

**EFFECTIVENESS OF AGRICULTURAL EXTENSION ORGANISATION IN RURAL
AREAS: THE CASE OF AMATHOLE DISTRICT MUNICIPALITY (EASTERN CAPE)**

by

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DECLARATION

I, Mzuhleli Makapela, declare that this dissertation, EFFECTIVENESS OF AGRICULTURAL EXTENSION ORGANISATION IN RURAL AREAS: THE CASE OF AMATHOLE DISTRICT MUNICIPALITY (EASTERN CAPE), is my own work and all primary and secondary sources have been appropriately acknowledged, by means of a complete reference and acknowledgement.

Signature: _____ Date: _____

(Mr. Mzuhleli Makapela)

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ABSTRACT

The study was prompted by the escalating levels of poverty in Amathole District Municipality of the Eastern Cape Province despite the poverty alleviation programmes that have been established since 1994. The main objective of this study was to identify the underlying factors and challenges that affected agricultural extension organisations in the Amathole District Municipality and explore the role and the prospects of extension organisations as a strategy for development and growth in the district municipality. Data was collected through interviews and with the use of structured questionnaires. The questionnaires were administered to 300 farmers and 20 extension practitioners that had been selected by the systematic random sampling technique in the Amathole District Municipality. After data collection, questionnaires were coded, captured and analysed using MS Excel (2010) and SPSS version 22 (2014). Descriptive statistics were used to summarise the data. Results indicated that although extension officers indicated that they had a positive relationship with the communities they services, farmers indicated that extension policies did not favour them. Conclusions were therefore drawn that agricultural extension organisation was not effective in accelerating development in the Amathole District Municipality. The study, therefore, recommended that further research focusing on the impact of extension services on the economy of South Africa be conducted.

Key terms:

Agricultural extension organisation, Extension practitioner, Extension services, Agriculture, Rural development, Farmers, Poverty, Poverty alleviation, Food security, Household food security, agricultural development strategies, Socio economic needs

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LIST OF ACRONYMS

ABET	Adult Basic Education and Training
ADM	Amathole District Municipality
ADT	Agricultural Development Technician
AEO	Agricultural Extension Organisation
ARDRI	Agricultural Rural Development and Research Institute
ATD&T	Agricultural Technology Development and Training
BIC	Bantu Investment Corporation
CASP	Comprehensive Agricultural Support Programme
CRI	Citrus Research Institute
DAFF	Department of Agriculture, Forestry's and Fisheries
DBSA	Development Bank of South Africa
DRDAR	Department of Rural Development and Agrarian Reform
DARI	Dohne Agricultural Research Institute
DSA	Department of Social Development
ECDoA	Eastern Cape Department of Agriculture
ECDC	Eastern Cape Development Corporation
ECPGDP	Eastern Cape Provincial Growth Development Plan
ECRDA	Eastern Cape Rural Development Agency
EO	Extension Officer
ERP	Extension Recovery Plan
FSP	Farmer Support Programme
FSRE	Farming Systems Research and Extension
GDP	Gross Domestic Product
GEAR	Growth, Employment & Redistribution Strategy
IDP	Integrated Development Planning
IDP	Integrated Development Plans
NGO	Non-Governmental Organisation
PELUM	Participatory Ecological Land Use Management
PGDP	Provincial Growth and Development Plan

RDP	Reconstruction and Development Programme
SDF	Skills Development Facilitators
T&V	Training and visit system
TOT	Transfer of Technology

CHAPTER ONE

INTRODUCTION

1.1 Background

This chapter begins by giving an overview of the concept of agricultural extension organisation. The chapter proceeds to highlight the importance of agricultural extension organisation and challenges that face it. It is followed by background of the problem in the study area, Amathole District Municipality (ADM) in the Eastern Cape Province of South Africa. Aims and objectives together with the research questions are highlighted. The significance, delimitation and limitation of the study are also highlighted followed by the definition of terms that will be used throughout the study.

1.2 Agricultural extension organisations

According to Saville (1965) and Adams (1982) the term agricultural extension organisation can have various connotations depending on who is using it. To the farmers it is a form of assistance to help improve their knowledge, efficiency, productivity, profitability and contribution to the well-being of their families, communities and society (FAO, 2002). To the politicians, planners and policy-makers it is a policy instrument to increase agricultural production, to achieve food security for the nation and to help alleviate rural poverty (FAO, 2002). To the agricultural extension organisations, it is tool used to improve in addition to fast-track the spread of awareness and know-hows to farming communities. These activities are to promote security of food, increase economy, projected to lead continuous production, better returns and comfort for smallholding farmers. Bembridge *et al.* (1983) attests that an extension organisation is a collection of individuals and groups of people deliberately arranged to achieve goals, perform tasks or conduct extension programmes that might not be as effectively performed by individual or isolated groups. Sulaiman (2000) defines

extension organisations as knowledge-intensive organisations which are meant to assist assembly and diffusion of information. By consulting both Bembridge *et al.* (1983) and Sulaiman (2000), agricultural extension organisations can be defined as a structured, organised body of people with a common aim of achieving certain goals or objectives. Therefore working definition of agricultural extension organisations for this study is that agricultural extension organisations are formalised structures devised with the intention of achieving extension through the transferring of knowledge and technologies to farmers in order to attain optimal production.

1.3 The importance of agricultural extension organisations and their challenges.

Agricultural extension organisations are geared primarily for rural development (Kepe, 2004). According to Benor *et al.* (1984) their main intention is to convey needed transformation to the mindsets of farmers and agricultural development. Food and Agricultural Organisation (2005) further states that their function is also to make technical techniques and innovations available to farming communities enable them to improve their production and standards of living. Community development being the aim in the ADM the objective of extension organisations is agricultural improvement, which can be made through bringing transformation to the performance and the beliefs of farming communities. Extension organisations play a vital role in bringing and facilitating desirable change to the rural communities.

Duvel (1994) attests that agriculture is crucial to accomplishing worldwide hunger drop targets in the Southern Africa Development Community. Agriculture is the vital industrious area in a number of developing nations, in terms of its portion of the Gross Domestic Product (GDP) and almost always in terms of the number of people it employs. In countries where the share of agriculture in overall employment is large, broad-based growth in agricultural incomes is essential to stimulate growth in the overall economy, including the non-farming sectors selling to rural people (Richardson, 2003). Research has shown that every dollar of growth from agricultural products sold outside the local area in poor African countries leads to a second dollar of local rural growth

from additional spending on services, local manufacturing, construction materials and prepared foods (Hansen *et al.*, 1999).

According to Whiteside (1998), there is a widespread view throughout Southern Africa that agricultural extension organisations have underperformed, especially in relation to resource-poor smallholders. The researcher further stated that some researchers have concluded that problems of management and the extension organisations themselves, rather than individual competence, are the major factors responsible for the poor performance of many extension officers. A factor to be considered in interpreting these findings is that the management and organisational structures of extension services tend to be western in traditional positioning. Local operational staffs devise to adjust to a imported administration arrangement with social, mental, moral and organisational transformations (Mjoli, 1986). Kepe (2004) point out that farming division extension services play a key role in distributing information, skills, and in connecting rural people with additional group of actors in the economy. The researcher also explained that extension services constitute one of the crucial agents for change required to transform smallholder farming to modern profitable agricultural production, which would stimulate security of food, increase returns and decrease food scarcity.

As has already been noted, agricultural extension services include the dissemination of information by extension workers to farmers (Anderson and Will, 2007). The Strategic Plan for South African Agriculture (Department of Agriculture, 1995) commits agricultural departments of agriculture to offer extension support to farmers in the Southern African region. Opio-Odongo (2000) contends that for the past century, public agricultural extension in Uganda has contributed to the vital service of advising and educating farmers on agricultural productivity and production. Subsistence producers are unable to pay for private extension services, and consequently have to rely on public sector agricultural system for agricultural advises. However, Ngomane (2000) found that the public extension support services as it is currently constituted is not geared to satisfy the needs of the resource-poor smallholder farmers, and argued that

the system needed to be transformed to help smallholder farmers to break away from the bondage of dependency and poverty.

It is important to recruit more extension staff and involve Non-Governmental Organisations (NGOs) to intensify availability of agricultural extension services to farming communities. Southern Africa has a well-developed agricultural system but the challenge is the use of modern science and agricultural technologies for optimum production (FAO, 2005). It has been found that extension services does not support farmers who are in most parts of South Africa because of a challenge of extension staff: farmer ratio that is standing at 1:1,500 (Province of the Eastern Cape, 2008). This situation has hindered most farmers from keeping up with the pace of changing technological advances. Efforts to increase agricultural productivity are limited by insufficient research–extension–farmer linkages to facilitate demand-driven research and increased use of improved technologies as farmers continue to use outdated and ineffective technologies (Oladele and Wakatsuki, 2005). This carries almost the necessity of agricultural extension services that can connect research and the farmers. The capacity of agricultural extension differs greatly across South African provinces (Bese, 2010).

The agricultural sector of South Africa has a two-track extension system established: muscular extension support for extensive commercial agriculture together with services for limited producers in the former homelands. With the scrapping of the homeland system by the government, former homeland departments of agriculture combined with the new provincial departments of agriculture. Stilwell (1997) suggested that for extension to be effective it might best be provided by contract arrangements with the private sector but, Anderson and Will (2007) do not agree as almost 80 percent of extension support services all over the world are funded by the government.

The agricultural sector in Africa and the rest of the third World countries are faced with a number of challenges (Somda, 2006). According to a significant amount of literature, the main challenge which is the underdevelopment of agriculture has resulted in low

productivity (Hogset-Smith, 2005). Most South Africans who are in rural areas are living below food scarcity line: a great proportion than in any region of the world. The consideration of what strategies to adopt for poverty eradication and hunger which is in the context of the Millennium Development Goals is a challenge for development practitioners and researchers (Davids *et al.*, 2005). He further states that there are many obstacles that affect the performance of agricultural extension organisations and that eventually affect the agricultural production in rural areas.

1.4 Problem statement

Although the government has established a number of development programmes since 1994, with the aim of reducing poverty in all the nine provinces of South Africa, poverty is escalating in the Eastern Cape Province. There are several factors that contribute to this problem. The ineffectiveness of agricultural extension organisation in the Amathole District Municipality is identified as one of the factors contributing to the development stagnation of the district. Hence, there is a need to investigate the stakeholders' perceptions about the effectiveness of extension organisation and the key challenges militating against their effective functioning.

1.5 Aim and objectives

The aim of this study is to contribute to the understanding of the functioning of agricultural extension organisation in the Amathole District Municipality of the Eastern Cape Province. The study seeks to analyse the effectiveness of agricultural extension organisations in the development and uplifting of the rural poor in the district municipality. The objectives of this research included gaining an understanding of the historical development of subsistence farming in the ADM during both the time of apartheid and that of post-apartheid South Africa in order to explore the potential opportunities and challenges facing agricultural development in the communities falling within the ADM. These challenges were explored in relation to the physical, social, and

economic factors affecting farming in the chosen research site within the municipal district. The specific objectives of the study are to:

- a) assess the socio-economic characteristics of the extension practitioners and farmers in the Amathole District Municipality.
- b) analyse extension practitioners' perceptions about the effectiveness of extension agricultural organisations in the Amathole District Municipality.
- c) analyse farmers' perceptions about the effectiveness of extension organisations in the Amathole District Municipality.
- d) assess the farmers and extension practitioners' understanding of agricultural extension organisations in the district.
- e) identify and analyse key challenges that face agricultural extension organisations in the study area.

1.6 Research questions

From the specific research objectives the following research questions were formulated:

- a) What are the socio-economic characteristics of the extension officers and farmers in the Amathole District Municipality?
- b) What are the perceptions of farmers and agricultural extension practitioners about the effectiveness of extension organisation in the Amathole District Municipality?
- c) What are the main challenges faced by agricultural extension organisation in the Amathole District Municipality?
- d) What recommendations would be of assistance to improve extension organisation in the study area?

1.7 Significance of the study

It is expected that the human population will increase by 1 billion each decade into the next century. This development of population growth is expected to occur in the

developing nations (FAO, 2002a; Swanson, 1997), placing further pressure on arable land bases.

The Eastern Cape Province is one of the two poorest provinces in South Africa, with a poverty level of over 60 percent compared to a South African average of 46,8 percent (Bese, 2010). A recent assessment of the Eastern Cape Provincial Growth Development Plan (ECPGDP), specially made by the Premier's Office indicated that approximately seven out of ten people are still living in poverty. Due to the significance of attention being applied when new methods are to be launched, which are supposed to prepare the way for innovative but sustainable income perspectives for farmers, it is highly advisable to ask the right questions from the outset (Didiza, 2006). This study is grounded on basis that agriculture set up one fundamental component, within a wide-range field of approaches that can be accepted to decrease shortage of food as well as contribute to agricultural development. The study should, therefore, contribute to an already rich body of knowledge on the subject. It should provide key lessons to policy-makers and practitioners to come up with a policy that will benefit all players of development which is critical in the improvement of rural livelihoods in Eastern Cape Province and in South Africa as a whole.

More specifically, the study should ensure the following:

- a) Highlight lessons, from both positive and negative experiences that can be drawn from previous and current extension organisation interventions for agricultural development in communal areas of ADM.
- b) Determine how innovations and funded projects perform based on extension services offered.
- c) Provide better insights into the possible contribution that the extension could realistically play in alleviating poverty in rural contexts and within communal settings in particular.

- d) Evaluate the role of government extension services and its agencies in stimulating agricultural development.

1.8 Delimitation

This research excludes all the other provinces in South Africa and District Municipalities in the Eastern Cape Province where the agricultural extension also functions.

1.9 Limitations of the study

The study will be limited to the role and the prospects of extension organisation as a tool for development and growth in ADM, Eastern Cape Province of South Africa and the results may not necessarily be applicable elsewhere.

1.10 Summary

This chapter has showed clearly that the main focus in this research is the determination of factors that influence the effectiveness of extension organisation in ADM of the Eastern Cape Province. The study area is the Amathole District Municipality of Eastern Cape Province in South Africa. The chapter has explored the research problem that brought about the study and research questions that need to be addressed in the study that are intended to unpack the causes of the ineffectiveness of agricultural extension organisation.

