UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Evaluating the impact of the Siyazondla Homestead Food Production Programme on the food security of selected households in the Amathole District, Eastern Cape Province, South Africa

by

Tlhokomelo Leonard Ramangoele

Submitted in partial fulfilment of the requirements for the degree

Master of Agriculture (Rural Development)

in the

Faculty of Natural and Agricultural Sciences

Department of Agricultural Economics, Extension and Rural Development

UNIVERSITY OF PRETORIA

PRETORIA

March 2022

ABSTRACT

Evaluating the impact of the Siyazondla Homestead Food Production Programme on the food security of selected households in the Amathole District, Eastern Cape Province, South Africa

by

Tlhokomelo Leonard Ramangoele

Degree: MAgric Rural Development

Supervisor: Dr JB Stevens

Department: Agricultural Economics, Extension and Rural Development

The *Siyazondla* Homestead Food Production Programme (SHFPP) was implemented in the Amathole District Municipality of the Eastern Cape Province to support homestead food production for improved household food security and possible household income purposes. The expectation was that land sizes and complementary extension support would increase food production of beneficiaries. The purpose of this report was to evaluate the impact of SHFPP in improving food security and socio-economic conditions of the benefiting households in Amathole District. A structured questionnaire was administered to a total of 212 farmers using simple random sampling, from which 132 were the beneficiaries of SHFPP and 80 were non-beneficiaries from Amahlathi and Raymond Mhlaba local municipalities under Amathole District. A total of 10 extension officers who were involved in the programme were purposively sampled and interviewed using a semi-structured questionnaire. Primary data was coded on Microsoft Excel and analysed using the Statistical Package for Social Sciences (SPSS) Version 24.

Findings showed that 83.3% of the beneficiaries were females, and the mean age of beneficiaries and non-beneficiaries was 47.4 and 46.6 years respectively. The mean household size of the beneficiaries and non-beneficiaries was 5.12 and 5.18 household members respectively. The study showed that the *Siyazondla* programme has improved the food security of beneficiary households, by increasing the availability and access to fresh vegetables when compared to non-benefiting households. Household food insecurity decreased from 30.2% during 2017/18 to 23.6% during 2018/19.

Seventy-three of the beneficiaries perceived a major improvement in food production due to the programme, with Amahlathi having the highest proportion of beneficiaries (81.8%) who shared this perception. A possible reason for this may be the relatively higher input access and extension support experienced in this municipality compared to Raymond Mhlaba. Although the agricultural production has improved due to the *Siyazondla* programme, only 35.8% of beneficiaries indicated that they sell surplus fresh produce mainly on local markets (58%) and to family members (46%). However, all the non-beneficiaries in both municipalities were not able to sell on-farm produce since it was entirely used to sustain household food security.

The main challenges facing the programme included the lack of funding, low access to production inputs and lack of market opportunities for beneficiaries. Although one of the objectives of SHFPP was to increase access to extension services, 91.7% of the beneficiaries experienced no or little improvement in access to agricultural extension services. This should be a concerning observation to the staff in the Department of Rural Development and Agrarian Reform who is responsible for the implementation of the programme.

Some of the key recommendations made are as follows: (i) SHFPP should be integrated into the Provincial Growth and Development Plans and (ii) the selection criteria of eligible beneficiaries should be revised to also include more young people into the programme; (iii) strengthening the linkages with other stakeholders in the programme to improve the coordination between role players; (iv) funding opportunities should be considered to address the current challenges with regard to impact; (v) political interference should be minimised.

Keywords: Household food security, *Siyazondla* Programme, beneficiaries, non-beneficiaries, Amathole District

DECLARATION

I, Tlhokomelo Leonard Ramangoele, declare that this dissertation, which I hereby submit for the degree of Master of Agriculture (Rural Development) at the University of Pretoria, is my own work and has not been previously submitted by me or anyone else for the degree at this or any other tertiary institution.

_____

Ramangoele TL

March 2022

DEDICATION

To my mother, Mrs Malebohang Alinah Ramangoele and my late father, Mr Molefi Bethwell Ramangoele, and to my beautiful beloved daughter, Dieketso Onalerona Ramangoele.

ACKNOWLEDGEMENTS

It gives a great pleasure to express my sincere gratitude to the following members who have made valuable contributions to the completion of this study:

- My supervisor, Dr JB Stevens, for his moral support, hard work, guidance, and dedication in supervising me throughout this research study.
- My mother, Mrs Malebohang Alinah Ramangoele, for her never-ending support and encouragement, and for standing by me during tough times. Thank you, Mother, for your patience and belief in me.
- Mr Ndzimakhwe Mziwenkosi for helping me with data collection. Thank you for your time brother.
- Ms Busisiwe Nohlaka for your assistance with data analysis.
- The extension officials and farmers in the Amathole District Municipality, who sacrificed their time during the interviews and have provided the required information.
- My family and friends for their words of encouragement and never-ending support throughout my studies
- My deepest gratitude goes to the National Research Foundation (NRF) and the University of Pretoria for funding my postgraduate studies, and to the Department of Agricultural Economics, Extension and Rural Development for granting me the opportunity to further my postgraduate studies.

I thank ***Lord Almighty*** for the gift of life, for giving me strength, guidance and wisdom throughout my studies.

TABLE OF CONTENTS

LIST OF ACRONYMS

ADM	Amathole District Municipality
ACB	African Centre for Biodiversity
CAADP	Comprehensive Africa Agriculture Development Programme
CASP	Comprehensive Agricultural Support Programme
DAFF	Department of Agriculture, Forestry and Fisheries
DRDAR	Department of Rural Development and Agrarian Reform
EC	Eastern Cape
ECSECC	Eastern Cape Socio-Economic Consultative Council
ECPGDP	Eastern Cape Provincial Growth and Development Plan
FAO	Food and Agriculture Organization of the United Nations
GDP	Gross Domestic Product
GHS	General Household Survey
HH	Household
IDP	Integrated Development Plan
IFAD	International Fund for Agricultural Development
MDGs	Millennium Development Goals
PGDP	Provincial Growth and Development Plan
RDP	Reconstruction and Development Programme
SDGs	Sustainable Development Goals
SHFPP	*Siyazondla* Homestead Food Production Programme
Stats SA	Statistics South Africa
SPSS	Statistical Package for Social Sciences
UN	United Nations
UNICEF	United Nations International Children's Emergency Fund
WFP	World Food Programme
WHO	World health organization

LIST OF FIGURES

LIST OF TABLES

CHAPTER 1

INTRODUCTION

1.1 Background

The world population is projected to reach 9 billion in 2050 (Galhena, Freed & Maredia, 2013). Food security has been a growing concern for many across the world since the 1970s and the first acknowledgement was made at the 1974 World Food Conference held in Rome (Napoli, De Muro & Mazziotta, 2011). At the World Food Summit in 1996 held in Rome, leaders of the Food and Agriculture Organization (FAO) of the United Nations coined a comprehensive and international definition of food security (Napoli *et al.,* 2011; Hendriks, 2015). The FAO (2008) stated that "food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life". This definition has been used for food security programming in many countries.

The world leaders have made various commitments to reduce global poverty and achieve food security in the world, which include the formulation of Millennium Development Goals (MDGs) (Napoli *et al.,* 2011) and the universal Sustainable Development Goals (SDGs) (Hendriks, 2018). Despite these efforts, the World Bank (2018) stated that the fight against ending extreme poverty is far from being over since the number of poor people in the world remains unacceptably high. One of the reasons for extreme global poverty could be that the benefits of economic growth have not evenly been shared across the regions and countries. The estimates by the United Nations (2015) and World Bank (2018) shows that the number and proportion of people living in extreme poverty (less than $1.90 a day) globally have declined from 1.9 billion (nearly 36%) in 1990 to 836 million (10%) in 2015, thanks to the efforts of the international community. Recent estimates from the World Bank (2020b) still demonstrate a high level of global poverty, with nearly 729 million people worldwide who live in poverty.

Food insecurity is a challenge that continues to cripple many people across the world. Data from the FAO, International Fund for Agricultural Development (IFAD), United Nations International Children's Emergency Fund (UNICEF), World Food Programme (WFP) and World Health Organization (WHO), (2019b) demonstrates that nearly 820 million people in the world have faced hunger during 2018. Many of these people are found in developing countries, including African countries. Beegle and Christiaensen (2019) stated that nearly 82 percent of Africa's poor people live in rural areas and depend largely on farming for their livelihoods. The rural poor households in Africa have a large number of children, with limited access to education, health care and sanitation (World Bank, 2018).

