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NATURAL AND
AGRICULTURAL SCIENCES
NATUUR- EN
LANDBOUWETENSKAPPE

**TO ASCERTAIN THE ROLE OF AGRICULTURAL COOPERATIVES TO SUSTAINABLE
AGRICULTURAL DEVELOPMENT AND FOOD SECURITY IN THE GAUTENG
PROVINCE OF SOUTH AFRICA: THE CASE OF METSWEDING MUNICIPALITY**

BY

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(2015221431)

Dissertation submitted in fulfilment of the requirements for the MSA Degree of the
Faculty of Natural and Agricultural Sciences
(Centre for Sustainable Agriculture, Extension and Rural Development)

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January 2018

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ABSTRACT

This study deals with analysis of the role of agricultural cooperatives to sustainable agricultural development and food security. A simple random sampling technique was used in the selection of agricultural cooperatives. A structured questionnaire was used to obtain information on the membership and activities of the agricultural cooperative. The study has revealed that there are 12 major agricultural cooperative enterprises in the area involved in the livestock, crop, storage and processing. The agricultural produce of the agricultural cooperatives include maize, vegetables, poultry, beef, piggery, sheep & goats and animal feed and farm inputs procured are fertilizers, seeds, agro chemicals and agricultural equipment. One of the major challenges of the agricultural cooperatives in Metsweding is that of developing appropriate institutions to mobilize the members of the rural sector into a greater productive. As such small holder farmers in rural areas characterised by low resource utilization, small farm holdings, scattered, farmlands, finds it difficult to pool their resources together in order to raise their farm income and substantially improve of their living conditions. In such situation cooperatives representatives represent a strong and viable economic alternative. Cooperatives organization offers the best machinery for reaching the masses of the small scale farmers.

ACKNOWLEDGMENTS

The writing of this dissertation has been one of the most important aspects of my academic experience. Without the support, patience and guidance of the people mentioned below, this report would not have been completed. It is to them that I owe my sincere deepest gratitude. Firstly, I would like to give glory to the Almighty God for His grace and love that has made me to be where I am today.

Secondly I would like to express my appreciation and gratitude to Dr J. Van Niekerk who took to be my supervisor despite his academic commitments. His outmost wisdom, knowledge and the commitment to the highest standard of performance has indeed inspired and motivated me. Completing this work would have been difficult if were not for the support from Ms Kirsty Green, MSA-Project Manager and the agricultural cooperatives in Metsweding Municipality, Gauteng.

I would also like to give a special thanks to the officials from Gauteng Department of Agriculture & Rural Development and the Department of Trade & Industry for their tremendous support. I also would like to thank the research assistants who supported me during the survey and these include Mr Tediso Molepo, Ms Khaya Deleki-Mkona, Ms Nolufefe Maqhubela and Ms Primrose Makgatho.

Special thanks to my late mother Ms Nomsa Mcata and my late husband Mr Columbus Mhlauli who passed away during this journey and may their memory be a blessing. Finally, I would like to thank my grandmother, Ms Nompulelo Agnes Mcata and my children, Ayabonga, Somila and Kunene for their constant support in every aspect of my life.

DECLARATION

I Ncumisa Cordelia Mcata, do hereby declare that this dissertation for the degree Masters in Sustainable Agriculture at the University of Free State is the product of my original work that was built from the literature that has been carefully acknowledged as required by the University 's plagiarism policy. The work has not been previously submitted elsewhere for the purpose of obtaining another qualification.

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Ncumisa Cordelia Mcata

LIST OF ACRONYMS

ACA	Agricultural Co-operative Association
DAFF	Department of Agriculture, Forestry and Fisheries
DTI	Department of Trade and Industry
FET	Further Education and Training
GDP	Gross Domestic Product
GEGDS	Gauteng Employment Growth and Development Strategy
GFSP	Gauteng Farmer Settlement Programme
IDP	Integrated Development Plan
ICA	International Co-operative Alliance
ILO	International Labour Organization
KLM	Kungwini Local Municipality
NFU	National Farmers Union
NTTLM	Nokeng Tsa Taemane Local Municipality
MAFISA	Micro Agricultural Financial Institutions of South Africa
OFDC	Organic Food Development and Certification
SAS	Statistical Analysis System
SDA	Sustainable Development Approach
SFS	Sustainable Food Systems
SMMES	Small, Micro and Medium Sized Enterprises

Chapter 1: Background and Overview of the Study

1.1 Introduction

According to the Department of Trade & Industry in South Africa (2006), cooperatives can be defined as autonomous associations of persons united voluntarily to meet their common economic, cultural and social needs and the aspirations through shared ownership and the democratically controlled enterprises. The cooperatives provide an alternative approach for the implementation of sustainable community based interventions in South Africa.

The Government in South Africa always advocates the use of cooperative model for the upliftment of our communities as a movement that could enhance the empowerment of small businesses especially in the agricultural sector. There is a significant policy development that happened over a number of years by the South African Government to take forward the government commitment towards the empowerment and the development of cooperatives. The Cooperative Development Policy for South Africa (2003) Broad Based Black Empowerment Act (No.53 of 2003) and the Cooperative Act (No.14 of 2005) are the most crucial policies for the promoting and social development of the South African communities particularly in job creation, poverty eradication and the black economic empowerment.

1.2 Problem Statement

The major focus of this study is premised on the fact that despite Government interventions in support of agricultural cooperatives most people in our communities cannot afford to have three meals per day to meet their household needs and hence in Gauteng there are still vast majority of people who go to bed hungry especially the vulnerable groups such as children, mental ill patients, people with disabilities and the

elderly people. The main areas affected in the Gauteng are rural areas in the Metsweding District Municipality.

Another major problem of agricultural development in Gauteng is that of establishing appropriate institutions to mobilize the members of rural sector in Gauteng to a greater productive effort. As such rural farmers find it difficult to pool resources such as machinery, production inputs and to raise their farm income and ultimately improve their standard of living. In such situation the cooperative could serve as a strong and viable economic alternative (ICA, 2010).

Cooperatives have important role to play in Gauteng, however the conditions under which they can participate is not clearly defined. Lack of effective implementation of Agricultural Cooperative Support Programme impact largely on the economic livelihoods of the poor communities in Metsweding Municipality especially those in rural areas of Gauteng. Government has become the jack of all trade such as programme developer, implementer, coordination and facilitation without collaboration with key stakeholders such as municipalities, Civil Society including small holder and commercial farmers. The support received by agricultural cooperatives from Government unfortunately does not cover all the resources required by farmers and most farmers depend on rain-fed agriculture which is not sustainable hence they have to wait for the rain to start their farm productively hence poor quality of produce (Department of agriculture, forestry and fisheries 2010/11:14)

The major question to be addressed in this study is to ascertain the role of agricultural cooperatives in ensuring sustainable agricultural development and food security in Metsweding Municipality?

1.3 Research Objectives

The objectives of the study are as follows:

- The study will ascertain the role and performance of agricultural cooperatives in the Metsweding Municipality.
- Examine the successes and challenges of cooperatives and how, when, who and what support is provided to cooperatives.

- Analyze the extent to which agricultural cooperative contribute to agricultural development and enhance food security.
- The study will also assess the reasons why only a minimum number of cooperatives are functional whilst there are big numbers that are registered cooperatives.

1.4 Significance of the Study

The study on the role of agricultural cooperatives to sustainable agricultural development and food security in the Gauteng Province with specific reference to the Metsweding Municipality will contribute to policy, programme development and knowledge in Sustainable Food System(SFS) and development studies. This will also assist Government and private sector partner to make informed decisions in instances when the expectations of the communities are not met. The important part of the study will be the important role the cooperatives have to play in addressing food security challenges through ensuring sustainable agriculture. In many developing nations including South Africa food security is a priority among the poor communities especially in the rural areas which are mostly neglected by Government and public sector. According to McLachlan and Kuzwayo (1997: 3) South Africa is considered as food self-sufficient but a significant number of households are still food insecure. The study will therefore bring new thinking and insight in terms of the empirical evidence on the role of agricultural cooperatives to sustainable agricultural development and food security.

The study is focusing more on the rural areas of Gauteng specific reference to Metsweding Municipality which is different approach than focusing on townships.

Chapter 2. Literature Review on Agricultural Cooperatives to Sustainable

Agricultural development & Food Security

2.1 Introduction

This chapter discusses the main concepts in this study on agricultural cooperatives and sustainability of agriculture including food security issues. This research deals with the concepts and theories of sustainable development that underpin the study. This chapter begins with definition of concepts of the agricultural cooperatives, agriculture and food security. The chapter also discusses the origins, principles and strengths and as well as the shortcomings of the Gauteng Agricultural Cooperative Strategy. It also outlines the role of cooperatives in food security in South Africa. The current state of agricultural cooperatives in the Metsweding Local Municipality of Gauteng.

This research embraced the Sustainable Development Approach (SDA) as the main theory that underpins the study. The main reason why the sustainable development approach was adopted is that it helps to inform the policy makers on how to approach the sustainability and how they can effectively use the sustainable paradigms as an important tool for the enhancing poverty alleviation in agricultural cooperatives.

(Reisch et al, 2013:26). This will then reduce the rate of poverty amongst the poor communities. The sustainable Development approach provides a crucial understanding of agriculture as an important basis for the sustainability of the food security intervention. This approach was used to understand the challenges faced by agricultural cooperatives in the Metsweding Local Municipality Several literature has been written regarding the contribution made by various cooperatives in South Africa The purpose of this chapter is to examine the literature that is most relevant to the study and also discusses the theoretical framework that underpins the study. The International Labour Organization (ILO) (2009:9) recognizes seven basic principles that the cooperatives subscribe to which includes amongst other: voluntary

membership; economic participation by members; independence and autonomy; training, education and information and cooperation amongst members (Dunn et al, 2002:80).

2.2 Definition of Concepts

Cooperatives have been defined by the International Cooperative Alliance “as the autonomous of persons who are united voluntarily to meet their common economic, cultural, social, cultural need and the aspirations through a jointly owned and a democratically controlled enterprise “(Ortman and King, 2007: 19) .Cooperatives can also be solidarity organizations which are defined as non-profit organization comprising mainly of person with collective goal and each member has a vote in the selection of the management and proportional in the benefits occurring in activities of the associations. The small scale farmers are able to increase their income through productivity by bargaining and collective negotiation for reasonable better prices for their production inputs such as seeds, fertilizers, fuel transportation, storage through agricultural cooperatives.

Agricultural Cooperatives have long been known to play a key role in the society by improving the standard of living of their individual member (Onje,2003). They also facilitate the transport availability which provides access to the markets, provide services such as production inputs, credit facilities, sometimes they offer training and capacity building to their members through seminars and workshops. This implies that the service offered by the agricultural cooperatives can reduce poverty and enhance production activities in sustainable manner .It has also been noted that whilst cooperatives in rural areas were initially started in Metsweding District by apartheid government there where many flaws which were solely based on racial discrimination and they need presented the role the cooperatives can play in costs reduction, risk minimization, ensuring economies of scale and promotion of market access.

According to Stats SA (2012), there are still vast challenges faced by South Africa in terms of food security ranging from household to the national level although there is a decline in the levels of vulnerability to hunger and malnutrition in South African

households over the past ten years but there is still a large percentage of households who have difficulties to access food.

2.3 General Overview of Coops in South Africa

According to the Department of Agriculture, Forestry and Fisheries (2009), one of the challenges faced by the agricultural sector is to increase the number of viable and sustainable agricultural enterprises. The establishment of cooperative movement dates back as far as the early 1900s as economic vehicle in South Africa. One can define the five broad experiences of cooperatives in South Africa. The first cooperatives were used to develop farming communities during the time of white organized agriculture before 1994. A lot was learned with this kind of set up which was mostly individuals operating as a team and major focus on business involvement till a point where an individual is market ready, formal institutions that ensures bulk buying and joint marketing. Cooperatives were a well-established economic vehicle in South Africa back in 1900s. The first existed in organized white agriculture where cooperatives were used to develop and build the farming community. In 1945 the Agricultural Cooperative Association (ACA) was established as a result of the arrangement between the NFU and the co-operative leaders. In the 1950s they comprised as many as 103 cooperatives (Knapp, 1965).

The second set of coops emerged in the 1980s when the labour movement was established as vehicle to address the redundant and retrenched works. The third coops were established in the former homelands of Ciskei, Bophuthatswana, Venda etc. used as a vehicle to support local economic activities in these areas. The fourth cooperatives were mainly in the informal sector of which most of them were not formally registered. The fifth cooperatives are the newly established cooperatives by government and receiving donor support as a vehicle for entrepreneurship development. Despite the challenges faced by cooperatives over the years but they have ensured the empowerment and upliftment of our people. Cooperatives have been recognized by government in facilitating empowerment on bridging the gap between the first and the second economy. Initially the Department of Agriculture, Forestry & Fisheries was the lead institution in facilitating the registration and providing support to the agricultural cooperatives however following the establishment of the

National Cooperative Task Team this work was shifted to the Department of Trade and Industry(DTI), to ensure that cooperatives are given recognition and allowed to flourish in all sectors of the economy (Department of Trade and Industry, 2012:7).

The Department of Trade and Industry has played a leading role in promoting the cooperatives and coordinating the efforts regarding cooperative development in South Africa and the implementation of integrated strategy on the development and promotion of cooperatives (Department of Trade and Industry, 2012:7).