1.11 Definition of concepts

Agriculture - Any farming activity, regardless of whether or not such activity is undertaken for profit (Extension Recovery Implementation Plan, 2008).

Extension Services - Help to farming communities to help themselves recognise and scrutinise their production difficulties and come to be attentive of the opportunities for development (Bembridge, 1979).

Agricultural extension organisations- Formal institutions that offer extension services (Food and Agricultural Organisation, 2005).

Farmer - Any person who engages in agriculture (Department of Agriculture, 1995).

Integrated Development Planning - It is defined as a method to preparation that involves the entire municipality and its residents in getting the best answers to accomplish good long-term development. It is a great strategy for the area that gives the overall framework for development. The strategy have to look at economic and social development of the area as a whole (<http://www.etu.org.za>).

Rural Development - It talk about to the change that assist rural residents; where development is assumed as the continuous improvement of the people standards of living or welfare (Anríquez and Stamoulis, 2007).

Poverty - Poverty is multi-dimensional and must be seen as more than lack of income; it is primarily characterised by a lack of access to opportunities for a sustainable livelihood [income, assets, skills, knowledge, self-confidence and access to decision-making] (South Africa, Government of National Unity, 1994).

Household - all individuals that are staying together as a collection or family in a house (Didiza, 2006).

Food security - the quantity of foodstuff that can be accessed and put in storage to meet the necessities of a collection of people or household (Didiza, 2006).

Household food security - the amount of food that can be accessed by a family to meet its day to day needs (Bese, 2010).

Poverty alleviation - Poverty alleviation in this study refers to the total eradication of elements of poverty like lack of access to basic food production resources like land, water, inputs, labour, market, capacity and others (Didiza, 2006).

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The previous chapter (Chapter one) provided the problem and background of this research. This chapter will commence by presenting an overview of the global review on agricultural extension organisations. Thereafter the review is narrowed to countries in Southern Africa; these include Botswana, Mozambique, Malawi and Zambia. The chapter will proceed to define the major objectives of agricultural extension organisations. The different types of agricultural extension organisations are explored, including how they influence farmer performance.

2.2 Overview of agricultural extension organisations

2.2.1 Agricultural extension and extension organisations

The concept of extension has a wide variety of meanings. Saville (1965) describes extension as a system of out of school education for rural people. More specifically Maunder (1972) described the thought as a package which helps agricultural community, through educational processes, in educating agricultural techniques and performances, increasing food productivity and income and improving their levels of living. Adams (1982) defined extension as support to farmers to help them to recognise and scrutinise their production difficulties and to become alert of the opportunities for development.

Bembridge (1979) defines agricultural extension as a chain of fixed communicative mediations that are meant, among others, to improve and/or encourage improvements which supposedly assist to resolve (usually multi-actor) challenging circumstances. According to the National Department of Agriculture, Forestry and Fisheries (2008) the Extension Recovery Plan (2008/9) added by describing extension as a orderly method

of working with farmers or communities to help them to get appropriate and beneficial agriculture or related information and abilities to increase agricultural production.

According to Chauhan (2006) about 80 percent of world population lives in economically undeveloped areas. These areas include south-east Asia, Africa and the middle-east. These parts continued below suppression for centuries and their government structure was only for taken advantage of (Chauhan, 2006). These countries became independent rapidly after the Second World War (Buford *et al.*, 1995). Then, solutions to address problems properly were needed. Therefore, many development programmes were revived. According to Buford *et al.* (1995) very few programmes of the slavery period were executed according to the needs at that time, making it incorrect to state that there was nothing done during suppression era.

According to Adams (1982) the people of the world in the developing and underdeveloped countries is living below poverty line. The word extension was used in Britain in in the middle of 1800 and 1900 in the form of "*University Extension*" or "*Extension of the University*". It is stated that, William Sewell of Britain used it in his report entitled "*suggestions for the extension of the university*". James Stuart of Trinity College, Cambridge University used the word in a practical manner he was speaking to "*Women Association and Working Men's Clubs*" of North England. In 1871, he appealed to the officials of the Cambridge University to form extension centres so that they could be used as a platform to deliver lectures to people. For the reason that of his determination in this field, he was named "*Father of University Extension*". In a formal way, Cambridge University in 1873, London University in 1876 and Oxford University in 1878 developed extension system, which worked among people. In 1880, his work came to be known as "*Extension movement*".

In the eighth decade of the 19th century, the term Extension was used in the form of Extension education in U.S.A. (Buford *et al.*, 1995). The motive was that in the latter half of the 19th century rural people had started migrating to urban areas. According to Benor *et al.* (1984) this led to two main problems in U.S.A.:

- (i) Agriculture suffered a setback due to the relocation of rural people to towns.
- (ii) The escalation of urban population created education, employment and housing related problems.

In order to solve this problem, the Philadelphia Committee was established in 1785. The committee recommended that in order to keep rural people in rural areas “Out of school education” should be provided to them.

According to Webster’s dictionary (1828) the term “Extension” means “Branch of a university for student who cannot attend the University properly”. In other words, the word ‘Extension’ is used in the context which means an out of school system of education. In 1862 President Roosevelt established a “county commission” under the chairmanship of Liverty Hydevelle. Hanyani-Mlambo (2002) agreed that an important catalytic role was played by agricultural extension in agriculture and rural development by bringing information and new technologies to the farmers in order to improve production, incomes and standards of living through the adoption of these technologies and other innovations. She further stated that agricultural extension provided a link between farmer problem identification, research and amendment of agricultural policies for the benefit of farmers and that a framework was provided by the extension system where farmers were organised into function groups in order to gain access to credit institutions, information on government development programmes and marketing services.

Agricultural extension is an informal education process that assists farmers in improving their agricultural practises and approaches, increasing production efficiency and income, bettering their standard of living and lifting their social and educational standards (Maunder, 1972). It includes the sensible use of communication of information to assist farming community creating sound ideas and making good choices (Van den Ban and Hawkins, 1996).

2.2.2 Agricultural extension organisations in the world

Agricultural extension over the years has been used as a tool for facilitating agricultural and rural development (Steven and Ntai, 2011). Extension organisations therefore play an important role in rural development in developing countries (Richardson, 2003). However, in the past two decades, agricultural extension services in developing countries have been under increasing pressure from globalisation, liberalisation of agricultural markets, environmental changes, HIV/AIDS and food insecurity, to reform and respond to the needs of their clients (World Bank, 2001a; Richardson, 2003). In response to these changes, agricultural extension organisations are shifting their principal focus from agricultural productivity towards sustainable development, where participatory processes, action learning- that is, the human dimension of agricultural and natural resource management are given importance (Richardson, 2003).

According to a Training Needs Analysis done at the Agricultural Research and Extension Unit in Mauritius (Food, Agriculture and Natural Resources Policy Analysis Network, 2011), the main causes in performance gap of extension officers were identified. Only 39.3 percent of the extension officers claimed that training was not done at a regular intervals, 67.9 percent were not satisfied with their working conditions and 45 percent said that their offices were badly equipped (Hosenally, 2011). Presently, youth are being encouraged to go into agriculture and be entrepreneurs. But is the extension service ready to serve this category of farmers? Many countries do not have provisions for paying higher performance or for a salary system based on excellence. Rather, promotion criteria are centred on seniority and length of service (Singh and Vijayaragavan, 1997). Extension organisations have an important part in brokering among communication expertise, providers of those expertise and services, and the client groups they serve (Singh and Vijayaragavan, 1997).

In recent years there have been many debates about the appropriate role of the agricultural extension services (Nitsch, 1982). These debates reflected on drastic changes that happened for the period of the last few decades in agricultural production

and in the characteristics of farmers. Farmers according to Mchombu (1992) have two information systems, which have become uncoupled; the indigenous knowledge system and the external knowledge system. It was indicated that both were closely connected. The provision of information to farmers was a responsibility fragmented among several government ministries, non-governmental agencies and parastatals (Mchombu, 1992). These agencies assisted to offer valuable information to the end-users. It is now acknowledged that effective organisations are those that create new innovation, distribute it broadly throughout the organisations, and represent it into new skills and products (Metaxiotis *et al.*, 2005, Hansen *et al.*, 1999). Perceiving knowledge management as a condition of organisational success makes it crucial for agricultural extension experts to embrace and engage in it. According to Buford *et al.* (1995), as agricultural practitioners face the challenge of learning new skills to sustain their ability or become fit for promotions, the significance of an effective staff training program for agricultural practitioners becomes evident.

2.2.3 Agricultural extension organisations in Africa and Southern Africa

The efficiency of agricultural extension work extremely depends on the disposal of extension professionals who are skilled, inspired, dedicated and quick to respond to the ever-changing social, economic and political environment (Ayele *et al.*, 2002). One of the serious challenges of extension organisations in developing countries is the absence of clearly defined systems of compensation and fine. According to Singh and Vijayaragavan (1997), in a large number of developing countries reward and incentive systems which will entice, keep and encourage extension personnel are a challenge. Among other reasons, the absence of clearly defined systems of compensation and fine have contributed in the poor performance of agricultural sector in Southern Africa in the past years, resulting in very high rates of poverty. (Leeuwis and Van den Ban, 2004).

There is a widespread view throughout Southern Africa that agricultural extension has underperformed, especially in relation to resource poor smallholders (Whiteside, 1998). Extension fieldwork, on the other hand, demands location specific, flexible and often

quick decisions and actions. In sub-Saharan Africa extension tends to lose its sense of mission (Whiteside, 1998).

As one of the few government institutions with the broad coverage of the rural areas, agricultural practitioners are responsible to be involved in performing any agricultural related task which fulfils ministerial policy at village level, be it supplying inputs and credit, transferring technology, feeding back information to research workers, mobilising local communities for group action to solve community-wide problems, or dealing with specific farmer problems and referring them to specialists (Whiteside, 1998). Because policy intentions have a habit of to surpass the resources available to accomplish them, this leads to overload on the extension agents. Furthermore, it also leads to them trying to do jobs for which they have neither training nor the experience. As the resultant pressure of being expected to do more than they are able to, both quantitatively and qualitatively, demoralises the extension staff (Belay and Abebaw, 2004).

Although Southern Africa has well-developed agricultural research systems, the use of modern science and technology in agricultural production is still limited (FAO, 2005). Inadequate research–extension–farmer links to facilitate demand-driven research and increased use of improved technologies continue to constrain efforts to increase agricultural productivity as farmers continue to use outdated and ineffective technologies (Oladele and Wakatsuki, 2005). This highlights the need for extension services that can create a link between research and farmers. In South Africa agricultural extension capacity varies greatly across provinces (Bese, 2010). This suggests that there is no steadiness in the agricultural extension service delivery.

Within South Africa's agricultural sector, a two-track extension system has been developed: well-developed extension support for large-scale commercial agriculture alongside services for small-scale producers in the former homelands (Last, 2006).

It is predictable that 74 percent of the individuals who are underprivileged in South Africa live in rural areas and females constitute the majority of the rural poor (Rahman

and Westley, 2001). Eastern Cape is among the poorest in the nine provinces of South Africa. The Eastern Cape has about 29 percent of the population living below the South African derived poverty line of R250 (South African Institute of Race Relations Today, 2008). A considerable amount of literature to suggest that underdeveloped agriculture which has resulted in low productivity is one of the key challenges (Hogset-Smith, 2005). It is probably fair to say that, based on the Integrated Development Plans of a number of municipalities in the Eastern Cape, including the ADM, which is area of study; agriculture is viewed as a key economic driver (Kepe, 2004). In other words, agriculture is seen as a key element of local economic development strategy, which would eventually reduce local poverty.

A number of South Africans who are in rural areas are considered to be living lower than the poverty line, which is a great proportion than in any region of the world excluding South Asia. Considering what strategies to adopt to eradicate poverty in the context of the Millennium Development Goals is challenge for development practitioners (Davids *et al.*, 2005). The growth of smallholder and subsistence agriculture has a number of challenges. In this regard, poor performance of the agricultural sector of the region has resulted in the extremely high poverty rates (Wenhold *et al.*, 2007).

Wenwold *et al.* (2007) states that South African agricultural sector is one of the best performing sector in the African continent and possibly in the world, but the legacy of the apartheid regime's unfair strategies means that the communal farming sector where the smallholders are dominant has not shared in this phenomenal success. According to Bese (2010) South Africa is characterised by disparities in income distribution whereas some countries regard her as an upper middle-income country. Ayele *et al.* (2002) noted that, technical improvements a growth production play a fundamental role in increasing food production for increasing population and scarce land.

According to Bembridge (1983) agricultural extension organisations are meant to assist in reducing poverty by transferring of technical skills and innovations. The key performers within the extension system are the members of rural farmers, extension

and other development workers, scholars and staff of commercial or public service and support organisations. For extension to be effective all the above mentioned actors need to take part in addressing issues such as poverty reduction. According to FAO (2001), agricultural extension organisations are facing a number of challenges in achieving extension goals, hence poverty is still an alarming problem in most developing countries. Bese (2010) attests that agricultural extension organisations are not achieving their desired objectives towards food security for all.

2.3 Objectives of agricultural extension organisations

The main objective of agricultural extension organisations is to bring about all-round development of rural people that is, assisting rural people in all spheres of their development (Sulaiman, 2000). All-round development includes socio economic, educational, and political development. Bese (2010) attested to that by saying agricultural extension organisations brought change in the behaviour, in the work capacity and in the attitude in a wider context. Chauhan (2007) agreed that the aim of agricultural extension organisations like social, economic and political change was automatically achieved by bringing about educational changes. He added that agricultural extension organisations should be flexible and dynamic enough to control and facilitate the learning processes, and thus lead to empowerment of extension officers (EOs) and ultimately the community.

