and $(1-P_i)$ is the probability that the farmer is not a member of an agricultural project. The odds ($Y=1$ versus $Y=0$) to be used is defined as the ratio of the probability that the farmer is a member (P_i) to the probability of non-membership ($1-P_i$), namely odds $= P_i / (1-P_i)$. By eliminating the natural log, we get the following equation (Shaban *et.al*, 2006):

$$\ln \left(\frac{p_i}{1-p_i} \right) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_n + \mu_i \quad (4)$$

Where $\ln \left(\frac{p_i}{1-p_i} \right)$ = log of odds ratio, p_i = probability of being a member in agricultural project and $(1-p_i)$ = the probability of being a non member. The value of:

$$p_i = \frac{1}{1 + e^{-Z_i}} \quad (5)$$

And the value of Z_i is referred to as the log of the odds ratio in support of being a member and is calculated as follows:

$$Z_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_n + \mu_i$$

Where: β_0 = intercept term

$\beta_1, \beta_2, \beta_3, \beta_n$ = slope of the parameters of the model which measures Z_i for a unit change in explanatory variables.

X_1, \dots, X_n = factors that explain the membership to agricultural project or the probability that a farmers participates in agricultural projects:

These factors are highlighted as follows:

Table 4.1: Description of Variables

Description	Variable
X1	Gender
X2	Household income

X3	Primary occupation
X4	Marital status
X5	Secondary occupation
X6	Education level
X7	Source of income
X8	Farming experience
X9	Membership in irrigation scheme
X10	Extension services
X11	Output
X12	Market access

CHAPTER FIVE

Presentation of research findings

5.1. Introduction

In this chapter the results and discussion of the descriptive analysis are presented. The data under analysis were collected from 100 smallholder farmers which comprised of project members and non-project members. The questionnaire was designed to capture demographic information of households of Newcastle and Dannhauser Local Municipalities, as well as the information on the impact of agricultural development projects on poverty alleviation in the Amajuba District Municipality as a whole. The first section begins with brief explanations of the demographic characteristics of the sampled farmers. Within the chapter, descriptive statistical measures such as minimum, maximum and mean values, frequencies, percentages, as well as bar graphs and tables were used.

5.2. Demographic characteristics of the sampled farmers

In this section, demographic characteristics such as gender, age, marital status, household size, employment status, income class, number of individuals bringing income, highest level of education as well as the sources of food are discussed. These aspects pertaining to the household head is important because the main household activities are coordinated by the household head and the head's decisions are most likely to be influenced by such demographic aspects as gender, age, marital status, level of education as well as the employment status and income class (Makhura, Kirsten & Mathye, 1999). Demographic characteristics of households are essential when analysing economic data because such factors influence the household's economic behaviour.

5.2.1 Gender distribution

Figure 5.1 below summarizes the gender distribution of the interviewed farmers in Dannhauser local municipality, females account for about 59% while males accounts for 41%. Young adults dominated because they are innovative and eager to improve their livelihood and try new things. The gender balance when collected data happened unintentionally as was noted when analysing data using SPSS that the gender is 59-41. The female in the Amajuba District tend to head their households in the cases where

they are widowed or single. Even if the husband is away for employment in urban environments, still the wife cannot take the role of being a household head as most of the household activities are dictated by the husband.

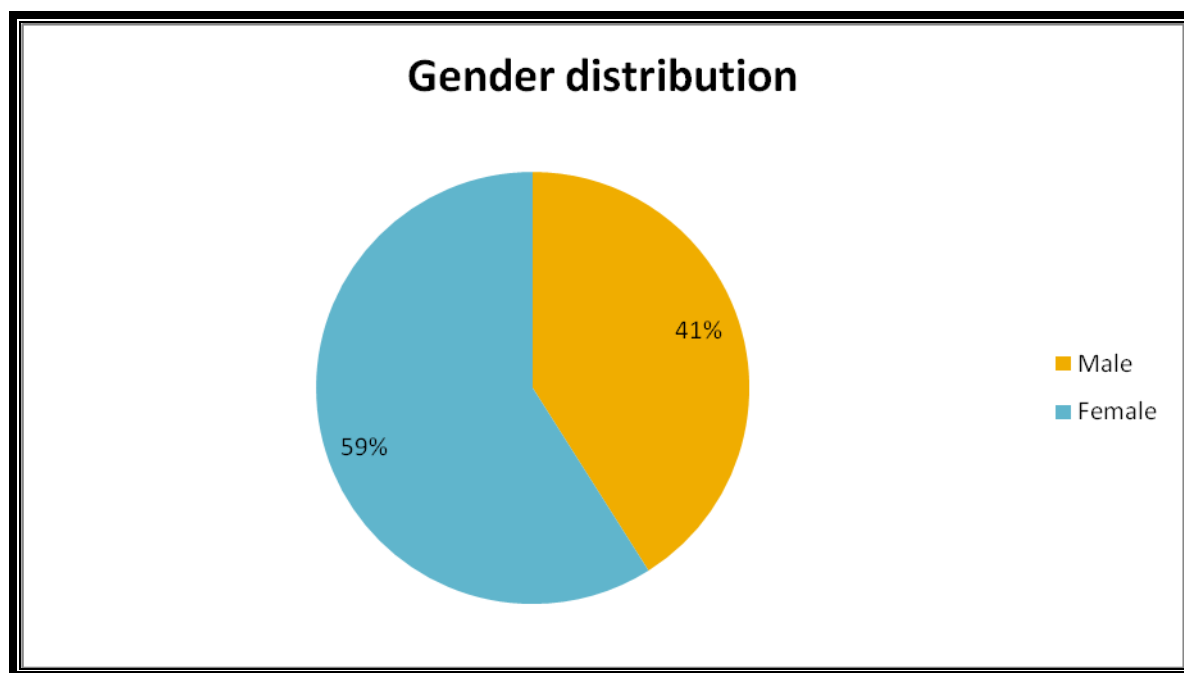


Figure 5.1: Gender distribution of the interviewed (n=100)

According to Mihiretu (2008) males and females are likely to play different roles in technology adoption and use, depending on the nature of the technology. Due to many socio-cultural values and norms, males have freedom of mobility and participation in different extension programs; consequently, they have greater access to information. However, women also have the mentality of independence and working hard to nurture their families. Table 5.1 below summarizes the age distribution of respondents.

Table 5. 1: Age distribution of the interviewed farmers (n =100)

Age catergories	No. of Respondents	Percentage
19 - 29	9	9

30 – 39	27	27
40 - 55	48	48
56 - 73	13	13

Source: Field Survey, (2013)

The minimum age of respondents in Dannhauser local municipality was 19 years old, whilst the maximum age was 73 years. The mean age of interviewed farmers was 40 years, overall, the dominant age group of the interviewed farmers was above 40-55 years, which constituted about 48% of the total respondents in Dannhauser local municipality. The age group which has the least number of respondents was that below the age of 30 years which has a proportion of 9% which was even lower than that of the age group between 56-73 years. These findings suggest that farming in the rural areas is usually done by older people. This is probably because younger people are not interested in agriculture or they migrate to urban areas in pursuit of other forms of employment, which may offer better income compared to farming. Dejere (2006) suggested that as a farmer's age increases s/he becomes conservative. Therefore, the probability of adopting new technology decreases. However, Hofferth (2003) argues that older people can be more adaptive to new technologies because they have relatively richer experiences of the social and physical environments as well as greater experience of farming activities.

5.2.3 Analysis by marital status, income class and level of education of the interviewed farmers (n = 100)

This demographic information is put together in the Table 5.2 below. Marital status, income class and level of education will be further analysed using Figures. These are very important aspects of demographic information of the interviewed members as they tend to influence the project's decisions in the process of coordinating the household activities. Marital status and education level will further be explained using charts.

Table 5. 2: Marital status, income class and education of the interviewed farmers (n = 100)

Variable	Frequency	Percent
Marital status: Single	33	33.0
Married	46	46.0
Widowed	19	19.0
Divorced	2	2.0
Total	100	100.0
Education level: No education	6	6.0
Education	94	94.0
Total	100	100.0

Source: Field Survey, (2013)

The number of years spent in formal education is one of the most important determinants of increased agricultural production. Especially the use of modern technologies such as use of hybrid seeds, cattle dipping and good management. Education of the household head often influences adoption of technology positively (Hoag *et al*, 1999). Education catalyses the process of information flow and leads the farmers to explore as wide as possible, the different pathways of getting information about agriculture and technology. In this study, the level of farmer education was measured by capturing the actual number of years a farmer has attended schooling. Bester *et al*. (1999) also noted that illiteracy is one of the factors that limit economic, social, physical, technical and educational development in less developed countries. Educational considerations generally influence the adoption of new technologies by farmers.

Women in the rural areas of Dannhauser local municipality got married in the old traditional way and they perform almost all of the household activities. It was so interesting to find out that some of the families in the municipality still believe that it is not good for a woman to pursue higher education and become professionals. This is because most men in the municipality have low levels of education and secondly, it is believed that educated women tend to delay child bearing. According to Dunn (2009), more professional women are opting to become single parents and more middle and upper class females are becoming single parents.

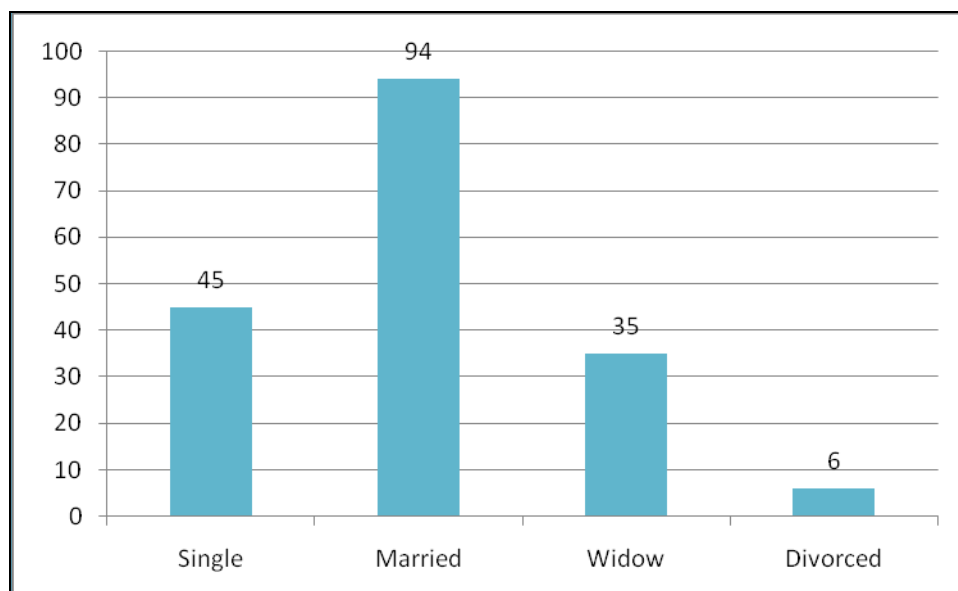


Figure 5. 1: Marital status of the interviewed members (n = 100)

As shown in Figure 5.2 above, many interviewed members were married which sum up to 94% and only 6% were divorced, while 35% were widowed, 45% were single. Due to the fact that males are more likely to be family providers, women are more likely to be alone and in poverty when they are widowed. This makes them become more vulnerable because of their higher rate of participation in nurturing the families are so likely to be caregivers to the sick family members.

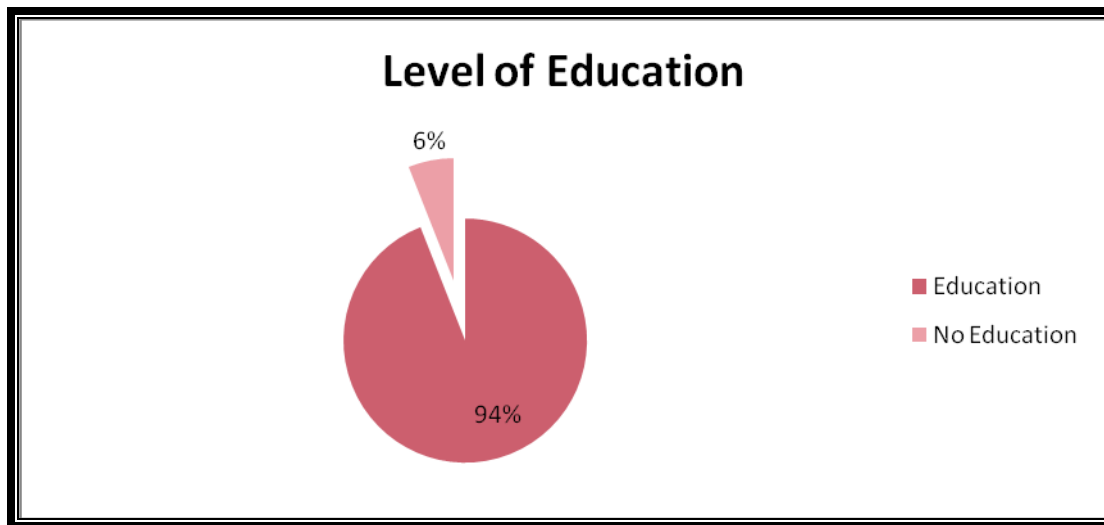


Figure 5. 2: Level of Education of the interviewed members (n = 100)

Bester *et al.* (1999) indicated that educational levels influence the adoption of new innovations by farmers. Figure 5.3 shows the educational levels of the interviewed farmers. The levels of education were grouped into two categories into which sample were placed. In Dannhauser local municipality 6% of the interviewed farmers never went to school at all, 94% of the interviewed farmers have primary, secondary and some had attained tertiary education. Generally the majority of the respondents had attained some formal education. Bembridge (1998) pointed out that lack of knowledge can affect the potential adoption of new technology since most of the farmers in the study area have secondary education, this may make possible for them to interpret and process information systematically. The ability to process information means that the farmer can weigh and opt for new technology that can be of benefit. However, the older generation in this study never went to school or they attain only primary education, this means that adults in the rural the Dannhauser local Municipality are characterised by low levels of education. The cause of this was said to be the immoral behaviour of the elders that believed that males should be responsible for the livestock and females should be married to other families so as to increase the wealth of their parents. The increase in wealth was achieved through the exchange of women with livestock (*Illobola*). As a result, the more girls were there in the family the wealthier the family will be when they are ready to be married. The elders did not like sending their children to school. They argued that, if they send a boy to school, then who is going to look after

the cattle? And if they send a girl to school it means that she will never get married. They cursed education.

5.2.4 Family size

This study considers family size as the number of individuals who reside in the respondent's household. The question was structured in the way that allows for the actual size as an answer. The study revealed that family sizes were in the range of 5 to 16 for Dannhauser people per household. It can be inferred that most of the households had enough labour to produce because the average household size was about 5 people per household. A larger family size also means that a variety of labour capacity is available in the form of young, middle aged and elderly members (Hayes *et al*, 1997). Increasing family size tends to provide households with the required labour for agricultural production especially in livestock, crops and vegetables farming (Paddy, 2003). Table 5.3 below shows that the majority of the households consist of 8-13 members which include children and adults, while the rest of the households have less than 7 household members. Mean of the household sizes is 6.90 and the standard deviation is 3.030 as shown in Table 5.3 below

Table 5. 3: Actual family size (n = 100)

Variable	N	Minimum	Maximum	Mean	Std. deviation
Actual household size	100	3	16	6.90	3.030

Household size has been observed to have a positive relationship to technology adoption since larger households mean more labour and that larger households would show more willingness to participate in project activities (Gladwin *et al*, 2002). If this positive relationship follows for participation in agricultural projects, it can be argued that the higher the household size, the higher the probability of a household participating in agricultural development projects.