2.4 Overview of Metsweding Municipality

Metsweding District Municipality is located in the north-eastern reaches of the Gauteng Province comprising of two local municipalities, Kungwini Local Municipality (KLM) and Nokeng Tsa Taemane Local Municipality (NTTLM) The climate of the area can be described as temperate, experiencing warm summers and cold winters with sharp frost. On average the area experiences 8.3 hours of sunshine per day, and only nine days a year without sunshine. The mean daily maximum temperature is 25.8 C in January (mid-summer) and 17.1 C in July (mid-winter). The average daily minimum temperature is 13 C in January and 0.2 C in July. Due to the low winter temperatures, there is general frost incidence in the municipal area, with the growing season being highly dependent of warming up of soils in spring and the incidence of late frosts, whilst growth season is influenced by the incidence of early frosts. The implication is that any strategic dryland crops selected for the municipal area should be relatively frost hardy and optimum growing conditions suited to the available heat units (Metsweding Agricultural Development Strategy, 2009).

Metsweding District Municipality receives an average annual precipitation of approximately 720 mm. The rainy season in Metsweding extends from October through to April when approximately 90% of the rainfall occurs. Rainfall peaks for the area occur in December and January. During the dry winter months of June, July and August only approximately 3.5% of the rainfall occurs. Therefore, Metsweding District Municipality experiences summer rainfalls. The rainy season peaks from October to March, while the driest months are in winter, between June and August. The soils in the district municipality are dominated by loam soils, as well as sandy clay loams, which traditionally show good drainage and water holding capacity, with patches of silt soils which have a high crusting potential. The soils thus generally are suited to crop production. (Metsweding Agricultural Development Strategy, 2009).

2.5 Overview of the Agriculture Sector

The area's agricultural production traditionally focused on maize and cattle, although flowers and agricultural products are also produced. Increasing mechanization of agricultural also impacts on relative investments in capital and labour. These changes reduce the demand for farm labour and favours larger farming industries to family owned farms. Niche agriculture is beginning to take hold in Metsweding and because of this the area has one of the largest rose producers in South Africa. The advantage of niche products is that they can in certain cases be grown year-round in greenhouses and are therefore less dependent on seasonal labour and climate. Examples of these niche products include maize, sorghum, groundnuts, sunflowers, soybeans, wheat, other vegetables, beef and sheep (commercial and communal tenure), game farming as well as dairy.

Gauteng Province has developed a baseline on the number and types of cooperatives that exist. The most developed and oldest cooperatives are in the agricultural sector and therefore one would expect it to have the largest numerical representation. This includes both the emerging and old established agricultural cooperatives and the support by Department has ensured growth in the agricultural sector of the cooperative

movement. In terms of the existence of the cooperatives, there have been a relatively significant number of agricultural cooperatives that are registered but most of them are dormant. The Cooperatives have been in existence in Gauteng as far as 1912 and mainly the establishment of big agricultural cooperatives such as SENWES. There was an emergence of first Savings and Credit Cooperatives in the late 1970s and early 1980s and with strong social cohesion and orientation including the burial societies and stokvels. In post 1994 particular attention was directed towards support to the SMMEs including the cooperatives which were empowered to operate like business entities and has been shaped factors and influences (Ingalsbe and Groves, 1989).

2.6 Performance of Agricultural Cooperatives in Gauteng

The Gauteng Province is the smallest of South Africa's nine provinces in land size (1,5% of land), yet is considered as the economic engine of the country. The Province is also a home to almost 13million people, which represents almost a quarter of the total South African population and making it the most populous province in South Africa. The estimated number of smallholdings in province is between 18000 and 21000 of which only a few solely rely on income derived from agriculture. Most of the occupants have other sources of income. This therefore means that much of the land is not used to its full potential. The average size of farms in Gauteng is almost 2000ha. Provincial agricultural land holdings are approximately 20 000 hectares in extent, with the individuals holdings ranging from 2.4ha to 500ha. The Gauteng Provincial Government is in the process of disposing of all its land that is not required for government purpose through the Gauteng Farmer Settlement Programme (GFSP), which provides for a three-year lease with an option to purchase. The following important farming enterprises are found in Gauteng: livestock (including poultry), horticulture (including floriculture) and crop production (including limited cultivation of herbs and medicinal crops).

The Gauteng Provincial Government in its Gauteng Co-operative Development Policy Framework has committed itself to providing a supportive legal environment for cooperatives in the province, there is already a number of departments that have actively committed themselves to cooperative development in various programs. One

of the objectives of this provincial policy framework is to target the unemployed and poor in particular women, youth and the disabled in order to ensure an even spread of the benefits from reconstruction and development. Moreover, the Gauteng Provincial Government has introduced the 10 Pillar Programme of Radical Transformation, Modernisation and Re-industrialisation which aims at revitalising and mainstreaming township economies through creating and stimulating township enterprises including cooperatives (Department of Agriculture and Rural Development ,2013)

Over 20 agricultural cooperatives specializing in various agricultural commodities participated in the planning workshop held on the 12 July at the Department of Trade & Industry in Pretoria. It became evident that the following commodities are key in the Agricultural sector in the province.

- a) Vegetables
- b) Maize
- c) Beef
- d) Poultry
- e) Agroprocessing

Agriculture is still the key driver of cooperatives. This then also suggests that proper attention such as

- Capacity building on human capital
- Organized support
- Local and international, market access
- Lack of maximum participation by members
- Agricultural extension services
- Agricultural Value Chain system

2.7 Cooperatives in Metsweding Municipality

The Gauteng Provincial Government has a number of programmes to support the cooperatives based on the national policy framework. The emerging farmer support programme provides support to agricultural cooperatives and this includes support in terms of registration of cooperatives, technical advisory assistance, training and capacity building, business plan development and financial assistance. The MAFISA Fund provides financial assistance for production loans and the after care services to

cooperatives in agriculture. The municipalities at local government level also provide support to the SMMEs and cooperatives in agriculture. Consultative workshops were done with a number of cooperatives whereby we facilitated discussions to ascertain the views on agricultural cooperatives. (Metsweding Agricultural Development Strategy,2009)

It came out clear that cooperatives have frustrations with support and land issues, lack of clear instructions and contradicted information from the government agencies seem not to help the development of the cooperatives.

The following is a list of few cooperatives interviewed through the planning workshop

Table 1: Informal Interviews done with Cooperatives

Farming Activity	Name of Coop	Municipality
1. Poultry	Masimong Cooperative'	Metsweding
	Segaoa le Masenke Primary Cooperative	
	Maja Poultry Family Primary Cooperatives	
2. Vegetables	Savuna Primary Cooperative	Metsweding
	Kgorang Agri Farming Primary Cooperative	
	Rethabiseng Food Garden Primary Cooperative	
	Chaka Primary Coop	
3. Agro processing	Khayaletu Primary Cooperative	Metsweding

Interviews outcome

Challenges	Crop	Livestock	Mixed Farming
High Input costs	Access to Market	Health & Safety compliance	Member participation

CHAPTER 3: COOPERATIVE STRATEGY IN METSWEDING AND GAUTENG

3.1 Introduction

This chapter outlines the critical role the agricultural cooperatives play in ensuring food security in Metsweding and Gauteng Province. This also will show the historic overview of the cooperatives Gauteng their success and failures. The chapter will also discuss the state of agricultural cooperatives in South Africa.

3.2 Existing Policy

In 2001, South African cabinet resolved that the mandate for the development and promotion of cooperatives be transferred from the Department of Agriculture to the Department of Trade & Industry(DTI), to ensure that cooperatives are given recognition and allowed to flourish in all sectors of the economy (Department of Trade and Industry, 2012:8). The Department has ensured its role a leadership role in promoting the cooperatives and coordinating all the efforts pertaining to the cooperatives development in South Africa. This involves the implementation of the DTI integrated strategy on the development and promotion of the cooperatives in relation to all other stakeholders at the national, provincial and local levels (Department of Trade and Industry, 2012:7).

The Policy is governed by national legislation and other regulatory instruments, chief among are as follows:

- Cooperative Act (Act No.14 of 2004)
- The dti: A Co-operative Development Policy for South Africa, 2004 and
- The Cooperative Regulations, 2007

The Purpose of the Act:

- Promote the development of sustainable cooperatives that comply with co-operative principles, thereby increasing the number and a variety of economic enterprises operating in the formal economy.

- Encourage persons and groups who subscribe the values of self-reliance and self-help, and who choose to work together in democratically controlled enterprises, to register co-operatives
- Enable such enterprises to acquire legal status separate from their members
- Promote equity and greater and greater participation by black persons in the formation and management of cooperatives
- Establish a legislative framework that preserves a cooperative as a distinct legal entity
- Facilitate the provision of support programme that target emerging cooperatives
- Ensure the design and implementation of cooperative development support programme all spheres of government
- Facilitate the effective coordination and reporting mechanisms across all spheres of government (Department of Trade and Industry, 2012:7).

The Act provides

- A clear definition of cooperatives based on the internationally recognized principles of cooperatives
- Clear regulations for the registration of cooperatives by defining requirements and procedures
- Rules for the functioning and operations
- Clear rules for the capital and ownership structure of cooperatives
- Regulations to govern audits, conversions, amalgamations, divisions and winding up of cooperatives (Department of Trade and Industry, 2012:7).
- Clear procedures for the administration of cooperatives by the registrar of cooperatives and national Minister
- For a Co-operative Advisory Board to play the role of a policy forum at a national level to ensure the implementation and realization of the policy

Types of cooperatives legislated by the Act

Primary Cooperative – Minimum of 5 individuals can form a primary cooperative

Secondary Cooperative – Minimum of 3 primary cooperatives

Tertiary Cooperative – 2 secondary cooperatives may form a tertiary cooperative

3.3 2016 Cooperative Strategy for Gauteng

This strategy and implementation plan has been developed for Cooperative Support and Development in alignment with national policy frameworks such as the constitution of the Republic of South Africa, Reconstruction and Development Programme (RDP), the Cooperative Act No14 of the Department of Trade and Industry, the Gauteng Employment Growth and Development Strategy (GEGDS, 2014) and the dti - Industrial Policy Action Plan 2017. These policies charges the institutions with the responsibility of ensuring socially inclusive, equitable, productive and unequal distribution of economic participation and the wellbeing of the South Africa.

The strategy provides an indication of the approach, strategy to the cooperatives in Gauteng. It also draws lessons from other countries of the continent, developing and developed countries all over the world. It further attends to other forms of collective enterprises such as the community trusts, secondary and the tertiary cooperatives, that are organically established by the primary cooperatives themselves. The strategy is therefore based on a strong cooperative movement that can only be made up of vibrant, and well-functioning primary cooperatives based in communities. As part of the study there are more than 80 functional cooperatives in the Gauteng. Most of them are largely small with marginal impact to the economy of Gauteng. The vision of the strategy is to ensure a vibrant and self-reliant sector in the Gauteng with cooperatives being part of the Gauteng's economic structure. This vision mostly focuses not only on the economic contribution of cooperatives but more importantly the developmental role of the cooperatives including social and cultural development of all communities in the Gauteng Province. Gauteng Government also has to ensure that they provide boost to the development of cooperatives sector and movement.

3.4 Objectives of the 2010 Cooperative Strategy

The strategy aims to promote the development of sustainable cooperatives that comply with cooperatives principles, thereby increasing the number and variety of economic enterprises operating in the formal economy. Such framework would encourage persons and groups subscribes to the values of self-reliance and self-help and chooses to work together in democratically controlled enterprises.

The aim is also to ensure that adequate tailor made programme is in place to guarantee sustainability and the growth of cooperatives in Gauteng. The growth of cooperatives in Gauteng is autonomous and independent of Government and aligned to the categories of cooperatives identified in the cooperative act no14 of 2014. The main purpose is also to clarify the role of different stakeholders such as Government, state owned entities, communities and cooperatives themselves in the development of cooperatives in Gauteng and ensure alignment in terms of the Gauteng Cooperative strategy between the cooperative development programmes and all other provincial government support programmes and also with the local government.

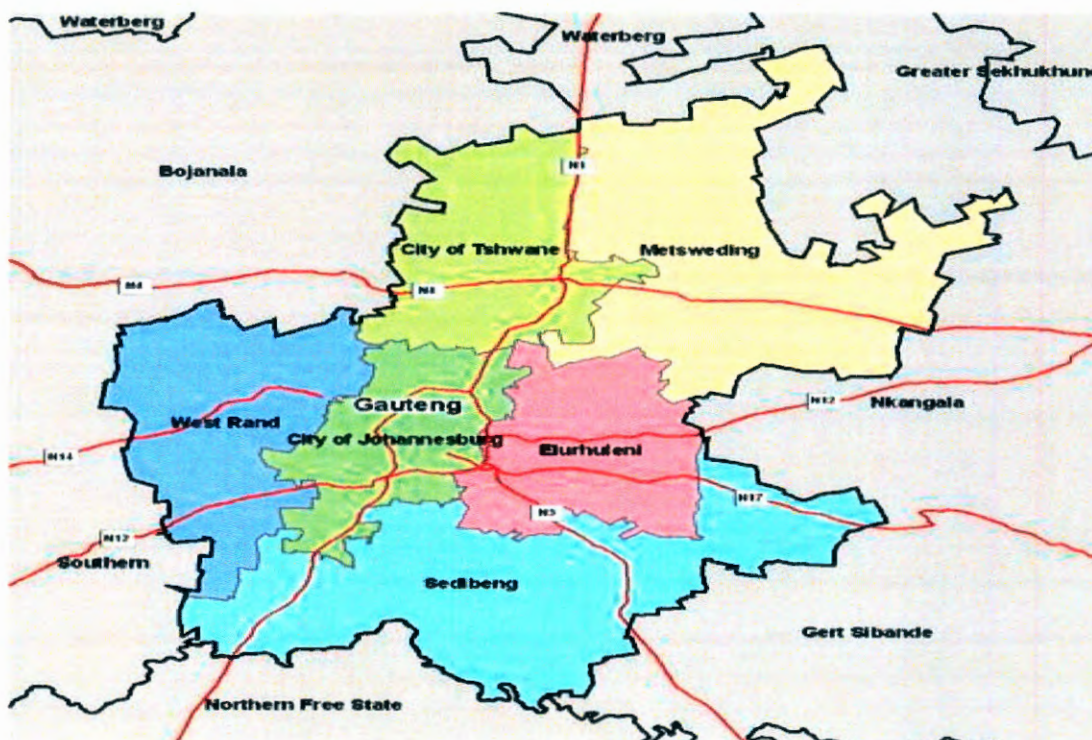
In the development of the 2010 Gauteng Agricultural cooperative strategy, the Department of Economic Development has been very strategic in terms developing the manufacturing – industrial policy of the Province. The second objective was aimed to change the spatial sectorial, including inequalities which are inherent in the economic and industrial structure of Gauteng. The development of workers in various economic sectors is one of the key element envisaged to contribute to the transformation, modernization and industrialization of the Gauteng City Region.