Some of objectives of extension organisation in the ADM are as following:

- (1) Raise the net income of rural communities by more production and proper marketing system.
- (2) Advance the standard of living of farmers.
- (3) Develop rural areas.
- (4) Improve rural governance.
- (5) Advance the sense of self-dependence among rural people.
- (6) Offer scholastic and well-being services in rural areas.

- (7) Develop feeling of patriotism and love for society by developing civic sense among rural people.
- (8) Inspire farmers to take part in community programmes.
- (9) Training of young people for development works.

2.4 Types of agricultural extension organisations in ADM

- **Public community development and agricultural extension organisations**
PELUM Association (2005) explains this category as all the providers of conventional public agriculture and other rural extension services e.g. Department of Rural Development and Agrarian Reform (DRDAR).
- **Public research-cum-extension organisations**
According to PELUM Association (2005) public research-cum-extension organisations are traditional public agricultural extension research establishments that have a direct or indirect involvement in agricultural extension being guided by their mandates, the establishments' nature of work at foundation level and/or research and extension models transformation and evolution towards more farmer-participatory approaches.
- **Donor-supported rural development programmes**
These programmes differ from many government–instituted development programmes. They have been highlighted as actors in agricultural and rural development processes through their well-defined vehicles of agricultural extension and other rural development information (Chauhan, 2006).
- **International and private research centres**
In the local agricultural extension system, a number of international and local private research centres have also been identified as active players. Similarly to the case of local public research establishments, there is a direct and indirect involvement in agricultural extension work for a number of reasons: Achieving the

a wider adoption of developed technologies which their objective, giving meaning and purpose to the nature of their work at the grassroots level; and/or the transformation and evolution of research and extension approaches. (e.g. Citrus Research Institute: CRI).

- **Farmers' associations**

Farmers associations do not only act as representing their members on the economic and political frontages. They play an active role in policy advocacy, capacity building programmes that affect their production and dissemination of production and marketing information (Last, 2006). In ADM, two broad categories of farmers (commercial and smallholder) are represented by two farmers associations.

- **NGOs and bilateral donors**

According to PELUM Association (2005), NGOs are the main supporters for rural and especially urban agriculture than from agricultural extension practitioners located within local municipalities or the provincial department of rural development and agriculture. It has been debated that extension services should also focus on advising urban producers as current extension methods are focusing on rural setup and do not adequately accommodate urban producers (Chauhan. 2007). In urban setup, ecological friendly technologies are required, using little space and are highly productive. The utilisation of organic wastes and water waste is needed and is combine with other functions like recreation, landscape management

NGOs represent some of the more noticeable actors in all rural development contexts for different reasons. They are known for being relatively well endowed with financial resources for their programmes, their great mobility and their drive for bottom-up approaches. Hence, in some sectors NGOs are associated with great progress in rural development (Chauhan, 2006). On the other hand, they have also been accused of promoting donor-dependency, and their rural development programmes have been criticised for lacking sustainability.

- **Private agrochemical input suppliers**

The direct or indirect involvement of all the private companies that supply agrochemical inputs is part of a marketing strategy to promote farmers awareness of products (especially new products), attain a competitive edge and increase market share. These actors include seed houses, fertilizer manufacturers, pesticide and herbicide companies and credit institutions (Chauhan, 2006), (e.g. Pfizer).

- **Commodity processors and exporters**

This is the group that is partly involved in providing agricultural extension services to rural farmers, their involvement stem from (i) providing information about particular technical production aspects to farmer groups that produce on contract basis on their behalf; and (ii) this group is also known for spreading information on quality and other standards that create processing or exports acceptable (Chauhan, 2006), (e.g. Agri-parks)

- **Bat actors**

The word “bat actors” comes from the animal of that name (Chauhan, 2006). Bat actors are connect the gap between agricultural extension organisation (interventionists) and the farmers who are the beneficiaries. Bat actors are normally used as vehicles in interventionist programmes that involve agricultural extension, rural reforestation and natural resources conservation.

2.5 Role of extension services

Assessing educational needs of extension officers is recognised as an important element among extension services and is seen as a critical factor in the success of the organisation (Buford *et al.*, 1995). According to Buford *et al.* (1995), as extension officers face the challenge of learning new skills to maintain their proficiency or become qualified for promotions, the importance of an effective staff training program for

extension officers becomes evident. Buford *et al.* (1995) states further that to ensure extension officers are well trained, extension management must determine training needs to increase agent capabilities. One of the major challenges facing agriculture extension services in the Southern Africa is the low level of extension staff education as compared with the education of their research counterparts (Buford *et al.*, 1995).

The agricultural sector extension service plays an important role in disseminating knowledge, technical skills and agricultural information, and in linking farmers with other actors in the economy. However there is limited access to extension services in most parts of the country with the national extension staff: farmer ratio standing at 1:1,500 (Extension Recovery Implementation Plan, 2008). This situation has hindered most farmers from keeping pace with changing technological advancements. There is therefore a need for recruitment of more extension staff and the involvement of NGO's to increase access of extension services to farmers.

Working conditions of agricultural practitioners assert that in developing countries most extension personnel are working under difficult and disadvantageous conditions (Nagel, 1997). According to Nagel (1997) fieldwork in many developing countries is characterised by conditions that foster low morale: lack of mobility, virtually no equipment and extremely low salaries. For many extension workers, tapping additional income sources is a question of physical survival (Nagel, 1997). These difficulties contribute to a high turnover rate; those who remain in extension profession are typically people with few employment opportunities elsewhere (Kaimowitz, 1991).

According to Bembridge *et al.* (1983) attitude, motivation, problem perception and level of knowledge of individual officers have a strong bearing on how efficiently and effectively an organisation functions. An important question to be considered is the self-image of extension officers. The task of bringing about behavioural change could only be done successfully when an extension practitioner is motivated (Bembridge *et al.*, 1983).

The agricultural extension organisation should be able to support the community-based service delivery system by providing resources, training, managing, facilitating linkages, information flow and networking among role-players (Bembridge, 1999). Bembridge *et al.* (1983) stated key roles of extension organisation:

- Preparation of community members to become EOs, through education, training and exposure.
- Facilitation of research and other support for the community from extension organisation.
- Promotion of links between the EOs and community with relevant extension organisation.
- Channelling feedback so that the community can influence institutional and government.
- Priorities and policy.
- Input of human, material, technical and financial resources toward the establishment.
- Maintenance and management of the EOs system.
- Re-orientation of services to be more responsive to the community's situation and needs.
- Analysis and prioritisation of community and agricultural issues with the community.

Extension practitioners' basic qualities

According to Bembridge *et al.* (1983) extension practitioners:

- Be located in near or within the community
- Acceptable to and appreciated by the community
- Passionate, innovative and creative
- Have a spirit of voluntarism and not driven by material or monetary gains
- Eager to share information and knowledge
- Able to communicate clearly and effectively

2.6 Extension approaches

In many governments pro-poor intentions fail to be met due to insufficient extension approaches to interface between technical extension organisation and the implementing community (Bembridge *et al.*, 1983). The ratio of agricultural technicians to farmers in sub-Saharan Africa is about 1:800 (PELUM Association, 2005) and in the Eastern Cape Province it is about 1:1000 (Minister of Agriculture, 2008). According to Bembridge *et al.* (1983) innovative techniques must be pursued to assist necessary and workable service delivery to rural and agricultural communities. The extension technician notion is a reference to services that have a client participation in the development and sending of messages (Bembridge *et al.*, 1983). There is quantitative proof that community-based service delivery is widespread, cost effective and efficient (Rivera, 1996).

International development and extension discourse has distinguished between the training and visit (T&V) and transfer of technology (TOT) models on the one hand with farmer first participatory and farmer led extension approaches on the other (Steven and Ntai, 2011). Over the past two decades, this perspective has provided a very powerful critique of the conventional organisation and application of agricultural rural and development, with its emphasis on transfer of technology models (Stilwell, 2007). This critique pointed out that if research develops and transfers technology in a linear fashion to farmers very often these technologies are found to be inappropriate to the social, physical and economic setting in which those farmers have to operate (Steven and Ntai, 2011). At the very least such technologies needed complementary organisational, policy and other changes to enable them to be put into productive use (Steven and Ntai, 2011). Over time methods and approaches became more synthesised and learning process approaches developed which combined participatory methods and traditional research tools (Stilwell, 2007). And this according to FAO (2005) marked the shift from “participation in technology transfer to collaborative science and innovations systems” and resulted in a “creative proliferation of hybrid methods, mixing quantitative and qualitative analysis, and social and biological approaches.”

According to Nagel (1997), in many developing countries the TOT model has been the prevalent practice for developing and spreading innovations. Chauhan (2006) defined the TOT model as the basic paradigm of agricultural research and extension in which priorities are decided by scientists and funding agencies, and new technologies are developed on research stations and in laboratories and then handed over to extension agencies to be transferred to farmers. The TOT model was based on the assumption that new agricultural technologies and knowledge were typical. According to Belay and Abebaw (2004), the task of extension agencies is to promote the adoption of technologies by farmers, thereby increasing agricultural productivity.

2.7 Innovations and technologies (tangible and non-tangible) in the Eastern Cape Province.

The "Six-peg Policy" was introduced in 2006/07 financial year as a framework for agricultural development in the province. It focused on fencing, dipping tanks, tractors and implements, stock-water dams, resuscitation of old and establishment of new irrigation schemes and human capacitating. The intention was to address and systematically defeat underdevelopment and its manifestations, namely, unemployment and poverty in rural and peri-urban areas of the province. Extension organisations at ADM were intended to provide rural farmers with tangible and non-tangible technologies in maintaining and applying of industry knowledge for the encouragement of client decision-making and implementation of improved practices industry networks were fostered. (Buford et al., 1995). Development of change management approaches in accordance with departmental policy and practices to help beneficiaries to find their own solutions was done and ensuring that assist to implement change. Identification of risks and management of risk strategies were determined and implemented according to change management strategies (Bembridge *et al.*, 1983). Getting and handling of resources was done and development of extension strategy in line with program responsibilities, extension objectives and agricultural extension organisational requirements.

2.7.1 Facilitation of innovation and change

Recommendations for implementation and improvement of information strategy to clients in accordance to agricultural extension organisational requirements are taken into consideration (Steven and Ntai, 2011). According to Swanson (2008) customer/client feedback is a tool to identify challenges and new issues and that lacks as there is poor feedback, and information/advice is given in response to beneficiary needs. Implementation of change management strategies is done, and possible solutions to problems are discussed in line with requirements. Change resistance is identified and strategies are modified to address resistance in accordance with organisational requirements (Leeuwis and Van den Ban, 2004).

2.7.2 Monitoring and evaluation of adoption of innovation and change

According to Bembridge (1983) and Leeuwis and Van den Ban (2004) change management approaches are observed, outcomes are scrutinised and possibilities managed in line with organisational requirements. Results are assessed and reported against extension intentions and necessary program results, and recommendations are made for adjustment of future strategies (Leeuwis, 2004). Reviewed approaches are executed and assessed in accordance with organisational requirements for continuous development. Results with implications for organisational policy are identified and policy development is influenced in accordance with organisational requirements.

2.8 Participation of farmers in extension services

According to the White Paper on Reconstruction and Development (1994), “the birth of a transformed nation can only succeed if the people themselves are voluntary participants in their development. In creating the infrastructure to meet these needs, the RDP will encourage and support participation of the people in making the key decisions about where the projects should be and how they should be managed” (Reconstruction and Development Programme, 1994). The participation of farmers who were side-lined

in decision making is favoured in this policy. Public involvement is seen by the integrated people tactic as a straightforward prerequisite and a democratic right (Davids et al. 2005) in Steven and Ntai, (2011). Moreover, development that is people-centred is accomplished when there is energetic and voluntary participation of its intended recipients (Davids *et al.*, 2005).

Farmer participation in extension requires prioritising farmers or giving them real ownership and accountability of public extension management (Bembridge, 1999). Rivera (1991) argued that the involvement of farmers in the programme planning process is essential because it give them the opportunity to accurately express their needs and how they can be addressed. Several authors in extension (Leeuwis and van den Ban, 2004) have argued that farmer involvement in extension activities is critical in developing countries.

2.9 Challenges faced by local municipalities in promoting extension services of the Amathole District Municipality.

The implementation of extension services is not without challenges for extension organisation in the district municipality. The following points highlighted the main challenges faced by the extension organisation in implementing extension services:

- **Political interference**

Provision of agricultural extension was affected by political interference in various extension programmes and initiatives. Politicians would insist that extension and advisory staff implement a project whereas technical staff did not see it feasible.

- **Human capital versus institution capacities**

The issues of human capital and the capacities of institutions, due to budgetary constraints and the lack of the required expertise and skills on the part of both officials and beneficiaries, negatively affected agricultural extension.

- **Poor planning, monitoring and evaluation**

Poor planning, monitoring and evaluation on one hand was accompanied by a lack of reporting of this perceived underperforming on the other. There was poor planning, lack of coordination and a sound working relationship between the partners and stakeholders involved.

- **Lack of communication**

There were communication problems between senior staff and junior staff resulting in no clear lines of command and no clear lines of reporting.

- **Poor working relations**

Poor working relationships existed with other directorates e.g. Veterinary Services, Land Use Planning, and Economic and marketing services, Administration, Engineering etc. Indications were that research results were not being based on the day to day experiences of farmers.

- **Policies hindering performance**

There were policies that hindered extension workers when working in rural areas. The extension workers were not allowed to take decisions alone such as signing of documents. They had to consult senior officers who were based about 100 kilometres away i.e. specialist scientists were based in larger centres and accordingly and were not accessible to rural farmers.

- **Unstable agricultural projects and illiteracy**

According to the study, adult farmers were illiterate. The study established that there were tendencies of undercutting and devaluing of old-fashioned agricultural practices and expertise as being old and outdated; and those to be considered inappropriate. It was learned through the study that replacement with new skills was supported and advocated by the farmers. Skota-Dayile (undated) argued that, "Before colonialism, food was produced by rural women for themselves and for their families and took into consideration the issue of food security even in difficult times by storing some of their

production. Innovative and effective farming has been practised by these women despite substantial difficulties”. However she warned that starting from the known could be important in introducing new ways of improving agriculture by rural women. Rahman and Westley (2001) advised, that the challenges that come with the new exciting technologies need to be acknowledged by the developers. They went on to say that the potential of the existing technologies has not been exhausted so it will not be a wise decision to totally write off the existing technologies. After all, people continued producing food even though the new skills were unknown before the colonial and apartheid system; as a result there was food security. Nagel (1997) articulated that in order to achieve sustainable agricultural development, the indigenous know-how of African women farmers must be considered.