5.3 Analysis of Livelihoods strategies of interviewed farmers

Individuals have sufficient access to food when they have adequate incomes or other resources to purchase food (Ziervogel *et al.*, 2006). Individuals tend to rely on social grants and remittances as other livelihood strategies in the face of poverty (McDonnell & Ismail, Undated). The question in the sources of income was designed to capture local sources of income which included social grants and remittances by the interviewed project members and non-project members within each household. The sample interviewee was given options to choose from and the question was structured in a way that allows them to choose a number of options. In a Figure 5.4 below, the responses are categorised according to choices of sample respondents from the options they were given.

Households have a wide variety of income ranges and sources. These incomes can be earned from formal employment or from other means of living. Most of the households derive their income from agricultural sources and the value of the household consumption of items produced. Employed livelihood strategies contribute a number of factors to the income. One of these factors can be less participation of members of the family in farming because of their commitments to other activities. Another factor can be education; the more individuals attain education, the less they participate in farming. Educated individuals shift from farming to civil employment. Figure 5.4 present the primary occupation of the households interviewed.

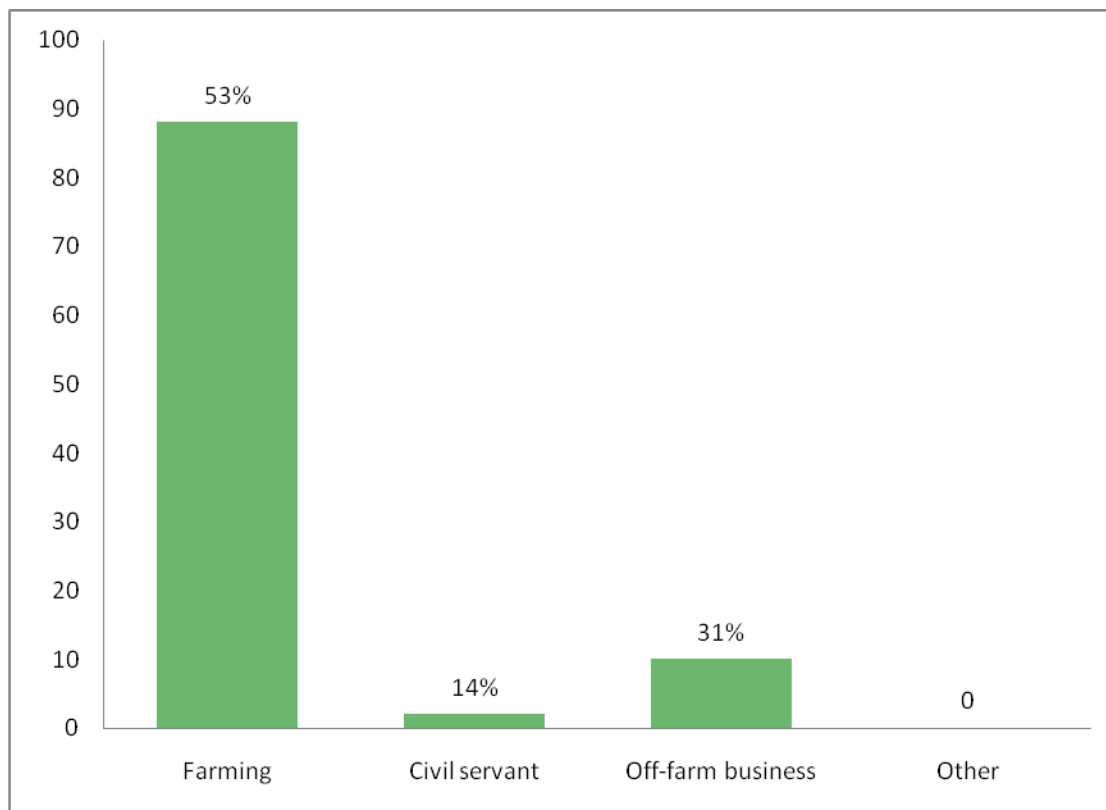


Figure 5:4 Distribution of primary occupation by farmers
Source: Field survey 2012

The variable measuring off-farm activity measured whether a farmer was engaged in any income generating activity other than at the farm. The variable was treated as a dummy, implying that it is either a farmer engages in income generation activities or otherwise. It was expected that off-farm activities influence participation in irrigation development positively. This is attributed to the fact that the extra income earned from such activities enables farmers to engage in irrigation development.

Figure 5.4 above shows that 53% of both project members and non-project members are practising farming as their main livelihood strategy and source of income. The results further revealed that 14 percent of the respondents had formal employment and 31% of respondents are involved in off-farm business as a livelihood strategy at Dannhauser local municipality. The majority of the interviewed farmers reported that

they did farming because there was no alternative. There was no formal employment available and farming was their primary source of income.

5.3.1 Analysis of household income

Household income of household head is another factor that may affect farmer decisions to participate in agricultural projects. This is because the nature of employment a household head is engaged in is a source of income which could be channeled towards agricultural development projects. The interviewed households were asked about their household income and the results are as shown in Figure 5.5. In most cases employment opportunities are minimal in Dannhauser local municipality, the main source of income of households are either government grants or agriculture. Agriculture production is the main economic activity that takes place in the municipality due to high level of unemployment and poverty. The government grants that include child support, disability, old age pension grants also assist in improving the household income for poverty reduction. The pie chart below (Figure 5.5) illustrates the distribution of households according to main sources of income. In the area studied, 55%, 11%, 5% and 29% household main sources of income were social grants, remittances, and pension funds respectively and there was 5% of the respondents who doesn't have any other sources of income apart from the agricultural projects that they are involved in.

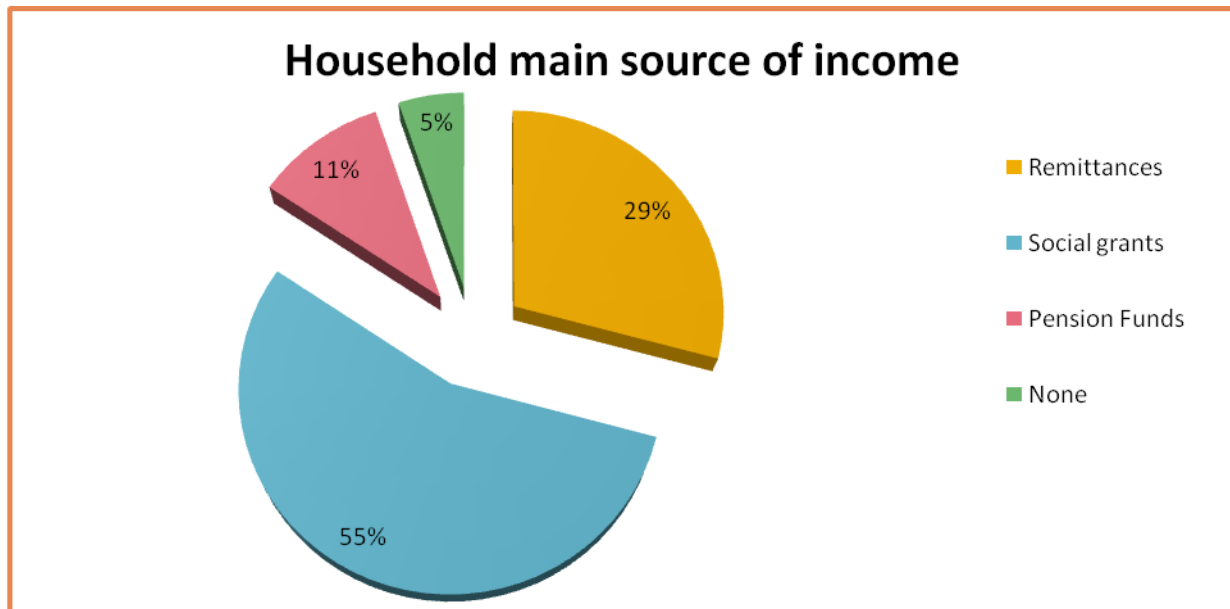


Figure 5. 5: Household main source of income (n=100)

According to Bembridge (1998) smallholder farmers get about 10% of their income from the sale of their farm produce. Farmers who had higher income than others indicated that they had other sources to boost their main sources of income. When looking at the income class, Figure 5.5 shows that 55% of the interviewed members depend on social grants which fall under the income class of R700-1500. Due to the high level of unemployment in the municipality about 29% of the respondents depends on remittances and 11% of the total number of respondents depends on grants apart from agricultural projects. This means that due to the low level of education, these households respondents tend to provide cheap labour to the urban environments where they have jobs.

5.4 Analysis of variables

Farmers were interviewed to give the information about the projects that they are involved in. They were asked given options to choose from on what they contribute to the project, and also on what they benefit. They were further asked on what commodities they are producing in their projects. Non-project members which are 40 respondents were excluded in this section because the intension of the study was to

look at the impact of agricultural development projects on poverty alleviation in Dannhauser local Municipality. The aim was also to check if the objectives of the study are going to be achieved in alleviating poverty. Table 5.4 below gives much detailed information on frequencies and percentages of the respondents as the analysis of 60 project members is given.

Table 5. 4: analysis of the variables contributed and benefited by project members in the projects

VARIABLE	FREQUENCY	PERCENTAGE
Contribution of project members to project		
Time	3	6
Money	4	8
Labour	9	18
Skills	4	8
Time & Money	13	26
Time & Labour	21	42
Time & Skills	6	12
Total	50	100
Benefits derived from the project		
Income	5	10
Skills	4	8
Reduced transaction costs	0	0
Income & Skills	30	60
Income & reduced costs	18	36
Skills & reduced costs	4	
Total	50	100
Commodities produced by the project		
Vegetables	0	0
Crops	1	2
Poultry	4	8
Livestock	9	18
Vegetables & crops	20	40
Vegetables & poultry	12	24

Crops & livestock	4	8
Total	50	100

Source: Field Survey, 2013

5.4.1 Contribution of project members to the project

For a project to be sustainable project members need to contribute either with time, money, labour and skills. Therefore the table above shows the frequencies and the percentages of the respondents according to their contributions in their projects. In Dannhauser Local Municipality 26% of the respondents who said they contribute with time and money for their project viability, because some of the project members are having other jobs in the factories around and also in the government departments, so those who are not working contribute with their time to take care of the projects viability. However, 42% of the interviewed project members contribute with time & labour. In all the projects that were interviewed there is a contribution fee every month either of R20 or R50 which help the project members when there are emergencies like attending meetings, workshops, and other costs. According to table 5.4: above it indicates that 18% of respondents contribute with labour in their projects, as other members have commitments outside the projects, whilst 8% contributes with skills for project management and sustainability.

5.4.2 Benefits derived from the project

There are benefits that projects members get after participating in the projects. Developing projects is one of the strategies to assist in jobs creation and poverty alleviation. Table 4.4: above further indicates that 50% of the respondents get income out of the projects. The majority of respondents get profit share after every sales while

others get it quarterly. By getting income poverty is alleviated. According to the table above it shows that 15% of the project members benefited skills out of the projects as they got trainings from different fields in project management and agricultural production. 10% of the respondents receive reduced transaction costs, because there are many benefits in working as a group than working as an individual. They stipulates that when buying inputs and taking their produce to the markets they get reduced transaction costs, and also when buying in bulks to the suppliers they get discounted price. The table further shows that 25% of the interviewed project members get knowledge from the projects as they observed and learn on a daily basis about project management.

5.4.3 Commodities produced by the project

The project members produce different commodities in their projects depending on the nature of the area and environment, and also on the demand of the produce in the market they are targeting. According to Table 5.4: above are no project members who produce vegetables only, bearing in mind that in Amajuba District Municipality water is not a reliable and adequate resource. In the projects where they are producing vegetables they also have other commodities to assist with income in the times when vegetables production is not doing well because of water scarcity. The table 4.4: above shows that 40% of the respondents are producing vegetables and crops at the same project, whilst 24% are producing vegetables and poultry simultaneously. According to the table above only 2% are producing crops only, whereas 8% of the project members are producing crops and livestock simultaneously. The table further shows that 18% of the respondents project members produce livestock while 8% produce poultry. Project members are doing well in their production to earn enough income and be able to improve the level of poverty for the better.

5.4.5 Importance and functions of the Projects

Agricultural projects acts as poverty reduction measures, like those of poultry, vegetables, crops and livestock production which are intended to raise, enabling the poor to create wealth for themselves as a means for ending poverty forever (FAO, 2009). Involvement of smallholder farmers in projects improved the lives of the farmers at Amajuba District municipality; hence, they are able to take care of their families while they are also getting exposure in the field of agriculture. Projects play a major role in poverty alleviation as job opportunities are created and community members get employed either part time or full time. After the study has been conducted our findings shows that 60% of the respondents are project members who are working as groups and another 40% are non-project members who work and sell individually. Figure 5.5 below shows the functions of the projects that the interviewed members of Amajuba District are participating on to reduce poverty.

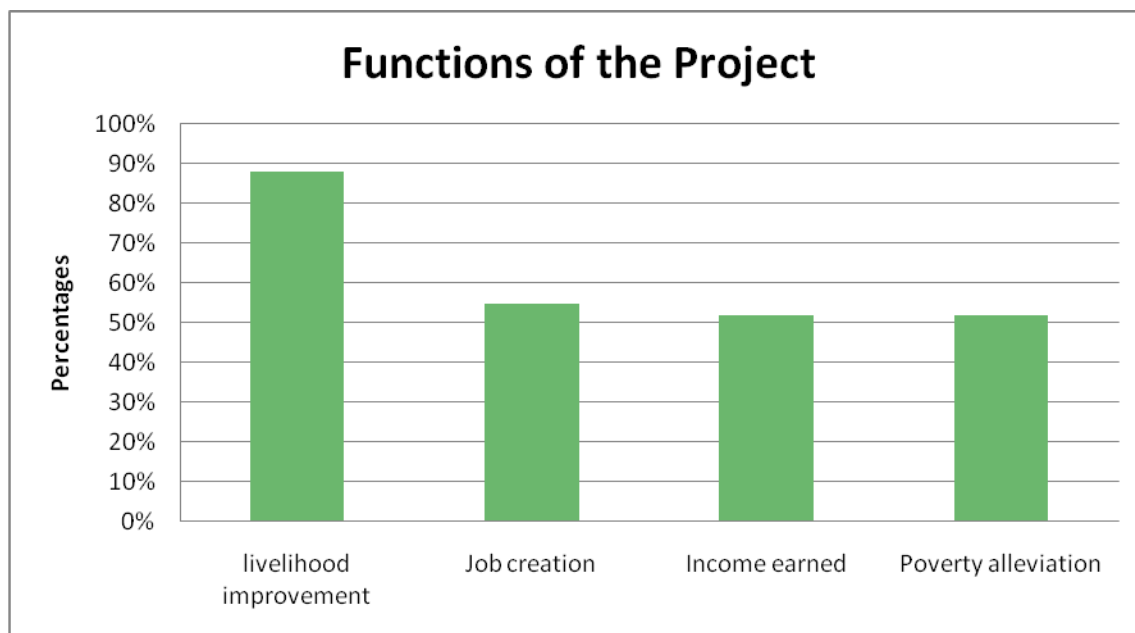


Figure 5. 3: Functions of the project (n=100)

88% of the project members who were interviewed said that projects improved their livelihoods, while 55 % perceive projects as a way of creating jobs for them and the community, 52% confess that through projects they earn income and the other 52% see projects as a tool of poverty alleviation.

5.5 Description of livelihood measures based on variables

The initiation of agricultural development projects in the community result in increased community participation in identifying and selecting projects that will be viable according to the community available resources. Table 5.5 below shows the comparison between project members and non-project members based on livelihood measures.