The 2010 Cooperative strategy is a government commitment to the promotion of agricultural cooperative movement over the next decade. It also sets out the implementation framework for the cooperatives development policy 2004 and the Cooperative Act No. of 2005 as revised (Department of Trade and Industry, 2012:7). The strategy was as a result of extensive consultation with industry including, national, provincial and local government, organized labour, Community and Non-Governmental Organizations and cooperative movement. (Department of Trade and Industry 2012:7)

3.5 Description of the Study Area

The land reform environment and the emerging farming sector in the Province Gauteng is the smallest of the provinces in South Africa, covering an area of approximately 1.7million hectares which is about 1.4% of the country's land mass. The cooperative programme is considered as a key strategy in moving people out of the second economy by creating the ability to better take advantage of economic opportunities Group of people who organized themselves into primary cooperatives (production units) and register with the Department of Trade and Industry and are provided business management training through further and education training colleges (FET) and assisted with development finance. The purpose of this is to provide support to the primary cooperatives by the Metsweding Municipality. The Municipality is located in the northern reached of the Gauteng Province comprising of two local municipalities, Kungwini Local Municipality and Nokeng Tsa Taemane Local Municipality

Figure 1. Map - Metsweding Municipality



Source: Municipal Demarcation Board, 2003

According to Stats SA, 2016 the unemployment rate in the Municipality is at 19,2% of the economically active population and the employment in the primary sector is focusing on unskilled to semi-skilled labour. Agriculture contributes 2.9% to the municipalities GDP with employment contribution of 8.8%. The biggest contributors to the GDP and the employment are services and manufacturing. Agriculture which is defined to include the forestry, game farming, fishing and commercial farming, crop and livestock production is the dominant land use at more than 80% with bulk value of agricultural produce from the Bronkhorstspuit primarily maize, groundnuts, cotton, sunflower, sorghum and subsistence production of vegetables. (Metsweding Agricultural Development Strategy, 2009).

The climate of the area can be described as temperate experiencing warm summers and cold winters with sharp frost. The mean daily maximum temperature is approximately 25 0°c in January and 17.1 0°C in July(mid-winter). The rainy season in Metsweding extends from October through to April when approximately 90% of rainfall occurs Therefore the Metsweding Municipality experiences summer rainfall. The mean annual rainfall is 625mm in Bronkorstspuit.The geology of the study area was obtained from the IDPs (Metsweding IDP, 2015) The Metsweding Municipality is underlain by rocks of varying ages, with the oldest rock of Waterberg Group are overlain by Karoo sediments The soils in the area are dominated by loamy soils as well as sandy clay loams which traditionally show good drainage and water holding capacity with patches of silt soil which have a high crusting potential.

The Cooperatives in Metsweding have been known as having high impact on the poverty reduction and economic development. Before 1994, agriculture cooperatives have been characterised by large-scale farming and centrally managed cooperative project farms and this was the case with major crops and industrial crops (Walt, 2005) however with time there were financial losses in some of the major cooperatives. It should be noted that the major cooperatives had high levels of resource use, high levels of production, wage employment were achieved through these major agricultural enterprises and very minimal was done to improve the farming conditions

of the subsistence farmers outside the major enterprises (Vink, 2005). Agricultural cooperative in Metsweding are recognized in terms of economic, social and cultural development. They also empower members in most cases where there is collective responsibilities and decision making is democratic. The cooperatives also play a major role in facilitating member's access to agricultural inputs, marketing, transport, training as well as extension advisory support.

3.6 Conclusion

The empirical evidence of the study focused on the role of agricultural cooperatives to sustainable development and food security in the Metsweding Municipality. It is very clear that agricultural cooperatives play a crucial role in ensuring food security and poverty alleviation. They have always been significant in this regard dating back pre 1994 and this has brought about policy recommendations and strategies that encourages the development of cooperatives in the Gauteng Province. It is important to note that Government support to agricultural cooperatives is very paramount in creating an enabling environment for the cooperatives to contribute to food security and sustainable agricultural development.

Chapter 4: Methodology of the Study

4.1 Introduction

This chapter presents the research methodology that was used in order to achieve the objective that were outlined in Chapter 1. The Chapter includes target population, sampling and data collection procedures.

4.2 Research Methodology

The quantitative and qualitative research methodology was used because it seeks to find in depth information on the role cooperatives to sustainable agricultural development and food security (Creswell,2010). The quantitative and qualitative research involved the process of forming questions and asking them and this was achieved through a planning workshop and interviews. The research sought to understand the challenges of village farmers that include men and women towards agricultural cooperatives

In terms of the methodology the study was limited to only agricultural cooperatives supported by the Gauteng Provincial Government (focus was mainly on 6 major agricultural cooperatives located in the Metsweding Municipality of Gauteng) due to given time and the financial constraints.

The methodology determines a better understanding of human experiences with regards to agricultural cooperatives in the Metsweding Municipality. According to Myers and Avison (2002:2), "Research Methodology is a strategy of enquiry that moves from the philosophical assumption to the research design and the data collection" and merely the term methodology means the way in which one proceeds to resolve problems. However, Creswell (1981) maintains that the research methodology implies the entire process of a study.

4.3 Research Design

The Agricultural Cooperatives in Metsweding Municipality form the basis for this research study. The cooperative types include group farming cooperatives, agricultural produce market cooperatives and farmer's multipurpose cooperatives. The explanatory research was used as the problem statement has already been formulated and the questionnaire was designed in a way that the respondents can provide evidence supporting the idea if they want to or not supporting the idea. The questionnaire was semi-structured to collect data both the quantitative and qualitative data. All the cooperatives under investigation were visited with purpose of firstly informing the cooperative about the study objectives. The main purpose was to forge relationship with major agricultural cooperatives so that the results can be true reflection of the role of agricultural cooperatives to sustainable agriculture and food security.

4.4 Sampling and procedure

A simple random sampling was applied in order to identify the respondents. The sample has been drawn randomly from the questionnaire received. This research has covered 9 major agricultural cooperatives and 57 members in Metsweding Municipality of the Gauteng Province using a simple random sampling. Polit and Hungler (1999:37) define the population as an: "aggregate or totality of the objects or the members that conforms to a set of specifications" A minimum size of 9 cooperatives is the target unit of analysis of this study and with expected data saturation from this number of participants hence in this manner adequate data has been obtained.

4.5 Data Collection Instruments

Both secondary and primary sources of data collection were used for this research study. The data collected has been captured on the Excel spread sheet and transferred to SAS. The data has been analysed using the general descriptive statistics. Desktop Analysis: A desktop research analysis of the overview of the current

state of the agricultural cooperatives in Gauteng and the contribution they have towards economic empowerment in the province. Site Visits: A sample of agricultural cooperatives used for the study has been drawn using relevant methods, and site visits

were made to those cooperatives for completion of the study. Also a planning workshop was held with the major cooperatives in Metsweding Municipality. Interviews and Questionnaires: Interviews and questionnaires have been used to get information from the cooperatives and from the relevant government sources and agencies. Table 2. above indicates the total number of cooperatives, respondents, gender and age. A focused group was also established to get more information on the role of agricultural cooperatives in sustainable agriculture and food security. The data were analysed using additions, mean and percentages.

Table 2: Total number cooperatives, respondents, gender and age

Name of Cooperative	Location	Number of Males	Number of Females	Age	Total
Malope Farming Coop	Bronkhorstspuit	3	2	36-40	5
Marope Coosta	Bronkhorstspuit	4	3	51-60	7
Phasi Cooperative	Bronkhorstspuit	2	5	41-50	7
Bakwa Hlabedi	Holfontein	4	3	41-50	7
Tholo Cooperative	Bronkhorstspuit	3	3	51-60	6
Rhoda Farming Cooperative	Bronkhorstspuit	4	3	51-50	7
Ntswana Coop	Bronkhorstspuit	4	2	41-50	6
Dreamland Coop	Locks Vaal	4	3	51-60	7
AP Agricultural Coop	Kusile	3	2	18-50	5
9	9	30	28		57

4.6 Secondary Data Sources

The research also made use of the secondary data sources. According to Creswell 1998: 19-19, secondary data sources are defined as the documents that are prepared after the occurrence of events and they provide information on topics, certain events or people that are of a second-hand nature. The research has also used information from the annual reports of the Metsweding Municipality, journals, annual reports from Government Departments, books and reports from cooperative members. These reports were used to augment information from the interviews conducted. Secondary

sources were also based on Metsweding Integrated Development Plans that were done previous by municipality

4.7 Focus group discussion

In terms of data collection , focus groups were used as research technique that collects data through group interactions on various questions or topics that are part of the research questionnaire .Focus group was used in this research study to ensure strong argument and the reliability including validation of information received through face interviews with cooperatives .One of the main advantages of this technique is that participants are able to argue and discard false information thus providing good quality information (Kingry et al , 1990 ; 5-7) In one of the focus group conducted in July 2017 in Pretoria there were 12 participants and as a researcher acted as a facilitator in introducing the purpose of the study and various questions and encouraged all members to express their views and perceptions. To obtain clarity and the understanding from group members, probing and follow up questions were asked and sometimes the researcher had to repeat and explain further some questions so as to ensure same understanding.

4.8 Challenges with Methodology

Five of the respondents in the workshop could not be interviewed due to time constraints, some had other equally important engagements and some have refused to be interviewed. Some interviews were conducted during livestock auction day and some were done through farm visits and workshops. This however did not affect the outcomes of the study since the majority of the interviewees were available and their interviews were taken to representative of farmers who are involved in production in the Metsweding Agricultural cooperatives.

4.9 Ethical Considerations

The researcher received an ethical clearance from the University of Free State and complied with the rules and regulations. During the interviews the research also assured the respondents that their names will be kept confidential since the study is entirely academic. It was further explained that interviews were mainly voluntary and anyone was free to participate or withdraw at any given time of the process. This research involved the collection of delicate information from the respondents and their rights must be protected as all times hence the respondents were treated with respect. Punch (2005) states that any social research involves ethical issues and this mainly collecting data from the people and about the people. Ethics are mainly about with what is wrong and right in the process of conducting interviews and the observations of ethics are very crucial in social research (Mouton, 2001).

4.10 Conclusion

This chapter has presented techniques and methods that were used for the collection of data in farm visits and planning workshops done by Gauteng Department of Agriculture and the Department of Trade & Industry. The sample of the research study was drawn from 9 major agricultural cooperatives with 57 members in the Metsweding District Municipality. The study used interview guidelines and techniques "facial and eye movement constantly being judged" <http://work.chron.com/importance-eye-contact>. The researcher interviewed 2 focus groups but the disadvantage in that it was time consuming as the participants kept on deliberating on the challenges in their farming activities. Data was interpreted through spreadsheet (Table 1 & 2) and main issues or themes namely high input costs, access to markets, health and safety compliance, member participation etc. The study also indicated the ethical issues as these assisted as guidelines on the way the research is structured. Ethical issues included confidential information, identity protection of the respondents and acknowledgement of sources of information.

CHAPTER 5: DATA PRESENTATION, ANALYSIS AND FINDINGS

5.1 Introduction

This chapter presents more details and analyses of the data that was collected from the field based on the research methodology and brief analysis of the data articulated in Chapter 3 & 4. The study's findings are presented categorically according to the themes which were derived from the study include the role of agricultural cooperatives to sustainable agriculture and food security in the Metsweding Municipality as well as challenges faced by these agricultural cooperatives such as lack of access to finance, lack of skills, lack of access to markets, lack of access to food, lack of technical support and lack of government support.

The main themes identified had provided a better understanding to the difficulties encountered by these cooperatives from contributing to sustainable agriculture and food security especially in areas where there are high levels of unemployment and food insecurity. The findings will be based on Sustainable Development Approach (SDA) and According to the Department of Agriculture & Forestry, Policy on Sustainable Agricultural Development " in addressing social challenges it is important that focus be placed on food security, unemployment, health and equity " Agriculture plays an important role in sustainable development and in hunger and poverty alleviation.

5.2 Case Studies

5.2.1 Sustainable Agricultural Cooperatives in China

The officials from the Department of Trade & Industry visited China on the 16-27 October 2017 as a case study to determine the performance of agricultural cooperative and the sustainability of the agriculture sector. In terms of Chinese agricultural policy in recent decades the focus has been on increasing crop efficiency and output through "modern "inputs of the agrochemicals, large-scale irrigation system, mechanized farm system and market related incentives for developing industrialized food chains. The

widespread dissemination of technical innovations and the entrepreneurial energies of Chinese farmers have enabled food production to keep up with rapid population and limited arable land. However, this linear approach to food security has had significant social and environmental costs- as well as creating economic inequalities.