2.10 Conclusion

This chapter has shown clearly that agricultural extension organisation is essential to transfer knowledge to farmers so that their livelihoods are improved. Extension services can include change of farming methods and skills. The process of extension in agricultural development is perceived as an important component of local economic development strategy, which would ultimately decrease local poverty and in this context agricultural extension is of vital importance driven by extension organisations. The challenges faced by the local municipalities indicate that a lot needs to be done to improve effectiveness of agricultural extension organisation in the ADM. Finally, this chapter has shown that an effective extension organisation empowers farmers so that they can improve their production practices.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The preceding chapter (Chapter two) discussed the related literature to the study. The literature provided basis for the research methodology of this study. The survey research design and its applicability in the study are discussed in this chapter. Furthermore, population, sampling, pilot study and the research instruments in the form of questionnaire are argued in depth. The chapter also provides data analysis and presents a summary.

3.2 Study area

The study was conducted at the Amathole District Municipality (ADM) in the Eastern Cape Province of South Africa which is both urban and rural (Figures 3.1 and 3.2). The municipality has a population estimate of 1 664 753 (Statistics South Africa, 2007). This area forms part of the inland Eastern Cape which is characterised by moderate rainfall seasonal (500–900 mm/ annum) with most rains occurring in spring and summer (October to March), (Eastern Cape Development Corporation, 2007). According to Eastern Cape Development Corporation (ECDC, 2007) the municipality area is very humid and the villages above sea level are surrounded by the mountains experiencing cool conditions in winter (ECDC, 2007). However, the area is conducive to farming paving way for socio-economic improvement (ECDC, 2007). The rural farmers in the area practise diversified farming with women owning chickens and pigs while men are responsible for livestock species such as goats, sheep and cattle and crops (ECDC, 2007). All the extension practitioners among the respondents were from the Department of Rural Development and Agrarian Reform (DRDAR).



Figure 3.1: Locality map of the Eastern Cape Province

Source: Urban-Econ Eastern Cape, 2009

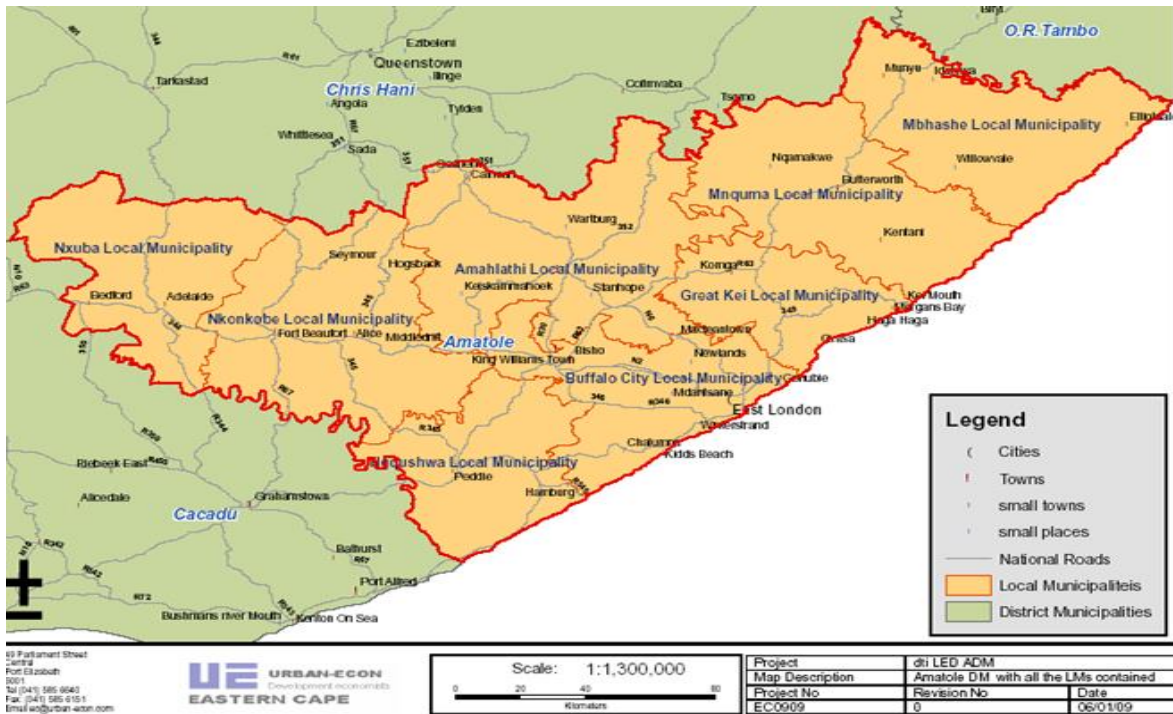


Figure 3. 2: Map of the Amathole District Municipality in the Eastern Cape Province.

Source: Urban-Econ Eastern Cape, 2009

3.3 Research design

The study is constituted by both qualitative and quantitative research methods. Qualitative methods refer to those approaches in which the procedures are not highly formalised, while the scope is more likely to be undefined, and a more philosophical mode of operation is adopted (Mouton and Marais, 1992). This was used for the investigation on the interviewees' perceptions and their interpretation of their perceptions and how events affected their thoughts. Quantitative research methods are those that are form of conclusive research involving a large representative samples and fairly structured data collections procedures (Struwig and Stead, 2001). In other words, this approach is concerned with numbers which represent values of variables, and these values measure characteristics of respondents.

Through the use of both the qualitative and quantitative methods, this study applied a face to face survey that involved the collection of data through administration of questionnaires and checklists (Maree, 2007). Macmillan and Schumacher (2001) define a survey research design as the assessment of the current status, opinions, beliefs and attitudes by questions or interviews from a known population. According to Macmillan and Schumacher (2001) a survey sets to describe and interpret the status quo as regards the behaviours, beliefs, observations of a particular issue under discussion in the research.

3.3.1 Population and sample selection

Bless and Higson-Smith (1995) defines the target population as a set of elements that the researcher focuses upon and which the results obtained by testing the sample should be generalized to. Allison *et al.* (1996) describes a population as the larger collection of all the subjects that one wishes to apply one's conclusion to. In this study the target population consisted of 1400 farmers and 20 extension practitioners in Amathole District Municipality. According to literature most of the farmers are poor and cannot afford private extension services. The research focused mainly on public

agricultural extension organisation as it is publicly funded and offers free services. Macmillan and Schumacher (2001) suggest that Krejcie and Morgan's sampling size table should be used to determine the sample size as indicated in Table 3.1.

Table 3.1 Krejcie and Morgan's sampling size table

Table for determining size for a given population									
N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2 800	338
15	14	110	86	290	165	850	265	3 000	341
20	19	120	92	300	169	900	269	3 500	246
25	24	130	97	320	175	950	274	4 000	351
30	28	140	103	340	181	1000	278	4 500	351
34	32	150	108	360	186	1100	285	5 000	357
40	36	160	113	380	181	1200	291	6 000	361
45	40	180	118	400	196	1300	297	7 000	364
50	44	190	123	420	201	1400	302	8 000	367
55	48	200	127	440	205	1500	306	9 000	368
60	52	210	132	460	210	1600	310	10 000	373
65	56	220	136	480	214	1700	313	15 000	375
70	59	230	140	500	217	1800	317	20 000	377
75	63	240	144	550	225	1900	320	30 000	379
80	66	250	148	600	234	2000	322	40 000	380
85	70	260	152	650	242	2200	327	50 000	381
90	73	270	155	700	248	2400	331	75 000	382
95	76	270	159	750	256	2600	335	100 000	384

Note: "N" is population size
 "S" is sample size
 Source: Krejcie & Morgan, 1970

Source: Krejcie & Morgan, 1970

In pursuance of the Krejcie and Morgan's sample size table (Table 3.1) the population of 1400 farmers produced a sample of 300 farmers from the fourteen different villages that formed part of the ADM. Systematic random sampling method was used to obtain the required sample with the use of the sampling table, whereby every fourth name was chosen from record of 1400 farmers. All the 20 agricultural extension officers from the ADM were included in the study.

3.3.2 Research instrument

The main research instrument that was used to collect data was the administered questionnaires with semi-structure questions. Dirwai and Gwimbi (2003) proposed that a questionnaire should be made in such a way that it covers the specific objectives of the study. That means the researchers should restrict themselves to relevant aspects only. In a questionnaire the same questions were asked from different respondents. The questions were clear with a simple English language that enabled field assistants to use them in interviews.

Two questionnaires were used to collect data. This first questionnaire enquired on the socio-economic characteristics of the interviewed farmers, and their perceptions on the effectiveness of agricultural extension services in the ADM. The second questionnaire focused on socio-economic characteristics of extension practitioners, their perceptions on the effectiveness of agricultural extension service and their understanding of agricultural extension organisation. Challenges of agricultural extension organisation in the ADM were also asked.

3.3.3 Pilot study

The questionnaires were pre-tested for workability and for the ability of the instruments to collect correct and relevant information. This had to be done in an environment that approximated the true environment in the field. Pre-testing the questionnaire was important because it afforded the researcher an opportunity to edit the questionnaires accordingly.

In this study the researcher pre-tested the first questionnaire on twenty respondents from ADM. The interviewed farmers identified four questions that were vague and difficult to comprehend. The respondents also showed that they had reservations on providing detailed information on their personal aspects. The accepted comments from the respondents for the pre-testing were incorporated into the questionnaire. However,

questionnaire that was directed to the agricultural extension practitioners did not pose any challenge, and therefore no corrections were made.

3.3.4 Data collection

Six field assistants were briefed on the data collection process and were taken through the questionnaire for clarity. The field assistants were trained through practical gimmick exercise of data collection on both questionnaires. Data were collected over a period of three (3) weeks through face-to-face interviews with the sampled farmers and the agricultural extension practitioners. Further investigations stimulated by the curiosity of in-depth understanding of issues in cases that resulted in hypothesis formation followed and this constituted the second loop of data collection and analysis.

3.4 Data analysis

Data collected was captured on the Ms Excel spreadsheet (2010) and transferred to SPSS version 22 (2014) for analysis. Descriptive statistics were produced in the form of tables and figures. Feedbacks to the respondents were carried out in order to verify the data collected.

3.5 Ethical considerations

Ethical considerations with regards to the rights of participants were applied when collecting data. This is in line with Bless and Higson-Smith (2000) who believe that rights of participants should be considered when data is collected. Participants were not forced to participate in the interviews. For this study, direct informed consent was given by participants through the signing of consent forms to show that they participated out of their own free will. For this study confidentiality and anonymity were ensured by the researcher and the information was only to be used for the stated purpose of the research (Kumar and Hansra, 2000).

3.6 Summary

This chapter explained the method that was used in the sampling of the farmers' population and agricultural extension practitioners' population. Data collection and analysis methods of both quantitative and qualitative nature were explained. The sample used for this research consisted of 300 farmers and 20 extension practitioners. Throughout the research the correct ethical considerations associated with working with people were observed. Consent forms were given and signed before the commencement of the interviews. Respondents were told in detail what the research involved, and they were also assured that all information would be treated in confidence. Respondents were also allowed to protect their identities. Chapter four is based on this chapter as it guides and regulates all the data analysis and presentation.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter focuses on the presentation of the results obtained from the analysis of data collected from respondents during the course of the study. The first section deals with the socio-economic characteristics of respondents, whereas the second part provides perceptions of respondents about the effectiveness of extension organisation. Farmers and extension practitioners' understanding of agricultural extension organisation in the district is discussed followed by identification of and analysis of key challenges that face agricultural extension organisations in the study area. The chapter is wrapped up with a summary that captures all that has been discussed in the chapter.

4.2 Socio- economic characteristics of extension practitioners and farmers.

4.2.1 Age of farmers

Respondents were asked to write their age in a box. All participants responded to the request (300 responses). 104 of the respondents were between 40 and 50 years of age and were high number of bulk of the population sample. 112 respondents were above 50 years, 59 respondents were between 30 and 40 years whilst only 25 respondents were below 30 years of age.

Table 4.1: Age of farmers (n=300)

Age range in years	Number (n=300)	Percentage
<30	25	8.4
30-40	59	19.6
40-50	104	34.6

>50	112	37.4
Total	300	100

Explanation for the above results is that adult people are more involved in agricultural production more than young people.

4.2.2 Gender

It was important to identify gender in order to make the sample representative. In this study, the majority of the respondents, some of whom were farmers, managers and officials from government department and other institutions were males.

Table 4.2: Gender of respondents (farmers) from the study (n=300).