Table 5.5: Comparison of project members & non-project members based on livelihood

Descriptive		Project Members	Non-project Members
Mean		2.44	0.2
95% Confidence Interval for Mean	Lower Bound	1.93	-.02
	Upper Bound	2.95	0.6
	Mean		
5% Trimkmed Mean		2.27	.00
Median		1.00	.00
Variance		3.272	.020
Std. Deviation		1.809	.141
Minimum		1	0
Maximum		7	1
Range		6	1
Interquartile Range		2	0
Skewness		1.200	7.071
Kurtosis		.880	50.000

The Explore procedure was used to compare the differences between non-project members and project members in terms of aggregate welfare measures. According to Table 5.5, the mean value of the aggregate livelihood scores calculated for project members was 2.44 while the value for non-project members was 0.2. This clearly suggests that project membership results in better livelihood performance for the households than being outside the project context. The results further show that the

livelihood scores for project members actually ranged from 1 to 7 which means that the possibility of several individuals scoring more than the average was quite high. Table 5.5 shows that these values had a low skewness of 1.2 meaning that they did not vary much from the positive scores. The indication that project members were better off than non-project members is consistent with everyday observation that people who are productively employed are more likely to enjoy better incomes and livelihoods than those who are not. In this case, the issue is about the level of support and empowerment that individuals receive in the work they do. As is well known, the lack of government support in the form of subsidies for inputs and infrastructure are the key constraints to the smooth implementation of the current programmes of reform and transformation of agriculture designed to integrate the black population into the nation's mainstream economy. Projects are frameworks for demonstrating to what extent the provision of these support and subsidies can make a huge difference in the lives of the people and contribute in the alleviation or reduction of poverty for the generality of the rural dwellers.

5.5.1. Analysis of production costs

One of the more critical elements in sustaining food production is to improve the living conditions of rural communities by assisting especially small farmers in enhancing agricultural productivity and their incomes. The interviewed project members indicated that project implementation and evaluation in Dannhauser local Municipality is successfully undertaken with local communities by the assistance of Extension officers from the Department of Agriculture, who are working in the urban and rural areas to ensure that projects members are trained in all aspects e.g. financial management; bookkeeping etc. to be able to produce sustainable projects so as to alleviate poverty. Table 5.6 below shows the comparison of production costs between project members and non-project members using the explore procedure on SPSS.

Table 5. 6: Comparison of production costs between members and non-members based on livelihood measures

Descriptive		Project members	Non-project members
Mean		2.80	.08
95% Confidence Interval for Mean	Lower Bound	2.57	-.08
	Upper Bound	3.03	.24
5% Trimmed Mean		2.78	.00
Median		3.00	.00
Variance		.653	.320
Std. Deviation		.808	.566
Minimum		2	0
Maximum		4	4
Range		2	4
Interquartile Range		1	0
Skewness		.387	7.071
Kurtosis		-1.358	50.000

According to Table 5.6, the mean value of the production costs for project members was 2.80 while the value for non-project members was .08. The analysis further shows that the substantial gap between these two shows that those that are in the projects get more assistance and subsidies from government and different stakeholders to sustain their projects and improve the livelihood. Project members of Amajuba district indicated that they receive reduced transaction costs when buying inputs because they buy in bulks, transport costs when supplying their produce or inputs and when taking their produce to the market whereas non-project members pay normal prices for their projects activities. Table 5.6 further show the production costs scores for project members with the minimum of 2 and the maximum of 4 as compared to that of non-project members. Project members of Amajuba district municipality are privileged to benefit in Micro Agricultural Financial Institutions of South Africa (MAFISA) where

Government contributes overall commitments towards the social upliftment of people in their communities for poverty reduction.

4.6 Government structures support for poverty alleviation

South Africa is also fully committed to achieving the Millennium Development Goals by 2015 with respect to poverty reduction, water supply, and access to safe sanitation (DoA, 2008). Several successful initiatives were implemented in Amajuba District municipality; however, poverty continues to strain rural development efforts. Different departments and stakeholders have budget for community development as the issue of poverty alleviation is the concern to every member of the society. A Table 5.7: below shows the efforts that different stakeholders put in training and assisting in marketing the produce for the farmers in the District.

Table 5. 7: Stakeholders that are involved in project development

ORGANISATION	Project Members		Non-project Members	
	Training	Marketing	Training	Marketing
Department of agriculture	60	64	20	12
Department of social development	5	0	3	0
NGOs	8	0	6	0
Amajuba district municipality	20	36	15	26
Dannhauser local municipality	7	0	6	0
Total	100	100	50	38

Source: Field Survey (2013)

5.6.1 Project Members and non-project members

5.6.1.1 Training

Table 5.7: demonstrates that Department of Agriculture is playing a huge role in training the farmers and marketing their produce as compare to other stakeholders in the Municipality. It is further shown that those that are in projects receive much attention from the Department as compared to those that are working individually, the reason for that is because they are easily reachable and accessible at a time which saves time and money. Table above shows that 60% of respondents who are project members receive trainings from the department of Agriculture, whereas only 20% who are non-project members receive the same trainings from the Department of Agriculture. Moreover, 5% of the interviewed project members who received training from the Department of Social welfare and 3% who are non-project members who receive training from the same Department. Table 5.6: above further shows Amajuba District Municipality also takes part in proving training to the farmers as 20% of the project members who were interviewed stated that they receive their training from them while only 15% who are non-project members receive training from the same Municipality. The local Municipalities of Dannhauser also take part in training the farmers although few respondents mentioned this municipality for trainings. The table above shows that 7% of the project members received their training from Dannhauser local municipality whereas 6% of the non-project members received their training from the same municipality.

5.6.1.2 Marketing

According to table 5.7: above 64% of the respondents who are project members and 12% who are non-project members mentioned that it is Department of Agriculture who assist them in marketing their produce, as there are market shows every month in every local municipality whereby the farmers bring their produce in the same sport normally by taxi and bus ranks for marketing. That marketing strategy helps the farmers a lot to

improve their income and be able to sell their produce. Amajuba District municipality also play a part in assisting the marketing of the farmers produce as 36% of the respondents who are project members and 26% who are non-project members get help from Amajuba with marketing of produce.

5.7 Examine challenges encountered by farmers

A major challenge facing Amajuba district Municipality is the development of rural areas, many of which are seriously disadvantaged. Efficiency and productivity is of utmost importance. The Extension officers are therefore training farmers in every aspect to reduce poverty both in rural and in urban areas. A major challenge confronting the agricultural community is how to develop policies and strategies that will help previously disadvantaged farmers to benefit from the more liberalised, deregulated market for agricultural products (DoA, 2008). A table 5.8: below shows the number of challenges that project and non-project members encountered and also the percentages according to the number of respondents.

Table 5. 8: Challenges facing project and non-project members

Challenges	Non-project members	Project members
Lack of information	60	28
Poor markets	52	20
Poor infrastructure	68	40
Lack of skills	80	42
Lack of funding	76	40

Table: Response >100 due to multiple choice response

5.7.1 Lack of information

Table 5.8: above shows that non-project members lack information more than those that are in the projects. The table further shows that non project members has a level of

60% compared to project members who have 28% because non-project members prefer independence, they don't like interdependence where they can access new information about agriculture, new ideas, and new technology. Communication with individuals becomes a challenge and it involves a lot of time and money than working with a group. Whilst with project members it becomes easy for them to access new information through the extension officers who visits them regularly. They also attend community meetings because there is a division of labour as they are working as a group. Whereas with the non-project members they depend on ward councilors and hear say for information because they don't have time as they are hands on in their projects by so doing they lack much information as compared to project members and poverty cannot easily be alleviated.

5.7.2 Poor market

Table 5.8: above demonstrate that non-project members suffers the most with marketing their produce as they have 52% as compared to project members who have 20%. Non-Project members of Amajuba district have poor markets because they don't increase their productivity, the problem is exacerbated by the relative poverty of the rural population. Farm incomes are below non-farm incomes on a per capita basis. Whereas with project members their products are bought at a low price in formal markets because of the average weight which is low compared to those of the commercial farming sector. In Amajuba district municipality some of the individual farmers are located in relatively remote and inaccessible areas, therefore it becomes difficult for them to take their produce to formal markets as they don't have transport, they end up selling to the local community and at pension points. Therefore their level of poverty will remain the same there won't be any improvement in their poverty level, it will remain the same or get worse. Whereas with project members they manage to hire a transport to take their produce to other neighbouring markets because they get reduced transaction costs.

5.7.3 Poor infrastructures

According to Table 5.8: above, it demonstrates that non-project members have more challenge with infrastructures which are poor as compared to project members. Non-project members have 68% while project members have 40%. Farmers and community location are sometimes unreachable because of poor infrastructures especially in rural areas, therefore it becomes difficult for Extension officers to reach those communities for monitoring and training. The government cannot allocate thousands of rands to subsidies an individual farmer whereas he can spend millions to build an infrastructure for a group. Therefore the non- project members are at a disadvantage when comes to government funding unless they go to ask for loans at the banks and to other agricultural financing institutions like MAFISA for assistance. Therefore those that are in projects have better infrastructures as compared to those that are out of projects. Moreover, the non-project members cannot be able to increase their production which means that even the production income will remain the same, therefore, with non-project members the chances of poverty being reduced are minimal.

5.7.4 Lack of skills

Table 5.8: shows that project members are better skilled than the non-project members, reason being that project members get more training in every aspect of project management as compared to an individual member. There is a lack of technical knowledge to the community because it is not the whole community who get training from the extension officers but only the project members because of their involvement in the agricultural projects. The table above further demonstrates that non-project members who were interviewed are 80% who lack skills as compared to those in projects who are 42%. It is therefore tempting to blame their low levels of literacy and formal education. Non-project members of Amajuba district municipality lack knowledge and skills as they are not exposed to a number of trainings that involves demonstrations and discussions because of the barriers to spread of technological information. They are still into traditional farming as most of them are in rural areas, they believe in

indigenous knowledge because they are not exposed to trainings where new technology farming is being taught. The majority of non-project members that were interviewed appeared to be ignorant of modern farming methods and the technology, therefore, poverty cannot be reduced to them until they involve and include themselves to groups and communicate. It becomes expensive for an Extension officer to travel only to give trainings to an individual farmer as compared to a group.

5.7.5 Lack of funding

According to FAO, (1998) Agricultural finance and investment to rural areas is a vital part of addressing food security and poverty reduction in developing countries. However, the farmers of Amajuba district municipality lack funding for their projects. Table 5.7: above shows that non-project members lack funding the most as compared to project members. The table shows that 76% of respondents are non-project members whereas 40% are project members. Project members get agricultural finance when the Extension officer through the projects that they are rendering in the communities according to the budget allocated by the Department of Agriculture for the District office. Whereas with non-project members it becomes difficult because there is no funding in the government Departments allocated to cater for individual farmers as the government is promoting Cooperatives. This reduces poverty and enhances food security consequently improving rural livelihoods.

5.8 Socio-economic characteristics

Respondents were assessed on different aspects regarding their socio-economic characteristics. This section presents different socio-economic characteristics of sample project or non-project respondent which include access to and ownership of land, Money to invest in farming, and sources of water.

5.8.1. Access to and ownership of land

Land is one of the most important resources in agriculture (Stockbridge, 2007). Therefore access and ownership of this resource determines the people's ability to perform agricultural practices. In rural villages especially in Dannhauser local municipality, each household has a backyard garden and at least one field in most cases. The sample respondents were asked if they have access to both arable and grazing land but for arable land the question was not directed precisely to access to arable land but rather it was structured in way that captured if the sample members own a garden or at least one field. All the sample respondents indicated that they have access to grazing land. Dannhauser local municipality which comprised of 10% urban and 60% rural. In town agricultural land is scarce because they only have a very limited space to practice agriculture compare to rural areas, therefore they end up leasing and buying land in order to start agricultural projects. Figure 5.6 below demonstrate on how the land is allocated to the interviewed members and also on how they access it.

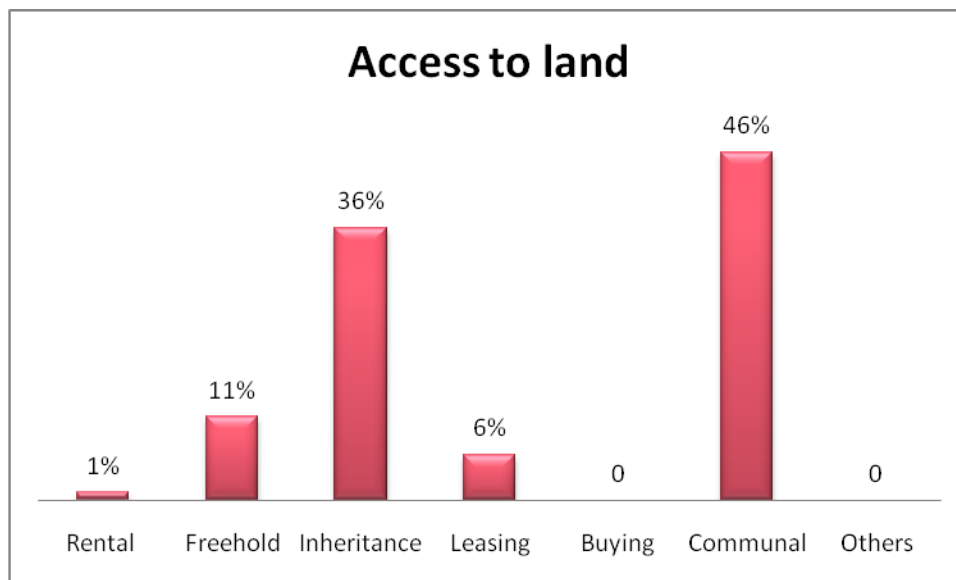


Figure 5. 4: Allocation of land (n=100)

Figure 5.6: Shows that 36% of the respondents have inherited land either from their grandparents or from parents. Whereas most respondents who are in projects

(cooperatives) get land communal land easily as the headmen or chiefs promote Working together in their lands. The study further shows that 6% of the respondents access agricultural land through leasing especially those in urban areas, because of the interest in agricultural projects as they don't own or inherited land for farming. Figure 5.6 further shows that there are no respondents who bought land for farming and only 1% who is renting a land for farming, because he is passionate about farming and is taking agricultural project as a business. The majority of people grow more of maize, beans and vegetables in their fields. Rural households in Amajuba district municipality are still ruled by chiefs (*Amakhosi*). The land that does not belong to any household is regarded as the chief's land; therefore anyone that needs some land has to go to the headman to ask for some piece of land. The headman will meet with the chief and then the land will be granted to that person by the headman and the size of the land is determined by the availability of the chief's land. Hence, one can notice that in the rural areas the households in the Dannhauser local municipality have larger pieces of land than the Newcastle rural villages because of the limited space and that they were demarcated after 1990.