This research study views sustainability in all its social, economic and environmental dimensions- this case study has shown us the complex interconnections among these aspects. Furthermore, we have used the term “sustainable agriculture” to reflect a continuum rather than an endpoint: from less rigorous systems such as hazard –free standard, to the very stringent organic standards. In this conception, emerging attempts to reduce applications of chemical fertilizers and pesticides are seen as the first step towards a more sustainable form of the agricultural production. To have focused solely on the organic farms would have missed the panorama of initiatives emerging in the country which merit exploration and support.

Agriculture was a means to simultaneously address problems of food safety, out-migration, the decline of the rural areas and environmentally damage caused by conventional agriculture. The cooperative emerged as the dominant approach, in most case studies of China – Zengjipan, the group operated very much like a cooperative status. Through this case study the evidence suggests that cooperatives have been extremely beneficial in enabling smallholder farmers to come together and achieve much more sustainable and vibrant food systems than they would have been able to achieve acting individually. Cooperatives can bring myriad benefits to farmers, including higher incomes. For instance, the average annual incomes of Xincheng Chinese Yam Cooperatives members were 36% higher than those of non-members from the same villages. In Wanzai county and Nanmazhuang village, agricultural cooperative members also enjoyed higher incomes than the non-members of the cooperatives.

Moreover, the benefits of the cooperative membership are not simply higher incomes. Prior to the establishment of the Xincheng Chinese Yam Cooperative, small farmers managed the production and sale of Chinese yam themselves. Technical and environmental constraints meant their yields were low and farmers sold their Chinese yam at the local market as a low price and on a small scale. Since the establishment of the agriculture; cooperatives, both infrastructure and brand awareness have

improved and the market for the Xincheng Chinese yam has gradually begun to expand. This demonstrates the ability of cooperatives to address the technical and marketing constraints faced by the individual small holder farmers.

The agricultural cooperative is a singularly powerful tool for sustainable agriculture in China precisely because of its flexibility, which allows for its support to a wide variety of models. The cooperatives described here are led by a wide variety of people, exist at different focus activities and benefits. Policy on cooperatives needs to be flexible enough to reflect this diversity, particularly by allowing for multi-product cooperatives.

The so-called “richest village in China” Huaxi village – it’s no more a city than a village – is a Co-op which has provided remarkable benefits for the citizen. Every adult from the factory workers to doctors owns a car and live in a large spacious villa. The standard of living is much higher than most of Chinese citizen ever experience. There are endless examples of the power of Cooperatives in China.

The Chinese population growth and high mortality rate has there necessitated the Chinese government through agricultural co-operatives to develop sustainable production of Wheat, rice, sugar and cotton especially in Northwest China in to combat food production in the Country. The development of agricultural cooperatives and the stability has played a key role in realizing China’s domestic and local markets being sufficiently supplied by the grain commodities. Hence is the larger exporter of their produce to Africa and other parts of the world with current statistics from the International Food and Agribusiness Management Review Journal of 2015.

Department of Trade & Industry also visited an agriculturally –based eco-industrial park (AEIP) as home to food processing and distribution companies, equipment manufacturers, energy generators and manufacturers using rural and urban biomass discards. Organic agriculture training and research centre and a demonstration farm with vegetables, fruit and medicinal herb cultivation at the site of the AEIP. Recruitment of the organic food processing companies from China, Europe and North America to joint venture with Chinese companies. Development of the Chinese business models for the organic farming and food processing that help small to the medium sizes farmers still remains financially viable producers. The International Food Development

Centre (OFDC) as a major domestic organic certification organization in 2014. This recognition provides the basis for the developing reliable export markets.

The Ministry of Agriculture has created a Green Food Programme with the food inspection as a major component. Green Food Association represents and supports processors and distributors. The largest organic farming research project in Yunnan province has almost doubled the yield of rice and virtually eliminated any fungal plant disease and need for the costly fungicide (Youyong Zhu et al 2000).

5.2.2 ITALY'S Co-operative impact on sustainable agriculture

The Department of Agriculture in Gauteng had visited the City of Emilia Romagna with some students from the University of Free State, a region in Northern Italy as a case study exercise and this city has nearly 4.5 million people and has densest cooperative economies in the world. About two of three inhabitants are cooperative members, together producing around 30% of the region's GDP. Doing business through cooperatives is one of the clearest ways to democratize economic institutions. Building institutions that go against the grain of corporate capitalism while managing to survive in the markets. That's why it's important that South Africa must learn from countries where the cooperative economy is more developed and more densely integrated and this is about hard-won experience that can teach other coops how to scale up the community owned initiatives.

We also visited an Italian dairy cooperative which has disbursed more than six million dollars in financing by issuing bonds backed by aging wheels of Parmesan cheese earlier in the year 2016, when the Parmesan market proved too uncertain for the bank. In Emilia Romagna, the cooperative movement is more of a networked ecosystem than a single corporation. This is a main advantage as it built a giant firm because the agricultural cooperatives require flexibility and specialization and cooperative movement in Italy is a whole interwoven fabric of horizontal, vertical and complementary networks that support each other financially. The growth of Italian coops has also been fuelled by deep connections to broader sets of political commitments and values. The largest two federations, Lega-coop and Conf-cooperative are organized with strong historic ties to the Italian Communist Party and Catholic Church. By law, cooperatives in Italy have to contribute a share of their profits

to a cooperative federation fund the further development of more cooperatives, but they pick which one.

Generally, Lessons from Successful Countries Globally

- Cooperative society has highly succeeded as a business model on the international business environment
- Cooperatives in Germany & France create 440 000 to 700 00 jobs
- Kenya Coops account for 48% of the GDP and 40% gross material savings in 2015 –Statistics presented in Antalya Turkey (International Cooperative Alliance by Dr Jeremiah M Nyatichi , PhD Professor and Economists. The coops also control market for coffee, cotton and dairy farming
- The US, more than 100million people or over 40% of the population are members of the cooperatives
- The revenue of the most top 300 cooperatives exceeds US 1 trillion, which equals to the world 10th largest economy
- International cooperative movements represent 800 million members more that the total population of the entire European Continent

5.3 Socio-economic characteristics of the respondents

Descriptive analysis for all the variables was carried out as a first step in data analysis. In this study Statistical Package for Social Sciences (SPSS version 21) was used to analyse the data collected from the participants. Descriptive analysis involved looking at frequencies and standard deviations of the variables. The χ^2 -test was used to test the degree of association gender, level of education and other relevant categorical variables. Descriptive statistics are used to describe the basic features of the data in a study. The analysis helps describe, show or summarize data in a meaningful way such that, for example, patterns might emerge from the data.

Table 3 show the descriptive statistics of the data gathered from the study. Statistics are discussed below. The majority of the participants were black South Africans. Only

2% (1) were Indians while another 2% were coloured. White community/ Caucasian were not represented in the survey. The majority that is 58.8% of the sampled households were males. The majority of the participants were between the ages of 41 to 60. However, in the survey all ages older than 26 were fairly represented. Likewise, the survey constituted participants from wide range of educational levels. About 11% of the participants have never been to school, 25.5 had completed from Grade R to grade S, 11.8% had a secondary education, 25,5% where Matriculated and only 5.9% of the participants had National certificate while 19.6% of the participants had Tertiary qualification.

Table 3: Socio-Economic Variable of the Respondents

Variables		Frequency	Percent
Gender	Male	30	58,8
	Female	21	41,2
Age	26-30	2	3,9
	31-35	3	5,9
	36-40	8	15,7
	41-50	16	31,4
	51-60	19	37,3
	61 or older	3	5,9
Racial group	African or black	49	96,1
	Indian	1	2,0
	Mixed Ancestry or Coloured	1	2,0
Level of education	Never been to school	6	11,8
	Grade R to grade 8	13	25,5
	Grade 9 to grade 12	6	11,8
	Matriculated	13	25,5
	National certificate	3	5,9
	Tertiary qualification	10	19,6

- In the survey whites/ Caucasian where not represented

Racial group	Do you have any dependent		Total
	Yes	No	
African or black	78,4%	17,6%	96,1%
Indian	0%	2,0%	2,0%
Mixed Ancestry or Coloured	2,0%	0%	2,0%
Total	80,4%	19,6%	100,0%

		Average number of dependents	P value
Racial group	African or black	3,04	0.248
	Indian	0,00	
	Mixed Ancestry or Coloured	2,00	
	Total	2,96	

		Gender		Total	P value
		Male	Female	Total	
How long have you been farming in this area?	Less than 5 years	11.8%	2.0%	13.7%	0.465
	More than 5 years, but less than 10 years	25.5%	15.7%	41.2%	
	More than 10 years, but less than 20 years	13.7%	19.6%	33.3%	
	More than 20 years	5.9%	2.0%	7.8%	
	5	2.0%	2.0%	3.9%	
Total		58.8%	37.3%	100.0%	

Level of education	How long have you been farming in this area?				Total	P value
	< 5 years	> 5 years, but <10 years	> 10 years, but < 20 years	More than 20 years		
Never been to school	2.0%	2.0%	3.9%	3.9%	11.8%	0.401
Grade R to grade S	3.9%	11.8%	5.9%	3.9%	25.5%	
Grade 9 to grade 12	2.0%	5.9%	2.0%	2.0%	11.8%	
Matriculated	5.9%	11.8%	7.8%	0%	25.5%	
National certificate	0%	3.9%	2.0%	0%	5.9%	

Tertiary qualification	0%	5.9%	11.8%	2.0%	19.6%	
Total	13.7 %	41.2%	33.3%	11.7%	100.0%	

Level of education	Are you involved in any agricultural cooperatives		Total	P value
	Yes	No		
Never been to school	11.8%	11.8%	11.8%	0.703
Grade R to grade S	25.5%	11.8%	25.5%	
Grade 9 to grade 12	11.8%	11.8%	11.8%	
Matriculated	23.5%	2.0%	25.5%	
National certificate	5.9%	11.8%	5.9%	
Tertiary qualification	19.6%	11.8%	19.6%	
Total	98.0%	2.0%	100.0%	

The male's constituent about 58.8% of the population, while the remaining 41.2 % are females. The high percentage of male members maybe due to the fact that cooperatives is free from any gender, religious consideration and politics. The Age of most respondents showed that majority of the cooperative members (37.3 %) belong to the age bracket of 51-60 years. 3% of the respondents did not provide information on their age. Even though there was no indication of no age limit in the membership of the agricultural cooperatives in Metsweding Municipality, agricultural activities are indeed strenuous and requires manpower. In most instances the old and young people are not fit enough to carry the activities of land preparation and cultivation. This means that majority of the agricultural cooperatives in the Metsweding Municipality in productive farming activities. The racial groupings for the members of agricultural cooperatives showed that 99% of them are African people which shows black culture predominance in the Metsweding Agricultural Cooperatives and only 2 % mixed ancestry and coloured people respectively. Black communities have on average higher number of dependents.

The educational levels of the respondents revealed that 11.8 % had no formal education. About 25.5% had primary education up to secondary education and its equivalent. In summary about 88% of the cooperative farmers were literate that is they had either primary, secondary, matric up to tertiary education. The level of education among the respondents were generally high as compared to the farmers from Western Region of Gauteng which is normally recorded at less than 40% literacy levels.

This relatively higher level of education may encourage acceptance of the innovations as a way of raising farm productivity and the income levels

The result of the study has also revealed that about 33% of the respondents had been in the cooperative business for more than 20years .About 40% had been member cooperatives for the past 10years and the remaining 26% had been in cooperative in the farming area for the last 5years .The mean cooperative years for the area was 7years .The large number of membership within the recent time may be due to the government intervention and support to farmers through the regional agricultural offices.

5.4 Farming Activities of the Agricultural Cooperatives in Metsweding

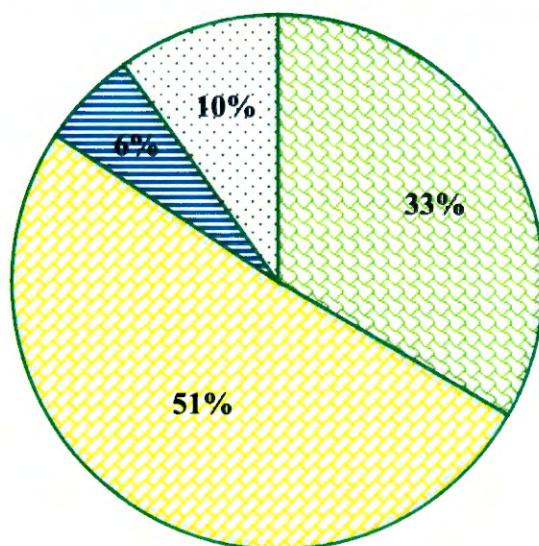
The farming activities of the agricultural cooperatives in the state is presented in

Table 4.1 below. The major activities reviewed by this study includes: Types of farm enterprises, types of farm produce, farm input purchased and the types of training. The various types of the farm enterprises engaged by the cooperatives are: crop enterprises (40%). Marketing of the farm produce (25), storage for the farm yield, livestock enterprise (20%) and the processing of the farm products (15%) such as maize, vegetables, meat etc. The study also indicated that the major farm outputs from the various societies are: crop, livestock, processing and storage.

Figure1. Types of Farm Enterprises

The farming activities performed by cooperative in your area.