Sub-Saharan Africa has a large number of people living in extreme poverty due to lower rates of growth in the region, conflicts, weak institutions, and limited success in channelling growth into poverty reduction (World Bank, 2018). Nearly 239 million people in sub-Saharan Africa were malnourished in 2018 (FAO *et al.,* 2019b). Rapid population growth is one of the contributors to increasing food insecurity in sub-Saharan Africa (Ndobo, 2013).

The drivers of the world's food insecurity and extreme poverty are interlinked. The World Bank (2020b) identifies three drivers of poverty in many countries, namely climate change, conflicts and the current COVID-19 pandemic. According to Boliko (2019), the world's food insecurity is caused by climate variability and extremes, conflict, and economic slowdowns. Evidence from the World Food Programme (2020) shows that the COVID-19 pandemic affects food availability and access by restricting movements between countries; disturbing the transport and processing of food; increasing delivery times; and reducing the availability of basic food items. The COVID-19 pandemic has eroded the livelihoods of many households across the world through increasing unemployment, influencing food prices and reducing food accessibility (WFP, 2020).

In South Africa like any other developing country, many development challenges exist. While South Africa is an upper-middle-income country with the largest economy in Africa, the country is characterised by large scale inequality, unemployment, and extreme levels of absolute poverty (Altman, Hart & Jacobs, 2009; Labadarios *et al.,* 2011; Masuku, Selepe & Ngcobo, 2017). Poverty and hunger in South Africa have resulted from the legacy of apartheid (Koch, 2011). Statistics South Africa (2018) reported that multidimensional poverty as measured by the deprivation of health care, access to education, living standards and economic activity has declined from 17.9 percent in 2001 to 7 percent in 2016 in South Africa.

Notwithstanding the decline in poverty, South Africa face challenges in achieving household food security. Despite the fact that the country is food secure at the national level, a large number of people and households are food insecure (Altman *et al.,* 2009); or have insufficient food due to low incomes (Hendriks, 2014). Data from Stats SA (2019a) demonstrates that 6.8 million people and 1.7 million households in South Africa experienced hunger during 2017. It is therefore clear that South Africa is not on a good track for achieving zero hunger by 2030. Since access to food is a Constitutional right in South Africa, various government policies and programmes have been implemented to achieve food security at the household level. Hendriks (2014) indicated that post-1994, the South African government has re-focused on increasing public spending in social programmes in all spheres of government in order to improve the food security status of historically disadvantaged people. Such programmes include school feeding schemes, social grants, public works programmes, agricultural programmes and land

reform programmes (Hendriks, 2014). Various agricultural and food security programmes were introduced, such as the Comprehensive Agricultural Support Programme (CASP), *Ilima/Letsema* Conditional Grant, *Fetsa Tlala* Food Initiative and the *Siyazondla* Programme. CASP aimed to address the lack of access to farmer support services within the smallholder farming sector (Machethe, 2004). It is encouraging that CASP has improved the growth and sustainability of individual smallholder farming enterprises through increasing incomes, job creation, market access and on-farm infrastructure and livestock across the country (DAFF, 2019). Further, the *Siyazondla* programme is implemented in the Eastern Cape to achieve household food security through supporting homestead production of vegetables (Kubheka, 2015). Nevertheless, Khapayi and Celliers (2016) augured that these government interventions have not been successful in improving the livelihoods of rural households.

Agricultural extension is an important component of agricultural and rural development. Agricultural extension and advisory services are key to sustainable agriculture, resilient livelihoods and inclusive growth (Davis, von Maltitz, de Bruyn, van Niekerk & Ngomane, 2021). There are various ways in which agricultural extension can contribute to agricultural development, food security and rural development. Abdu-Raheem and Worth (2011) showed that agricultural extension can help address the challenges of food insecurity and poverty through technology innovation and transfer, human capital development, social capital development and increasing market access. Further, agricultural extension plays an important role in the implementation of agricultural support programmes such as CASP, *Ilima/Letsema* and the *Siyazondla*. In the Eastern Cape, The Department of Rural Development and Agrarian Reform (DRDAR) provides extension services to communal farmers to ensure the improvement of the local economy and food security in the province and for supporting the development of farmer organisations (Phezisa, 2016).

1.2 Problem statement

The *Siyazondla* Programme was implemented as a part of the Eastern Cape Provincial Growth and Development Plan aimed to achieve agrarian transformation and food security (ECSECC, 2009). The Eastern Cape Provincial Growth and Development Plan for 2030 aims to eliminate poverty and reduce inequality and unemployment in the province by 2030 (ECSECC, 2019). Studies that have been conducted to assess the impact of the *Siyazondla* Homestead Food Production Programme (SHFPP) over time illustrated mixed findings. For instance, an impact assessment of the SHFPP by Kubheka (2015) showed that the programme has improved the food security of the beneficiaries in Amathole District Municipality. Kubheka (2015) reported a significant improvement in the frequency of vegetable consumption, income generation, and dietary diversity among the households benefiting from SHFPP when compared to non-

benefiting households. Phezisa (2016) indicated a positive impact of SHFPP on food security, nutrition level and income generation of the beneficiaries, but illustrated that the SHFPP did not contribute to poverty alleviation among the beneficiaries.

It is encouraging that most governments of African countries, including South Africa, have invested in agricultural extension as the primary tool for improving agricultural productivity and farmers' income (Khwidzhili & Worth, 2019). However, most of the small-scale farmers in South Africa, including the Eastern Cape Province are supported by the public sector extension. The promotion of sustainable agricultural practices amongst farmers remains a task of public extension in South Africa (Khwidzhili & Worth, 2019). While the public extension is critical for growth in the smallholder farming sector, most studies show that public sector extension faces a number of challenges and constraints. Raidimi and Kabiti (2017) indicated that public sector extension is mostly challenged with limited resource availability, which is exacerbated by a wide range of role players (farmers and extension personnel), and mishandling of administration services, marketing, and agribusiness.

With regard to the competency of extension personnel, Davis *et al.,* (2021) indicated a concerning shortage of soft and/or functional skills among public sector extension. This result in public sector extension being ineffective in supporting farmers in South Africa, as Phezisa (2016) indicated that public extension services provided to the beneficiaries of the *Siyazondla* programme did not address the challenges with regard to market access and poverty alleviation. With regard to improving the effectiveness of public extension in South Africa, Davis *et al*., (2021) indicated that there is a need for new training, skills and attitudes by extension staff to meet the demands of the changing sector. There has been a need to study the role of the Departmental (DRDAR) extension support in the implementation of SHFPP.

The recent Integrated Development Plan of the Amathole District (2021) however indicated high levels of unemployment (46.17%) and poverty (76.4%) during 2019 in Amathole District. Food insecurity is still very high in the district, with 53.1% of the households who experienced inadequate food access during 2016 (Stats SA, 2018). The high prevalence of food insecurity and poverty in the Amathole district poses a big question on the impact of SHFPP. It is against this background that the study was conducted in Amathole District to fill the knowledge gap regarding the impact of the SHFPP in achieving economic, employment and food security objectives set for the programme.

1.3 Purpose statement

The purpose of this research was to assess the impact of the *Siyazondla* Homestead Food Production Programme in improving household food security and the socio-economic

conditions of selected communities in the Amathole District of the Eastern Cape Province and to make recommendations for future improvement of similar programmes.

1.4 Research objectives

Specific objectives of the study were:

a) To compare the socio-economic profile of beneficiaries of the *Siyazondla* programme with non-beneficiaries.
b) To determine the perceived effectiveness of the *Siyazondla* programme in addressing household income and food security of beneficiary households.
c) To identify the perceived challenges impacting the outcomes of the *Siyazondla* programme.
d) To assess the role of extension support with the implementation of the programme.

1.5 Research questions

a) How effective is SHFPP in improving household income and food security of the beneficiary households?
b) Identify the perceived challenges of farmers and extension staff that affect the outcomes of SHFPP?
c) What is the role of agricultural extension support in the implementation of SHFPP?

1.6 Academic value and contribution of the study

The outcome of this research study will indicate the possible factors that might be contributing to the impact of this programme in the Amathole district. The *Siyazondla* programme operates both at the household and community level and aimed to impact in terms of social and economic levels. The study highlights the role of extension support in the implementation of the programme and what should be taken into consideration with the planning and implementation of programmes of this nature to support the development of farmers.

1.7 Delimitations of this study

This study was delimited to the *Siyazondla* programme in Amahlathi and Raymond Mhlaba Local Municipalities within the Amathole District and did not include all other municipalities in the district. The study included only programme beneficiaries and individuals eligible but not selected (non-beneficiary households).