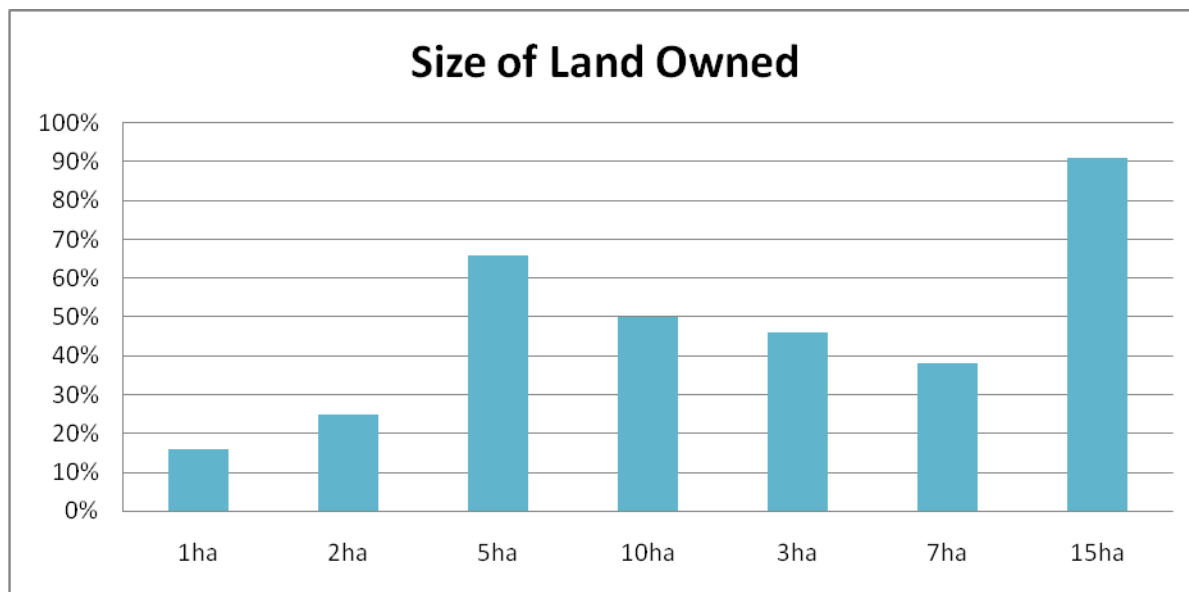


Figure 5.7: Size of land owned by farmers (n=100)

Figure 5.7 demonstrates that the huge pieces of land up to 15ha is accessed by those in projects because they have access to government grants and funding from different institutions, as well being supported by the chiefs is accessing communal lands. Whereas those working individually according to the study access from 1ha to 3ha of land and they don't use all the land because of lack of capital as they depend on own savings and from loans.

5.8.2 Analysing sources of money for farming

The availability of capital may determine the level of investment on agricultural production. The sample households were asked to indicate where they source the money to invest if agricultural production. They were given options to choose from and the options included borrowing from banks; borrowing from friends, own savings, state aid or other. Figure 5.8: below demonstrate on where the farmers access money for farming

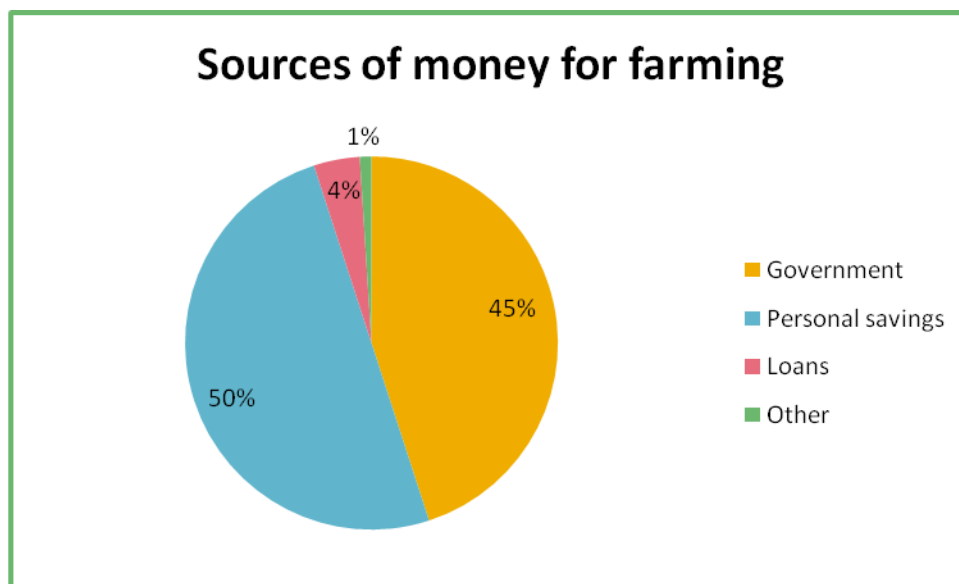


Figure 5. 8: Money to invest in farming (n = 100)

According to Figure 5.8: above only 45% of the respondents indicated that they were assisted by the government with funding since they are project members. Moreover; the Department of Agriculture in KwaZulu-natal is distributing vegetables seeds to every household to ensure food security and to reduce poverty. Whereas 50% of which are non-project start projects with their own saving, whereas 4% borrow from banks and friends because of the passion with agriculture and they also want to improve their income and livelihood. Figure 5.8: further indicates that 1% of the respondents get capital from MAFISA which is an institution that assist farmers with finance for agricultural projects. The majority of those respondents are working and others have other sources of income because the banks need surety that the money is to be returned with interest.

5.8.3 Analysing sources of water for farming

Water plays an important role in the world economy and safe drinking water is essential to humans and other life forms. Therefore, water is the most important use for agriculture which becomes impossible to start farming without water. Livestock, poultry vegetables and also crops need a lot of water which is a key component to produce enough food and to satisfy one person's daily dietary need. In Amajuba district municipality there are areas where there is water scarcity to meet all human's demands as it is shown in the graph below where people had to walk some km's to access water and others fetch them in the dam. Therefore it becomes impossible for the farmers to increase productivity and be able to market their produce, which is the other reason why some farmers end up farming for consumption because the quality of the produce is poor. Figure 5.9: below shows the sources of water for farming and the percentages of respondents on where they access water.

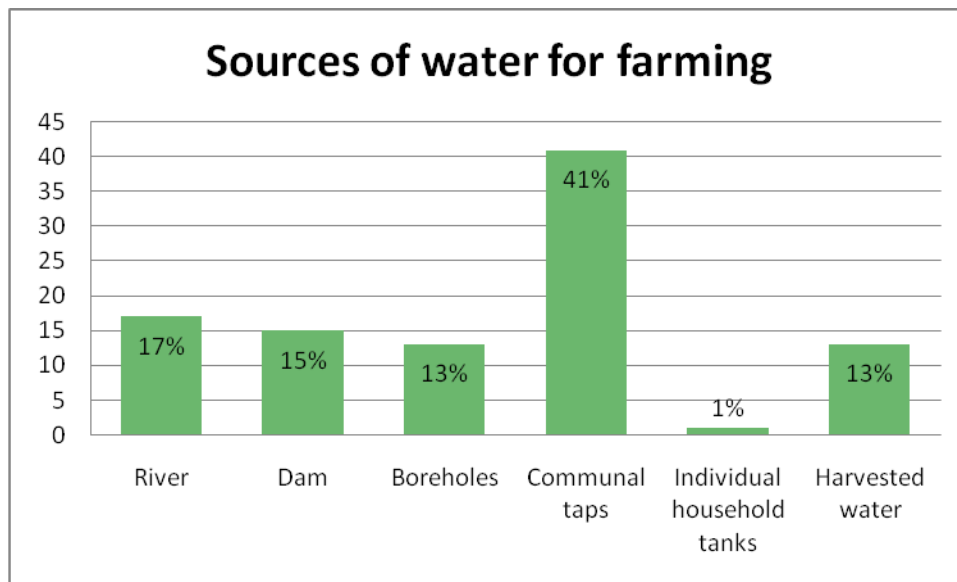


Figure 5.9: Sources of water for farming (n=100)

Figure 5.9: shows that people in the rural areas of Amajuba district municipality do not have sufficient water for farming and consumption. The study shows that 17% of the farmers fetch water from the river and use for cooking, drinking, washing and farming. Even the distance to the source is too much, especially considering the fact that the water are being fetched by women, girls and young boys. Only 1% uses individual household tank, whilst 15% of farmers fetches water from the dam for household use and for agricultural purposes which according to the research is very unhealthy because even the livestock uses that same water. Whereas, 41% of farmers uses communal taps which are not reliable and inadequate because it is controlled by the municipality which they sometimes close. Therefore irrigating agricultural products depending on municipality water becomes a challenge. About (13%) of respondents use harvested water for agricultural projects, but depend on rainfall during winter and do not produce because there are no rainfalls.

5.9 Types of Crops Produced

The types of crops and crop diversification influence on farmers' decisions to participate in project membership development initiatives to ensure close monitoring to projects to avoid crops failure. Crop diversification guarantees farmers of returns in case other crops fail. Farmers derive income from farming, which they can channel towards working together as projects members (cooperatives) not individually to promote agricultural development. This adds to their income base and increases their capacity and willingness to participate in irrigation development. An analysis was done on the types of crops the farmers grow and results are as shown in Table 5.10 below.

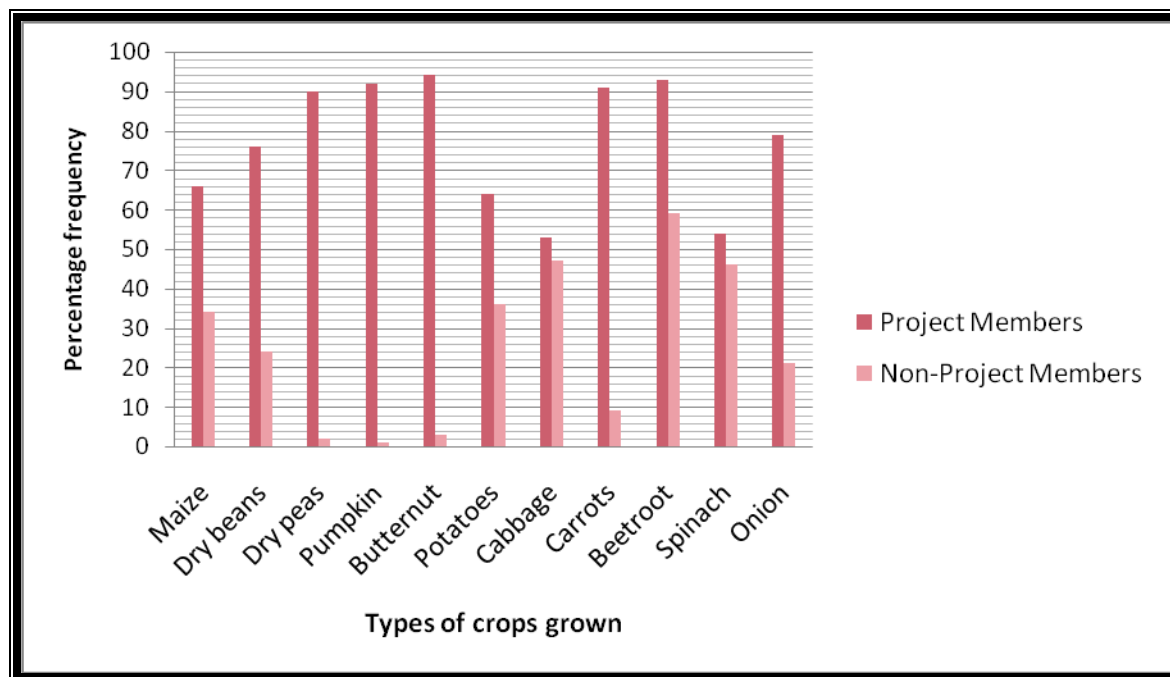


Figure 5.10: Different types of crops produced by respondents

Source: Field Survey (2013)

Figure 5.10 show the results of the respondents where both project and non-projects members were interviewed about different types of crops that they produce. The research further depicts that those in projects produce more than those who work individually. Projects members receive much attention and support services from the government and other stakeholders than those working individually. Extension officers

play a huge role in assisting the projects members to produce this much because the government promote cooperatives as it easy to provide service such as funding, trainings, workshops, taking soil samples and other services. The results of the study above indicates that project members produce about (66%) of maize, whereas non-project members produce 34%. Moreover, one of the respondents who is a non-project member complained that they are supported by capital and they never tested soil samples before planting which might be one of the reasons why they do not produce high quality maize. and further argued that land is a scarce resource to them because they cannot be accessed as they are non-project members without inputs, capital and infrastructure.

Table 5.9 Comparison of output for different crops produced by Project members and non-project members (n=100)

Crops Grown	Project Members Percentage	Non-Project Members Percentage
Maize	66%	34%
Dry beans	76%	24%
Dry peas	98%	2%
Pumpkin	99%	1%
Butternut	97%	3%
Potatoes	64%	36%
Cabbage	53%	47%
Carrots	91%	9%
Beetroot	95%	59%
Spinach	54%	46%
Onion	79%	21%

Source: Field survey (2013)

The results demonstrated in the above table display the percentages calculated from the field data collected in Dannhauser local municipality to access the impact of

agricultural projects on poverty alleviation, the results promotes working as project members as the solution to reduce poverty in the communities.

5.10 Support Services

5.10.1 Extension services and Advice

Contact with extension allows farmers greater access to information on the technology, through greater opportunities to participate in demonstration tests (Whittome *et al*, 1995; Atta-Krah & Francis 1987). Access to information affects farmers perceptions of risk. Having sufficient knowledge about the technology enables farmers to optimize these decision-making processes (Feder *et al*, 2003). Furthermore, (Feder *et al*, 2003) found that farmers consider other farmers to be the most important source of agriculture information, but prefer more specifically trained sources as the complexity of the message increases. The acquisition of knowledge may lead to a change in farmer perceptions about risk and profitability. Thus, farmers who are knowledgeable about profit-enhancing technologies will choose to adopt (Negatu & Parikh, 1999).

In this survey, farmers were asked on whether they accessed extension services and their responses were analysed as shown in figure 5.11 below.

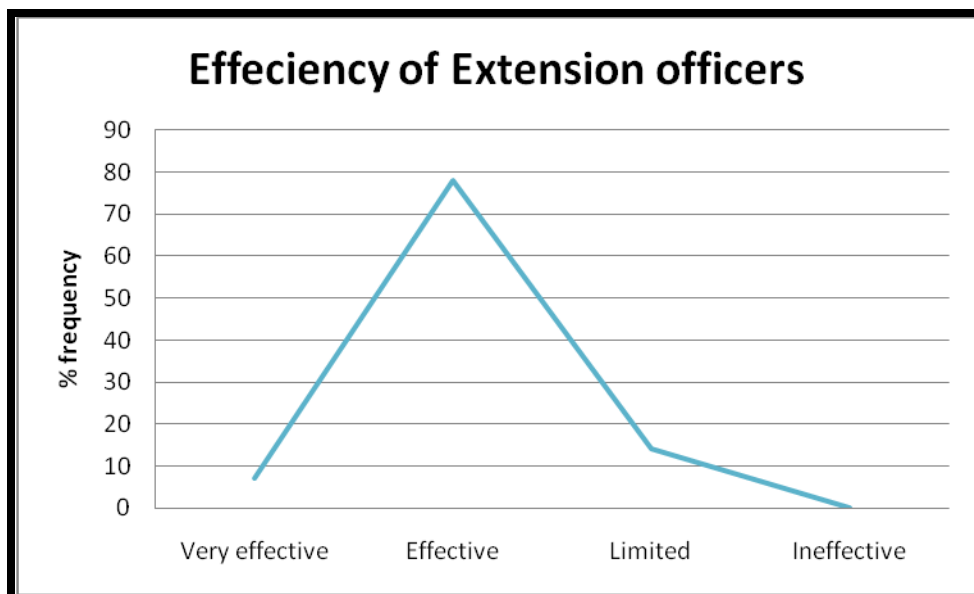


Figure 5.11: Efficiency of extension officer's advice
Source: Survey data (2013)

The results in Figure 5.11 show that only 8% of respondents who are projects members indicated that extension officer's advice is very effective and adequate in their projects, while 78% indicated that extension officer's advice is effective to their projects and also in increasing their production. Hence, about (14%) of the respondents (mostly the non-projects members) have limited access to extension officer's advice because they cannot be easily accessed by government for services, since they work individually. Moreover, there is lack of resources for individual rich farmers and this is quite costly for the government. According to Sidibé(2005) & Forson (1999), farmers who have frequent contacts with extension services and experts have easy access to information about problems, potentials and performances to produce and agriculture, since they can regularly upgrade their knowledge on development projects. However, lack of adequate and proper extension services reduce the willingness of farmers to participate in development initiatives as there is lack of motivation for them to participate. Table 5:10 below shows how much the projects' members and non-projects members use the advices given by extension officers.