■ Crop
 ■ Livestock
 ■ Processing
 ■ Storage



Investigation years of agricultural cooperatives being involved in farming is presented in Table 4. below. The result of the study reveals that about 33.3% of the respondents have been involved in farm business for more than 10years

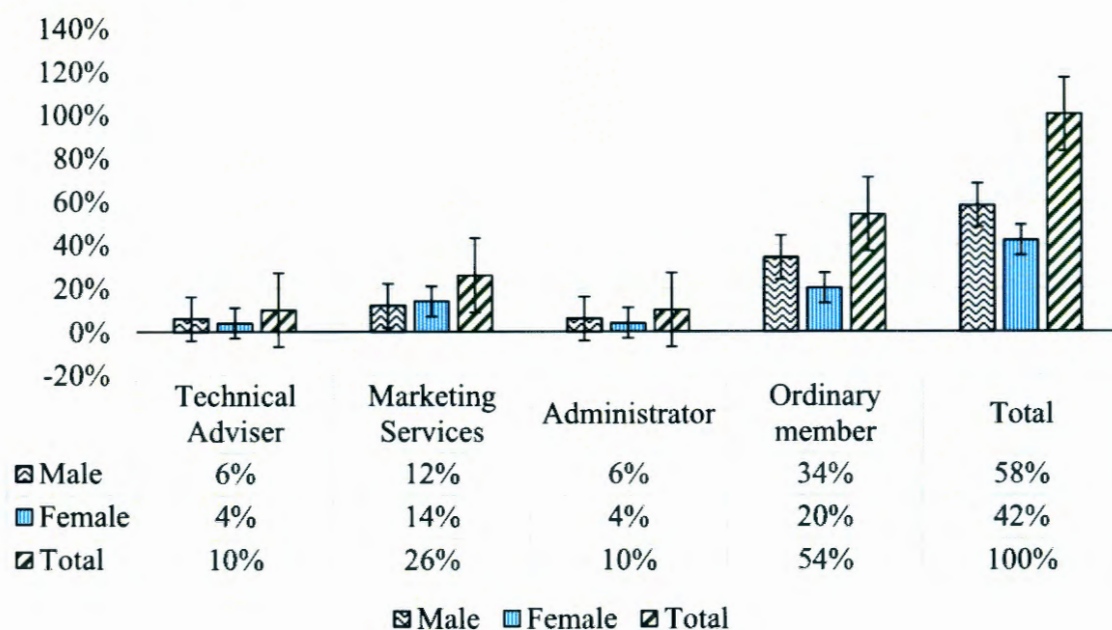
Table 4: Years of cooperative involved in farming

		How long have you been farming in this area? % of Total				Total	P value
		Less than 5 years	More than 5 years, but less than 10 years	More than 10 years, but less than 20 years	More than 20 years		
Age	26-30	3.9%	0%	0%	0%	3.9%	0.000

	31-35	3.9%	0%	2.0%	0%	5.9%
	36-40	5.9%	7.8%	2.0%	0%	15.7%
	41-50	0%	23.5%	3.9%	3.9%	31.4%
	51-60	0%	9.8%	25.5%	2.0%	37.3%
	61 or older	0%	0%	0%	5.9%	5.9%
Total		13.7%	41.2%	33.3%	11.7%	100.0%

Source: Field Survey, 2017

Figure.2 As the age increased their involvement in agric increase

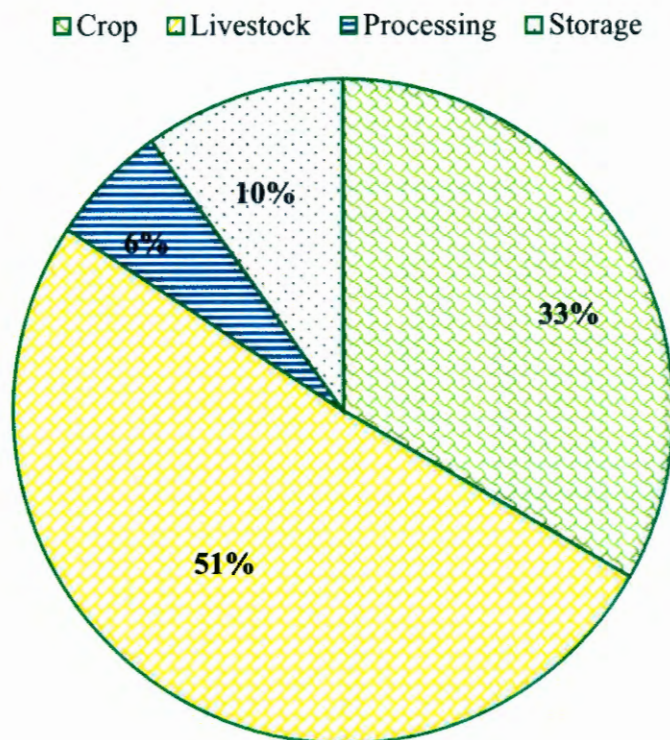


Investigation into the farming activities of agricultural cooperatives in the is presented in Figure 3 below, the major activities reviewed by the study includes: Types of farm enterprises, types of farm produce, farm input procured and types of training.

The various types of farm enterprises engaged by the cooperatives are: crop enterprises (40%), marketing of the farm produce (30%), storage of the farm produce (20%), livestock production (18%) and processing (20%).The study has further

revealed the major farm activities are maize (30%), vegetables (20%), groundnuts (10%), poultry (25%) and piggery (34%).

Figure 3 The farming activities performed by cooperative in your area.



The study showed that some of the agricultural cooperative procured the following farm input for their members, improved seeds, fertilizers and farm implements. The general performance of these cooperatives as indicated by their members are still generally low considering the low percentage indicated under the types of training received by the cooperative members. In addition, the local cooperatives are supposed to ensure local people unit, assist in identifying the community needs and mobilizing the resources (Onje, 2003). By so doing they provide for themselves with government and other agencies may not provide.

The result of the study has also revealed that about 60% of the respondents had been in the farming business for less than 10 years. About 25% others had been in the farm business for more than 20 years. The mean years of experience in the farm business was 8 years. The vast experience in farm business may be due to government

intervention to support farmers through the cooperative support programme. The study has also revealed that majority of the cooperative members are full time farmers while the minority of them took farming as secondary activity.

Table 5: How do they market their produce?

How do you market your produce?	Gender			P value
	Male	Female	Total	
Informal Market	31,4%	17,7%	49,0%	0,474
Formal Market	17,6%	9,8%	27,5%	
Household Consumption	9,8%	13,7%	23,5%	
Total	58,8%	41,2%	100,0%	

According to Table 5 above Investigation into how the respondents market their produce revealed that 49% use informal market. About 27,5% respondents are able to access formal markets. Respondents blamed poor markets as the major cause of high level of food insecurity in the Metsweding Municipality

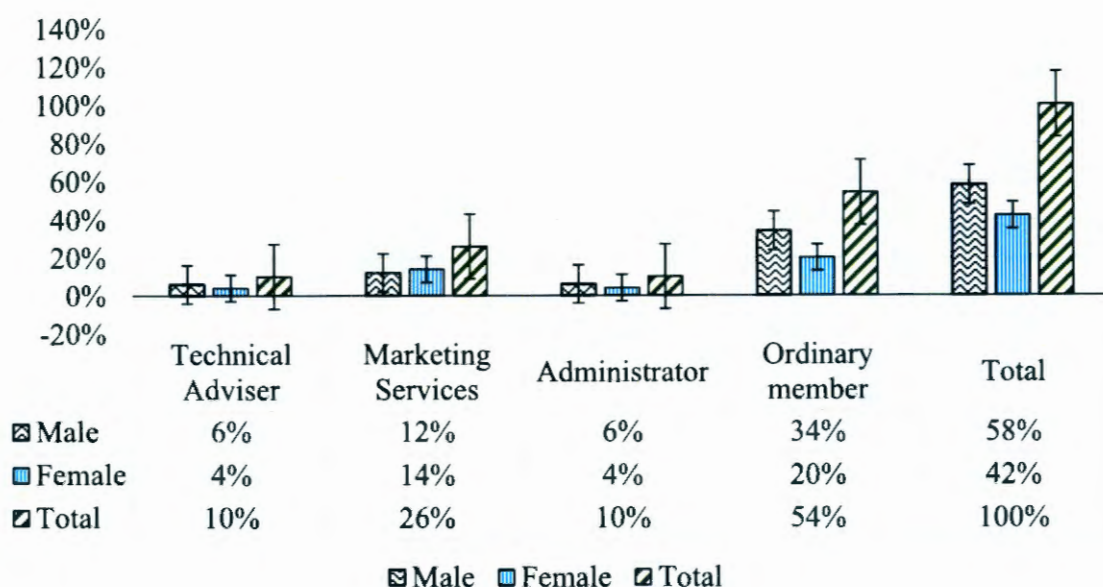
The remaining 23.5% respondents indicated that they produce for household consumption and this part of addressing immediate needs in terms of ensuring household food security. Lack of access to markets has been indicated as one of the challenges faced by agricultural coops. A market is an institution whereby parties engage in exchange of goods and services hence most markets relies on both buyers and sellers in exchange for money. One of the respondents indicated that "large leading firms sell their products at a low prices and hence we are forced to sell our products at these low prices as such we get less profit "

The respondents revealed that they are facing challenges in marketing their produce due to tight competition from large companies. Most participants do have proper knowledge of market dynamics as most of these cooperatives are based in peri-urban areas which are not easily accessible. They indicated a need for proper marketing of their products including product branding, advertisement and communicate with wholesale and retailers. The agricultural cooperatives need to have reliable stable markets with big retailers and this involve communication with local supermarkets. Another challenge is transportation of produce from farm gate to various markets and due to this challenges the study reflects that most of the agricultural cooperatives are

forced to reduce their level of production due to local markets which are not well developed to absorb large quantities of their goods and this prevents the cooperative to contribute enough to food security. Some of the challenges experienced by cooperatives when marketing their produce are vulnerable to marketing risks due to product price fluctuations.

5.5 Role and Performance of Agricultural cooperatives in Metsweding

Figure 4. Role and performance of Agricultural cooperatives in Metsweding



The agricultural cooperatives enable members to become active and ensure their participation in the domestic and national economies and to promote the socio economic development. There is also a need to provide an organizational development to deliver cheap interventions aimed at assisting members to access services such as extension and production inputs and the facilitate financial services (Wanyama, et.al.,2008:4).

Thus agricultural cooperatives have the plusses of the identifying economic prospects for the poor; enabling the disadvantaged to preserve their interests; and providing security to the poor by allowing them to translate individual risks into collective risks. Consequently, cooperatives are increasingly being presented as a pre-condition for a

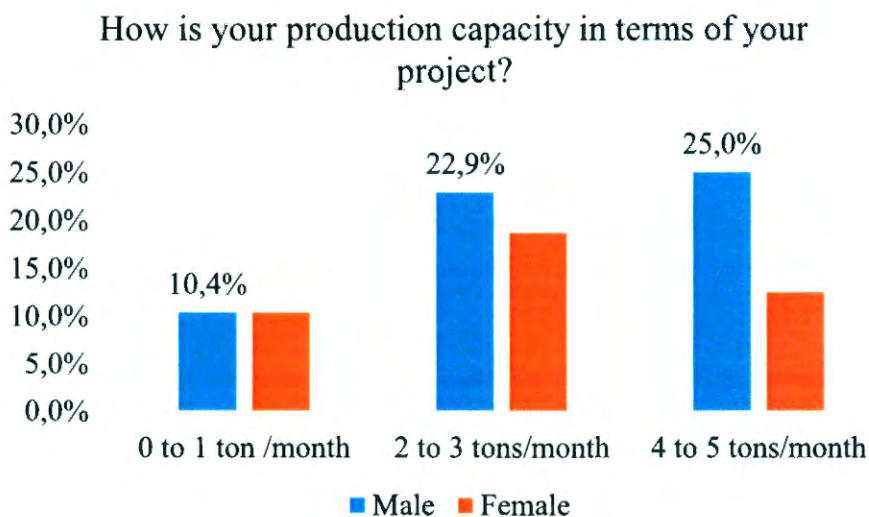
successful drive against poverty and exclusion mainly in Africa (Birchall,2004:2003; ICA,2003).

Therefore, Cooperative emerged as means to fight food insecurity. This poverty is caused by inadequate access to resources (such as land, capital and infrastructure) and the poor availability of the social services (for example education, health and housing).The South African government has committed itself to creating a favourable environment for cooperative development .In particular , the government has undertaken to focus its relatively scarce resources on providing physical and legal infrastructure to reduce transaction costs, including risk , so that market for products and resources on providing physical and legal infrastructure to reduce transaction costs, including risk , so that markets for products and resources (such as land) can work more efficiently . Improvement in physical infrastructure, such as roads and telecommunication facilities are aimed at reducing transport and communication costs for the farmers and traders and would improve access to inputs such as hybrid seed, agricultural fertilizer and chemicals, while access to product markets

The research study is focusing mainly on the role of agricultural cooperatives. These include correlation between food security and agricultural cooperatives. The correlation examples are countries such as Italy, China and Lesotho as witnessed through various case studies. The farmers who are members of cooperatives better advantages than those who are not participating in a cooperative of employment and food security (Chambo, 2009).

There are some important aspects of the agricultural cooperative in terms of sustainability and these include a strategic leadership in the farming community, ensure ongoing member commitment, ensure good farm records, provision of logistics for cooperative members, support with production inputs and ensuring access to credit. The impact of the support mainly depends on education and training of members and the cooperative management.