1.8 Structure of the dissertation

This report is organised into seven chapters, beginning with the introduction in Chapter One. Chapter Two provides a literature review on food security challenges facing the world and the African continent, as well as an overview of the agricultural sector in South Africa. Chapter Three outlines the research methodology used to carry out this study.

Chapter Four compare the socio-economic profile of the beneficiaries of SHFPP and non-beneficiaries. Chapter Five discusses the research findings on the perceived effectiveness of SHFPP in improving household income and food security of beneficiaries. Chapter Six discusses the findings on the role of extension support in the implementation of SHFPP. Chapter Seven gives key conclusions derived from the findings and proposes recommendations for the improvement of the programme in future.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter reviews the literature about the food security and poverty challenges facing the world and the African continent. It also elaborates on the existing government programmes that support the food security of the farming households in South Africa. The chapter further discusses the contribution of agriculture to development in South Africa and the role of agricultural extension in enhancing it. The literature sources used in this chapter include peer-reviewed journals, policy briefs, reports from the World Bank, UN Agencies such as FAO, WFP, WHO and IFAD, and to a lesser extent, dissertations, and thesis.

2.2 The concept of food security and food availability

The concept of food security started to gain increasing attention in the development literature since the 1940s and it is currently being used to inform programme design, implementation, and evaluation (Hendriks, 2016). Further, Pérez-Escamilla (2017) stated that food security is acknowledged as a universal human right because it is the foundation of human development. Since the 1940s numerous definitions of food security have been coined, but for the purpose of this study, the FAO's definition of food security will be used. The FAO (2008) stated that "food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life". The definition was coined and accepted in 1996 at the World Food Summit held in Rome (Hendriks, 2016; Chitiga-Mabugu *et al.,* 2016). The food security concept comprises of four dimensions, which interact in a sequential and systematic manner:

a) The first dimension is food availability which involves a continuous or effective availability of good quality and nutritious food in sufficient quantities to all households and all household members from the local, regional, or international sources through domestic production, commercial imports, donations, or other exchanges (Sonandi, 2018; Stats SA, 2012; Sakyi, 2012; Kubheka, 2015). Several agricultural programmes have been implemented in South Africa to increase food availability at the household and national levels such as CASP and the SHFPP.
b) The second dimension is food accessibility which addresses the measures taken by a nation and its households to obtain sufficient and nutritious food continuously (Du Toit *et al.,* 2011). It involves actions taken to ensure that people have both physical and economic access to food through means such as own production, food purchase, gifts,

bartering or trading (Gibson, 2012). Food access is a major challenge for poor households in South Africa and other developing countries.

c) The third dimension of food security is food utilisation which entails appropriate use of food based on knowledge of basic nutrition and care, as well as adequate water and sanitation (Du Toit *et al.,* 2011). It involves using clean water, ensuring good sanitation and health care practices to prepare sufficient diets (Richardson, 2010 cited in Ndobo, 2013). This dimension generally implies that people should consume safe and nutritious diets to meet their daily food requirements.

d) The fourth dimension is the stability of the other three dimensions of food security. Chitiga-Mabugu *et al.,* (2016) stated that the stability of the food system focuses on consistent access to adequate and nutritious food despite shocks like conflict, natural disasters, or unemployment at the household level. Other pillars of food security are dependent on stable availability, access to supplies and the resources to get adequate, safe and nutritious food (Hendricks, 2016). Achieving food security status at all levels requires that all dimensions of food security be sufficiently balanced.

2.3 Overview of global food security

Achieving food security for all is an important goal in the 2030 Agenda for sustainable development. Food security remained critical in the Millennium Development Goals (MDGs) of the United Nations. The MDG 1 sought to halve the number of people suffering from extreme poverty and hunger between 2000 and 2015 (European Commission, 2005, cited in Ndobo, 2013). It is through the MDGs that more than one billion people were lifted out of extreme poverty conditions globally (United Nations, 2015 cited in Matebeni, 2018). These MDGs has enabled the international development community to continue to address challenges including undernourishment and hunger and to ensure a sustainable future and dignified life for all people across the world (Matebeni, 2018). Despite these commitments, food security remains a concern for many people across the globe (Ndobo, 2013). Many people in the world are food insecure and have limited access to safe and nutritious food, thus impacting negatively on their livelihoods (McDonald, 2010 cited in Ndobo, 2013).

FAO data demonstrates that the global food security situation keeps fluctuating. In 2009, the FAO estimated that nearly 1.02 billion people were undernourished worldwide due to high domestic food prices, lower incomes and unemployment that have reduced people's access to sufficient food (FAO, 2010). In 2018, more than 820 million people were still facing food insecurity challenges (FAO, IFAD, UNICEF, WFP & WHO, 2019b).

The recent estimates by the FAO *et al.,* (2020), indicated that approximately 750 million people were exposed to severe levels of food insecurity during 2019. These estimates reveal that the world will not achieve the zero-hunger target by 2030.

2.4 Food security status in Africa

Africa is one of the continents with a large number of poor countries in the world. Key challenges facing Africa include widespread food insecurity and hunger, particularly in sub-Saharan Africa (Boon, 2007). In the efforts to improve food security, Africa has received external and internal development assistance which included the transfer of new technologies and interventions (Ozor, Umunnakwe & Acheampong, 2013). Despite these interventions to address food security challenges in Africa, Kimenyi *et al.,* (2013) stated that food insecurity remains a challenge in almost all African countries today. The evidence is seen through repeated food shortages and famines, for example, the food crises that have hit the Horn of Africa from July 2011 to February 2012 and affected the lives of 13 million people (Kimenyi *et al.,* 2013). Sasson (2012) reflected similar findings of food insecurity in sub-Saharan Africa, and that in some cases it has reached catastrophic dimensions in the Horn of Africa and southern Madagascar.

Hunger is increasing in almost all African subregions, making it the region with the highest prevalence of undernourishment (FAO, *et al*., 2019b). The diets of African people are less diverse and mostly made up of cereals with limited access to fruits, vegetables and animal-source proteins that are rich in micronutrients (Dlamini, 2013). In 2018, 257 million people in Africa were malnourished, of which 237 million were from sub-Saharan Africa and 20 million from northern Africa (FAO & ECA, 2018). Recent estimates show that in 2019 the sub-Saharan African region had a population of over 1 billion people and the highest share of its population was food insecure (Thome *et al.,* 2019). These estimates show that Africa is still struggling to feed its population. WFP (2020) reported three main drivers of food insecurity in Africa, namely, economic shocks, weather extremes and conflicts or insecurity.

2.4.1 Comprehensive Africa Agriculture Development Programme (CAADP)

Over the years Africa's development agenda has been focused on food security and nutrition with a greater commitment to eradicating hunger and achieving food security for all Africans (FAO, 2017). The African governments introduced the Comprehensive Africa Agriculture Development Programme (CAADP) to achieve food and nutrition security goals in the continent. CAADP is an intervention by the African Union to improve policy and capacity problems within the agricultural sector in Africa and reach an average production growth rate of six percent (Dlamini, 2013).

CAADP was built on two targets: firstly, to achieve six percent annual growth in agricultural productivity by 2015 and secondly to increase the allocation of national budgets channelled to the agricultural sector to at least 10 percent (Kimenyi *et al.,* 2013). The main emphasis of the initiative was on increasing public investment in the agricultural sector to boost agricultural production and the incomes of farmers in Africa at large.

2.5 Overview of food security and poverty in South Africa

South Africa is an upper-middle-income country characterised by a modern industrial and financial sector (Dube, 2013). According to Koch (2011), South Africa continues to be a net exporter of agricultural commodities and has a high per capita income. Poverty and unemployment continue to prevail despite the political and economic achievements in the post-apartheid period (Labadarios *et al.,* 2011). Stats SA (2018) shows that 49.2% of the South African population lived in poverty conditions between 2014 and 2015. The majority of poor people in South Africa are found in rural areas (Machethe, 2004). People living in these areas have constrained access to resources needed to sustain their livelihoods (Stevens *et al.,* 2012). Available data shows that South Africa is not positioned to end hunger and poverty as imagined in the Sustainable Development Goals.