Table 5.10: Extension officer's advice

Item	Frequency	Percent
Regularly	61	61.0
Quite often	36	36.0
Sometimes	3	3.0
Total	100	100.0

Source: Field survey (2013)

Table 5.10 above indicates that 61% of the respondents use extension officers' advice regularly, as the majority of these respondents are projects members, whereas 36% of the respondents use the advice often and 3% responded by saying they sometimes use extension officers' advice because they still believe in indigenous technical knowledge not in new technology of farming that is being promoted by extension officers. Farmers who receive regular advice and training on projects developmental programs have a higher probability of producing more of quality products than farmers who do not have access to these services.

5.10.2 Farmer Institutional Support

The research depicts that 80% of the project members receive support which includes training, funding, inputs and infrastructure from government. Whereas 15% of the respondents get support services from the municipality. Figure 5.12 below also indicates that 3% of the respondents is being help out by LIMA which is an non-governmental organisation for farmer's support services especially those who are non-projects members with infrastructure and inputs, as they are not fully supported by government with infrastructural funding. There are also local associations such as Taxi associations and farmers associations in the Amajuba District Municipality that assist farmers with support especially those that are struggling to make ends meet, according to the research about 2% of the respondents are being assisted by local associations in their projects to alleviate poverty.

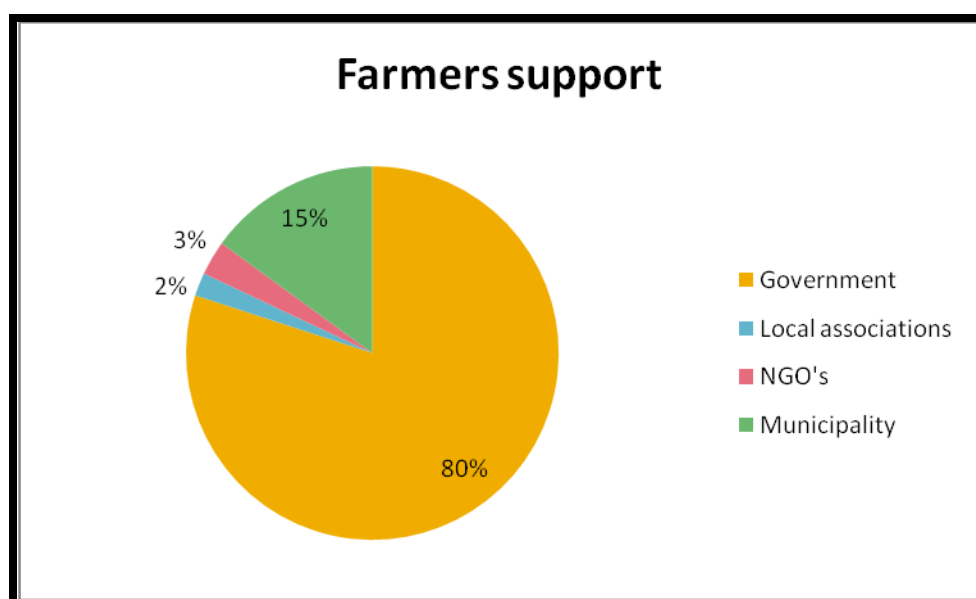


Figure 5.12 Farmers service support
Source: Field survey (2013)

As farmers benefit with support from different institutions for capital, inputs, implements, workshops and market information. Most farmers highlighted that they received training on how to operate and manage their agricultural projects, preparing and compiling

business proposals for sourcing credit from financiers and financial institutions. Therefore, farmers benefit a lot from workshops that is rendered by different stakeholders to them in order to alleviate poverty by establishing agricultural projects. Figure 5.12 below further stipulate different benefits that the respondents were selecting from according to their order of priority, 51% of the respondents states that they benefit a lot with workshops which Department of agriculture extension officers provide. They further specify that these workshops promote working together as cooperatives because that makes it easy to convey a message and also promote development. Whereas 26% of the respondents benefit inputs such as fertilizer, seeds and chemicals especially from the DAEA as it is stated in figure 5.13 that government play a big role in supporting agricultural projects for poverty alleviation.

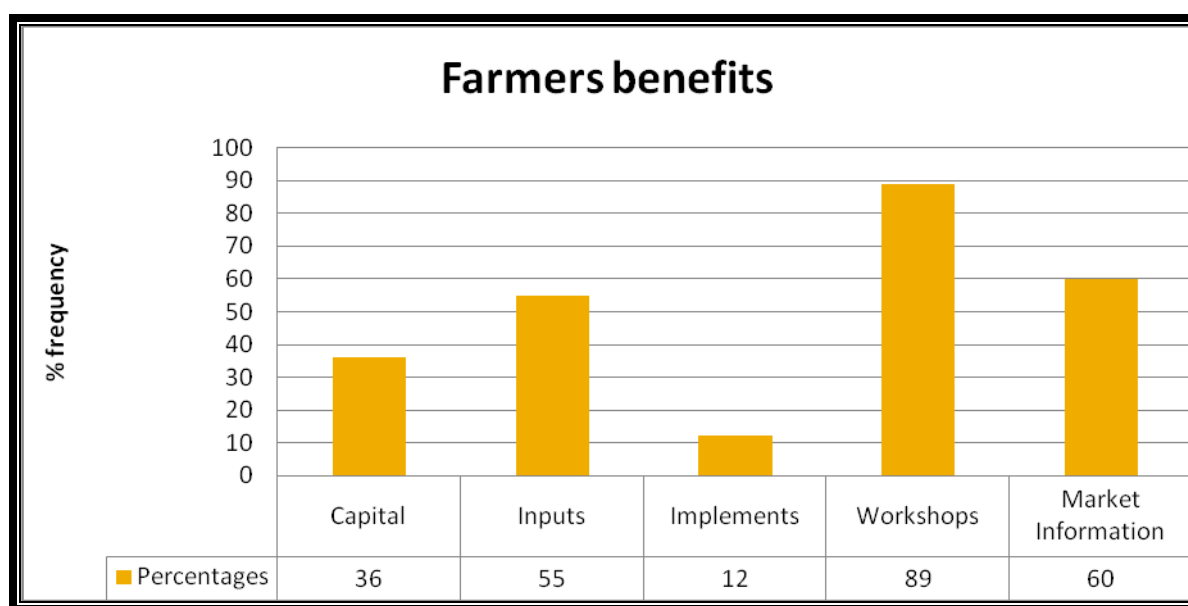


Figure 5.13 Farmer support service benefits

Source: Field survey (2013)

About 36% of the respondents who are projects members who get capital support from different sectors that are stated in figure 5.13 above. Whereas those that are non-projects members don't get capital from these institutions. The research further states that 60% of the respondents receive market information from the government sectors and from the municipality, only 12% who benefited implements from the government

because they are a big co-operative that was funded by the Minister of agriculture because of the effort they put in agriculture for poverty alleviation and advancing from being sustainable farmers to commercial market, and 89% of the respondents confessed that they get market information from the government extension officers

5.10.3 Asset ownership

Accessibility of farm implements such as planters, ploughs, cultivators, spade, fork and hoes are expected to influence the total output and marketing. Hence, farmers who own planting implements stand a better chance of using all of the land available to them (Jari, 2009). In addition, ownership of planting implements positively affects the time of planting. The farmer who owns farm implements is more likely to plant on time. This may result in larger output levels. Of equal importance is the development of the technology that is used to cultivate the land by the emerging and smallholder farmers. Results of the farm implements owned are explained in Table 5.11.

Table 5.11: Owned Farm implements by communities

Farmers Implements (n=100)	No. of farmers without implements (n=100)	No. of farmers who own implements (n=100)	No. of farmers who borrow implements (n=100)	No. of farmers who hire implements (n=100)
Plough	14	20	60	6
Planter	15	14	64	7
Cultivator	17	10	66	7
Spade	5	95	-	-
Rake	64	34	2	-
Fork spade	29	70	1	-
Hoe	1	99	-	-

Source: Field survey (2013)

Table 5.11 shows that 100 people were interviewed when conducting field survey for this study in Dannhauser local Municipality. The question was asked if they own, borrow and/or hire farm implements. The analysis illustrated in the above table indicates that only 20 respondents out of 100 who own plough, and 14 does not have a plough at all and 60 of the respondents borrow plough when practicing agriculture. The research further discovered that 99% of the respondents own hand hoes as they were supplied by the department of agriculture in KwaZulu-Natal in their one home one garden programme for food security to alleviate poverty and only 1 person does not own a hand hoe. All the respondents do not hire spade, rake, fork rake and hoe, atleast 2 borrow rake and 1 respondent also borrow fork spade. The study further revealed that 95% of the respondents own spades and only 5% does not have spade. About 66% of the respondents borrow the cultivator and 64% also borrow the planters.

5.11 Results of the Binary Model

This chapter presents the results of the regression analysis. It begins by specification of the model, where variables are fitted into the model. The chapter provides empirical results that were obtained from the model. An in depth analysis on the significant variables is then given and a conclusion of the chapter.

Omnibus Tests of Model Coefficients		
Chi-square	df	Sig.
58.756	30	.001
58.756	30	.001
58.756	30	.001

Table 5.12: analysis from SPSS model

The -2 log likelihood (deviance) has a chi squared distribution. The -2 log likelihood is a measure of how well the model explains variations in the outcome of interest. The *p value* for the model is less than 0.05, hence, we conclude that the addition of variables is statistical significant.

Binary Logistic Estimates

Variables	B	S.E.	Wald	df	Sig.	Exp(B)
GEN(1)	1.085	.958	1.283	1	.257	2.958
ED	.141	2.052	.005	1	.945	1.152
WIYCPO	.534	.474	1.268	1	.260	1.705
WIYCSO	1.376	.688	3.998	1	.046**	3.959
AFAMASI			.916	3	.822	
AFAMASI(1)	-.196	.946	.043	1	.836	.822
AFAMASI(2)	.792	1.735	.208	1	.648	2.209
AFAMASI(3)	.887	1.700	.272	1	.602	2.429
HMYBIF	.003	.320	.000	1	.992	1.003
TGT	.936	.399	5.502	1	.019**	2.549
AYMOAIS(1)	.402	1.350	.089	1	.766	1.495
ITORYAT			6.692	4	.153	
ITORYAT(1)	1.525	1.665	.840	1	.360	4.597
ITORYAT(2)	-	1.588	.701	1	.403	.265
ITORYAT(3)	1.330	1.141	1.851	1	.174	.212
ITORYAT(4)	-	.990	4.583	1	.032**	.120
HEDUEOA	1.552	.825	2.502	1	.114	.271
AGE	-	.058	2.323	1	.127	1.093
OUTPUT	2.120	.000	10.624	1	.001***	1.000
MST	-		3.169	3	.366	
MST(1)	1.304	1.007	3.108	1	.078*	.169
MST(2)	.089	1.214	1.044	1	.307	.289
MST(3)	.000	6.872	.001	1	.978	.828
Constant		4.222	1.166	1	.280	.010
	-					
	1.775					
	-					
	1.241					
	-.189					
	-					
	4.559					

Significant at 10%*, Significant at 5%** , Significant at 1 %***

Percentage correctly predicted: 87.9%

Table 5:13: Binary regression model analysis

Source: SPSS Field Survey (2013)

Model Summary		
-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
65.235 ^a	.499	.673

Table 5:14: Binary regression model analysis

Source: SPSS Field Survey (2013)

Hosmer and Lemeshow Test	Chi-square	df	Sig.
	9.797	8	.280

Table 5.15: Binary logistic analysis(2013)

Source: SPSS Field Survey (2013)

The Hosmer and Lemeshow Test is the most robust test or the model fit. Unlike the most *p-values* we want **$p > 0.05$** to indicate a good fit to the data. As show above the *p-value* is over 0.05 suggestions that there is no difference between the observed and the predicted model values of the dependent.

5.11.1 Explanatory Variables

Gender- We can see that the coefficient of gender (GEN) is not significant ($\text{sig}=0.257 > 0.05$). The Exp (B) column shows the relative odds and indicates that females are 2.958 times likely to be member of agricultural projects than males. For every unit change in gender the log odds of being a project member increases by 0.90. This is in support of the preliminary study findings on gender which showed that 59 % were female and 41 % were male. The finding is consistent with Nnadi and Akwiwu (2008) who did not find any significant relationship between sex and farmers participation in agricultural projects. However, Nxumalo and Oladele (2013) noted that male farmers were more likely to participate in agricultural projects.

Marital status- The overall effect of marital status (MST) coefficient is statistically insignificant ($.37 < 0.05$) although the classes of marital status are insignificant, MST=1 is

significant ($0.078 < 0.10$). Therefore, chances of being a project member are reduced by 1.69 times when single. This was noted within the respondents, most of them were already married (46%) and widowed (19%). Suggestion that marital status may have a contributing factor in membership of agricultural projects. This is particular the case when a family is seeking a variety of means to generated income. Nhadi and Akwiwu (2008) noted that marriage increases a farmer's concern for household welfare, therefore, it is likely to positive effect the decision to participate in agricultural projects. The study found a negative relationship between marriage and farmers participation to projects, similarly to Oladejo *et al*, (2011).

Education- (ED) was found to be statistically insignificant in influencing farmers to be members of an agricultural project ($0.95 > 0.05$). This implies that membership to an agricultural project is not influenced by age of the individual. The results are in support of Hoag *et al*, (1999) who postulates that given the type of benefits and time taken to realise, it is expected that educated households would a higher opportunity costs of labour, thus, this variable is expected to have a negative relation with participating in a project. This finding contradicts Matsumura (1997) who claimed that educated household were likely to participate in projects. Similarly, Francis (1987) supported the importance of education in development projects. However, Nxumalo and Oladele (2013) did not find any significant relationships between education and participation in agricultural projects.

Primary occupation- (WIYCPO) of respondents was statistically insignificant ($0.26 > 0.05$) in having influence to membership in projects. Although the coefficient was positive (0.534) suggesting that a one percent increase in a unit increases membership by 5 %. The findings pointed out that many respondents who are part of the projects where not influenced by their occupation.

Secondary occupation- (WIYCSO) was found to statistically significant (0.046) in influencing individuals to be a member of agricultural project. The odds of being a member were 3.959 times high and the co-efficient was positive suggesting a positive

relationship between membership and secondary occupation. Many respondents agreed that the secondary occupation had an influence in making them chose projects because it was mostly done in part time.

Sources of income - (AFAMASI) overall was found to be statistically insignificant ($0.822 > 0.05$) in influencing membership to agriculture projects. Although most of the respondents were generating income from grants. Their participation in projects was not influenced by their source of income. Some of the respondents were receiving salaries, yet, they were members of the projects. This means that income may not be a pushing factor in contributing to membership of a project.

Farming experience - (HMYBIF) was found to be statistically insignificant (0.992) in influencing membership to projects. This was in support to what the respondents claimed. Most of the respondents claimed that they joined projects due to other factor such as self-actualisation. Therefore, they were doing the projects as hobbies in most times.

Market targeted- (TGT) seemed to have a significant influence in the having a membership in agriculture projects. The *p value* was 0.019 meaning that is was less than the 0.05 . This meant that the odds ratio was 2.549 times for an individual to participate in the projects. Most of the respondents agreed that knowing about the market where they will sell their produce, was a significant factor in making them join projects. The main argument was that it was pointless to join an agricultural projects producing crops and failing to sell them in the mainstream markets. Therefore, the first question they asked project leaders was about market stability or access to market.