Figure 5. Production Capacity



- P value = 0.236

Table 6: How do you keep record for production

		How do you keep record for production		Total	P value
		Manual System	Electronic System		
Level of education	Never been to school	9.8%	2.0%	11.8%	0.037
	Grade R to grade S	25.5%	0%	25.5%	
	Grade 9 to grade 12	11.8%	0%	11.8%	
	Matriculated	21.6%	3.9%	25.5%	
	National certificate	3.9%	2.0%	5.9%	
	Tertiary qualification	9.8%	9.8%	19.6%	
Total		82.4%	17.6%	100.0%	

Investigation in production capacity of the project indicates that 10,4 % of the members produce less than 2tons of produce per month. About 22% produce between 2-3tons per month. The remaining 25% of respondents indicated that they produce between 4-5tons/month. The highest number pf farmer produce high quantities is due to access farm inputs, high level of education indicating that 25.5 % respondents matriculated and 19,6% has tertiary qualifications and coupled with lot of experience in farm

business. However, the study has revealed that most of the agricultural cooperative in the Metsweding Municipality are operating at a subsistence level. This high level of education encourages innovation and technology as a way of increasing productivity and the farm income.

5.6 Benefits and Challenges of the Agricultural Cooperatives

The challenges indicated by members of the cooperative from contributing to the food security were mostly intertwined. If these challenges are not addressed they might affect the viability and sustainability of these cooperatives. These challenges may also limit their potential to providing opportunities for accessing basic needs to ensuring sustainable livelihoods. The importance of sustainable cooperatives should never have been underestimated. The sustainability of the agricultural cooperatives can be as result of climatic conditions, challenges to transport produce or lack of agricultural equipment and poor skills amongst the members. The challenges of the cooperatives are discussed based on the respondent's views and when members were asked about benefits derived from the membership of the cooperatives the result, almost all the respondents agreed that membership of the cooperatives lead to improved farm outputs and subsequently Improvement in the general living conditions of the respondents amongst the benefits derived from participating in a cooperative.

5.6.1 Benefits of the Agricultural Cooperatives

Table 7: Benefits of the Agricultural Cooperatives

level of education	What are the membership benefits of the cooperatives?							Total
	Improved farm outputs	Access to farm inputs	Access to food	Easy Access to credit	Education and training	Technical Support	Employment	
Never been to school	4.0%	2.0%	2.0%	0%	0%	0%	4.0%	12.0%
Grade R to grade S	6.0%	2.0%	10.0%	0%	2.0%	4.0%	2.0%	26.0%
Grade 9 to grade 12	0%		8.0%	0%	2.0%		2.0%	12.0%
Matriculated	0%	2.0%	10.0%	0%	2.0%	6.0%	4.0%	24.0%
National certificate	0%	2.0%	2.0%	0%	2.0%	0%	0%	6.0%
Tertiary qualification	4.0%	4.0%	2.0%	2.0%	2.0%	2.0%	4.0%	20.0%
Total	14.0%	12.0%	34.0%	2.0%	10.0%	12.0%	16.0%	100.0%

Source: Field Survey, 2017

When the members were asked about benefits of the agricultural cooperatives, the result is presented in table 5. Other benefits indicated by the respondents are accessed to food (34%), access to farm inputs (12%), employment opportunities (16%), education and training (10%) and there are no benefits in terms of access to credit (0%). Access to food of respondents has ranked high among all benefits derived from membership benefits.

5.6.2 Challenges /constraints to Cooperatives

Table 5.2 below showed the challenges confronting cooperative members in the study area. These challenges if they are not addressed may affect the sustainability and the continuity of the Metsweding agricultural cooperatives by limiting their potential to grow and provide the opportunities for members to provide basic needs and sustainable livelihoods. The importance of sustainable livelihoods cannot be underestimated. The sustainability of the agricultural cooperatives can be attributed to many factors such as lack of access to finance, access to markets, lack of skills, technical support and lack of employment. A cooperative is sustainable if it copes with and recovers from stresses and shocks or enhances capabilities with assets while not undermining the natural resource base (Chambers and Conway, 1992:8).

The challenges of cooperatives are discussed according to the respondent's views as follows: lack of access to finance, lack of skills, lack of access to markets, lack of technical support, lack of employment, and lack of government support.

Table 8: Problems of the Cooperatives

What are problems of the cooperatives?	Gender		Total	P value
	Male	Female		
Lack of access to finance	19,6%	7,8%	27,5%	0,203
Lack of skills	5,9%	2,0%	7,8%	
Lack of access to markets	5,9%	11,8%	17,6%	
Lack of technical support	0%	2,0%	2,0%	
Lack of employment	9,8%	3,9%	13,7%	
Lack of Government support	17,6%	13,8%	31,4%	
Total	58,8%	41,2%	100,0%	

5.6.2.1 Lack of access to finance

Some of the challenges highlighted by the respondents are lack of access to finance (27.5 %). Due to the lack of access to finance most of the agricultural cooperatives lack self-sustainability hence are therefore unable to adequately contribute to food security. They indicated that they pay lot of money for capital costs and operational

costs for example production inputs, repairs of agricultural equipment, labour costs, electricity and ploughing and planting the land. They also indicated that government support in terms of grant funding is a major challenge hence most of them they contribute through the use of their pension grant every month so as to maintain the activities of the cooperatives.

5.6.2.2 Lack of skills

Amongst the respondents interviewed seven percent (7%) said that they do not have proper skills to carry some of the farming activities. This is serious concern to the farm production in the agricultural cooperatives and this leads to food insecurity as less produce is registered under these circumstances .The participants revealed that they need training on financial record keeping , technical aspects of the farm such as farm equipment , production management , entrepreneurial skills hence members they spend a lot of time doing the tasks that they don't understand .One of the respondents indicated that " we don't have a proper record keeping system , register of stock including the used and available stock , register of farm assets and members they stole items in the farm without any accountability ".Each member brings their own farm equipment and also sometimes people stealing equipment "This therefore may lead to the lack of progress in the project.

5.6.2.3 Lack of access to markets

It is important to note that a market is one of the many farming activities, institutions, social activities and infrastructure whereby the parties they engage in exchange. While the parties may exchange their goods and services, most markets rely to sellers offering their products and services in the exchange for money from the buyers. Marketing can be defined as a process by which prices of goods and services are established (Mishkin,2015). The following are the views of participants regarding the market challenges of the agricultural cooperatives in the Metsweding District Municipality. Most members indicated that they market their produce in informal

markets hence they need to be linked to large retailers and large leading companies in order to sell their products.

5.6.2.4 Lack of technical support

Amongst the respondents interviewed the 2% which is mainly said they do not receive technical support to carry out their farming activities. Participants revealed that they need on farm technical support on livestock and crop production especially on challenges such as pests and disease management technical support such provision of equipment such as tractor, harrows, irrigation equipment and combine harvester. Lack of equipment means that members spent money to source labour and perform tasks that can be done in a short space of time if the agricultural was available.

One respondents said that “they don’t have agricultural advisor for almost a year now and tractors that were given to cooperatives by government some member cooperative they don’t want to share with other coop members “One member said that as result each member now has to hire his or her equipment especially during the maize planting season such as summer “

There is a challenge from government of shortage of agricultural advisors to assist smallholder farmers hence some respondents they see very little progress in the project. About 80% of the respondents said that they had enough skills to carry their farming activities. Members of these cooperatives said that they also lack irrigation equipment which leads to dependence on rainfall to irrigate their crop and this prevent the cooperative from contributing to food security thus resulting in food insecurity.

5.6.2.5 Lack of access to employment

Thirteen percent (13%) of the respondents do not have permanent at the moment they work in the cooperative so as to get some form of income for their families.

The respondents mentioned that “**we do not have enough land; each member has his or her plot. We challenge when members do not produce enough to keep people**

employment for a long time. That can be mitigated by ensuring that government provides support so that members can stay in production “

Other respondents also indicated that availability of funds to produce good quantities of crops and vegetables are sometimes eaten by insects and this could be mitigated having soil test done to determine soil nutrients so as to get fertilizers from the Gauteng Department of Agriculture and private sector support”

It is notable that smallholder farmers use poor agricultural practices and hence over the years the soils they lose fertility (Bijman et al 2007) and poor quality soils is affecting yields and this is the major reason that the intake of farm workers is reducing and therefore one of the major reason for lack of access to employment in the Metsweding Municipality. This should be addressed through assistance from government and other stakeholders if food security has to be maintained in Metsweding Municipality.

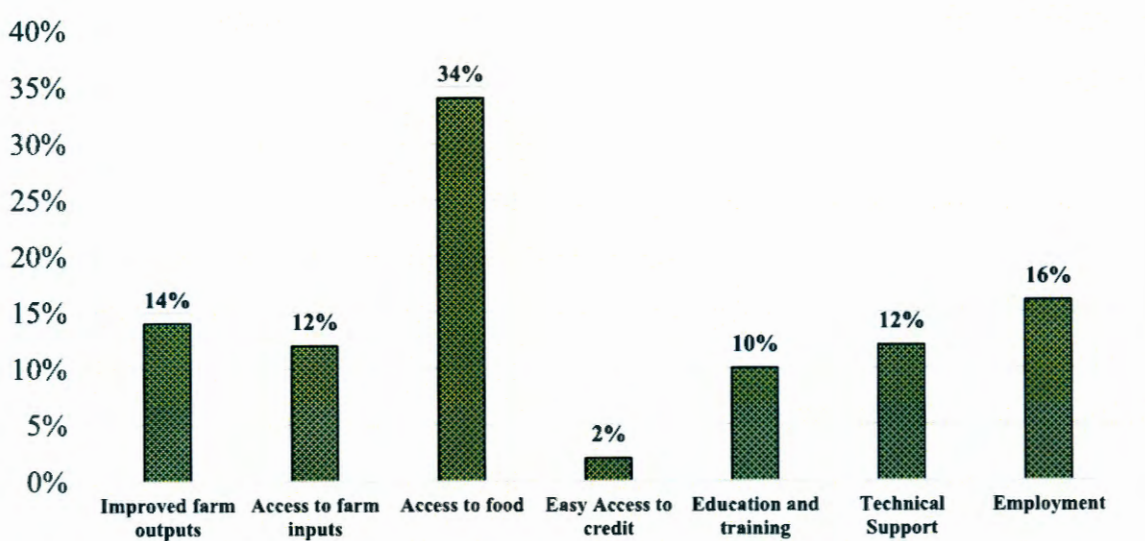
5.6.2.6 Lack of government support

Government is not sufficiently supporting the agricultural cooperatives in the Metsweding Municipality. There is a need for intensive support from all interested stakeholders and this support should lead to full support of the agricultural cooperatives so that food security can be enhanced. Almost 31,4 % of the respondents indicated lack of support from government especially mechanization which ensure that the agricultural cooperatives are mechanized for production yields that will significantly increase and hence guarantee food security at household level.

Respondents have indicated that they committed to be in farming throughout the year but if there is no support from government such as agricultural inputs, agricultural equipment such as fencing, proper irrigation infrastructure to sustain their winter crop. According to the respondents lack irrigation infrastructure is a drawback to sustainable production and should be prioritized by government. It is very evident that due to ongoing drought in Gauteng farmers require irrigation equipment, drilling of boreholes during dry season and droughts due to unreliable rainfall and frequent droughts (Cousins, 2012).

5.7 Extent of Agricultural Cooperatives to contribute to sustainable agricultural development and food security

Figure 6. Extent of Agricultural Cooperatives to contribute to sustainable agricultural development and food security



When members were asked about the extent of agricultural cooperatives to contribute to sustainable agricultural development and food security in Figure 4 above. From the analysis of the results, almost 34% of the respondents indicated agreed that if you participate in cooperatives you have better chances of access to food than someone who's not involved in the cooperative. This is followed by 16% access to employment, improved farm outputs (14%), access to farm inputs and technical support (12%) respectively. The easy access to credit has been ranked the lowest at 2% as an extent of agricultural cooperatives to sustainable agricultural development and food security.

Table 9: Membership benefits of the cooperative

level of education	What are the membership benefits of the cooperatives?							Total
	Improved farm outputs	Access to farm inputs	Access to food	Easy Access to credit	Education and training	Technical Support	Employment	
Never been to school	4.0%	2.0%	2.0%	0%	0%	0%	4.0%	12.0%
Grade R to grade S	6.0%	2.0%	10.0%	0%	2.0%	4.0%	2.0%	26.0%
Grade 9 to grade 12	0%		8.0%	0%	2.0%		2.0%	12.0%
Matriculated	0%	2.0%	10.0%	0%	2.0%	6.0%	4.0%	24.0%
National certificate	0%	2.0%	2.0%	0%	2.0%	0%	0%	6.0%
Tertiary qualification	4.0%	4.0%	2.0%	2.0%	2.0%	2.0%	4.0%	20.0%
Total	14.0%	12.0%	34.0%	2.0%	10.0%	12.0%	16.0%	100.0%

The respondents were asked of the benefits derived from membership of the agricultural cooperative, the result presented in table 7 indicated that majority members (34%) derived their benefits from ensuring access to food for their household needs as well as to ensure access to employment (16%) and this also lead to improvement in the general living conditions of the respondents among the benefits derived from being members .Other benefits indicated by respondents are improved access to farm income , access to farm inputs only 12% and the access to credit once again has been the lowest only 2% and this mainly involves unavailability of loans and inadequate capital accumulation .The implication of this finding is that sustainable agricultural production cannot be realized if credits are not easily accessible although the cooperative in Metsweding performed moderately well towards addressing household food security amongst the rural dwellers.

5.8 CONCLUSION

The findings of the study indicated that agricultural cooperatives are playing an important role in the welfare of the Metsweding Municipality in terms of access to food although cooperatives are underperforming in access to credit for their members. They facilitate the marketing of the produce and access to farm inputs by members and in creating access to employment. The challenges that are hindering the effectiveness of the agricultural cooperatives are inclusive are lack of government support and access to finance followed by access to markets. According to sustainable development approach to be effective and for there to ensure sustainable agricultural development five types of assets need to be available: human, political, social, physical and access to capital. These assets need to be provided in order to overcome the challenges of the agricultural cooperatives and also to strengthen their contribution to sustainable agricultural development and food security. There is immense need for government support and other interested stakeholders including the private sector in order for these challenges to be addressed so that cooperatives can have meaningful contribution to maintaining food security and sustainable agricultural development.