In food security discussions, South Africa is known as a food secure country, but a large number of households in the country is food insecure (Altman, Hart & Jacobs, 2009). Estimates by the Stats SA (2019a) indicated that the number of South Africans facing hunger has declined from 13.5 million people in 2002 to 6,8 million estimated in 2017. In a similar trend, the number of South African households facing hunger has declined from 2,7 million to 1.7 million (Stats SA, 2019a). These estimates reveal that food insecurity and hunger are still a challenge in South Africa. The main challenge is the inability of households and individuals to access sufficient food. However, social grants have played a key role in improving the food security of poor households. The contribution of social grants to household food security has been important since 2001 (Van der Berg, 2006, cited in Altman, Hart & Jacobs, 2009).

2.5.1 Food security in the Eastern Cape Province and Amathole District

The Eastern Cape Province is predominately rural, as it has a large number of rural areas. According to the 2011 Census (Stats SA, 2011), the Eastern Cape Province had a total population of 6.5 million people, which is approximately 12.7% of the total population in South Africa. The Eastern Cape is characterised by high-income inequality and poverty, especially in the rural areas (Godfray *et al.,* 2010 cited in Selepe *et al.,* 2015). Rural areas in the province experience huge infrastructure backlog, high levels of poverty, food insecurity and skills shortages (Msutwana, 2017).

The Eastern Cape's multidimensional poverty has been reduced from 30.2% in 2001 to 12.7% in 2016 (Stats SA, 2019a). The largest proportion of food-insecure households is found in rural areas of the province (DEDEAT, 2013 cited in Sonandi, 2018). The available data shows that a percentage of households facing inadequate access to food in the Eastern Cape has declined from 20.1% estimated in 2017 to 15.4% in 2019 (Stats SA, 2017; Stats SA, 2019b). Nearly 6.5% of the households in the province were severely food insecure in 2019 (Stats SA,2019b). It appears that food insecurity remains a challenge in the province despite high dependency on social grants and numerous government programmes implemented to address the problem.

The Amathole District Municipality is one of the poor districts in the Eastern Cape Province. Ngumbela and Mle (2019) indicated that the poverty rate in the district is 41.1%. In terms of food security in the district, Ngumbela, Khalema and Nzimakwe (2019) reported that over half of the population in the Amathole is facing food insecurity. In 2016, 31.5% of the households in Amathole had inadequate access to food due to a lack of financial resources to buy food (Stats SA, 2018). Both poverty and food insecurity are associated with structural drivers present in the Eastern Cape and the Amathole district. High levels of illiteracy, unemployment, limited access to infrastructure, and social and economic vulnerability are some of the key drivers of poverty and food insecurity in the district (Ngumbela & Mle, 2019).

2.6 Contribution of agriculture to food security in South Africa

The agricultural sector in South Africa is described as dualistic, consisting of the well-developed and capital intensive commercial agricultural sector, and the less developed, poorly resourced smallholder and subsistence agricultural sector (Thamaga-Chitja & Morojele, 2014). Commercial farms occupy 87% of the total agricultural land in the country and produce about 95% of the agricultural output (Aliber & Hart, 2009). According to the 2017 Census of commercial agriculture, there were 40 122 commercial farms across South Africa. The total land area used by commercial agriculture across the country was 46.4 million hectares. The contribution of the commercial agriculture sector to national food security is enormous (Thamaga-Chitja & Morojele, 2014).

The smallholder and subsistence agriculture is predominately found in rural areas of South Africa. This sector is generally associated with black farmers, occupying 13% of South Africa's agricultural land (Feynes & Meyer, 2003 cited in Aliber & Hart, 2009). This sector operates under communal land rights where land rights are administered by the traditional authorities. The communal ownership of land in rural areas tend to suppress its commercial value (Thamaga-Chitja & Morojele, 2014).

According to Stats SA (2019b), agriculture is an important contributor to the process of economic development and household food security. Therefore, the development of the agricultural sector is vitally important for people whose livelihoods are dependent on farming. Makhura (2016) indicated that the agricultural sector of South Africa contributes 2.4% to the GDP. However, the contribution of agriculture to GDP could be greater at the local level compared to the national level (Musvoto *et al.,* 2015). Agriculture contributes to the economy of the country through forward and backward linkages with other sectors of the economy such as the manufacturing industry (DAFF, 2014; Van Zyl, Nel & Groenewald,1988). In this regard, agriculture creates demand for agricultural inputs and services (backward linkages) and allows manufacturing and processing industries of foodstuff (forwards linkages) (Makhura, 2016). These linkages are critical to driving the entire economy.

Agriculture has also the potential to create job opportunities for poor people. From the African perspective, agriculture employs a significant share (65%) of the continent's labour force (Musvoto *et al.,* 2015). In South Africa, DAFF (2014) indicated that agriculture provides employment opportunities for most people in rural areas and contributes to the sustaining of rural livelihoods (Stats SA & NDoA, 2000). The World Bank (2020a) estimated that the proportion of the South African population employed in agriculture has declined from 9.9% in 2000 to just 5% estimated in 2019. This decline in agricultural employment could be attributed to structural transformation in South Africa since people move from agriculture to seek employment in other sectors of the economy. Also, DAFF (2010) stated that the adoption of production technologies and the existing institutional environment are also responsible for this decline.

In South Africa, subsistence agriculture contributes to household food security by increasing food supply and reducing dependency on food markets which is subjected to food price inflation (Baiphethi & Jacobs, 2009). In terms of poverty alleviation, agriculture is key in creating employment, increasing real wages, and improving farm income (Machethe, 2004). Employment in agriculture helps poor people to sustain their livelihoods.

2.6.1 The role of homestead food production in South Africa

Homestead food production is one of the strategies that can be used to ensure household food security in rural and urban areas. Bahta and Owusu-Sekyere (2019) reported that homestead food garden intervention has significantly improved the incomes of vegetable farmers in South Africa. Through increased food production, farmers can feed their families and sell excess produce to the surrounding community, thus contributing to household income. Tesfamariam *et al.,* (2018) showed that the Homestead Food Garden programmes reduced food insecurity by 41.5% among the participating rural households in South Africa.

In the Eastern Cape Province where the majority of rural households are experiencing food insecurity and poverty, homestead food production has the potential to contribute to household food security. This was confirmed by Mcata (2019); Bongiwa and Obi (2015); Adekunle (2013) that home gardening is key in improving food security by increasing direct access to nutritionally rich fresh vegetables, creating job opportunities for the poor, reducing expenditure on food and alleviating poverty. Noticeably, homestead food production in South Africa is mostly adopted by rural households to cope with food security effects. However, full ownership of food gardens is a major challenge facing households (Mcata, 2019).

2.6.2 Challenges facing smallholder agriculture in South Africa

As in any developing country like South Africa, many challenges exist in the agricultural sector. The smallholder and subsistence farmers have limited access to factors of production, credit and information, and markets due to poorly defined property rights (Ortmann & King, 2006). Thamaga-Chitja and Morojele (2014) indicated three major institutional bottlenecks which face smallholder farmers, namely, the poor socio-economic conditions of farmers; the unsupportive policy landscape and unfavourable agro-climatic zones. These challenges prevent farmers from participating fully in the market environment. A lack of sufficient extension support is also a challenge facing smallholder and subsistence farmers in South Africa. In the Eastern Cape Province, Adekunle (2014) stated that the limited extension services have resulted in a lack of awareness of improved agricultural practices and technical expertise among the smallholders. These challenges continue to trap the majority of smallholder farming households into chronic poverty and food insecurity.

2.7 Agricultural development and food security programmes in South Africa

In order to support agriculture and address food insecurity in rural communities, the government has implemented a number of programmes and initiatives following the Reconstruction and Development Programme (RDP) of 1994. According to Hendriks (2014), the RDP identified food security as a basic human need and food insecurity as a legacy of the apartheid socio-economic and political order. Other subsequent interventions such as school feeding programmes, social grants and agricultural programmes were implemented to improve the food security of the disadvantaged people (Hendriks, 2014). Some of these development programmes are aimed to reduce rural poverty through improving agricultural development.

2.7.1 Comprehensive Agricultural Support Programme (CASP)

The Comprehensive Agricultural Support Programme (CASP) was implemented in 2004 by the National Department of Agriculture to achieve food security and accelerate agrarian reform (DAFF, 2017; Joala & Gumede, 2018). CASP aims to "provide effective agricultural support services, promote and facilitate agricultural development by targeting beneficiaries of land reform's restitution and redistribution; and other black producers who have acquired land through private means and are engaged in value-adding enterprises domestically, or involved in export" (DAFF, 2017). The programme sought to address the lack of access to farmer support services within the smallholder farming sector (Machethe, 2004).