Membership to irrigation schemes- (AYMOAIS) was found to be statistically insignificant ($0.766 > 0.05$) in influencing membership to agricultural projects. Being a member of an irrigation scheme exposes an individual to information and provides farmers to farmer interactions. Therefore, Adesina et al, (2000) posit that being involved in a group or scheme has an effect of increasing the likelihood of a farmer in

participating in agricultural programmes. The findings of this study are dissimilar to Ngwenya (2013) who noted that farmer groups have the effect of increasing the latent propensity to participate in proposed schemes.

Resources- the type of resources available (ITORYAT) was statistically insignificant overall at 0.153. Suggesting that membership to agricultural projects is not influenced by resources available. Most of the respondents when not drawn to projects because of resources. Although they admitted that resources helps them in deciding their choice. The final outcome is based on a number of factors not linked to resources potential of a project.

Extension services- (HEDUEOA) was statistically insignificant ($0.114 > 0.05$) in influencing membership in projects. This is in contrast to Sidibe (2005) who noted increase in access to extension services helps farmers to be appraised on challenges and can upgrade their know how on developmental projects. Of the same view, Atta-Krah and Francis (1987) stated that contact with extension services allows farmers greater access to information, hence, increasing the farmers' ability and desire to participate in projects. However, it was noted from the respondents that many who were members in agricultural projects were influenced by other factors not linked to the information they received from extension services. Hence, the variable is insignificant supporting their claim.

Output- (OUTPUT) that was recorded from agricultural projects was strongly statistically significant in influencing individuals to be members in agricultural project. The odds ratios were 1.000 times in favour of output influence to membership. This meant that individuals were likely to be influenced by the output of a project to be a member in that project. This findings means that output generation is one of the major influencers in becoming a member of a certain project. Most of the respondents stated that before joining the projects they would inquire about the output that was produced before. If the project has been successful then they become members others if it is not successful they do not join the project. Studies done by Enete and Igbokwe (2009), and

Omiti *et al*, (2009) support the idea that output act as an incentive for producers to supply more goods in the market resulting in higher income, which influences participation in project.

Age - Age was found to be statistically insignificant ($0.127 > 0.05$). Although the relationship between age and membership to project is said to be positive. It means that the probability of being a member to an agricultural project is higher amongst older individuals than younger ones. Several authors have noted a positive relationship between age and participation in agricultural projects (Nnadia & Akwiwu, 2008; Nxumalo & Oladele, 2013). The results are similar to Oladele *et al*, (2011) who failed to find any significant relationships between age and participation in agricultural projects. However, Turner *et al*, (1983) noted that older farmers are risk averse and thus maybe more resistant to change, thus increasing their likelihood of not participating in a project or programmes. In the study areas, the average age group was 40 years. Suggesting that most of the members in agricultural projects were older. This is in support of the Agricultural Statistics (2013) which pointed out that youth participation in agriculture has declined in the past decade.

CONCLUSION

The study investigated the factors that influence membership in agricultural developmental projects. Six explanatory variables analysed through the use of a binary model were found to be statistically significant in influencing membership in projects. It is very important to note that most variables were statistically insignificant in influencing membership in projects not the outcome of the projects. Therefore, the impact of the projects in poverty alleviation was explained more in the descriptive results.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter presents a summary of the dissertation. This chapter started by summarizing chapter two which focused on the literature review in respect of the current state of agricultural projects, rural livelihoods and the sources employed, available technologies, government efforts to alleviate poverty and agricultural development projects framework analysis. Chapter three dealt with the methodologies used to collect the data and the procedures and the model disruption fitted in the study. This chapter provides the conclusions and recommendations drawn from the data analyzed on the impact of agricultural development projects on poverty alleviation. The conclusion is based on the objective of the study which is achieved by answering the research questions which were stated in Chapter 1. The objective of this study was to identify poverty alleviation projects for development by the government departments in the District, to investigate on the livelihood strategies by smallholder farmers in Amajuba district municipality, and lastly to assess the impact of poverty alleviation strategies in place in the district.

6.2 Summary of the dissertation

This section covers the various chapters of this study. Chapter two which was the literature review appraised the literature on different aspect of rural livelihoods. Chapter three dealt with summary of the study area, that involve description of the study area, historical background, study sites, demographic information, employment status of the respondents as well as their agricultural potential. Chapter four covered the methodology used when collecting data, research design, target population or sample frame. Data collection procedures were also involved, as well as data analysis and presentation was done. Also chapter five dealt with data analysis and presentation. Descriptive logistics

and binary regression was used to analyse data. Variables such as membership, output, gender, marital status, age, household size, educational level, and land size were also analysed. Extension support services such as trainings, marketing and funding sources were also analysed.

6.1 Conclusion

The main objective of the study was to assess and evaluate the impact of agricultural development projects on poverty alleviation. Therefore the literature focused on different subtopics related to this objective. The first subtopic looked at different theories and their causes which were discussed. The first theory being a Poverty Caused by Individual Deficiencies, which blames individuals as responsible for their poverty situation, where politically theoreticians criticise community members that are in poverty for their own situation, and argue that if they worked harder and had better choices poverty could have been avoided to solve their problem. The second theory being Poverty Caused by Cultural Belief Systems that Support Sub-Cultures of Poverty, This theory states that poverty is created by the shift over generations to generations because of their beliefs, values, and skills that are socially generated but individually held. The third theory discussed is Poverty Caused by Economic, Political, and Social Distortions or Discrimination which look to the economic, political, and social systems which make people to have limited opportunities and resources with which to achieve income and well being. Fourth poverty that the study looked at was Poverty Caused by Geographical Disparities, the study indicates that Researchers and policy makers collect or construct geographically disaggregated indicators that provide information about the spatial distribution of inequality and poverty within a country.

The study indicates that there is rural poverty, ghetto poverty and developing countries poverty, and third world poverty. The fifth and the last poverty theory that the study looked at is Poverty Caused by Cumulative and Cyclical Interdependencies, this theory of poverty is the most compound and to some extent it constructs on mechanisms of each of the other theories, Moreover it looks at the individuals and their community at

large as trapped in a coil of prospect and problems, which leads to that once problems govern, they shut other opportunities and build a mounting set of problems that make effective response nearly impossible.

This chapter further looked at the importance of household agricultural production, in the rural areas of kwaZulu-Natal, and maize is the most important produce that the majority of households produce as it can be consumed and feed animals, while vegetables grown at home have a very high nutritive value. The study further emphasizes the importance of home production for home consumption because that alone reduces the level of poverty. Involvement in agricultural projects could reduce the high level of poverty and the migration of youth and men to the cities for greener pastures that are not accessible in rural areas.

Based on descriptive statistics results, the study conducted at Dannhauser local municipality states that the gender description between males and females is not equal, which is 59% female and 49% male. People are characterised by their levels of education and the household sizes are large with a mean household size of 6.32 and a household as large as 16 individuals. There is a high level of unemployment and the majority of people with employment fall under the income class of R1000 to R1500 a month. There is heavy dependence on social grants and therefore people depend on the market and on own food production for livelihoods. Access to and ownership of land is not a problem because the majority of respondents have access to land which they obtained in different ways. The study indicates that 36% of the respondents were inherited, 46% was communal land, 6% was leased while 11% said they are using a freehold land in order to start farming. The Amajuba district non-project members are still behind in terms of technology adoption, they still use old methods of production which is indigenous technical knowledge. However, with project members the study showed that they are better skilled because they get more training in every aspect of project management and production as compared to non-project members. Different government departments and stakeholders have budget for community development as

the issue of poverty alleviation is the concern to every member of the society. The study further indicates that Department of Agriculture is playing a big role in providing training to the project and non-project members and also in marketing their produce. A number of challenges facing Amajuba district farmers were examined which includes lack of information, poor markets, poor infrastructures, lack of skills, and lack of funding. According to the challenges mentioned above the study indicates that project members are not in big challenge as compared to non-project members because they get subsidies from the government including the extension services as they are better skilled than non-project members.

There are a number of projects for development in Amajuba district municipality which includes vegetables, poultry, livestock, and crops. Project members produce different commodities in their projects depending on the nature of the area and environment, and also on the demand of the produce in the market they are targeting. According to Table 5.: above there are no project members who produce vegetables only, bearing in mind that in Dannhauser local Municipality water is not a reliable and adequate resource. 40% of the respondents are producing vegetables and crops at the same project, whilst 24% are producing vegetables and poultry simultaneously. However, 2% are producing crops only; whereas 8% of the project members are producing crops and livestock simultaneously. 18% of the respondents' project members produce livestock while 8% produce poultry. The research shows that people in the rural areas of Amajuba district municipality still do not have sufficient water for farming and consumption. The study shows that 17% fetch water from the river, while 15% fetches water from the dam, Whereas, 41% uses communal taps which are not reliable and inadequate especially in winter when there is no rainfall and dry, then 13% which is the majority of people in this study uses borehole because of the intervention of local municipality to improve community development programmes. According to Figure 5.8: above only 45% of the respondents indicated that they were assisted by the government with funding since they are project members. Whereas 50% of which are non-project start projects with their own saving, 4% borrow from banks because of the passion with agriculture and also to improve their income and livelihood. 20% of the respondents borrow money for

farming from agencies such as SEDA. Projects play a huge role in boosting the economy in the communities and also in improving the incomes of those involve and in creating job opportunities. Poverty is being alleviated because of these agricultural development projects.

The research findings were that projects members get more preference than non-projects members from the government and other parastatals. Working in projects contributes to positive change in the socio-economic conditions in the municipality. Therefore, projects members create self-employment and sometimes provide space and time for socialization and the project members are sometimes through their produce able to provide basic foodstuffs to the family.

6.2 Recommendations

Project members of Amajuba district municipality have a great potential in own food production, as compared to non-project members. Therefore, non-project members should adopt a group approach by registering as Co-operatives to ensure effective use of limited resources. Group method will also help them to access subsidies provided by the government to projects and also to get full service such as trainings from the Extension officers. Poverty alleviation is easily reduced when working as a group because development and life improvement reach a number of people at one time.

There is a need for a strong extension support and advises to help especially non-project members on how to diversify their production, provide market information thereby enhancing production and opening channels to the market. This may enhance income from agricultural production thereby alleviating poverty.

Extension officer in each ward should be introduced for intervention in community needs for poverty alleviation. It is the Extension officer's role to form groups in the community, if he/she is allocated in the ward. It will also be easy to observe the needs of the community for development and act immediately especially in terms of funding for a project/group of people than an individual, and also when conducting trainings. The

standard of education needs to be improved. This may have a result even on reducing the household size.

There is a need for policy formulation

1. Addressing asset inequalities across gender and social divides. Special action is required to tackle socially-based inequality such as farm land ownership in rural communities, under-schooling of women and girls in rural areas due to lack of access to productive means.
2. A policy on creating economic opportunities for the poor, whereby growth-oriented policies should be accompanied by measures that enable the poor to share in the macroeconomic growth.
3. A policy that will devise anti-poverty programmes that are carefully targeting at the poor areas.

The study has highlighted various factors affecting agricultural projects sources. Therefore there is a need for the agricultural development projects to be consistently supplied with market information. Non-agricultural projects members were making little profit because they were selling their produce locally at low prices convenient to individuals. It is also important to equip the farmers with available market information and rules of these markets. Ways to disseminate information to farmers must be carefully considered and diverse, in a way that the information is conveyed to all projects members in farmers of South Africa. This calls for the government policy makers to disseminate information on the importance of working together as co-operatives in the communities in order to alleviate poverty. Farmers must also be trained in this aspect and the importance of working in groups. Farmers should also be trained on Value adding tactics as they also improve the cashflow in the projects and increase profit. This can be done by providing training and workshops on how to increase productivity using the same amount of land allocated to them.

Extension officers must also play a role using the recent extension approach of participatory rural appraisal, through discussions with farmers and empowering the farmers for marketing problems and solutions. Small-scale farmers should make sure that they contact Extension workers. If they do so, they stand a better chance of being assisted by the government, in terms of funding their infrastructure and production inputs. Most of these rural dwellers use agriculture to maintain their livelihoods. Therefore, government also needs to strengthen agricultural activities in these communities to sustain the rural livelihoods and meet the current standards of living. The government also needs to provide more access to irrigation schemes and provide credit to rural farmers.

REFERENCES

AAKER, D.A., KUMAR, V.AND DAY, D.S.2006.Marketing Research. New York. New York: John Wiley and Sons.

ABALU, G. I., 1999. Food security, rural economic linkages and the creation of employment in rural areas of Southern Africa, *Agrekon*, Vol. 38 (1).

ADAMS, M.E.1981.Agricultural Extension in Developing Countries. Intermediate Tropical Agriculture Series. Longman.

AGERGAARD, J. & BIRCH-THOMSEN, T., 2006. Transitional rural landscapes: The role of small-scale commercial farming in former homelands of Post-Apartheid KwaZulu-Natal.

AGRICULTURAL ORGANISATION (FAO), 2008. Bioenergy policy, markets and trade and food security. Available at: <http://www.fao.org/fileadmin/user.../food/climate/.../HLC08-bak-7-E.pdf> [Accessed 29 March 2014] .

AHUJA, V. & REDMOND, E., 2001. Economic and Policy Issues in Livestock Service Delivery to the Poor. Available at: http://www.fao.org/ag/againfo/resources/en/.../servicedelivery_ahuja.pdf[Accessed 28 March 2014].

ALEMU, Z.G., 2011.Livelihood strategies in rural South Africa: Implications for poverty reduction. Development Bank of Southern Africa.

ALTMAN, M., HART, T.G.B. & JACOBS, P.T., 2009. Household food security status in South Africa. *Agrekon*, Vol. 48 (4).

ANDERSON, J., VAN CROWDER, L. & DION, D. 1998. Applying the lessons of participatory communication and training to rural telecentres. In Richardson & Paisley (eds) *The First Mile of Connectivity*. FAO, Rome.

ANONYMOUS, 2007. Ingquza Hill local municipality first draft IDP 2007 – 2012. Integrated development plan 2007 /2012.

ASHLEY, C. & MAXWELL, S., 2001. Rethinking Rural Development. *Development Policy*.

ATIERI & YURYERVIC, A.1994. Community- based sustainable development in Latin America; the experience of CLADES.paper presented at IIED Symposium, Brighton.

BABER, R. A. A. & NIEUWODT, W. L., 1992. Economic incentives in the subsistence areas of South Africa and the need for reform, *Development Southern Africa*, Vol. 9 (2). Available at: <http://www.informaworld.com/index/790972037.pdf> [Accessed 05 April 2013].

BAHTA, S.T. & BAUER, S., 2007. Analysis of the determinants of market participation within the South African small-scale livestock sector. Available at: <http://www.tropentag.de/2007/abstracts/full/422.pdf> [Accessed 16 March 2014]

BAIPHETHI, M.N. & JACOBS, P.T., 2009. The contribution of subsistence farming to food security in South Africa. *Agrekon*, Vol 48 (4).

BAIPHETHI, M.N. 2004. An economic evaluation of water conservation systems for dryland crop production for small scale resource poor farmers: A case of Thaba Nchu, Free State Province.

BAIPHETHI, M.N. 2009. The contribution of subsistence farming to food security in South Africa. PhD intern, center for Poverty, Employment and Growth Human Sciences research Council. MSc thesis, Department of Agricultural Economics, Faculty of Natural and Agricultural Sciences, University of Free State, Bloemfontein

BEMBRIDGE, T.J. 1991. *The Practice of Agricultural Extension. A Training Manual*. Development Bank of Southern Africa. ISBN 0 947057 77 3

BESTER, B. J, BELETE, A. & DONI, T. M., 1999. An application of probit analysis to factors affecting small-scale farmers' decision to participate in the Farmer Support Programme: A case study in the Eastern Cape province of South Africa. *Agrekon*. Vol 38 (1)

BRADSHAW, T. K. (2000). Complex Community Development Projects: Collaboration, Comprehensive Programs and Community Coalitions in Complex Society. Community Development Journal, 35(2), 133-145.