Sex	Males		Females		Total	
	Number	Percentage	Number	Percentage	Number	Percentage
Farmers	173	57.7	127	42.3	300	100

According to the above table 4:2, the large difference in gender representation may reflect true differences in the entire population of the study. That is, it is possible that there are a greater number of males in the workforce of the agricultural extension organisations falling under the jurisdiction of the ADM. However, female subjects may also have been under-represented as a consequence of the sampling design employed. The figure 4.1 below shows the pie chart of 320 population sample that consists of 300 farmers and 20 extension practitioners

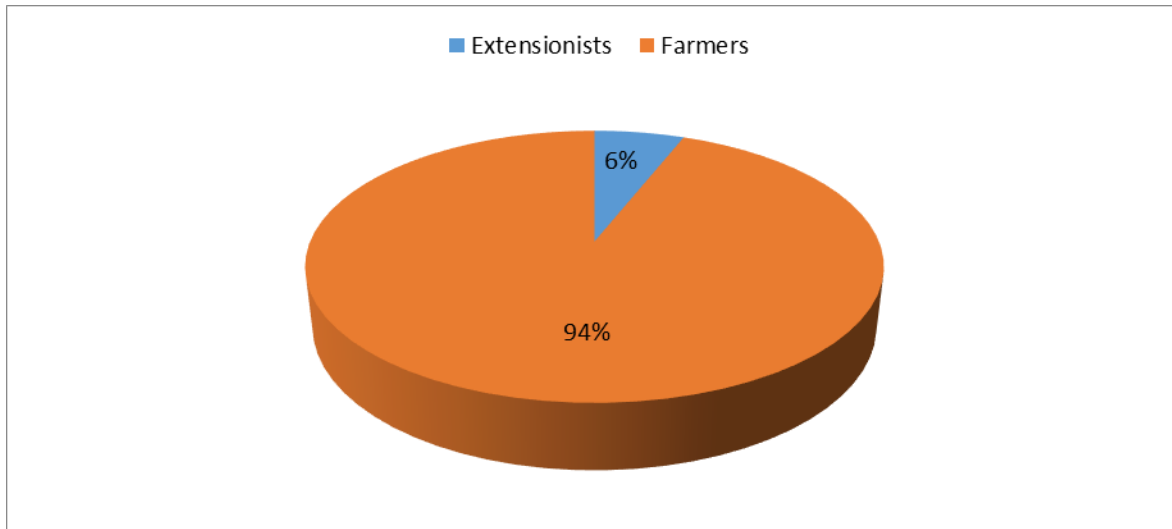


Figure 4.1: A pie chart showing the proportions of the sample population (n=320)

94 percent of and 6 percent of the sample population is extension practitioners according to the above figure represents farmers and extension practitioners respectively.

4.2.3 Educational level of farmers

The flow of information in development need relevant experience (recognition of prior learning), appropriate qualifications and technical skills and that assist in transferring relevant message. Figure 4.2 below shows the educational level of farmers.

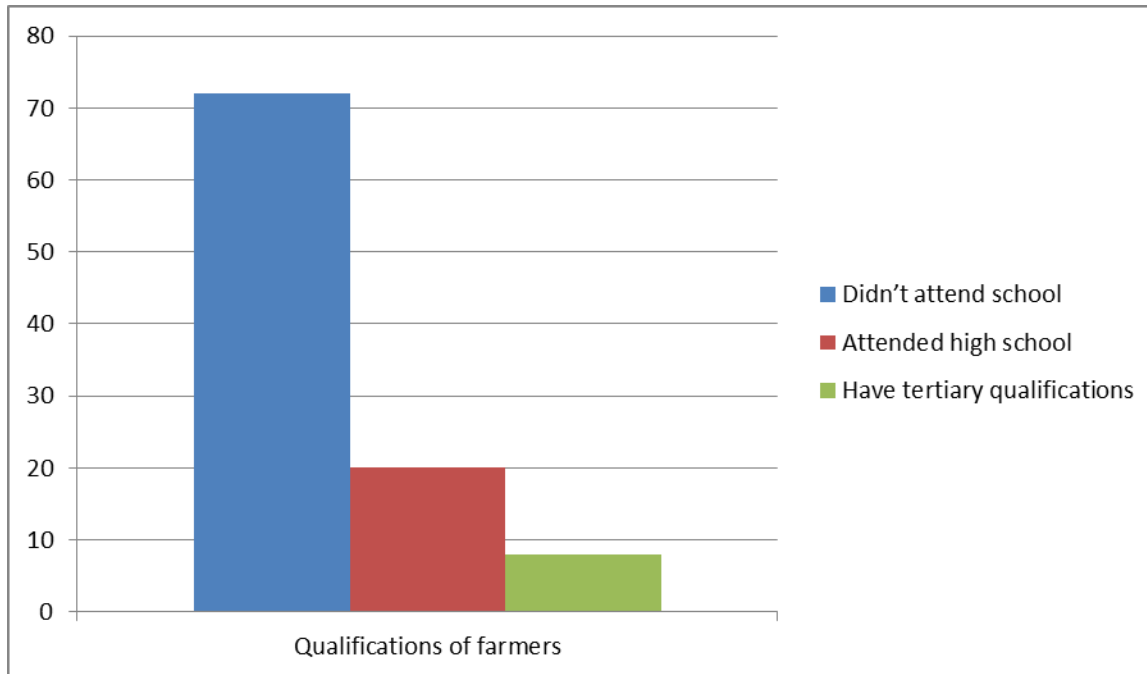


Figure 4.2: Educational qualifications of farmers (n=300)

A high percentage (72%) revealed that a most farmers did not attend school. Only 20 percent indicated that they attended high school while 8 percent had tertiary

4.2.4 Farm/Village name

All farmers that took part in this study where from fourteen villages and individual farms from the rural areas of ADM

4.2.5 Farmers' sources of income

Farmers were asked to indicate their sources of income by using three criteria (employed, not employed and depending on grant). They were categorised according to their age groups. According to Figure 4.3, the situation of the respondents was not good in terms of their sources of income. It is only those within the age group of 30-40 years who had sources of income, as they were employed outside farming and also depended on government grant. It is not surprising to see those of 50 years old and above

depending on grant. This finding confirms the poverty situation in Amathole District Municipality by Statistics South Africa (2002a).

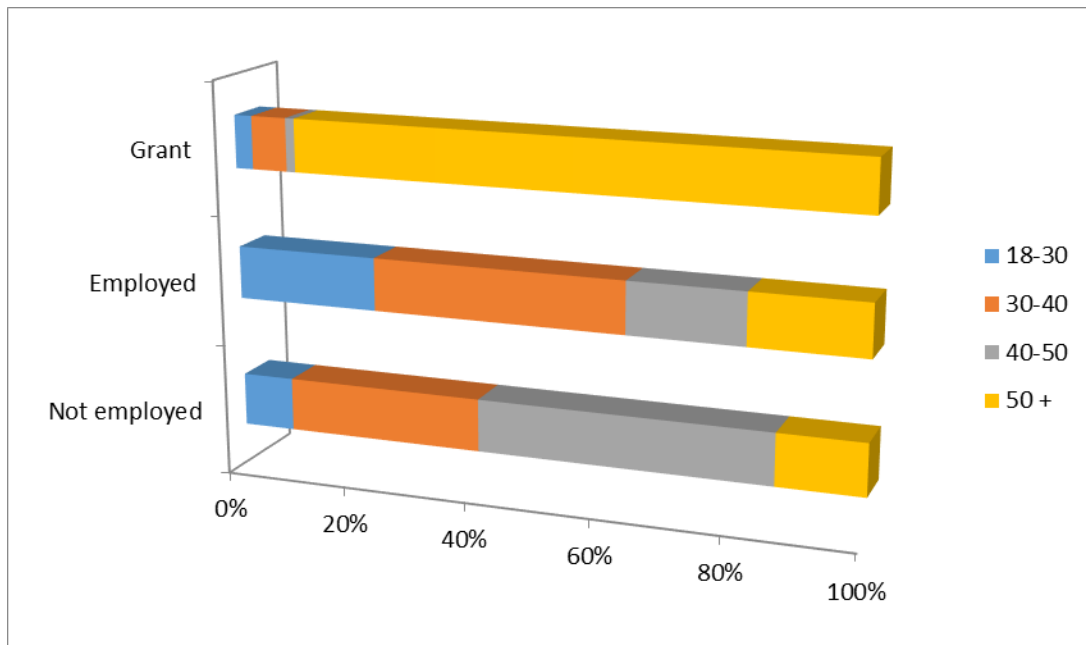


Figure 4.3: Farmers’ sources of income (n=300)

According to Figure 4.3 above, the situation of the respondents is not good in terms of their source of income. It is only those within the age from 30-40 years who have employment. However, it is not surprising to see those with 50 years and above depending on grants. These findings confirm the poverty situation of farmers in Amathole District Municipality by Stats SA (2002a). Some farmers indicated that they were involved in other development projects in order to make a living. It is an established fact that poverty is a problem in the Eastern Cape as it was declared one of the poorest provinces in South Africa (Statistics SA, 2002a).

4.2.6 Major extension organisation in the municipality

Below are the questions used to collect the data from the farmers.

Question: Do you know where to find agricultural offices in your area?

Farmers are beneficiaries of agricultural extension services. Government use agricultural extension as policy instrument (Van den Ban & Hawkins, 1990).

Table 4.3: Knowledge about locality of agricultural office (n=300).

Yes	Percentage	No	Percentage	Not sure	Percentage	Total number	Total percentage
234	78	30	10	36	12	300	100

78 % of farmers (234) know where to find agricultural offices and 10 % of farmers (30) do not know and 12% of farmers (36) are not sure.

Question: What is your understanding of extension organisation?

In achieving the objectives of the study it was of vital importance to get information on what exactly do farmers understand about agricultural extension organisation. The table 4.4 below present the results.

Table 4.4: Understanding of extension organisation (n=300).

Yes	Percentage	No	Percentage	Not sure	Percentage	Total number	Total percentage
186	62	90	30	24	8	300	100

Based on the responses gathered from the questionnaires that were distributed to farmers, it is interesting to note that a number of 186 respondents (62%) understand what agricultural extension organisation is and they even mention that the purpose was to develop rural communities. 90 respondents (30%) don't understand what agricultural extension is and 24 respondents (8%) were not sure.

Question: Does officials have the required skills/ expertise to promote and implement extension services?

According to Table 4.5 a total of 29 percent (12.7% and 16.3%) of farmers disagreed that extension practitioners had the required technical skills and knowledge while 41.6 percent (i.e. 36.3% and 5.3%) agreed. Only 29.3 percent were neutral. This implied that farmers were expecting better service delivery from extension practitioners because only 41.6 percent of farmers perceived extension practitioners to have the required technical skills.

Table 4.5: Responses to questions concerning extension practitioners having the required technical skills and knowledge (n=300).

Extension practitioners have the required technical skills and knowledge (n=300)	Frequency	Percentage
Strongly disagree	38	12.7
Disagree	49	16.3
Neutral	88	29.3
Agree	109	36.3
Strongly agree	16	5.3
Total	300	100

Question: What farming skills and knowledge do you have?

Table 4.6: Farming skills and agricultural knowledge have (n=300).

Farmers farming skills and agricultural knowledge	Frequency	Percentage
Crop production	97	32.4
Animal production	107	35.6
Animal health care	58	19.4
Fruit production	23	7.6

Other	15	5
Total	300	100

According to Table 4.6 a high number (107) of respondents have animal production related skills, following those that have crop production at 97 and there those have tractor maintenance (15) wool sorting and no till skills. The study found that the skills that are reflected on the above table show major farming enterprise that the farmers are engaged on.

Question: Did you gain any new skills because of advice from any officials offering extension services?

For farmers to produce, agricultural and technical skills and are needed.

Table 4.7: Farming skills and agricultural knowledge gained (n=300).

Yes	Percentage	No	Percentage	Total number	Total percentage
126	42	174	58	300	100

42% respondents gained new agricultural skills as a result of services offered by agricultural practitioners whilst 58% did not receive any skill from agricultural practitioners.

Question: Do you find it difficult to contact officials offering extension services?

Constant communication is very important between a farmer and extension practitioner. It is the vehicle that is used to induce, maintain and facilitate change in agricultural production practices. The table 4.8 below shows the results and interpretation.

Table 4.8: About difficult in contacting officials (n=300).

Yes	Percentage	No	Percentage	Total number	Total percentage
147	49	153	51	300	100

51 % find it difficult to contact officials offering extension services and 49 % do not experience any difficulties.

Question: Do these officials visit frequently or when called?

Agricultural practitioners need to form a link between research and farmer. Their job is to advise, communicate and facilitate, helping farmers in their decision-making. The agricultural extension is mainly provided by agricultural practitioners visiting farmers to give agricultural advisory service. The following table 4.9 shows the results and interpretation.

Table 4.9: Visits of agricultural practitioners (n=300).

Frequently		When called		Total	
Number	Percentage	Number	Percentage	Number	Percentage
147	15	153	85	300	100

15 % of respondents mentioned that agricultural practitioner visit frequently and 85% of respondents stated that agricultural practitioner visit when called.

4.2.7 Perception of farmers about the effectiveness of agricultural extension organisations in the ADM

There are change to beliefs and views of rural people concerning agriculture (Kepe, 2004). The questions were based on whether farmers receive required services from extension practitioners and if those services were effective enough to develop them.

The following were five questions to farmers about the effectiveness of agricultural extension organisation.

Question: How has extension services improved your life (is there any impact?)

The table 4:10 below show the number and percentage based on how extension services improved farmers’ lives.

Table 4.10: Agricultural extension organisation impact (n=300)

Yes	Percentage	No	Percentage	Total number	Total percentage
138	46	162	54	300	100

54% of respondents believed that extension services have failed to bring any improvement to their lives and 46% of respondents do agree that there is change in their lives. It was also found from farmers (46%) that they understand the objective of agricultural extension organisation. Smallholder/subsistence farmers accepted that genetically modified maize seed is best as it is normally roundup ready and weed can be killed by just application of weedicide and those were technical advises from extension practitioners. The study found that most farmers were positive that there are agricultural programmes that the department is offering to assist in reducing poverty and promoting agriculture. Their main concern was that although their produce is good, it is being sold only in the informal sectors like street vendors and to individuals in various communities.

Farmers’ main concern was on financial assistance and 70 % stated that they find it difficult to get any form of assistance including funding from the department. On the other hand 30 % acknowledged the support from government. Most farmers indicated that, where they have not adopted recommended technologies, they use either technologies from their own informal trials. ATD&T has neither systematically identified farmer developed technologies that work nor adapted these for extension to other farmers in other wards, districts or provinces.

Perceptions of farmers concerning effectiveness of agricultural extension organisations in the municipality were analysed according to extension policies, quality extension services, extension practitioners having the required technical skills and knowledge, sufficiency of agricultural extension practitioners and the functioning of agricultural extension practitioners. Perceptions were categorised according to characteristics of the extension organisation. Responses are provided from Table 4.11 below.

Table 4.11: Responses to questions concerning extension policies (n=300).