CASP was built on six pillars, namely, (i) on-farm and off-farm infrastructure support; (ii) technical and advisory services; (iii) training and capacity building; (iv) knowledge and information management; (v) market and business development support; and (vi) financial services (Department of Agriculture, 2003; DAFF, 2019). The targeted population include the hungry and vulnerable groups such as youth, women and people with disabilities; previously disadvantaged subsistence, smallholder and commercial farmers; entrepreneurs; and agricultural macro-systems within the consumer environment (Joala & Gumede, 2018; DAFF; 2017; DAFF, 2019). However, the impact of CASP on the livelihoods of the smallholder farmers relative to the budget allocations is questionable (Thamaga-Chitja & Morojele, 2014). DAFF (2019) however reported that CASP has contributed towards the growth and sustainability of individual smallholder farming enterprises through increasing incomes, job creation, market access and on-farm infrastructure and livestock across the country.

2.7.2 *Ilima/Letsema* Conditional Grant

The *Ilima/Letsema* grant was initiated by the Department of Agriculture Forestry and Fisheries (DAFF) in 2009, with the aim of "assisting vulnerable black South African farming communities to achieve an increase in agricultural production and invest in infrastructure that unlocks production within the strategically identified grain, livestock, horticulture and aquaculture production areas at both household and national level" (National Treasury, 2017; DAFF, 2019). The programme seeks to encourage the rural communities to participate in agriculture to improve food access, reduce poverty through the provision of agricultural incentives, and support services for all farmers across all provinces (Joala & Gumede, 2018). This grant is related to CASP, and Sonandi (2018) indicated that about 10% of the CASP's budget is directed to the *Ilima/Letsema* grant.

The grant is targeted at supporting vulnerable households, subsistence, and smallholder farmers. Beneficiaries are supported with farming inputs such as fertilisers, seeds, seedlings, machinery, equipment and irrigation infrastructure, breeding animals and poultry with feed and

medication (African Centre for Biodiversity (ACB), 2018; Joala & Gumede, 2018). This ensures food production for own consumption and sale of surpluses, and ultimately achieving the long-run commercialisation of some category of farmers (ACB, 2018).

2.7.3 *Fetsa Tlala* (End Hunger) Integrated Food Production Initiative

The *Fetsa Tlala* Initiative is a framework that was approved by the Cabinet in 2013 to implement the food pillar of the approved National Policy of Food and Nutrition Security (DAFF, 2015). It is a multisector initiative, involving the Departments of Social Development, Health and Education (ACB, 2018). It combines food security and nutrition objectives and seeks to eliminate hunger and address inequality and social exclusion (DAFF, 2013). The target beneficiaries are the subsistence and smallholder farmers in all provinces of South Africa, which are supported with the production of staples including maize and dry beans, and secondary crops such as sunflower and sorghum (ACB, 2018). Under this initiative, one million hectares of underutilised agricultural land was expected to be brought into production by 2018/2019, particularly in land reform farms and communal areas (DAFF, 2015; ACB, 2018).

2.8 Overview of agricultural extension in South Africa

Agricultural extension activities have started in the pre-1994 era in South Africa (Koch & Terblanche, 2013). Presently, the extension system in South Africa comprises of many service providers which respond to the needs and demands of farmers. There are public extension and non-governmental extension providers which include agricultural co-operatives, commodity organizations and the private sector (Koch & Terblanche, 2013). The public extension service focus on supporting the smallholder and emerging farmers, while the private sector extension targeted the commercial farming sector. Based on the dualistic nature of the agricultural sector in South Africa, Raidimi and Kabiti (2017) indicated that private sector extension plays a complementary role to public sector extension. Noticeably, both public and private sector extension is essential for driving agricultural development in South Africa.

2.8.1 Role of agricultural extension in the Eastern Cape Province

The agricultural extension system in the Eastern Cape Province shows some degree of pluralism. The pluralistic extension involves multiple providers of extension services to farmers, such as the coordinated partnerships between the public sector, non-governmental organisations and private sector (Davis & Terblanche, 2016). Pluralism in extension takes into account the existing differences between farmers and farming systems, and the need for multiple approaches to respond to challenges facing agricultural development (Gemo, Stevens & Chilonda, 2013).

Makapela (2015) indicated that extension services in the province comprise of many providers ranging from the public sector, non-governmental organisations to private sector extension. The Department of Rural Development and Agrarian Reform (DRDAR) remains the largest provider of extension services for small-scale farmers in the Eastern Cape Province (Makapela, 2015). Within DRDAR, extension support is provided under the Farmer Support and Development Programme, which provides extension and advisory services to farmers and households involved in agriculture. The vision and mandate of DRDAR are to promote, support and coordinate rural development and agrarian reform interventions in order to reduce poverty and underdevelopment through job creation, integrated food security programme, and equitable participation in development by all rural communities (DRDAR, 2015 cited in Keka, 2019). Therefore, the role of agricultural extension is important in the achievement of the Department's vision. Phezisa (2016) indicated that agricultural extension in the Eastern Cape is important for establishing projects and forming co-operatives, marketing agricultural produce, supporting the efficient use of natural resources, supporting farmers with acquiring funding and resources, training and visiting farmers. Extension services are important with the implementation of agricultural programmes for the improved local economy and food security in the province and for supporting the development of farmer organisations (Phezisa, 2016). Extension officers have the responsibility to ensure that agricultural support programmes such as SHFPP are effectively implemented.

Many challenges existed in the delivery of extension services to farmers. Gwala (2013) found that extension services were not effective on the livelihoods of the beneficiaries of the Nguni cattle project in the selected communities of the Eastern Cape Province. Another challenge facing the extension in the Eastern Cape is the poor implementation of extension programmes by the DRDAR due to poor planning, coordination, limited budget for extension and insufficient extension to farmer radio (Makapela, 2015). Agricultural extension personnel are not effective in undertaking proper monitoring and evaluation of the agricultural development programmes (Makapela, 2015). However, the role of agricultural extension in the livelihoods of small-scale farmers will not disappear.

2.9 *Siyazondla* Homestead Food Production Programme (SHFPP)

2.9.1 Description of the programme

The term "*Siyazondla*" is a Xhosa name meaning "we feed ourselves". The Eastern Cape Department of Agriculture introduced the programme in 2003 (Eastern Cape Provincial Growth and Development Plan (ECPGDP), 2004). The programme was introduced under the Eastern Cape Provincial Growth and Development Plan.

SHFPP sought to encourage homestead food production to promote food security in the Eastern Cape (Mafu, 2015; Tregurtha, 2009). SHFPP aimed to alleviate extreme poverty and malnutrition among the rural households in the province (Kubheka, 2015). Blaai-Mdolo (2009) and Kubheka (2015) stated that SHFPP is targeted at the following groups of people:

- The beneficiaries of food parcels (from the Department of Social Development).
- Unemployed breadwinners.
- HIV infected and affected families and physically challenged people.
- Households earning less than the accepted minimum social grant level.
- Children headed families (15 years and upwards with interest in food production).
- Micro-projects and youth development projects

The beneficiaries are supported with a package of starter packs of farming and production inputs, which include wheelbarrows, forks, spades, rakes, watering cans, seeds, fertilizers, seedlings, insecticides, irrigation pipes, fencing and water harvesting equipment such as water tanks (Kubheka, 2015; Mafu, 2015). Beneficiaries are encouraged to engage in the production of vegetables in their home gardens to improve food security and nutrition. Agricultural extension plays an essential role in the implementation, monitoring and evaluation of the *Siyazondla*. The extension officials are responsible for the delivery of production inputs to beneficiaries. Through this programme, extension officers provide food production support to beneficiary households (Mafu, 2015).

2.9.2 Objectives of the programme

According to Florian *et al.,* (2012), the overall objective of the *Siyazondla* programme is "to provide access to a limited package "starter pack" of resources to allow beneficiaries in dire need who have access to a backyard and water to cultivate in their backyards". Programme objectives are outlined in the ECPGDP (2004), which are:

1) To support the production of nutritional food within rural and urban homestead gardens.
2) To meet immediate needs while strengthening household livelihoods and laying the foundation for livelihood diversification and enhanced economic exchange.
3) To support surplus production where possible and feasible.
4) To address food vulnerability at the household level.

2.9.3 The contribution of the programme

An impact assessment of the SHFPP in various areas of the Eastern Cape was conducted by Kalazani-Mtya (2011); Kubheka (2015) and Phezisa (2016) respectively.