BRADSHAW, T. K. 2006. Theories of Poverty and Anti-Poverty Programs in Community Development. Rural poverty research center, Columbia.

CANT, M., GERBER-NEL, D. AND KOTZE, T. 2005. Marketing Research. Claremont, Cape Town: New Africa Books (PTY) Ltd.

CATLING, D. and SAAIMAN, B. (1996). Small-scale farmers and growers in the Western Cape: the challenge of providing appropriate extension services. In: Lipton, M., de Klerk, M. and Lipton, M. (eds.). *Land, Labour and Livelihood in Rural South Africa, Vol. 1: Western Cape*. Indicator press, Durban.

CHAMINUKA, P., SENYOLO, G.M., MAKHURA, M.N. & BELETE, A., 2008. A factor analysis of access to and use of service infrastructure amongst emerging farmers in South Africa *Agrekon*, Vol 47 (3).

CHUBB, J. E., & MOE, T. M. (1996). Politics, markets, and equality in schools. In M. R. Darby (ed), Reducing Poverty in America: Views and Approaches (pp. 121-153). Thousand Oaks: Sage.

CHUTA, E & SETHURAMAN, S.V., 1984. Rural small-scale industries and employment in Africa and Asia International Labour Office, Geneva.

COOPER, D.R. AND SCHINDLER, P.S.2006.Marketing Research. International Edition, New York: McGraw-Hill/Irwin.

DE VOS,A.S.2002. A Combined Quantitative and Qualitative Approach. In DE VOS, A.S. (Ed). *Research at grass roots: For the social sciences and human services professionals*. Pretoria: Van Schaik Publishers.

DE VOS, A.S., STRYDOM, H.AND FOUCHE, C.B.2005.Research at grassroots. Pretoria: Van Schaik.

DEICHMANN, W.1999. Geographic aspects of inequality and poverty. Text for World Bank's Web Site on Inequality, Poverty, and Socio-economic Performance.

DEJERE.H.,2006.Assesment of farmers' evaluation criteria and adoption of improved bread wheat varieties in Akaki,Central Ethopia.M.sc.(Unpublished) Presented To School of Graduate Studies of Alemeya University.

DEPARTMENT OF AGRICULTURE FORESTRY AND FISHERIES. *The integrated Food Security Strategy for South Africa (2002)*, [online] Accessed from www.daff.gov.za [Accessed: 2013-09-05].

DIEWERT, E.W., GREENLEES, J.S. AND HULTEN, C.R., 2009. Consumption of Own Production and Cost-of-Living Indexes. University of Chicago Press

DoA.(Department of Agriculture, South Africa).2002. The integrated food strategy for South Africa. Pretoria: Department of Agriculture.

DoA (Department of Agriculture, South Africa). 2008. The Integrated Food Security.Strategy for South Africa. Pretoria: Department of Agriculture.

DoA (Department of Agriculture, South Africa).2009.Economic Sector Review: Agriculture, Forestry and Fisheries. Pretoria.

DOLD, A.P. & COCKS, M.L., 2001. Traditional veterinary medicine in the Alice district of the Eastern Cape Province, South Africa. South African Journal of Science 97.

DOSS, C., GROWN, C. & DEERE, C.D., 2008. Gender and Asset Ownership: A Guide to Collecting Individual-Level Data. The World Bank Poverty Reduction and Economic Management Network Gender and Development Group.

DUVEL, G.H. & AFFUL, D.B., 1996.Sociocultural constraints on sustainable cattle production in some communal areas of South Africa, Development Southern Africa, Vol.13 (3).KwaZulu-Natal Development Corporation (KZNDC), 2004. Infrastructure.

Available at: http://www.ecdc.co.za/about_the_kzn/infrastructure[Accessed 02 April 2013].

FAO, 1996. Improving Extension Work with Rural Women, The Food and Agriculture Organization of the United Nations (FAO), Rome, Italy.

FEYNESS, T. & MEYER, N. 2003. Structure and Production in South African Agriculture. In Nieuwoudt, L. & Groenewald, J. (Eds.) *The Challenge of Change: Agriculture, Land and the South African Economy*. Pietermaritzburg: The University of Natal Press.

FOOD AND AGRICULTURAL ORGANISATION (FAO), 2010. Africa's changing landscape: Securing land access for the rural poor. Available at: <http://www.fao.org/docrep/012/al209e/al209e00.pdf>[Accessed 29 March 2013]

FOOD AND AGRICULTURAL ORGANIZATION (FAO), 2001. Crop and food supply assessment mission to Ethiopia. FAO Global Information and Early Warning System on Food and Agriculture, World Food Programme, Rome, Italy.

FOOD AND AGRICULTURAL ORGANISATION (FAO). 2009. The State of Agricultural Commodity Markets. Rome, Italy: Food and Agricultural Organization of the United Nations and Geneva: UNAIDS & WHO.

GERBER-NEL, C., NEL, D. AND KOTZE, T. 2005. Marketing Research. Claremont: New Africa Books (Pty) Ltd.

GHAURI, P. AND GRNHAUG, K. 2005. Research Methods in Business Studies. Dorset: Prentice Hall.

GODDARD, W. AND MELVILLE, S. 2001. Research Methodology: an introduction. Cape Town: Juta Academic.

GOERING, J., JEINS, J. D., & RICHARDSON, T. M. (2003). What have we learned about housing mobility and poverty deconcentration. in J. Goering, & J. D. Feins (eds), Choosing a better life? Evaluating the moving to opportunity social experiment (pp. 3-36). Washington DC: Urban Institute Press.

GOETZ, E. G. (2003). Clearing the Way: Deconcentrating the Poor. Washington DC: Urban Institute Press.

GRAHAMSTOWN, EASTERN CAPE PROVINCE. Fort Hare Institute of Social and Economic Research Working Paper No. 53. Paper presented at the Eastern Cape Historical Legacies and New Challenges conference, 27–30 August.

HAIR, F.J., WOLFINBARGER, M., ORTINAU, D.J. AND BUSH, R.P.2008.Essentials of Marketing Research. NewYork: McGraw-Hill/Irwin.

HART, T. & VORSTER, H.J. 2007. *African Indigenous Knowledge Systems in Agricultural Production*. Pretoria: Department of Science and Technology.

HART, T. 2009. Food security review: South Africa and Southern Africa. Unpublishedreport, Centre for Poverty Employment and Growth, Human Sciences Research Council, Pretoria.

HAYES, J., ROTH, M., &ZAPEDA, L., 1997. Tenure security, investment and productivity in Gambian Agriculture: A Generalized Profit Analysis. *American Journal of Agricultural Economics* 79(2):369-378.

HEDDEN-DUNKHORST, B. MATHONZI, T. M. & MPHAHLELE, E. R., 2001. Institutional transformation of small-scale irrigation farming in South Africa, *Agrekon*, Vol. 40 (1). Available at: <http://www.informaworld.com/index/922032159.pdf> [Accessed 01 April 2014]

HEMSON, D., MEYER, M. AND MAPHUNYE, K. (2004). *Rural Development. The Provision of Basic Infrastructure services*. Human Sciences Research Council.

Hendricks, F. & Fraser, G., 2003. Obstacles to agricultural development in the communal areas of the Eastern Cape. A report for the Eastern Cape provincial growth and development plan.

HENDRICKS, F. & FRASER, G., 2003. Obstacles to agricultural development in the communal areas of the Eastern Cape. A report for the Eastern Cape provincial growth and development plan

<http://www.fao.org/ag/AGP/agpc/doc/Counprof/southafrica/southafrica.htm#4>. Accessed on 05 December, 2013.

HENDRICKS, S.L. & LYNE, M.C., 2003. Agricultural growth multipliers for two communal areas of KwaZulu-Natal, *Development Southern Africa*, Vol. 20 (3). Available at: <http://www.informaworld.com/index/713661581.pdf> [Accessed 01 April 2013]

HUMAN SCIENCES RESEARCH COUNCIL (HSRC), 2006. Poverty in South Africa: Extent of access to food and income, Vol. 4 (4).

HUMAN SCIENCE RESEARCH COUNCIL (HSRC). 2007. Achieving Food security in South Africa: Characteristics, Stressors and Recommendations to 2019. Report to the Office of the Presidency (June 2007). Pretoria: Human Sciences Research Council

HUMAN SCIENCES RESEARCH COUNCIL (HSRC), 2006. Poverty in South Africa: Extent of access to food and income, Vol. 4 (4).

INONI, O.E. & OMOTOR, D.G., 2009. Effect of road infrastructure on agricultural output and income of rural households in Delta state, Nigeria, Vol. 42 (2). Available at: http://www.agriculturait.s.czu.cz/pdf_files/vol_42_2_pdf/INONI.pdf [Accessed 21 March 2013]

INTERNATIONAL FUND FOR AGRICULTURAL DEVELOPMENT (IFAD), 2003. Promoting Market Access for the Rural Poor in Order to Achieve the Millennium Development Goals. Discussion Paper. Available at: <http://www.ifad.org/gbdocs/gc/26/e/markets.pdf> [Accessed 18 July 2013].

INTERNATIONAL FUND FOR AGRICULTURAL DEVELOPMENT, STRATEGIC FRAMEWORK, 2001. Livestock and Rural Finance and the IFAD Rural Finance Policy Available online on <http://www.ifad.org/ruralfinance/policy/> Accessed on 07 November 2013.

IRZ, X., LIN, L., THIRTLE, C. & WIGGINS, S., (2001). Agricultural Productivity Growth and Poverty Alleviation. *Development Policy Review*, 19(4): 449-466

JACOBS, P., 2009. Agricultural Market Reforms and the Rural Poor in South Africa. Available at: <http://www.hsra.ac.za/Document-3216.phtml> [Accessed 13 June 2013].

JAGWE, J., OUMA, E. & MACHETE, C., 2010. Transaction Costs and Smallholder Farmers' Participation in Banana Markets in the Great Lakes Region of Burundi, Rwanda and the Democratic Republic of Congo. Department of Agricultural Economics, Extension and Rural Development, University of Pretoria, Vol. 6 (1).

JARI, B. & FRASER, G.C.G., 2009. An analysis of institutional and technical factors influencing agricultural marketing amongst smallholder farmers in the Kat River Valley, Eastern Cape Province, South Africa. *African Journal of Agricultural Research* Vol. 4 (11).

JARI, B., 2009. Institutional and Technical Factors influencing Agricultural Marketing Channel choices amongst Smallholder and Emerging Farmers in the Kat River Valley. Available at: <http://ufh.netd.ac.za/jspui/handle/10353/189> [Accessed 01 May 2012]

JENCKS, C. (1996). Can we replace welfare with work? in m. R. Darby (ed), Reducing Poverty in America (pp. 69-81). Thousand Oaks: Sage.

KANUNDU, M.G.C., HENDRICKS, S.L, BOWER, J.P. & SIWELA, M., 2007. Effects of traditional storage practices of small-scale organic farmers on potato quality. *Journal of the Science of Food and Agriculture*, Vol. 87 (10).

KHAN, M.H., 2001. Rural Poverty in Developing Countries Implications for Public Policy. The International Monetary Fund economic issue no. 26.

KIRSTEN, J., TOWNSEND, R. & GIBSON, C., 1998. Determining the contribution of agricultural production to household nutritional status in KwaZulu-Natal, South Africa. *Development Southern Africa*, Vol 15 (4).

LADZANI, R. 2009. The impact of HIV and AIDS on food security and nutrition in South Africa. Unpublished paper, Centre for Poverty, Employment and Growth, Human Sciences Research Council. Lahiff, E. & Cousins, B., 2005. Smallholder Agriculture and Land Reform in South Africa. *Institute of Development Studies*, Vol. 36 (2).

LIPTON, M., Ellis, F. and Lipton, M. (1996). Introduction. In: Lipton, M., de Klerk, M. and Lipton, M. (eds.). *Land, Labour and Livelihood in Rural South Africa, Vol. 1: Western Cape*. Indicator press, Durban.

MACHETE, C., 2004. Agriculture and poverty in South Africa: can agriculture reduce poverty? Department of Agricultural Economics, Extension and Rural Development and Postgraduate School of Agriculture and Rural Development, University of Pretoria.

MAGINGXA, L.L. & KAMARA, A.B., 2003. Institutional perspectives of enhancing smallholder market access in South Africa. 41st Annual Conference of the Agricultural Economics Association of South Africa, CSIR conference centre, Pretoria.

MAKHURA, M. & MOKOENA, M., 2003. Market access for small scale farmers in South Africa. In Nieuwoudt, L & Groenewald, J (Eds). The challenge of change agriculture, land and the South African economy. Pietermaritzburg: University of Natal Press.

MAKHURA, M.N. & WASIKE, W.S.K., 2003. Patterns of access to rural service infrastructure: the case of farming households in Limpopo province. *Agrekon*, Vol 42 (2). Available at: <http://www.informaworld.com/index/921890720.pdf> [Accessed 19 May 2014]

MAKHURA, M.T., KIRSTEN, J.F. & MATHYE, M.M., 1999. The response of nonfarm income to conditions in agricultural markets: an application of multivariate analysis of variance (MANOVA), *Agrekon*, Vol 38 (4).

MATUNGUL, P.M., LYNE, M.C. & ORTMANN, G.F., 2001. Transaction costs and crop marketing in the communal areas of Impendle and Swayimana, KwaZulu-Natal. Vol 18 (3)

MAXWELL, D., LEVIN, C., ARMAR-KLEMESU, M., AHIADKEKE, C., RUEL, M. & MORRIS, S. 1998. Urban livelihoods, food and nutrition security in greater Accra. Research report. Washington DC: International Food Policy Research Institute.

MAY, J., UNDATED. The structure and composition of rural poverty and livelihoods in South Africa.

MIHITERU, T.A., 2008. Farmers' evaluation and adoption of improved production package in Fogera district, South Gondar, Ethiopia. Msc Thesis submitted for examination. Haramaya University, Hamaraya.

MUSEMWA. L, A. MUSHUNJE, M. CHIMONYO, G. FRASER, C. MAPIYE AND V. MUCHENJE, 2008. Nguni cattle marketing constraints and opportunities in the communal areas of South Africa: Review. *African Journal of Agricultural Research* Vol. 3 (4), pp. 239-245.

MYRDAL.1957. Economic Theory and Underdeveloped Regions. London: Gerald Duckworth and Co.

NATIONAL DEPARTMENT OF AGRICULTURE (NDA), (2001). *The Strategic Plan for South African Agriculture*. Available [Online]
www.nda.agric.za/docs/sectorplan/sectorplanE.htm#vision Department of Agriculture, Directorate Agricultural Information Services, Pretoria.

PAGE, B. I., & SIMMONS, J. R. (2000). What Government Can Do: Dealing With Poverty and Inequality. Chicago: University of Chicago Press.

PALMER, T. & AINSLIE, A., Undated. Country Pasture/Forage Resource Profiles. Available at: <http://www.fao.org/ag/AGP/AGPC/doc/.../southafrica/southafrica.htm> [Accessed 01 June 2013]

PIXLEY, K. AND BANZIGER, M., 2001. Open-pollinated maize varieties: a backward step or valuable? Paper presented at the 7th. Eastern Africa Regional Maize Conference, Nairobi, Kenya.