Extension policies favour farmers (n=300)	Frequency	Percentage
Strongly disagree	36	12.0
Disagree	102	34.0
Neutral	34	11.3
Agree	82	27.3
Strongly agree	46	15.3
Total	300	100

Question: What challenges are you facing regarding extension services?

The question was based on the identification of challenges facing municipality in the study area and analysing those challenges. The study found that the functioning of extension organisation in implementing extension services faced with challenges. This was confirmed by the responses provided by farmers where all (100%) agreed that the objectives and vision of extension organisations is too far from being reached. The following were highlighted as the main challenges of extension organisation in implementing extension services:

According to the study these are the following major challenges from farmers:

- Visibility of extension workers and subject matter specialists and other farmers don't even know who supposed to assist them in regards to extension services.
- Non availability of camps and arable land because of non-availability of fencing and that automatically hinders agricultural development.

- Lack of adequate technical support to farmers and monitoring of farmer projects thereof;
- Marketing of agricultural produce;
- Research not based on day to day farming experiences;
- Inconsistent budgeting affects farmer performance and lead to low agricultural productivity in the district municipality;
- Poor communication between extension practitioner and farmers;
- Centralisation of Subject Matter Specialist;
- Scarcity of water for plants and animal that hinder the performance of agricultural production, farmers rely on rainwater.

Question: How do you think these challenges can be rectified?

Respondents were asked to give their recommended solution to the challenges they listed and the study found that 70 % of respondents suggested that the agricultural extension organisation management should stick to policies and promote transparency and honesty within the organisation. 30 % of respondents were adamant on what steps to follow in rectifying those challenges.

Question: What are your general perceptions about the functioning of agricultural extension practitioners?

Table 4.12: Functioning of extension practitioners (n=300)

The agricultural extension practitioners are functioning properly (n=300)	Frequency	Percentage
Strongly disagree	220	73.3
Disagree	21	7.0
Neutral	39	13.0
Agree	16	5.3
Strongly agree	4	1.3

Total	300	100
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According to Table 4.12 a total of 80.3 percent (73.3% and 7.0%) of farmers disagreed to the functioning of extension practitioners while 16 percent agreed and 4 % strongly agreed. A total of 13.0 percent were neutral. This implied that farmers were not happy with the functioning of extension practitioners in the district municipality.

Based on the responses of 98% of farmers the relationship between themselves and extension practitioners is that agricultural extension organisation which offers technical advice and particularly funding of agricultural development commodities, agricultural practitioners facilitate farmer to agricultural assistance, brings together farmer individuals and organise them together to receive agricultural extension services and, assist them. A response from 2% of respondents was not clear to prove their actual response hence the researcher decided to ignore them.

Question: What are your perceptions about extension services in the region and what can you recommend. Is the extension organisation effective?

The purpose of this question focused on perceptions of farmers about issues pertaining to agricultural extension services in the ADM.

Table 4.13: Responses to questions concerning quality of extension services (n=300).

DRDAR offers quality extension services (n=300)	Frequency	Percentage
Strongly disagree	56	18.6
Disagree	70	23.3
Neutral	31	10.3
Agree	101	33.7
Strongly agree	42	14.0
Total	300	100

According to Table 4.13 a total of 41.9 percent (18.6% and 23.3%) of farmers disagreed that DRDAR offered quality extension services while 47.7 percent (33.7% and 14.0%)

agreed that DRDAR offered quality extension services. Only 10.3 percent were neutral. This implied that farmers were not of the same opinion about the extension policies.

4.3 Socio economic characteristics of extension practitioners

4.3.1 Gender

In this study 94% of the respondents in a population sample made up from farmers and 6 % of extension practitioners.

Table 4.14: Gender distribution of agricultural practitioners (n=20)

	Males		Females		Total	
	Number	Percentage	Number	Percentage	Number	Percentage
Farmers	13	65	7	35	20	100

It was important to identify gender in order to make the sample representative. In this study, the majority of the respondents, some of whom were farmers, managers and officials from government department and other institutions were males. Thus, male constituted 94% of the respondents, while 6% were females. The large difference in gender representation may reflect true differences in the entire population of the study. That is, it is possible that there are a greater number of males in the workforce of the agricultural extension organisations falling under the jurisdiction of the ADM. However, female subjects may also have been under-represented as a consequence of the sampling design employed.

4.3.2 Qualifications obtained/ passed

The education background of the extension practitioners (i.e. extension officers, extension scientists and extension managers) sampled is presented in Table 4.15. Forty percent of the agricultural extension practitioners had a three year diploma qualification, 30 percent of the extension practitioners had either Bachelor of

Technology in Agricultural Management, Advanced Diploma or Bachelor’s degree while 20 percent of the extension practitioners had Bachelor of Science and Honours degrees. Only 10 percent of the extension practitioners had a relevant Masters’ degree in Extension, Master of Science (MSc) or PhD qualification as indicated in the following table.

Table 4.15: Education background of the extension practitioners (n=20)

Position	Diploma		B. Tech, Advanced Diploma or B. Degree		BSc, Hons		Masters, MSc or PhD	
	Number	%	Number	%	Number	%	Number	%
Extension officers	4	20	3	15	4	20	1	5
Extension scientists	3	15	2	10	-	-	-	-
Extension managers	1	5	1	5	-	-	1	5
TOTAL	8	40	6	30	4	20	2	10

The realisation of any agenda promoting development requires practitioners with relevant and appropriate qualifications as well as the skills and expertise needed to fulfil this role. The responses of the extension practitioners among the respondents confirmed this, as the majority had Diplomas or other qualifications related to agriculture.

In the case of farmers a high number of them were uneducated. A large percentage indicated that they never attended high school. This is shown by 72 percent who never attended high school (Figure 4.4). Only 20 percent indicated that they attended high school while 8 percent had tertiary qualifications. It is important to have extension practitioners that have a good level of educational background as this equips them to diffuse early adoption of technologies and farm record keeping skills to farmers.

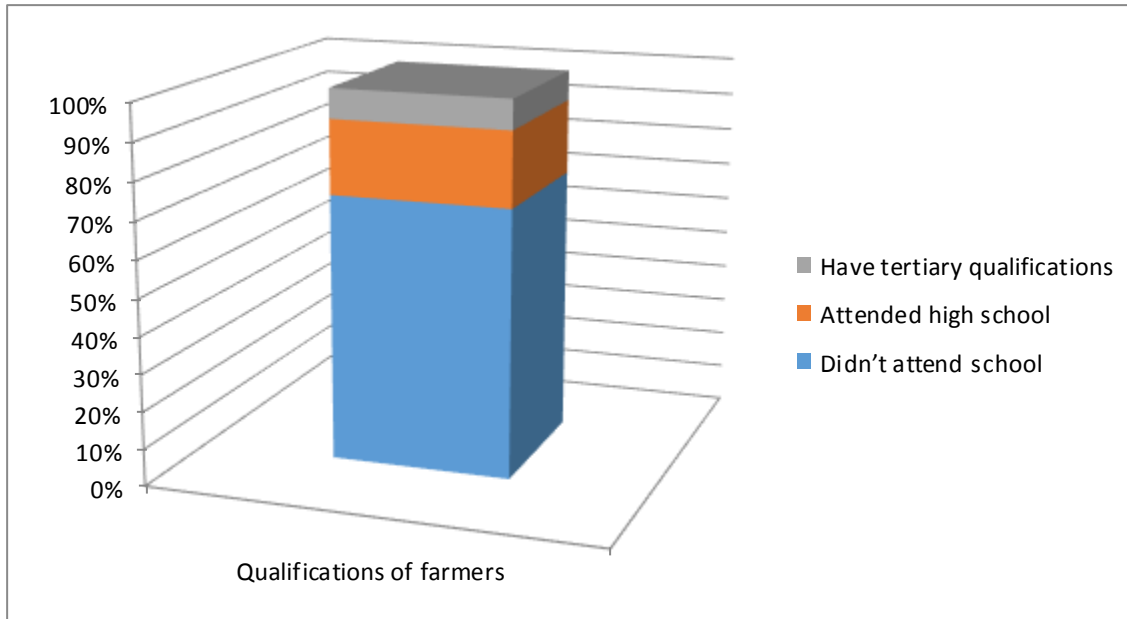


Figure 4.4: Educational background of farmers (n=300)

4.3.3 Organisation/ Institution

All extension practitioners who participated in the study were from the Department of Rural Development and Agrarian Reform and were publicly funded.

4.3.4 Positions of extension practitioners

The responses to the questionnaire revealed that 80 percent of extension practitioners held agricultural extension positions, while 11 percent were scientists and 9 percent were managers as indicated in Figure 4.5.

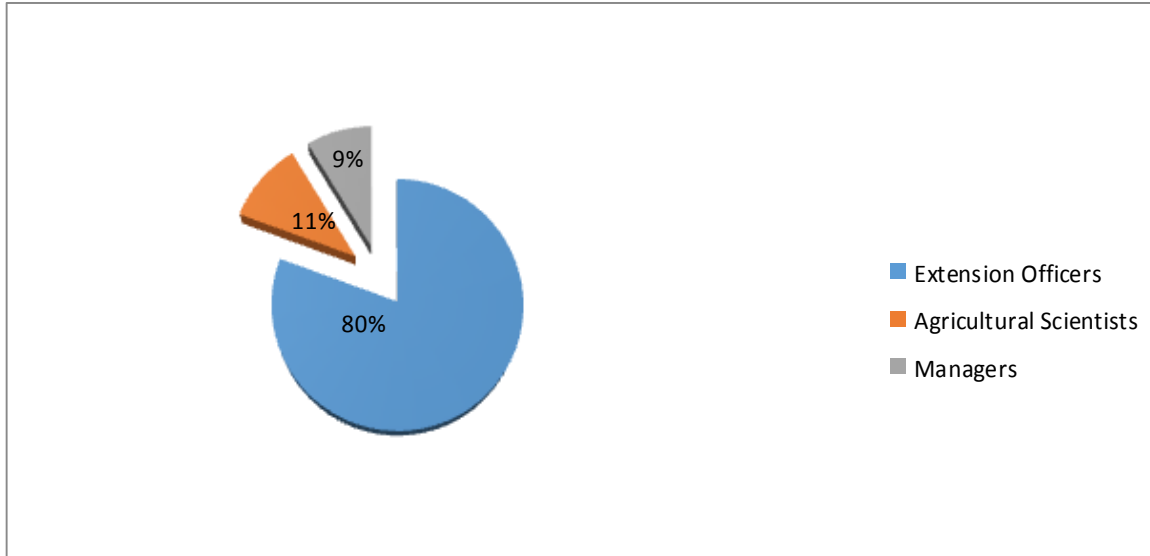


Figure 4.5: Positions of agricultural extension practitioners (n=20)

The statistics presented in Figure 4.5 shows that most respondents that were interviewed were extension officers (80%) and they were the ones who were always in direct contact with the farmers. Extension officers are the ones that implement extension and advisory services at village level (Bembridge *et al.*, 1983).

4.3.5 Perceptions of extension practitioners about the effectiveness of extension organisation.

Extension practitioners were asked questions about how they perceived the effectiveness of agricultural extension organisation in the district municipality. A criterion of “yes”, “no” and “not sure” response was used. Table 4.16 presents results and interpretation.

Table 4.16: Perceptions of agricultural extension practitioners about the effectiveness of extension organisation in the ADM (n=20)

STATEMENT	PERCENTAGE (%)		
	Yes	No	Not sure
1. There is a positive relationship between extension organisation and participation by the community.	80	10	10
2. The government has developed a proper extension strategy.	50	40	10
3. The extension strategy addresses the needs of farmers in the communities in the municipal jurisdiction area.	80	20	-
4. The government has prioritised the agricultural extension development in an effort to fight poverty.	40	60	-
5. An extension implementation plan outlining the short/medium term targets for the municipality has been developed.	10	70	20
6. A well-resourced extension unit/ section responsible for extension has been established.	10	90	-
7. The municipality has programmes in place to promote and ensure agricultural development in the municipal area.	30	30	40
8. The extension organisation has employed extension officers /Agricultural Development Technicians with a view to strengthen participation by farmers.	100	0	0
9. The farmer to Extension Officers /Agricultural Development Technicians ratio is reasonable.	10	80	10
10. Capacity building programmes for officials responsible for the implementation of extension services is in place and functioning properly.	66	34	-
11. Partnerships have been established with other institutions including NGOs with a view of promoting agricultural extension.	60	10	30

Question: Is there a positive relationship between extension organisations and community participation?

The question was based on the perceptions of extension practitioners about relationship between extension organisations and participation by the community.

A total of 80 percent of the respondents remained optimistic and confirmed that there was a positive relationship between agricultural extension organisation and participation by the community. This points to the true reflection of the nature of the work of extension officers who are in constant contact with the farmers. Only 10 percent of the extension practitioners did not agree to this assertion while 10 percent of them were not sure.

Question: Has the government developed a proper extension strategy?

This was one of the question that focused on Perceptions about the existence of government's proper extension strategy. It is interesting to note that even though there was an extension strategy in place (Alcinof Resources Management, 2012), such strategy, to a certain extent, fell short in addressing the extension needs of farmers. This is evident from the responses provided by respondents where 50 percent agreed that the extension strategy addressed the extension needs of the farmers and 40 percent of the respondents had a contrary view, while 10 percent was not sure.

Question: Do the extension strategy addresses the farmer needs of the communities in the municipal jurisdiction/ area?

Extension and advisory services are considered to be a broad technical and advisory tool offering agricultural development technologies and innovations for farmer development in fighting poverty (Alcinof Resources Management, 2012). Of the total number of questionnaires returned, 80 percent of the respondents, on the one hand were positive that the government had extension strategy that addressed farmers' needs in the Amathole District Municipality and 20 % were not on the same par with the

latter.. Importantly in this regard, it is the fact that the government recognised and prioritised certain needs of farmers as most basic to the local communities, and that such needs were attended to.

Question: Has the government prioritised the agricultural extension development in strides to fight poverty?