Findings by Kalazani-Mtya (2011) indicated the programme did not have an impact on the livelihoods of women, since it failed to empower women with farming skills and education to sufficiently improve their quality of lives. Contrary, Kubheka (2015) reported that the programme has improved food security among its beneficiaries by increasing vegetable consumption, dietary diversity, and household income. Phezisa (2016) reflected similar findings that the SHFPP has improved the food security and nutrition of the beneficiaries. Although mixed findings are reported on the impact of the SHFPP, it can be noted that the programme has improved the food security situation of the benefiting farmers.

2.9.4 Challenges facing the SHFPP

Studies on impact assessment of the SHFPP shows that the programme is facing numerous challenges. According to Kalazani-Mtya (2011), the extension officials in the programme are not effective in providing support and proper monitoring and evaluation of the programme. Other challenges include the lack of provisions for a diverse women population in the project; violation of the people-centred approach; limited women empowerment; insufficient support and lack of capacity from the Eastern Cape Department of Agriculture officials (Blaai-Mdolo, 2009). Phezisa (2016) identified three main challenges facing the beneficiaries of SHFPP, namely: a lack of marketing opportunities; lack of inputs and implements and environmental factors such as drought. These challenges have an impact on the success of the programme, which could be why food insecurity and poverty are still prevalent in the Eastern Cape Province after 17 years since the inception of SHFPP

2.10 Conceptual framework

The study aimed to determine the effectiveness of SHFPP and whether participants in the programme had better livelihoods outcomes. Figure 2.1 illustrates the relationship between the variables used to measure the effectiveness of SHFPP, namely the socio-economic characteristics of beneficiaries, household income, food security, extension support and challenges experienced in the implementation of SHFPP. The socio-economic variables measured include the gender and age of the respondents, household size, educational level, occupation status and sources of household income. The effectiveness of SHFPP in household income was measured by asking whether the beneficiaries are selling on-farm produce; their target market and the proportion of household income generated from the sale of on-farm produce. The improvement in agricultural production and the proportion of household food obtained from on-farm produce were used to determine food security. The perceived effectiveness of extension support was determined by the frequency of contact with beneficiaries and the perceived competency of extension staff with regard to technical and

soft skills. Challenges such as access to production inputs, markets and funding of SHFPP were identified.

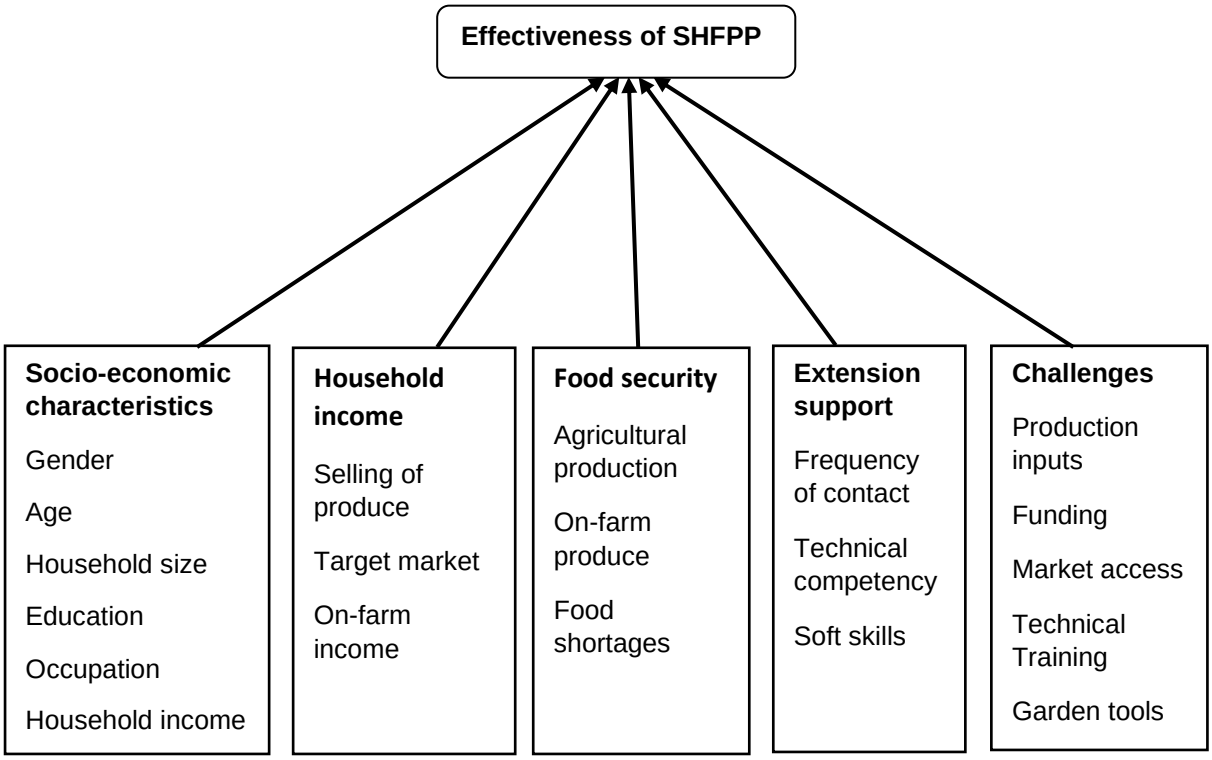

Figure 2. 1: Conceptual framework for evaluating of the effectiveness of SHFPP.

2.11 Conclusion

This chapter discussed the literature review on food security and poverty challenges facing the world and the African continent. The literature shows that poverty and food insecurity are more prevalent among African countries including South Africa. The chapter reveals that South Africa is food secure at the country level, but a large number of households are food insecure. The chapter also discussed an overview of South Africa's agricultural sector, focusing on the dualistic nature of the sector, as well as the contribution of agriculture to development in South Africa. It expanded on food security programmes including SHFPP implemented to improve the food security of poor households in South Africa. The chapter also highlighted the conceptual framework for the study.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This study aimed to evaluate the impact of the *Siyazondla* Homestead Food Production Programme in the Amathole District Municipality of the Eastern Cape Province. This chapter outlines the research area where the study was conducted, research methods and procedures that were used for data collection and analysis. A quantitative and qualitative research approach was used to collect information from farmers and extension officers in the district.

3.2 Description of the study area

3.2.1 The Eastern Cape Province

This study was conducted in Amathole District Municipality (ADM) of the Eastern Cape Province in South Africa. The Eastern Cape is the second-largest province by land following Northern Cape and the third highest by population after Gauteng and KwaZulu-Natal (Stats SA, 2011). The Eastern Cape Province occupies nearly 168 966 square kilometres of land, which is 13.8% of the total area of South Africa. The Province is located on the south-eastern South African coast and is bordered by the Western Cape Province and KwaZulu-Natal (Eastern Cape Socio-Economic Consultative Council, 2013).

Data from Stats SA demonstrates that the Province had a total population of 6.5 million people in 2011 and later increased to 6.9 million in 2016 (Stats SA, 2011; Stats SA, 2018). It has a large number of black African households, and yet one of the provinces with extreme poverty, inequality and household food insecurity (Stats SA, 2011; Selepe, Mtyingizane & Masuku, 2015). During 2016, Stats SA (2018) indicated that 13.2% of the Eastern Cape population experienced multidimensional poverty, which was measured using the following indicators: healthcare, educational levels, living standards and economic activity. The province is predominately rural with about 60% of the population living in rural areas and their livelihoods depend mostly on agriculture and non-agricultural sources such as off-farm employment, remittances, and social grants (Muleya, 2013).

According to Kubheka (2015) and Selepe *et al.,* (2015), the Eastern Cape has a large area of irrigable agricultural land which is unused and have the potential for farming. A significant contribution of agriculture to economic development and household food security in the Eastern Cape has long been acknowledged (Matebeni, 2018). The province has a wealth of natural resources that are mainly used for tourist attractions, yet the land in most parts of the

Province is under communal tenure (Kubheka, 2015; Selepe *et al.,*2015). Using natural resources for tourism helps to develop the economy in the province.

3.2.2 Amathole District Municipality (ADM)

The Amathole District Municipality is located on the eastern seaboard of the Eastern Cape and stretches from the Indian Ocean coastline in the south to the Amathole Mountains in the north, and from Mbolompo Point in the east to Great Fish River in the west (Integrated Development Plan (IDP), 2018). The population in the district increased from 855 793 people in 2011 to 880 790 in 2016 (Stats SA, 2018). The district has the third-highest population in the Province following the O.R Tambo District and the Nelson Mandela Bay Metropolitan. It occupies nearly 21 121.11 square kilometres of land area and about 60% of the population lives in rural areas (IDP, 2018). Approximately 73.7% of the population was employed in the formal sector in 2016 and 580 000 people were living in poverty conditions (IDP, 2018).