Be that as it may, there is quite a potential for the agricultural cooperatives in Metsweding Municipality of Gauteng in helping the local residents in ensuring access to finance, creation of employment and facilitating marketing of agricultural produce from the cooperatives. The cooperatives can assist members to get access to funding from different financial institutions and assist to upscale the government support through robust engagement with government departments. The poor finance of the agricultural cooperatives in the area calls for an urgent attention by government. The findings from this study gives the credence to use the agricultural cooperatives as vehicle for the rural transformation and agricultural development in the Gauteng Province. The continued existence and operations of these cooperatives have to be encouraged by both members and government. Government should intensify its effort on cooperative support including education and training in order to bring about increased participation and involvement of small scale farmers in the agricultural cooperative movement.

CHAPTER 6. CONCLUSION AND WAY FORWARD

6.1 CONCLUSION

The agricultural cooperatives in the Metsweding Municipality are contributing to food security although there are a number of challenges for example lack of access to finance, lack of access to markets and lack of government support among others. The government support to agricultural cooperatives is deficient since the majority of the respondents have indicated that support from government does not cover all the resources required by the rural farmers.

The study has shown that most of the agricultural cooperatives farmers in the Metsweding Municipality lack access to finance, proper marketing places, inadequate government support, sufficient skills and agricultural infrastructure to carry out effectively their agricultural activities. As such these challenges prohibits the agricultural cooperatives to ensure the provision of the basic needs for their families and local communities. According to the basic necessities, for the poverty to be alleviated people should secure access to minimum level of consumption of certain basic goods and services such as access to food, provision of shelter, access to clean water and sanitation (McGregor, 1981). The basic needs approach mainly encompasses the importance of poverty eradication as a critical objective for the community development and also poor people. The aforementioned benefits derived by the agricultural cooperatives in Metsweding Municipality gives the surety for the availability and accessibility of food at all times by the local residents as per majority of the respondents in the study. The agricultural cooperatives in the Metsweding Municipality provide limited support for their members to access credit hence poor participation and ownership of the cooperative by members. The study has shown that the majority of the farmers lack government support including access to finance hence low levels of production which therefore affects farmers to carry their farming activities. This situation comprises the agricultural cooperative to contribute to food security and sustainable agricultural development.

The literature indicates that cooperatives contribute to national food security of many countries in the world. In Italy cooperatives are found to be the major contributor to economic development and creating jobs thus ensuring household food security. Most governments found that the cooperatives should not be state controlled if they have to be effective and efficient. The agricultural cooperatives enable farmers to pool limited resources for the benefit of their members. The agricultural cooperatives in developed countries and in Africa accounts for the major part of agricultural development (Wanyama et al., 2008).

6.2 WAY FORWARD

The agricultural cooperatives have a basis in the idea of self and the collective empowerment, which is an imperative tradition of experience and practice that would have to be passed to the future generations. In general, the cooperatives are found to be playing an important role in the upliftment of the peri - urban and rural areas through provision of access to affordable food at household. However, cooperatives in the Metsweding Municipality are hindered by many challenges that prevent them from playing this role of ensuring access to food for the poor communities. In this regard this study proposed the way forward that the agricultural cooperatives should be empowered and be supported through various government programmes so that they can contribute to food security and sustainable agriculture.

The agricultural cooperatives in Metsweding have lack of access to finance and limited access to markets including lack of support from government. The study recommends that government should intervene or create an enable environment for cooperatives to access funding from financial institutions and private sector as the Italian Government did in terms of case studies presented here in this report. The Italian government has created a Cheese Bank Cooperative in the early 1980s as a vehicle to promote access to financial services to poor rural people who are not supported by the commercial banks. The study has also revealed that the cooperatives have limited access to water and land hence challenges of produce the required volumes of food including good quality products.

The outcomes of the research have further indicated that the agricultural cooperatives have lack of skills among the members of the cooperatives which also inhibits their production capacity hence causing food insecurity. Government should assist to provide training to the agricultural cooperatives through various training programmes organize study groups, workshops and short courses. Some of these courses are also offered by the Agricultural Research Council (ARC), private service providers accredited by AgriSeta. Such interventions will ensure that these agricultural cooperatives enhance the participation of their members in planning their livelihoods and also that the programmes are people oriented thereby raising the human capital status of household which is aligned with the sustainable livelihoods approach.

According to Satgar (2007), the agricultural cooperative requires the intra-governmental coordination hence the emergence of the various public and private institutions to ensure support of the agricultural cooperatives and the policy trust in the government support system. These contributions need to be properly brought in a synergistic way to strengthen learning from policy practice and should be institutionalized. In this regard the new co-operative Act (2005) provides for a national co-operatives advisory board to be established to make policy recommendations, strategy development and other important issues related to the agricultural cooperatives hence government needs to ensure proper monitoring and evaluation strategies that will evaluate the performance of the cooperative and mitigation plan in case of underperformance.

The study has also revealed that the agricultural cooperatives in the Metsweding Municipality rely on the rainfall for their agricultural activities. This obviously indicates that the production might not be reliable all year round hence there is food insecurity. This is one of the major challenges faced by the agricultural cooperatives. The Sustainable Development approach indicates the availability of natural resources such water and access to land, poor road infrastructure, lack of access to finance, lack of access to markets, livestock as important elements for ensuring sustainable agriculture. In this instance the study suggests that government should ensure proper infrastructure such as rain harvest tanks.

Finally, the research was able to note the importance of multi skills of the cooperatives especially in terms of attracting members with different capabilities and skills. Tertiary

institutions are also encouraged to develop special programmes on the governance model of the agricultural cooperatives, promote more research, journals, articles and publications including text books that will promote the cooperative movement as part of the education system. Further to the research, government should consider the establishment of cooperative agency in South Africa which should set up to support advance training needs for the cooperatives. Building the human capital is a crucial element of sustainable development approach which enhances human capabilities to enable them to have sustainable livelihoods and their basic human needs. The study also recommends that poverty should be tackled from all different angles besides the need for support from public and private sector. The agricultural cooperatives in Metsweding Municipality should be encouraged to be proactive by ensuring proper planning, implementation, monitoring and take ownership of their project activities in order to ensure food security and sustainable agricultural development. The finding from this study gives credence to the use of the agricultural cooperatives as vehicle to enhance food security and agricultural development in Gauteng hence the continued contribution of agricultural cooperatives which has to be encouraged by both private sector and government.

6.3 AREAS FOR FURTHER RESEARCH

Based on the findings and conclusion of this research the following are proposed areas for further research which this research could not explore due to the scope of work as follows:

- a) Further research is required in terms of access to finance by the agricultural cooperatives, cooperatives should be encouraged to be more radical on promotion of access to credit for their members from financial institution perhaps to look at the possibility of establishing their own cooperative bank in consultation with Government. Discussion have commenced by the National Government in terms of focusing on financial institutions that will assist to grow small businesses especially in the rural areas.
- b) Government should intensify its support on training and education, access to markets for the agricultural cooperatives in order to bring about increased participation of rural farmers in the agricultural cooperatives activities.

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APPENDIX A – Interview Guide

INTERVIEWER DECLARATION:

I,, declare that I have asked this questionnaire as it has been laid out. I declare that all responses which have been recorded are the true responses of the respondent and that I have fully checked the questionnaire.

Signature:

Date:

PARTICIPANT CONSENT:

I,, agree to take part in the aforementioned survey. I understand that my responses to this survey will be treated with the strictest confidence. I further understand that I will not receive any compensation for taking part in this study.

Signature:

Date:

SECTION A: DEMOGRAPHIC INFORMATION

Respondent name: _____

Contact number: _____

Date: _____

Name of cooperative: _____

Area/location of cooperative: _____

Instructions: Mark the appropriate block with an X or write your answer in the provided space where applicable.

1. Gender

(a) Male	1
(b) Female	2

2. Age

(a) 18-20	1
(b) 21-25	2
(c) 26-30	3
(d) 31-35	4
(e) 36-40	5
(f) 41-50	6
(g) 51-60	7
(h) 61 or older	8

3. Racial group

(a) Caucasian/White	1
(b) African/Black	2
(c) Indian	3
(d) Mixed Ancestry/Colored	4

4. What is your highest level of education?

(a) Never been to school	1
(b) Grade R to grade 8	2
(c) Grade 9 to grade 12	3
(d) Matriculated	4
(e) National certificate	5
(f) Tertiary qualification	6

5. How long have you been farming in this area?

(a) Less than 5 years	1
(b) More than 5 years, but less than 10 years	2
(c) More than 10 years, but less than 20 years	3
(d) More than 20 years	4

6. Do you have any dependents?

(a) Yes	1
(b) No	2

7. If yes to question 6, how many?

SECTION B: THE ROLE AND PERFORMANCE OF AGRICULTURAL COOPERATIVES IN THE METSWEDING MUNICIPALITY

8. How long have you been involved in farming or agriculture?

(a) Less than 1 year	1
(b) 1-3 years	2
(c) 4-6 years	3
(d) 7-9 years	4
(e) 10 years or more	5

9. Are you involved in any agricultural cooperative?

(a) Yes	1
(b) No	2

10. If no to question 9, for what reasons are you not involved in agricultural cooperatives?

(a) Lack of interest	1
(b) Conflict amongst members	2
(c) Lack of support from members	3
(d) Lack of support From Government	4
(e) No benefit accrued	5

11. If yes to question 9, please indicate your role in agricultural cooperative/s

(a) Technical Advisor	1
(b) Financial service provider	2
(c) Marketing Services	3
(d) Administrator	4
(e) Ordinary member	5

Or any other, please specify _____

12. What are the farming activities performed by cooperative in your area?

(a) Crop	1
(b) Livestock	2
(c) Processing	3
(d) Storage	4

Or any other, please specify _____

SECTION C: THE SUCCESS AND CHALLENGES OF AGRICULTURAL COOPERATIVES

13. What are the membership benefits of the cooperatives?

(a) Improved farm outputs	1
(b) Access to farm inputs	2
(c) Access to food	3
(d) Easy Access to credit	4
(e) Education and training	5
(f) Technical Support	6
(g) Employment	7

Or any other, please specify _____

14. What are problems of the cooperatives?

(a) Lack of access to finance	1
(b) Lack of skills	2
(c) Lack of access to markets	3
(d) Lack of access to food	4
(e) Lack of technical support	5
(f) Lack of employment	6
(g) Lack of Government support	7

Or any other, please specify _____

SECTION D: THE EXTENT OF AGRICULTURAL COOPERATIVES TO CONTRIBUTE TO SUSTAINABLE AGRICULTURAL DEVELOPMENT AND FOOD SECURITY

15. What kind of access do you have on Markets?

(a) Good access to Markets		1
(b) Moderately linked to Markets		2
(c) Poor access to Markets		3
(d) No access to Markets		4

Or any other, please specify _____

16. How do you market your produce?

(a) Informal Market	1
(b) Formal Market	2
(c) Household Consumption	3

Or any other, please specify _____

17. How is your production capacity in terms of your project?

(a) 0 – 1 ton /month	1
(b) 2 - 3 tons/month	2
(c) 4 – 5 tons/month	3

Or any other, please specify _____

18. How do you keep your records for production?

(a) Manual System	1
(b) Electronic System	2

Or any other, please specify _____

APPENDIX B – DATA ANALYSIS SPREADSHEET

ID	gender	age	Racial group	level of education	How long have you been farming in this area?	Do you have any dependent	how many?	How long have you been involved in farming or agriculture	are you involved in any agricultural cooperatives	why not	if yes, state your role	Or any other, please specify_
1	1	5	2	6	2	1	6	3	1		3	
2	1	7	2	4	2	1	6	3	2	4		
3	2	7	2	4	3	1	2	5	1		3	
4	2	6	2	6	2	2		3	1		3	
5	2	6	2	3	5	1	3	5	1		3	
6	2	7	2	6	3	1	3	5	1		1	
7	2	7	2	6	3	1	4	5	1		1	
8	3	4	2	6	3	1	6	5	1		3	
9	2	6	2	6	3	1	2	3	1		3	
10	2	7	2	4	3	1	3	5	1		5	
11	3	7	2	6	3	2		5	1		4	
12	2	6	2	4	2	1	3	4	1		3	
13	1	6	2	6	5	1	5	5	1		3	
14	1	7	2	6	3	1	5	3	1	5	5	
15	2	7	2	2	2	1	2	3	1		3	
16	1	6	2	4	2	1	3	3	1		5	
17	1	3	2	2	1	2	0	2	1		4	
18	2	5	2	4	2	1	1	3	1		5	
19	2	6	2	2	2	1	4	3	1		5	
20	2	5	2	4	2	2	0	2	1		5	
21	1	7	2	1	3	1	5	5	1		3	
22	1	7	4	5	2	1	2	3	1		3	
23	1	7	2	5	3	1	4	4	1		4	
24	1	6	2	3	2	1	2	3	1		5	
25	1	4	3	1	1	2	0	2	1		4	
26	2	7	2	2	3	1	4	5	1		5	
27	1	6	2	1	3	1	3	5	1		5	
28	1	5	2	4	1	1	1	2	1		5	
29	1	7	2	1	4	1	5	5	1		5	
30	2	7	2	3	3	1	3	5	1		5	
31	1	7	2	2	2	1	4	4	1		5	
32	2	6	2	2	2	1	2	3	1		5	