Following the 52nd National Conference of the African National Congress in Polokwane, government agreed on twelve outcomes to focus its work. Outcome seven focused on emphasis on developing agriculture. The New Growth Path targeted 300 000 households in smallholder schemes by 2020 (Government of South Africa, n.d). The question was based on evaluating the above statement in terms of agricultural extension organisation effectiveness based on perceptions about whether the government prioritised agricultural extension development in an effort to fight poverty. It is interesting to note that only 40 percent respondents were positive that the government was prioritising agricultural extension development in an effort to fight poverty and 60 percent did not agree to the perception.

Question: Is there any extension implementation plan that outline the short/medium term targets for the municipality?

Respondents felt that no plan outlining the short and medium term targets for the municipality concerning the implementation of extension strategies had been developed. Only 10 percent of the respondents felt positive that an extension implementation plan outlining the short/medium term targets for the district municipality had been established while 70 percent were adamant that this had not been achieved and 20 percent of them were not sure.

Question: Is there any well-resourced extension unit/ section responsible for extension?

In 1998 National Department of Agriculture highlighted five problems on extension provision to farmers which included well-resourced extension unit. Significant variations on the effective implementation of extension services can be observed between the extent to which the government has managed to establish a section to drive extension programmes and the lack of capacity on the part of the district municipalities thereof. To this end, 10 percent of the respondents remained positive that well-resourced extension sections/units had been established in contrast to 90 percent of the respondents who were adamant that such sections/units had not been established. The extension practitioners also indicated other aspects that made them to be unhappy with the way government handled extension organisation. Such aspects related to the establishment of well-resourced extension units, availability of development programmes and sufficient extension practitioners. These aspects were could contribute to retarding the effectiveness of extension organisation in the ADM.

Question: Does the municipality has programmes in place to promote and ensure agricultural development in the municipal area?

It was important to note that 30 percent of respondents confirmed that their respective institutions and communities had programmes that aimed to promote and ensure the development of local economies in place. Thirty percent was not in agreement and 40 percent was not sure. Most of these programmes were supported by the granting of funds to various projects by the Department of Social Development, the Department of Agriculture, Forestry and Fisheries (DAFF), the Agricultural Rural Development and Research Institute (ARDRI) and the National Woolgrowers' Association (NWGA), to mention but a few; and this funding was done through the District Municipality. Moreover, other stakeholders such as the DRDAR and Eastern Cape Rural Development Agency (ECRDA) promoted extension services through the implementation of programmes such as the Comprehensive Agricultural Support

Programme (CASP), Landcare Programme, Food Security (Cropping Programme, and Household gardens, the 4H programmes and the improvement of livestock farming.

Question: Has the extension organisation employed extension officers /agricultural development technicians with a view to strengthen farmer participation?

Bembridge (1979) states that extension services are meant to transfer skills and knowledge to the farmers. It is therefore required that government employs extension practitioners to fulfil its mandate. All interviewed extension practitioners (100%) agreed that there were extension practitioners in place but they were not enough as some serviced large areas and they mentioned that their response was based on the agricultural extension norms.

Question: Is the farmer to Extension Officers /Agricultural Development Technicians ratio reasonable?

According to the extension norms and standards the ratio should be 1:400/500 depending on what enterprise you service but it was found out that 100 percent of extension practitioners interviewed serviced more than 500 per extension practitioner in their areas of operation. Only 10 percent agreed that the ratio of extension officer/agricultural development technician to farmer was reasonable and 80 percent did not agree while 10 percent was not sure.

Question: Are there any capacity building programme for officials responsible for the implementation of extension services?

According to Hogset-Smith (2005), it is very important that agricultural extension personnel are empowered through continuous training in order to keep them abreast with new technologies. Extension practitioners were asked whether agricultural

extension organisation had capacity building programmes in place and whether they were functioning properly. Figure 4.4 depicts the results.

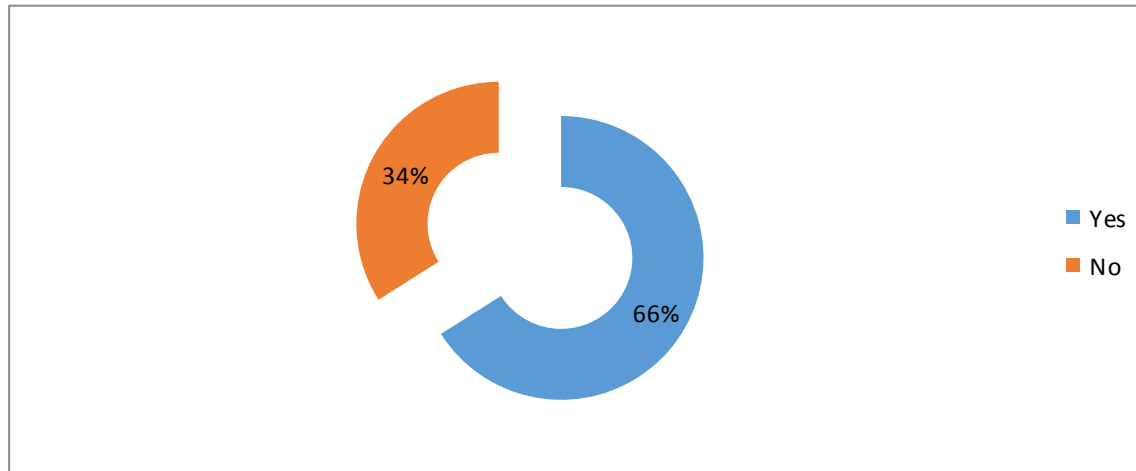


Figure 4.6: Capacity building programmes (n=20)

From Figure 4.6 it can be observed that the majority of extension practitioners amounting to 66 percent were positive that their respective institutions had capacity building programmes for officials providing extension services. Examples included programmes training in animal and crop management, monitoring and evaluation, project management, computer skills, strategy and business plan development. According to the respondents, the training programmes assisted them in transferring skills to farmers and that equipped farmers with farming skills. Only 34 percent were of the contrary view.

Question: Are there any partnerships that have been established with other institutions (including non- governmental organisations) with a view to promote agricultural extension?

When asked whether partnerships with other institutions including NGOs had been established, a total of 60 percent of the extension practitioners felt that it was the case, 10 percent were negative and 30 percent were not sure. However, the questionnaire neglected to ask respondents the names of the institutions with which they believed

partnerships had been established, but the respondents mentioned that the institutions offered advice and technical support by way of a type of partnership. This implied that agricultural extension organisations should also focus on promoting partnership with other stakeholders as they had the capacity to transfer skills and funding to farmers in order to ensure effectiveness of extension services.

Question: What is your understanding of extension organisation?

Based on the responses gathered from the questionnaires, it is concluded that all extension practitioners understood and were knowledgeable about the concept of an extension organisation. Below are the responses that they provided in expressing their understanding of the roles of an extension organisation:

- Extension organisation assists to eradicate or reduce poverty in rural and urban areas by implementing departmental programmes designed to improve economic growth and development.
- It is a section of the DRDAR that works with farmers to improve their standard of living.
- It is intended to supply extension services by transferring knowledge and farming skills to the communities.
- It helps people to work together to achieve sustainable agricultural growth and the economic benefits that will improve the quality of life for all in a community.

Although extension practitioners provided conflicting perceptions about their effectiveness in the district municipality, they had an understanding of what is expected of extension organisation in order to be effective.

Question: In your opinion, is there any relationship between extension organisation & community participation?

Participation in agricultural extension was designed to solve problems as especially as it seems to be cost effective means to obtain information timely. The table 4.17 below shows the response from agricultural practitioners.

Table 4.17: Relationship between agricultural extension organisation and community participation (n=20)

Yes		No		Total	
Number	Percentage	Number	Percentage	Number	Percentage
20	100	-	-	20	100

From the above table 4:17, it can be observed that 100% of respondents remained optimistic and confirmed that there is a positive relationship between extension organisation and community participation. They further explained that when there are meetings, farmer’s days, information days, agricultural expo and agricultural shows farmers are the one who take part in most preparatory work and showcasing of their entries and agricultural produce.

Question: Does the organisation have enough official to render extension services?

According to Table 4.18 a total of 14.7 percent (10.7% and 4%) of farmers disagreed to the sufficiency of extension practitioners while 30 percent (i.e. 18.0% and 12.0%) agreed. A total of 55.3 percent was neutral. This implied that farmers were expecting a higher number of extension practitioners for a broader coverage of farmers. This perception is in agreement with that of extension practitioners, that extension practitioners were not enough to cover the target farmers due to an imbalance in the ratio of extension practitioners to farmers.

Table 4.18: Responses to questions concerning sufficiency of agricultural extension practitioners (n=20)

The ADM has enough extension practitioners for the region. (n=300)	Frequency	Percentage
Strongly disagree	12	4.0
Disagree	32	10.7
Neutral	166	55.3

Agree	54	18.0
Strongly agree	36	12.0
Total	300	100

Question: Do you have a system of assessing community satisfaction with extension services?

Satisfaction surveys are of vital importance in any organisation to get feedback from the clients about the service the organisation is offering. The table 4.19 below give a clear picture of what extension practitioners felt.

Table 4.19: Assessment of community satisfaction (n=20)

Do you have a system of assessing community satisfaction (n=20)	Frequency	Percentage
Yes	20	100
No	-	-
Total	20	100

Based on the above table 4:19, 100 percent agreed that they don't have any system in place to assess community satisfaction with extension services.

Question: Have you established any relationship(s) with other development organisations with a view to promote extension services?

Relationship is a process in motion. Due to many factors influencing the process it is conceivable that problems will arise. Results are seen on the table 4.20 below

Table 4.20: Established relationship with other developmental organisations (n=20)

Relationship with other insititutions (n=20)	Frequency	Percentage
Yes	20	100

No	-	-
Total	20	100

All respondents agreed that there is a relationship with other institutions with the view to promote extension services. They further responded by mention few examples which include Agricultural Research and Development Research Institute (ARDRI), Eastern Cape Rural Development Agency (ECRDA), Department of Social Development (DSA), Agricultural Research Council (ARC) and World Vision. Respondents mentioned that they hold meetings and sometimes visit farmers together.

Question: What kind of support do you provide to other organisation in the implementation of extension services?

All extension practitioners (100%) agreed that they strengthened its collaboration with other organisations in the delivery of programmes. They mentioned that they conducted in-depth research on food security programmes and the use of Genetically Modified Seeds in cropping.

Question: Have you participated in the development plan process of the ADM?

75 percent of never participated in the drafting process of Development plan of the ADM and only 25 percent participated. The latter confirmed that it is because they form part of middle management of the department.

Question: What challenges do you encounter in implementing extension services?

The functioning of extension organisation in implementing extension services is not without challenges. This was confirmed by the responses provided by and extension practitioners whom all (100%) agreed that the objectives and vision of extension organisations is too far from being reached. The following were highlighted as the main challenges organisation in implementing extension services:

- political interference in various extension programmes and initiatives versus technical planning;
- The issue of human capital as well as institutional capacity. This relates, mainly, to budgetary constraints, lack of the required expertise and/or skills (on the part of both officials and beneficiaries);
- Poor monitoring and evaluation as well as reporting thereof;
- Limited transport for extension practitioners to do their work;
- Communication dynamics which lead to no clear line of command and no clear lines of reporting;
- Implementation of ERP which include payment of bursaries
- Poor working relationship with other Directorates e.g. Veterinary Services, Land Use Planning, Economic Services etc;
- Farmer ratio and no structured extension approach;
- Specialist scientists being based in larger centres and accordingly not being accessible to rural farmers.
- Remuneration to extension officers not being linked to experience and qualifications;
- Research not based on day to day farming experiences;
- Certain policies that prohibits Extension Practitioner when in the field of work;
- Alignment of national mandate and provincial mandate;
- Illiteracy of most farmers ;
- Remuneration not linked to experience and qualifications;
- Inconsistent budgeting which makes it difficult to operate;
- Being a jack of all trades and master of none because there is no specialisation;
- No advancement of farmers from subsistence to commercial Poor communication between extension practitioner and farmers;
- Limited budget that affect agricultural development;
- Centralisation of Subject Matter Specialist;

Question: How would you rate ADM in the implementation of extension services as compared to other municipalities?

Extension practitioners were asked how they rated the implementation of extension services in the ADM as compared to other municipalities. In Figure 4.7 are the results.

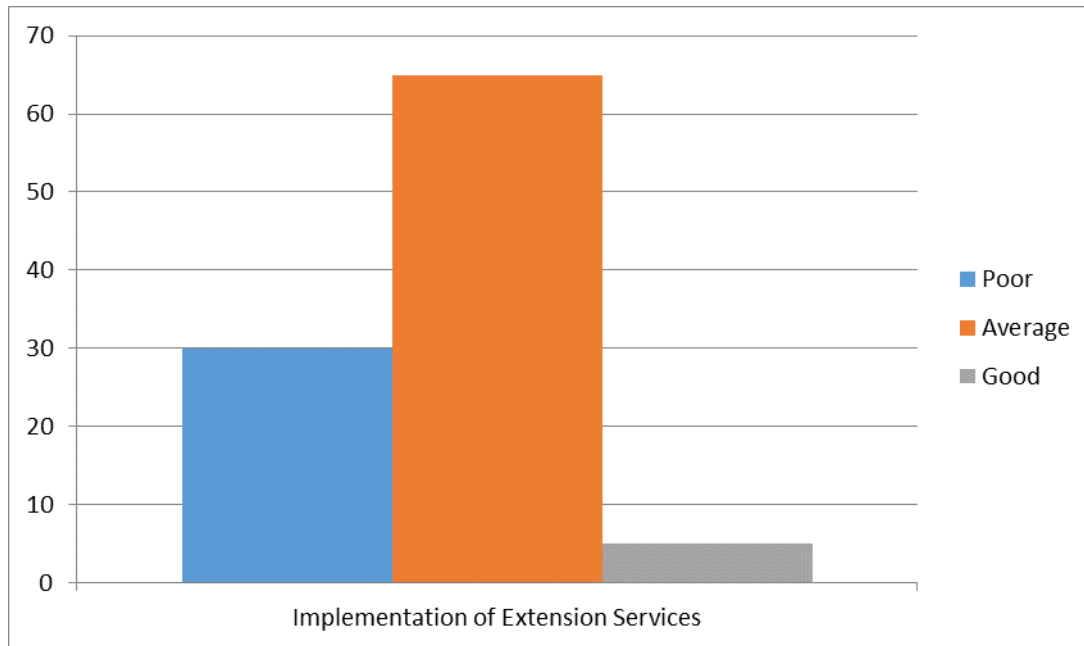


Figure 4.7: Responses of extension practitioners about implementation rate of extension services in the district compared to other municipality (n=20)

Figure 4.7 displays that only 5 percent of the extension practitioners were of the opinion that the district municipality was doing well in its implementation of extension services programmes, 65 percent gave an average rating to implementation achieved so far and 30 percent felt that a great deal still needed to be done to promote local development. They rated the implementation of extension services programmes aimed at achieving it as poor.