Agricultural activity in the district is active, with households involved in livestock production, poultry, grain and food crops, fruits and vegetables (Stats SA, 2018). Makapela (2015) indicated that women are owning mostly chickens and pigs, while men are focused on goats, sheep and cattle. The ADM consists of six local municipalities as illustrated in Figure 3.1 namely: the Amahlathi, Great Kei, Mbhashe, Mnquma, Ngqushwa and Raymond Mhlaba. This study was conducted in the Amahlathi and Raymond Mhlaba municipalities.

Figure 3. 1: Map of Amathole District Municipality

Source: *Amathole District Municipality – IDP 2018/2019*.

3.3 Research design

Webb and Auriacombe (2006) stated that research design provides a set of guidelines and instructions that the researcher should follow to reach the research goal and address the research problem. It gives a direction on how to achieve the research objectives. Mahlombe (2018) indicated two types of research design, namely the qualitative and quantitative research methods. Hahlani (2012) stated that a qualitative research method helps the researcher to gain an insight into the feelings, perceptions and experiences of respondents in the study area, while a quantitative research method is used to determine the prevalence and frequency of particular issues, attitudes, opinions and perceptions in a particular field of research. The choice of selecting which type of research design to use is determined by the nature of the study (Mahlombe, 2018).

This research study used both quantitative and qualitative research designs. A quantitative approach was used to gather information from farmers through structured interviews, while data such as coping strategies, production challenges and recommendations for improving the programmes of this nature was collected by using a qualitative approach. A qualitative approach like focus group discussions was also used to get the views of key informants, namely the extension officers involved in the SHFPP.

3.4 Sampling

For the structured questionnaire survey, the study targeted beneficiaries and non-beneficiaries of the *Siyazondla* Programme. The total population of beneficiaries during the 2019/2020 financial year was 1325, of which 721 were from Amahlathi and 604 from Raymond Mhlaba (DRDAR, 2020). Due to resource limitations, 10% of the total population was randomly sampled which translated into 132 respondents, with 66 beneficiaries from each municipality. The population in Raymond Mhlaba was nearly 160 000 and 102 000 in Amahlathi (Stats SA, 2018). A simple random sampling was used to select a total of 40 non-beneficiaries in each municipality, which totalled to 80 non-beneficiaries participating in the study. The non-benefiting households were selected based on their involvement in different agricultural enterprises in the study area.

Purposive sampling was used to identify the extension officers who were involved in the implementation of the *Siyazondla* programme in the Amathole District. Purposive sampling refers to a strategy in which particular settings of persons or events are selected deliberately in order to provide important information that cannot be obtained from other choices (Maxwell, 2006 cited in Taherdoost, 2016). A total of 10 extension officers were purposively sampled from the 52 extension officers employed in the Department for the study (DRDAR, 2020).

In the Raymond Mhlaba municipality, 28 officers were employed, while in Amahlathi 24 extension officers were employed. Five extension officers were selected from each municipality to which key interviews were independently conducted. These extension officers were selected based on their involvement in the implementation of SHFPP.

3.5 Data collection

This research study made use of primary data and secondary data to generate the research findings about the impact of the *Siyazondla* programme. Primary data was collected through interviews using structured household questionnaires (Appendix 1) and focus group discussions with extension officers using semi-structured questionnaires (Appendix 2). Secondary data was obtained from published and unpublished articles, internet sources and dissertations. The researcher was assisted by an enumerator to conduct interviews with the beneficiaries, non-beneficiaries and extension officers. The enumerator was trained on how to use questionnaires including probing the respondents to obtain necessary data.

3.6 Measurement of variables

a) Socio-economic characteristics

Socio-economic characteristics are important determinants of livelihood activities and sources. The following variables were investigated: gender, age, marital status, sources of household income, household size and household head, educational and employment status of the respondents.

b) Perceived effectiveness

The perceived effectiveness of SHFPP in addressing food security refers to the views of beneficiaries with regard to the impact of the programme on household income, access to agricultural inputs and markets, access to agricultural extension support and perceived improvement of job opportunities on the farm. This variable was measured using the Likert scale.

c) Food security

Food security was measured by comparing the availability of food between the beneficiaries and non-beneficiaries. Likert scale was used to determine the perceptions of farmers with regard to the effectiveness of SHFPP on food security.

3.7 Data analysis

The primary data were coded on Microsoft Excel and analysed using the Statistical Package for Social Sciences (SPSS) Version 24 to compute frequency distribution, descriptive statistics such as averages to summarise data. The socio-economic variables (objective 1) and perceived effectiveness of SHFPP (objective 2) were subjected to quantitative analysis. Objectives 3 and 4 were analysed using qualitative data analysis. The analysis of data from the semi-structured interviews involved reading through the responses several times to identify similar themes and insights. This was followed by listing all topics identified from the responses. Thematic codes were then established to categorise responses into key demographic, knowledge and attitudes traits to help in qualitative data analysis.

3.8 Ethical considerations

This research study has strictly and entirely adhered to the following ethical principles of conducting research, which are: voluntary participation of respondents, no harm to the participants, anonymity and confidentiality. The respondents were informed about the purpose and objectives of the study. Permission to conduct the study in Amathole District was granted by the Head of the Department of Rural Development and Agrarian Reform in the Eastern Cape Province. Since primary data was collected during the COVID-19 pandemic, the researcher ensured that social distancing and the use of facial masks were followed during data collection with respondents.

3.9 Conclusion

This chapter focused on outlining the research methodology used to carry out this study. It outlined the study area, the research design and sampling procedures. The chapter also elaborated on the methods of data collection and analysis. The study used primary data and secondary data. The ethical considerations used throughout this study were also discussed.

CHAPTER 4

COMPARISON OF SOCIO-ECONOMIC PROFILE OF BENEFICIARIES AND NON-BENEFICIARIES OF SHFPP

4.1 Introduction

This chapter reflects the findings on the socio-economic profile of beneficiaries and non-beneficiaries in the selected study areas. The chapter provides an overview of gender, age, marital status, household size, educational level, employment status, sources of household income, and land tenure status of respondents.

4.2 Gender, age, marital status and household size of respondents

Gender of respondents is important to identify for development purposes (Kangas, Haider & Fraser, 2014). Eighty-three percent of the beneficiaries of SHFPP were females (Table 4.1). It can therefore be ascertained that the *Siyazondla* programme is dominated by female farmers in these study areas which supports the findings of Phezisa (2016). However, amongst the non-beneficiaries, 62.5% of the respondents in Amahlathi were men, while only 33% of the non-beneficiaries in Raymond Mhlaba were men. There are two possible reasons for the dominance of women in the programme. Firstly, female beneficiaries indicated that the programme was introduced into already existing farmer groups in the communities, which were dominated by female farmers at the time of introducing the programme in the selected areas. Secondly, vegetable production in home gardens is mostly undertaken by female farmers, while male farmers are mainly involved in livestock production and other non-farm commitments. Female beneficiaries reported that the programme is important to them as it supports household food security. Simelane (2018) indicated that in many rural households, men tend to leave their homes in search of non-farm jobs.

The age of the respondents can have potentially significant implications on how the agricultural development worker or officer will address farmers, as most elderly people are often illiterate (Ngqulana, 2017). The findings in Table 4.1 showed that 73.1% of the respondents were older than 50 years of age, with only a small percentage (1.4%) of the respondents who were less than 30 years. These findings illustrated that young people have not participated in the programme, most probably because of other non-farm employment opportunities. There was no significant difference in the age of respondents as the mean age of beneficiaries and non-beneficiaries was 47.4 and 46.6 years respectively. These findings imply that participation in the programme was most attractive to people over 45 years of age.

Marital status in rural communities can have a serious influence on how households deal with problems, particularly when it comes to married women (Ngqulana, 2017). Table 4.1 illustrates that the marital status varied over two municipalities. The number of married persons was high (54.2%), which imply that the majority of households had stable families. A stable family is defined as the existence of a stable marriage (Craigie, Brooks-Gunn & Waldfogel, 2012). A stable family has important implications for decision making within farming households and also determines the availability of family labour, especially under smallholder farming conditions (Luwanda, 2015).