PADDY, F., 2003. Gender differentials in land ownership and their impact on household food security: a case study of Masaka district. Master Thesis, Uganda. Press, Baltimore and London. [Online] Available from:
<http://www.troz.unihoenheim.de/research/Thesis/MScAES/Paddy.pdf>. Accessed on 22 October 2013

POTTE, P.P.T., 2008. Technical constraints to smallholder agriculture: case study of Nkonkobe municipality, Eastern Cape, South Africa. Department of Agricultural Economics and Extension. Faculty of Science and Agriculture. University of Fort Hare republic of South Africa. Review, Vol. 19(4).

RAINWATER, L. (1970). Neutralizing the Dininherited: Some Psychological Aspects of Understading the Poor. in V. L. Allen (ed), Psychological Factors in Poverty (pp. 9-28). Chicago: Markham.

RANK, M. R. (2004). One Nation, Underprivileged. Oxford: Oxford University Press.

RIOS, A.R., SHIVELY, G.E. & MASTERS, W.A., 2008. Linkages between Market Participation and Productivity: Results from a Multi-Country Farm Household Sample. Department of Agricultural Economics Purdue University.

RIOS, A.R., SHIVELY, G.E. & MASTERS, W.A., 2009. Farm Productivity and Household Market Participation: Evidence from LSMS Data. Contributed Paper prepared for presentation at the International Association of Agricultural Economists Conference, Beijing, China.

ROCKEFELLER, J.D. (1969). The challenge of population and food. In: Clifton, R. and Wharton (eds.). *Subsistence Agriculture and Economic Development*. Frank Cass and Co. LTD, United States of America.

RSA GOVERNMENT GAZETTE. 2006. No. 26511. Pretoria: Government Printer

RUEL, M.T., GARETT, J.L., MORRIS, S.S., MAXWELL, D., OSHAUG, A., ENGLE, P., MENON, P., SLACK, A. & HADDAD, L. 1998. Urban challenges to food and nutrition security: a review of food security, health, and caregiving in the cities. Food Consumption and Nutrition Division (FCND) Discussion Paper No. 51. Washington DC: International Food Policy Research Institute.

SA YEARBOOK 2010. Agriculture, forestry and fisheries. Available at: <http://www.southafrica-newyork.net/consulate/yearbook/Agriculture.pdf>[Accessed 28 May 2014]

SCHWALBACH, L.M., GROENEWALD, I.B. & MARFO, C.B., 2001. A survey of small-scale cattle farming systems in the North West Province of South Africa. South African Journal of Animal Science, Vol. 31 (3). Department of Animal Science and Centre for Sustainable Agriculture, University of the Orange Free State.

SETI, S. 2003. Subsistence gardening for food security: A case study of three townships in

SHACKLETON, C.M. NETSHILUVHI, T.R, SHACKLETON, S.E. GEACH, B.S.2002. A. Balance and D.F.K. Fairbanks, Direct use values of woodland resources from three rural villages, *Economic Botany* 56 (2002) (2), pp. 130–146

STOCKBRIDGE, M., 2007. All-Africa review of experiences with commercial agriculture. Background paper for the Competitive Commercial Agriculture in Sub-Saharan Africa (CCAA) Study.

THAMAGA-CHITJA, J., HENDRIKS, S.L., ORTMANN, G.F. & GREEN, J.M., 2004. Impact of maize storage on rural household food security in Northern KwaZulu-Natal. Available at: <http://www.up.ac.za/saafecs/vol32/chitja.html>[Accessed 19 June 2013]

UNAIDS (Joint United Nations Programme on HIV/AIDS) & WHO (World Health Organisation). 2007. WHO Fact Sheet, 2007. AIDS epidemic update – regional summary.

UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT (USAID), 2010. Humanitarian Assistance. USAID Responds to Global Food Crisis Available at: http://www.usaid.gov/our_work/humanitarian.../foodcrisis/[Accessed 19 August 2013]

VALENTINE, C. A. (1968). Culture and Poverty. Chicago: University of Chicago Press.

VAN AVERBEKE, W. & KHOSA, T.B., 2009. The contribution of smallholder agriculture to the nutrition of rural households in a semi-arid environment in South Africa. Available at: <http://www.ajol.info/index.php/wsa/article/viewFile/49158/35504>[Accessed 19 August 2013].

VAN DER MEER, K., 2005. Linking small-scale producers to markets. Available at: http://siteresources.worldbank.org/INTRANETTRADE/.../Paper_van_der_meer.pdf[Accessed 06 June 2013].

VAN SCHALKWYK, H., GROENEWALD, J. & JOOSTE, A., 2003. Agricultural marketing in South Africa. In Nieuwoudt, L & Groenewald, J (Eds). The challenge of change agriculture, land and the South African economy. Pietermaritzburg: University of Natal.

VERES, V. & MORTAN, M., 2008. The Agricultural Products Market: The Impact of Agricultural Products Characteristics over the Trade. Available at: http://www.researchgate.net/.../4982270_The_Agricultural_Products_Market_The_Impact_of_Agricultural_Products_Characteristics_over_the_United_States. [Accessed 09 July 2013]

VINK, N. AND D'HAESE, M. (2003). The development debate and agriculture. In: D'haese, M., Vink, N., Van Huylenbroeck, G., Bostyn, F. and Kirsten, J. (eds.). *Local Institutional Innovation and Pro-poor Agricultural Growth: The Case of Small-woolgrowers' Associations in South Africa*. Garant, Belgium.

WEBER, M. (2001). Protestant Ethic and the Spirit of Capitalism . New York: Routeledge

WORLD BANK. 1997. *World Development Report 1997*. World Bank: Washington, D.C.

WORLD BANK. 2007. World Development Report 2008 Overview: Agriculture for development. Washington DC: International Bank for Reconstruction and Development/World Bank. www.timeanddate.com/worldclock/city. Accessed on 13 July 2012.

ZEZZA, A., WINTERS, P., DAVIS, B., CARLETTO, G., COVARRUBIAS, K., QUINONES, E., STAMOULIS, K., KARFAKIS, T., TASCIOTTI, L., DIGIUSEPPE, S. & BONOMI, G., 2007. Rural household access to assets and agrarian institutions: A cross country comparison. ESA Working Paper No. 07-17

ZIERVOGEL, G., NYONG, A., OSMAN, B., CONDE, C., CORTES, S. & DOWNING, T., 2006. Climate variability and change: Implications for household food security. AIACC working paper No. 20

APPENDIX

UNIVERSITY OF FORT HARE
FACULTY OF SCIENCE AND AGRICULTURE
DEPARTMENT OF AGRICULTURAL ECONOMICS

Impact of Agricultural development projects on poverty alleviation:
Amajuba municipality (KZN)

A. GENERAL INFORMATION

Interview Ref. No.....Enumerator's Name.....

Date.....

Interviewee's

Name.....Village.....Municipality.....

Project member..... Individual.....

B. DEMOGRAPHIC INFORMATION STARTING WITH HOUSEHOLD HEAD

Fill in the relevant information in the table below in respect of the household head. For questions B2, B3, and B4 mark the applicable option with an X.

B1 Age	B2 Gender		B3 Marital status				B4 Education		B5 No. of years schooling
	1.	2.	1.	2.	3.	4.	0.	1.	
	M	F	S	M	W	D	N	L	

Gender: 1.Male, 2.Female; Marital status: 1.Single, 2.Married, 3.Widowed, 4.Divorced

Education: 0.No education, 1.Literate

B6 Number of each household Adults (Age: ≥ 35)	
B7 Number of each household children and youth (Age: ≤ 34)	

B.8. What is the purpose of the project?

1. To improve the livelihood of the community and group members	
2. To create job opportunities	
3. To earn income	
4. To alleviate poverty	

B.9. Why are you a member of the project?

1. To be able to take care of the family	
2. To get exposure in the field of agriculture	
3. To get employed	
4. To create jobs for community members	

B.10. What do you contribute to the project?

1. Time	
2. Money	
3. Labour	
4. Skills/knowledge	
5. 1+2	
6. 1+3	
7. 1+4	

B.11. What do you benefit from the project?

1. Income	
2. Skills/knowledge	
3. Reduce transaction costs	
4. 1+2	
5. 1+3	
6. 2+3	

B.12.How many people did you employ in your project?

1.FULL TIME		2. PART TIME	
5		2	
7		4	
8		3	
3		6	

B.13. Give the main commodity that the project produces?

1. Vegetables	
2. Crops	
3. Poultry production	
4. Livestock	
5. 1+2	
6. 1+3	
7. 2+4	
8. 4+3	

B.14. Which stakeholders are involved in your project?

Organisation	1.Training	2.Marketing	3.Funding
1.Dept of Agric.			
2. Dept. of Social dev.			
3.NGO			
4.Amajuba distr. Municipality			
5.Dannhauser local Municipality			

B.15. What challenges do you face in your project.

1. Good 2. Better 3. Poor

Challenges	Rank
1.Lack of information	
2.Poor markets	
3.Poor infrastructure	
4. Lack of skills	
5.Lack of funding	

6.Insufficient water	
7.Insufficient land	

C. LIVELIHOODS

C.1. What is your current primary occupation?

Farming	Civil servant	Off farm business	Other
1	2	3	4

C.2.What is your current secondary occupation?

Farming	Civil servant	Off farm business	Other
1	2	3	4

C.3.Apart from the activities mentioned above, what are the other sources of income?

Remittances	Social Grants	Pension funds	Other (specify)	None
1	2	3	4	5

C.4. Do you think your livelihood has changed because of the project?

1. Yes	2. No
--------	-------

Section D. Farming System

D.1. How many years have you been involved in farming?

1. 1.year	
2. 2years	
3. 3years	
4. 4years	
5. more than 5 years	

D.2. What type of farming system are you using?

Extensive	Semi-intensive	Intensive
1	2	3

D.3. How do you farm?

Collectively	Individually	Government project	Other
1	2	3	4

D.4. Where do you get the capital to invest in your business?

From government	Personal savings	Loans	Other
1	2	3	4

Section E. Land utilisation

E.1. How did you acquire land for agricultural purposes?

Rental	Freehold	Inheritance	Leasing	Buying	Communal	Others (Specify)
1	2	3	4	5	6	7

E.2. What is the size of the land? (Ha)

1Ha	2 Ha	5Ha	10Ha	3Ha	7Ha	15Ha
1	2	3	4	5	6	7

E.3. Are there any rules or laws concerning land acquisition?

Yes	No
1	2

E.4. If yes what are the rules?

Traditional rules	Government rules	Others (specify)	No rules
1	2	3	4

E.5. Are you willing to expand your land?

Yes	No
1	2

Yes	No
-----	----

E.6. Is your land productive?

1	2
---	---

E.7. If not why?

Land degradation	Soil fertility	Poor land use management	Other (specify)
1	2	3	4

E.8. Do you have land (ha) that you not using

Yes	No
1	2

E.9. If yes why?

Lack of capital	Lack of skills	Fallow	Soil morphology	Not interested
1	2	3	4	5

E.10. Please indicate the kinds of crops or vegetables you grow, the extent as well as what you do with the produce

Crop	Output for this season(tons,kg, bags)	Area planted(ha, metres)	What do you do with the produce?	Target Market	Seasons planted	Times planted a year Once Twice
Maize						
Dry						
Dry peas						
Pumpkin						
Butternu						
Potatoes						
Cabbage						
Carrots						
Beet						
Spinach						
Onions						

Other (Specify)						
--------------------	--	--	--	--	--	--

Output: e.g bags,kgs,g's

Reason for growing: 1.Selling, 2.Consumption, 3.donation, 4.Barterd

Target Market: 1.Local community, 2.shops, 3. Hawkers, 4.Contractors, 5.Other

Growing Seasons: 1.Summer, 2.Autumn, 3.Winter, 4.Spring

E.11. What method of cultivation does your household normally use?

Tractor	Animal traction	Hand ploughing
1	2	3

E.12. Do you apply any fertility enhancing technology to improve the soil?

1.Yes	2.No
-------	------

E.13. If yes, how do you improve soil fertility?

Apply fertilizer	Apply kraal manure	Both	Other (Specify).....
1	2	3	4

E.14. Have you received any training on how and when to apply fertilizers (e.g. rates of application, timing. etc.)?

1.Yes	2.No
-------	------

E.15. Is there anybody in your household who has received training on agriculture in general?

1.Yes	2.No
-------	------

E. 16. Have you noticed any changes in the planting season?

1.Yes	2.No
-------	------

Section F. Water and Irrigation usage

F.1. What is the source of water for your crop production?

River	Dam	Boreholes	Communal taps	Individual household tanks	Harvested water
1	2	3	4	5	6

F.2. What are your coping strategies in times of scarcity of water?

River	Dams	Boreholes	Communal taps	Individual household tanks	Harvested water
1	2	3	4	5	6

F.3. Are you a member of any irrigation schemes?

Yes	No
1	2

F.4. If not why?

Lack of funds	Selection criteria	Social conflicts	Other (specify)
1	2	3	4

F.5. Do you have enough information about the irrigation schemes?

Yes	No
1	2

F.6. What type of irrigation schemes are you using?

Sprinkler	Drip	Surface	Manual	Other (Specify)
1	2	3	4	5

F.7. Are these schemes helping you out to reduce poverty or enhance your

Yes	No
1	2

livelihood?

F.8. If no why?

Underutilized	Water is not sufficient	Poor cooperation amongst farmers	Because of low productivity and profitability	High cost of repairing and rehabilitation
1	2	3	4	5

F.9. Do you think these irrigation schemes will have positive effect to your livelihood?

Increase standard of living in general	Reduce poverty	Increase food security	More income	Other (specify)
1	2	3	4	5

SECTION G. SUPPORT SERVICES, RESOURCES AND INFRASTRUCTURE

G.1. Are there any sectors where you get support services from?

1.Yes	2.No
-------	------

G.2. If any, who are they?

Government	Local associations	NGO's	Municipality	Other
1	2	3	4	5

G.3. What type of support services have you benefited from in these sectors?

Capital	Inputs	Implements	Workshops	Market information	Other (specify)
1	2	3	4	5	6

G.4. Which of the following equipment and implements are available to you? Please indicate whether it is yours, borrowed or hired.

Equipment	Own	Borrowed	Hired
------------------	------------	-----------------	--------------

Plough			
Planter			
Cultivator			
Spade			
Rake			
Fork spade			
Hoe			
Other (specify)			

Own, 2. Borrowed, 3. Hired

G.5. Indicate the type of resources you have access to

Water	Grazing land	Inputs	Time	Labour	Other(specify)
1	2	3	4	5	6

G.5. How effective or adequate are the extension officers advice?

Very effective	Effective	Limited	Ineffective
1	2	3	4

G.6. How often do you use the extension officer's advice?

Regularly	Quite often	Sometimes	Not at all
1	2	3	4

H. MARKETS

H.1. Which markets do you usually use for selling your produce?

Formal markets	Informal markets	I do not sell
1	2	3

H.2. Do you have regular customers who buy from you?

1. Yes	2. No
--------	-------

H.3. How do you sell your produce?

1.Collectively	2.Individually
----------------	----------------

H.4. Are the prices you selling your product constant throughout the season?

Yes	No
1	2

H.5. How difficult do you find to sell your produce

Able to sell	Not able to sell
1	2

H.6. How sustainable is your enterprise?

Unsustainable	Sustainable with support	Sustainable without support
1	2	3

H.7. Do you have knowledge on how to increase your productivity?

Yes	No
1	2

H.8. Are you selling with different prices to different groups?

Middlemen	Supermarkets	Institutions	Individuals
1	2	3	4

H.9. Do you sell the product as it is directly from the farm?

Yes	No
1	2

H.10. If yes, in what way?

Sorting	Grading	Packaging	Processing
1	2	3	4

THANK YOU FOR YOUR COOPERATION!!!!