The extension practitioners also indicated other aspects that made them to be unhappy with the way government handled extension organisation. Such aspects related to the establishment of well-resourced extension units, availability of development

programmes and sufficient extension practitioners. These aspects were could contribute to retarding the effectiveness of extension organisation in the ADM.

Question: What measures do you think need to be taken in to consideration to ensure optimal implementation of extension services?

According to 70 percent of the respondents, they agreed that the performance of agricultural extension organisation is affected political factors which include institutional politics and those interested play a vital role within them; technical factors which are mostly the methods that are entirely about the agricultural development and technology transfer; and organisational factors include the who suppose to do what in terms of tasks, resources allocation and authority. 30 percent of respondents felt that all is well within the operation of the extension organisation.

Question: In your opinion, do you think the budget is enough to implement extension services in the municipality?

Based on the responses gathered from the questionnaires that were distributed to all respondents, it is interesting to note that all (100%) of respondents agreed that the agricultural extension organisation does not have enough budget to implement extension services. Extension practitioners further explained their experiences about budget cuts and annual inconsistency. Sticking to the annual budget allocation was not done properly.

4.4 Conclusion

This chapter presented the results obtained from data analysis collected during the course of the study. This was done through the presentation the socio-economic characteristics of respondents. Interpretation of results of the second part provides perceptions of respondents about the effectiveness of extension organisations. The chapter also presented and analysed results on respondents' understanding of

agricultural extension organisation in the district and identification and analysis of key challenges that face agricultural extension organisations in the study was done.

CHAPTER FIVE

FINDINGS, RECOMMENDATIONS AND CONCLUSIONS

5.1 Introduction

In this chapter findings of the research are provided. This chapter also presents the recommendations of the study for the effectiveness of extension organisation. Lastly, this study draws conclusions to the research and makes recommendations for future research.

5.2 Findings

The education level of both extension practitioners and farmers was not satisfactory to can improve the effectiveness of extension services. Most extension officers (80%) had a diploma qualification in Agricultural Extension. This is in line with the positions they held in the ministry as 80 percent of them were extension officers. Most farmers (72%) indicated that they never attended high school. These findings suggest that in as much as farmers were not educated, extension practitioners were also not in a position to be effective due to their low levels of education which could limit their ability to be effective to extension practitioners.

Incomes outside farming were only benefited by a small percentage of farmers. This is confirmed by the findings that only those who were thirty to forty years old indicated that they had sources of income such as employment outside farming and government grant assistance, as well as occasional development projects that would create casual jobs for the farmers during the period of the project. This finding indicates the in the ADM not many farmers had sources of income. The findings also indicated the high vulnerability of farmers to poverty.

In terms of perceptions of agricultural extension practitioners about the effectiveness of extension organisation, the extension practitioners were doing their level best to serve

farmers in an appropriate way. They were optimistic that the extension needs of the farmers were addressed. However the concern was the inappropriate ratio of extension practitioners to farmers as the majority of them (80%) indicated that it was unreasonably skewed. In addition extension practitioners were of the opinion that the extension strategy addressed the needs of the farmers although government did not prioritise agricultural extension development. This finding indicates that extension practitioners were willing to serve farmers but were understaffed. This finding also suggests that extension practitioners were concerned about government not prioritising the development of agricultural extension. Overall, these findings suggested ineffectiveness of extension services in the district municipality.

The extension practitioners also indicated other aspects that made them to be unhappy with the way government handled extension organisation. Such aspects related to the establishment of well-resourced extension units, availability of development programmes and sufficient extension practitioners. These aspects were could contribute to retarding the effectiveness of extension organisation in the ADM.

Farmers' perception about the effectiveness of extension practitioners, on the other hand, revealed that most of the farmers viewed agricultural extension organisation as ineffective. Farmers were not satisfied with the extension policies, extension services and the functioning of agricultural extension practitioners. They also perceived extension practitioners as not having the required technical skills to be effective. Furthermore, they perceived extension practitioners as not being enough in numbers to service all the farmers in the district municipality. All these perceptions implied the dissatisfaction that farmers had about the extension organisation in the district municipality. In addition farmers seemed to be aware of what extension practitioners needed to deliver as a service to them (farmers) but those services were not met.

The functioning of extension organisation in implementing extension services not without challenges. This was confirmed by the responses provided by the respondents where all (100%) agreed that the objectives and vision of extension organisations is too

far from being reached. The study found that agricultural extension organisation at the municipality has a number of challenges.

5.3 Recommendations

The study makes the following recommendations:

5.3.1 Recommendations pertaining to strategies towards more effective and efficient extension organisations

Agriculture has been identified as a one of the key means of improving the economic prospects of South Africans. The purpose of agricultural extension organisations is to build the economic capacity of a local area in order to improve its economic future and the quality of life for all. It is a process by which public, business and non-governmental sector partners work collectively to create better conditions for economic growth and employment generation.

Although the study acknowledges and appreciates the efforts and initiatives of government in ensuring and promoting extension services, much more needs to be done to realise the government endeavours of growth and development. Considering that the country is a developmental state, integrated planning in this regard is of vital importance. This will require both National and Provincial government departments to recognise and relate to the extension services as the mechanism for identifying community needs for a coordinated government response. In essence, this influences the whole of government planning, resourcing and implementation of high impact projects in the rural economy. Importantly, the existence and maintenance of good relationships between government and community, particularly in service delivery, can never be over emphasised, for it involves increasing opportunities for employment, opportunities for citizens to participate in decisions that improve their lives. It also involves promoting partnerships between the state and the society by giving citizens a real sense of ownership of development projects.

More specifically, for purposes of ensuring the positive impact of agricultural extension organisation, the following is recommended:

- Considering the economic challenges encountering the district, province and the country at large, and the fact that the district has a potential in agriculture, DRDAR should prioritize agriculture development to ensure and achieve food security through agricultural production. This will also contribute to the creation of employment opportunities for the local communities;
- Adult Basic Education and Training (ABET) learning institutions should be introduced in all villages for communities to reduce illiteracy. This should help in the easy diffusion of innovations that are disseminated by extension organisations.
- Farmer satisfaction surveys should be in place to would enable the DRDAR to understand better the impact of its development programmes to the lives of farmers
- DRDAR should reconsider the issue of extension officer to farmer ratio based on norms and standards as it has been found that it is affecting the performance of extension officers.

5.3.2 Reforming extension

Agricultural extension organisations must offer agricultural advices to farmers. There is always a gap between what farmers can achieve in their production practices and what they actually achieve. Once the existence of such gap is established, it is the task of the extension services first to close the gap and then to be prime initiator for generating additional know-how. If there are no gaps, extension organisation's guide research to focus on constraints felt by farmers by bringing farmers' problems to research and in cooperation with research conducting field experiments.

5.3.3 Systematic training and visits

Once single line of command has been established and personnel devoted all of their time to extension. The work of the service needs to be organised in a systematic time

bond program of training and visit. Schedules of work responsibilities and training must be clearly specified and closely supervised and monitored at all levels. All extension staff must have realistic workloads and access to frequent, relevant training. To this end, it is hoped that the formulation and implementation of the National Development Plan Strategy, which seems to put emphasis on development of the underdeveloped will produce desirable results.

5.4 Recommendations regarding future research

While the study focused on the agricultural extension organisations in the ADM, it referred largely on departmental interventions. In acknowledgment of the latter, the researcher recommends that a further research focusing on the impact of extension services in the economy of South Africa be undertaken.

5.5 Conclusions

The main objective of this study was to identify factors that affected agricultural extension organisation in the Amathole District Municipality, and to explore the role of extension organisations as a strategy for development and growth in the district municipality. Data was collected from 300 farmers and 20 extension practitioners that were selected through random sampling. Results revealed extension organisation was not effective in the ADM.

From the foregoing assessment of the effectiveness of agricultural extension organisation and from exploring its role as a tool for development strategy and growth in Amathole District Municipality, the following conclusions and can be drawn:

Amathole District Municipality is characterised by high unemployment rate resulting in high levels of poverty. It also lacks basic skills required for extension services to function properly. Importantly, the following major key issues were identified in the district municipality:

- Implementation of extension services programmes by DRDAR is poor. This is attributable to various reasons which include *inter alia*, inadequate budget, and extension to farmer ratio. However, some inadequacies such as a --mammoth situational analysis with unclear strategies could be noted. Hence and otherwise, developmental initiatives in the municipality have been progressing at a snail's pace.
- Linked to the above, is issue of poor planning, coordination and budgeting for extension programmes.
- Low agricultural productivity in the district is attributable to lack of and/ or poor support by DRDAR to local farmers;
- Last but not the least, development agencies have been established in the district, with processes of developing others being underway, it remains to be seen how effective.

The study concludes, therefore, that while DRDAR is mandated by the parliament and the constitution to “promote, support and co-ordinate rural development and agrarian reform interventions to reduce poverty and underdevelopment through job creation, integrated food security programmes, and equitable participation in development by all rural communities”, they will not be able to do this without clear policy guidance; institutional capacity-building; inter-sectoral collaboration and real empowerment of the beneficiaries whom the programmes are supposed to assist.

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APPENDIX 1
QUESTIONNAIRE 1

EFFECTIVENESS OF AGRICULTURAL EXTENSION ORGANISATION IN RURAL
AREAS: THE CASE OF AMATHOLE DISTRICT MUNICIPALITY (EASTERN CAPE)

Section A: Biographical Data (Farmer)

Interviewee's Name	
Age	
Gender	
Educational level	
Farm/Village name	
Total income	
Other source of income	
Date of interview	

Section B: Major Extension Organisation in the Municipality

1. Do you know where to find Agricultural Offices in your area?

Yes		No	
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2. What is your understanding of Extension Organisation?

3. Do extension practitioners have required technical skills and knowledge about agriculture?

4. What farming skills and knowledge do you have?

5. Did you gain any new skills because of advice from any officials offering extension services?

Yes		No	
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6. Do you find it difficult to contact officials offering extension services?

Yes		No	
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7. Do these officials visit frequently or when called?

Frequently		When called	
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8. How has extension services improved your life

9. What challenges are you facing regarding extension services?

10. How can these challenges be rectified?

11. What are your general perceptions about the functioning of extension practitioners?

12. What are your general perceptions about extension services in the region and what can you recommend?

APPENDIX 2

QUESTIONNAIRE 2

SECTION A - Biographical data (Extension practitioners)

Please show your response by crossing the appropriate box

1. Gender

Male	Female
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2. Highest qualification obtained/ passed

Diploma	Degree	Secondary education	Post-graduate diploma degree
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3. Organisation/ Institution

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4. Position

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SECTION B: Perceptions about effectiveness of agricultural extension organisations

Please tick (✓) the appropriate answer

1. There is a positive relationship between extension organisations & community participation	Yes	No	Not sure
2. The government has developed an proper extension strategy	Yes	No	Not sure
3. The extension strategy addresses the farmer needs of the communities in the municipal jurisdiction/ area	Yes	No	Not sure

4. The government has prioritised the agricultural extension development in strides to fight poverty.	Yes	No	Not sure
5. An extension implementation plan outlining the short/medium term targets for the municipality has been developed	Yes	No	Not sure
6. A well-resourced extension unit/ section responsible for extension has been established	Yes	No	Not sure
7. The municipality has programmes in place to promote and ensure agricultural development in the municipal area	Yes	No	Not sure
8. The extension organisation has employed Extension Officers /Agricultural Development Technicians with a view to strengthen farmer participation	Yes	No	Not sure
9. The farmer to Extension Officers /Agricultural Development Technicians ratio is reasonable	Yes	No	Not sure
10. A capacity building programme for officials responsible for the implementation of extension services is in place and functioning properly	Yes	No	Not sure
11. Partnerships have been established with other institutions (including non- governmental organisations) with a view to promote agricultural extension	Yes	No	Not sure

1. What is your understanding of Extension Organisation?

2. In your opinion, is there any relationship between Extension organisation & community participation? Please explain.

3. Does the organisation have enough official to render extension services?

4. Do you have a system of assessing community satisfaction with extension services?

5. Have you established any relationship(s) with other development organisation institutions with a view to promote extension services?

Yes	No
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If yes, how are these managed?

6. What kind of support do you provide to other organisation in the implementation of extension services?

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7. Have you participated in the Development Plan process of the ADM?

If yes, what role did you play?

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8. What challenges do you encounter in implementing extension services?

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How would you rate ADM in the implementation of extension services as compared to other Municipalities?

Poor		Average		Good	
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4. Do all of these officials have the required skills/ expertise to promote and implement Extension Services? Please explain.

6. In your organisation, what programme(s) do you have in place with a view to promote and ensure the Extension services?

7. Does your organisation have any capacity building programme for officials responsible for Extension Services?

Yes	No
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If yes, what programmes?

8. What measures do you think need to be taken in to consideration to ensure optimal implementation of extension services?

9. In your opinion, do you think the budget is enough to implement extension services in the municipality? Please explain.

You are free to make any comments with regard to extension services in ADM.

Thank you for your assistance, contribution and your time to complete this questionnaire.