33	1	3	2	4	1	2	1	1	1	1	1	
34	1	6	2	2	2	1	1	3	1	5		
35	1	7	2	3	2	1	3	3	1	5		
36	1	4	2	3	1	2	0	2	1	5		
37	2	6	2	5	2	2	2	3	1	4		
38	1	5	2	2	1	2	0	2	1	5		
39	1	8	2	2	4	1	6	5	1	1		
40	1	6	2	4	2	1	4	3	1	5		
41	1	6	2	2	2	1	2	3	1	5		
42	2	8	2	2	4	1	6	3	1	5		
43	1	7	2	4	3	1	4	4	1	5		
44	1	7	2	2	3	1	5	5	1	5		
45	1	5	2	4	3	1	2	5	1	1		
46	1	6	2	3	2	1	2	4	1	5		
47	1	5	2	6	2	1	2	4	1	3		
48	2	5	2	4	1	2	0	1	1	5		
49	2	7	2	2	3	1	3	5	1	5		
50	1	8	2	1	4	1	7	5	1	3		
51	1	6	2	1	2	1	2	4	1	5		

Variables		Frequency	Percent
Gender	Male	30	58,8
	Female	21	41,2
Age	26-30	2	3,9
	31-35	3	5,9
	36-40	8	15,7
	41-50	16	31,4
	51-60	19	37,3
	61 or older	3	5,9
Racial group	African or black	49	96,1
	Indian	1	2,0
	Mixed Ancestry or Coloured	1	2,0
Level of education	Never been to school	6	11,8
	Grade R to grade S	13	25,5
	Grade 9 to grade 12	6	11,8
	Matriculated	13	25,5
	National certificate	3	5,9
	Tertiary qualification	10	19,6

- In the survey whites/ Caucasian where not represented

Racial group	Do you have any dependent		Total
	Yes	No	
African or black	78,4%	17,6%	96,1%
Indian	0%	2,0%	2,0%
Mixed Ancestry or Coloured	2,0%	0%	2,0%
Total	80,4%	19,6%	100,0%

Racial group		Average number of dependents	P value
	African or black	3,04	0.248
	Indian	0,00	
	Mixed Ancestry or Coloured	2,00	
	Total	2,96	

Black communities have on average higher number of dependents

		How long have you been farming in this area? % of Total				Total	P value
		Less than 5 years	More than 5 years, but less than 10 years	More than 10 years, but less than 20 years	More than 20 years		
Age	26-30	3.9%	0%	0%	0%	3.9%	0.000
	31-35	3.9%	0%	2.0%	0%	5.9%	
	36-40	5.9%	7.8%	2.0%	0%	15.7%	
	41-50	0%	23.5%	3.9%	3.9%	31.4%	
	51-60	0%	9.8%	25.5%	2.0%	37.3%	
	61 or older	0%	0%	0%	5.9%	5.9%	
Total		13.7%	41.2%	33.3%	11.7%	100.0%	

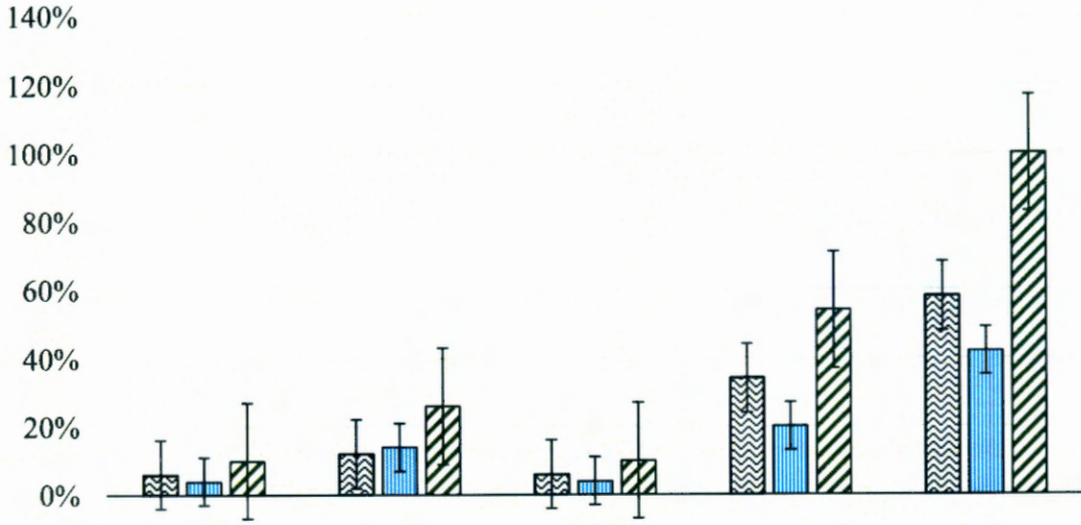
As the age increased their involvement in agric increased

		Gender		Total	P value
		Male	Female		
How long have you been farming in this area?	Less than 5 years	11.8%	2.0%	13.7%	0.465
	More than 5 years, but less than 10 years	25.5%	15.7%	41.2%	
	More than 10 years, but less than 20 years	13.7%	19.6%	33.3%	
	More than 20 years	5.9%	2.0%	7.8%	
	5	2.0%	2.0%	3.9%	
Total		58.8%	37.3%	100.0%	

Level of education	How long have you been farming in this area?				Total	P value
	< 5 years	> 5 years, but <10 years	> 10 years, but < 20 years	More than 20 years		
Never been to school	2.0%	2.0%	3.9%	3.9%	11.8%	0.401
Grade R to grade S	3.9%	11.8%	5.9%	3.9%	25.5%	
Grade 9 to grade 12	2.0%	5.9%	2.0%	2.0%	11.8%	
Matriculated	5.9%	11.8%	7.8%	0%	25.5%	
National certificate	0%	3.9%	2.0%	0%	5.9%	
Tertiary qualification	0%	5.9%	11.8%	2.0%	19.6%	
Total	13.7%	41.2%	33.3%	11.7%	100.0%	

Level of education	How long have you been involved in farming or agriculture					Total	P value
	Less than 1 year	1-3 years	4-6 years	7-9 years	10 years or more		
Never been to school	0%	2.0%	0%	2.0%	7.8%	11.8%	0.665
Grade R to grade S	0%	3.9%	11.8%	2.0%	7.8%	25.5%	
Grade 9 to grade 12	0%	2.0%	3.9%	2.0%	3.9%	11.8%	
Matriculated	3.9%	3.9%	7.8%	3.9%	5.9%	25.5%	
National certificate	0%	0%	3.9%	2.0%	0%	5.9%	
Tertiary qualification	0%	0%	7.8%	2.0%	9.8%	19.6%	
Total	3.9%	11.8%	35.3%	13.7%	35.3%	100.0%	

Level of education	Are you involved in any agricultural cooperatives		Total	P value
	Yes	No		
Never been to school	11.8%	11.8%	11.8%	0.703
Grade R to grade S	25.5%	11.8%	25.5%	
Grade 9 to grade 12	11.8%	11.8%	11.8%	
Matriculated	23.5%	2.0%	25.5%	
National certificate	5.9%	11.8%	5.9%	
Tertiary qualification	19.6%	11.8%	19.6%	
Total	98.0%	2.0%	100.0%	

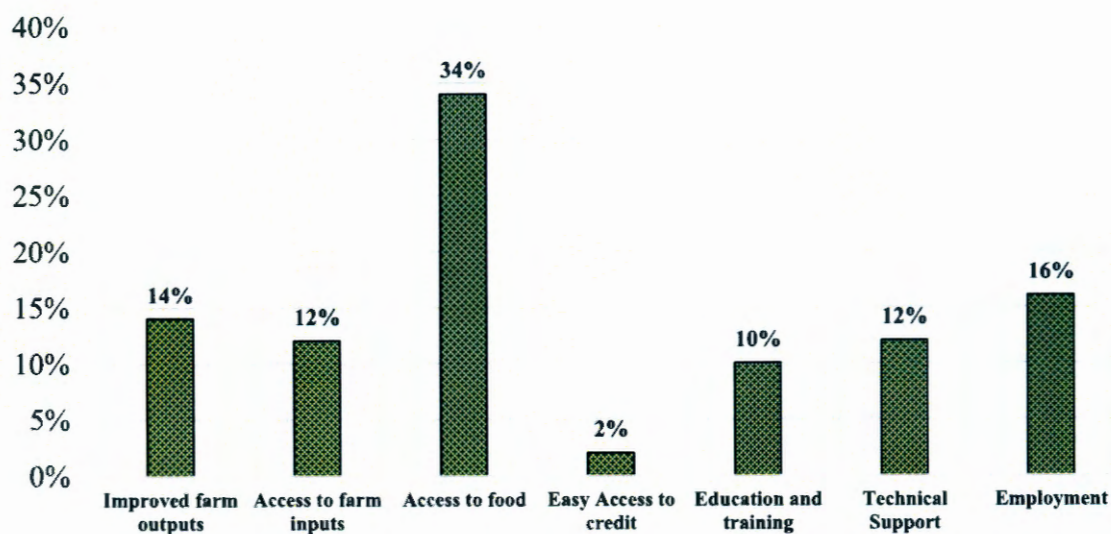
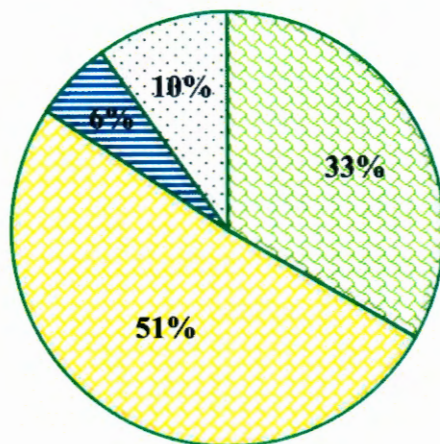


	Technical Adviser	Marketing Services	Administrator	Ordinary member	Total
Male	6%	12%	6%	34%	58%
Female	4%	14%	4%	20%	42%
Total	10%	26%	10%	54%	100%

Male Female Total

The farming activities performed by cooperative in your area.

■ Crop
 ■ Livestock
 ■ Processing
 ■ Storage



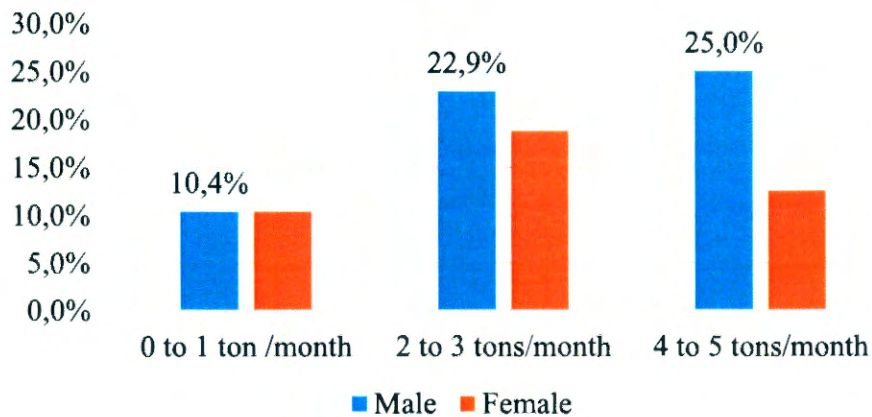
level of education	What are the membership benefits of the cooperatives?							Total
	Improved farm outputs	Access to farm inputs	Access to food	Easy Access to credit	Education and training	Technical Support	Employment	
Never been to school	4.0%	2.0%	2.0%	0%	0%	0%	4.0%	12.0%
Grade R to grade S	6.0%	2.0%	10.0%	0%	2.0%	4.0%	2.0%	26.0%
Grade 9 to grade 12	0%		8.0%	0%	2.0%		2.0%	12.0%
Matriculated	0%	2.0%	10.0%	0%	2.0%	6.0%	4.0%	24.0%
National certificate	0%	2.0%	2.0%	0%	2.0%	0%	0%	6.0%
Tertiary qualification	4.0%	4.0%	2.0%	2.0%	2.0%	2.0%	4.0%	20.0%
Total	14.0%	12.0%	34.0%	2.0%	10.0%	12.0%	16.0%	100.0%

What are problems of the cooperatives?

What are problems of the cooperatives?	Gender		Total	P value
	Male	Female		
Lack of access to finance	19,6%	7,8%	27,5%	0,203
Lack of skills	5,9%	2,0%	7,8%	
Lack of access to markets	5,9%	11,8%	17,6%	
Lack of technical support	0%	2,0%	2,0%	
Lack of employment	9,8%	3,9%	13,7%	
Lack of Government support	17,6%	13,8%	31,4%	
Total	58,8%	41,2%	100,0%	

How do you market your produce?	Gender			P value
	Male	Female	Total	
Informal Market	31,4%	17,7%	49,0%	0,474
Formal Market	17,6%	9,8%	27,5%	
Household Consumption	9,8%	13,7%	23,5%	
Total	58,8%	41,2%	100,0%	

How is your production capacity in terms of your project?



- P value = 0.236

How do you keep record for production?

		How do you keep record for production		Total	P value
		Manual System	Electronic System		
Level of education	Never been to school	9.8%	2.0%	11.8%	0.037
	Grade R to grade S	25.5%	0%	25.5%	
	Grade 9 to grade 12	11.8%	0%	11.8%	
	Matriculated	21.6%	3.9%	25.5%	
	National certificate	3.9%	2.0%	5.9%	
	Tertiary qualification	9.8%	9.8%	19.6%	
Total		82.4%	17.6%	100.0%	