Table 4. 1: Gender, age, and marital status of the respondents (n = 212)

Gender	**AMAHLATHI**				**RAYMOND MHLABA**				**TOTAL**	
	Beneficiary		**Non-beneficiary**		**Beneficiary**		**Non-beneficiary**			
	n	%	n	%	n	%	n	%	**n**	**%**
Male	11	16.7	25	62.5	11	16.7	13	32.5	60	28.3
Female	55	83.3	15	37.5	55	83.3	27	67.5	152	71.7
TOTAL	**66**	**100**	**40**	**100**	**66**	**100**	**40**	**100**	**212**	**100**
Age groups	n	%	n	%	n	%	n	%	**n**	**%**
< 30 years	1	1.5	1	2.5	0	0.0	1	2.5	3	1.4
30 – 50 years	16	24.2	14	35.0	16	24.2	8	20.0	54	25.5
≥50 years	49	74.2	25	62.5	50	75.8	31	77.5	155	73.1
TOTAL	**66**	**100**	**40**	**100**	**66**	**100**	**40**	**100**	**212**	**100**
Mean age (years)	**47.2**		**45.9**		**47.6**		**47.4**		**47.1**	
Marital status	n	%	n	%	n	%	n	%	**n**	**%**
Never married	14	21.2	7	17.5	15	22.7	8	20.0	44	20.8
Married	33	50.0	27	67.5	32	48.5	23	57.5	115	54.2
Widowed	16	24.2	6	15.0	18	27.3	8	20.0	48	22.6
Divorced	3	4.5	0	0	1	1.5	1	2.5	5	2.4
TOTAL	**66**	**100**	**40**	**100**	**66**	**100**	**40**	**100**	**212**	**100**

A household refers to all individuals who live together under the same roof or in the same yard, and who share resources such as food or money to keep the household functioning (Stats SA, 2019a). Households are responsible for making a range of decisions including production, consumption, and investment decisions. A study by Posel (2001) reflected that household heads are those members within the households in whom more control over decision-making is vested. Household heads are the decision-makers, and Sebeho (2016) stated that members that are not heads of their household are unlikely to take decisions on farming activities. Table 4.2 illustrate that sixty-four percent of the respondents were heads of households.

Table 4. 2: Distribution of respondents who are household heads (n=212)

Household head	AMAHLATHI				RAYMOND MHLABA				TOTAL	
	Beneficiary		Non-beneficiary		Beneficiary		Non-beneficiary			
	n	%	n	%	n	%	n	%	**n**	**%**
Yes	39	59.1	27	67.5	43	65.2	27	67.5	136	64.2
No	27	40.9	13	32.5	23	34.8	13	32.5	76	35.8
TOTAL	**66**	**100**	**40**	**100**	**66**	**100**	**40**	**100**	**212**	**100**

Olayemi (2012) and Sekhampu (2017) indicated that a large family size could have a negative influence on household food security. Table 4.3 illustrates that the mean household size of 5.12 members was recorded for beneficiaries of SHFPP, while it was a little bit higher for non-beneficiaries (5.18 members). Although the household sizes vary between beneficiaries and non-beneficiaries, these differences were not statistically significant. The mean household size is higher than the national average of 3.31 persons per household (Stats SA, 2019). This implied that the demand for food to meet household requirements in the study areas were higher but on the other hand, the availability of family labour for homestead food production is more. The latter implied that farmers have to rely less on hired labour for farming operations.

Table 4. 3: Characteristics of farming households (n= 212)

Household size (members)	AMAHLATHI				RAYMOND MHLABA				TOTAL	
	Beneficiary		Non-beneficiary		Beneficiary		Non-beneficiary			
	n	%	n	%	n	%	n	%	**n**	**%**
1 – 5	31	47.0	21	52.5	45	68.2	24	60.0	121	57.1
6 – 10	35	53.0	19	47.5	21	31.8	16	40.0	91	42.9
TOTAL	**66**	**100**	**40**	**100**	**66**	**100**	**40**	**100**	**212**	**100**
Mean household size= 5.14 Mean Household size for beneficiaries= 5.12 Mean Household size non-beneficiaries=5.18										

4.3 Educational level of households

Stevens (2010) as cited in Sebeho (2016) pointed out that farmers that have acquired relatively high levels of education are more able to understand agricultural marketing and challenges. Paltasingh and Goyari (2018) indicated that education plays a significant role in improving farm productivity, particularly in the adoption of modern technology. Table 4.4 illustrates that 16.0% of the respondents have never been to school, while 84% attended school. Nineteen percent of respondents obtained a tertiary education qualification. A relatively high percentage (25%) of non-beneficiaries in Raymond Mhlaba have no school education, which is a great concern for finding jobs and household income.

The relatively high percentage of respondents who have undergone some level of education translates into a high prevalence of numeracy and literacy skills and that farmers are likely to understand and adopt technical extension messages that will enable them to improve agricultural production and agripreneurship.

Table 4. 4: Frequency distribution of the education level of respondents (n= 212)

Educational level	AMAHLATHI				RAYMOND MHLABA				TOTAL	
	Beneficiary		Non-beneficiary		Beneficiary		Non-beneficiary			
	n	%	n	%	n	%	n	%	**n**	**%**
No education	8	12.1	4	10.0	12	18.2	10	25.0	34	16.0
Primary school	30	45.5	14	35.0	20	30.3	13	32.5	77	36.3
Secondary school	16	24.2	13	32.5	22	33.3	10	25.0	61	28.8
Tertiary education	12	18.2	9	22.5	12	18.2	7	17.5	40	18.9
TOTAL	**66**	**100**	**40**	**100**	**66**	**100**	**40**	**100**	**212**	**100**

4.4 Employment status

The employment status of the household head has a direct effect on household livelihoods, particularly food security and poverty. The income of a household head influences food security and gainfully employed household heads tend to be food secure (Arene & Anyaeji, 2010). Table 4.5 demonstrates that 67.9% of the respondents were unemployed, while 23.1% indicated that they are employed in the informal and formal sectors. Two percent of respondents are pensioners, who have retired and are participating in the programme. In terms of self-employment, 6.6% of the respondents were self-employed. These respondents indicated their involvement in businesses such as owning tuckshops, sewing and the taxi industry.

The difference in the proportion of unemployment between the two municipalities is important to mention, with more unemployed non-beneficiaries (75%) and beneficiaries (71.2%) in Raymond Mhlaba compared to 55% and 68.2% respectively in Amahlathi. The relatively high unemployment rate among respondents (beneficiaries and non-beneficiaries) illustrates the importance of SHFPP in addressing household food insecurity. However, it appears from these findings that the programme did not successfully address the employment crisis that people face in these selected areas after 17 years since its introduction.

Table 4. 5: Distribution of employment status of the respondents (n=212)

Occupation status	AMAHLATHI				RAYMOND MHLABA				TOTAL	
	Beneficiary		Non-beneficiary		Beneficiary		Non-beneficiary			
	n	%	n	%	n	%	n	%	**n**	**%**
Employed	14	21.2	14	35.0	13	19.7	8	20.0	49	23.1
Unemployed	45	68.2	22	55.0	47	71.2	30	75.0	144	67.9
Self-employed	6	9.1	4	10.0	3	4.5	1	2.5	14	6.6
Pensioners	1	1.5	0	0.0	3	4.5	1	2.5	5	2.4
TOTAL	**66**	**100**	**40**	**100**	**66**	**100**	**40**	**100**	**212**	**100**

4.5 Household income

Most of South Africa's poverty is found in rural areas due to unemployment and a lack of sustainable income-generating activities. Stats SA (2019b) indicated that the diversification of livelihood strategies is key to reducing poverty and improving the livelihoods of households. According to Mphande (2016), rural households with multiple sources of income have a better chance of surviving financially than a household that has only one source. Table 4.6 reflects the sources of income for the respondents.

The findings as displayed in Table 4.6 reflects that more respondents depend on social grants for household income, with Amahlathi having the highest proportion of beneficiaries (78.8%) who relied on social grants. Seventy percent of the beneficiaries in Amahlathi indicated that they earn some portion of household income from farming (selling vegetables), while all the non-beneficiaries in both municipalities indicated they did not generate any income from farming. These results imply that social grants play the largest role in the household income of both beneficiaries and non-beneficiaries in two selected study areas. This finding supports the results of Musemwa *et al.,* (2015), which showed that most households in the Eastern Cape are dependent on government social grants for food security rather than own food production. Pension funds have the lowest contribution to the household income of beneficiaries and non-beneficiaries in both study areas.

Table 4. 6: Frequency distribution of household income sources

Sources of household income	AMAHLATHI		RAYMOND MHLABA	
	Beneficiary	Non-beneficiary	Beneficiary	Non-beneficiary
	%	%	%	%
Social grants	78.8	70.0	74.2	80.0
Farming	69.7	0.0	45.5	0.0
Salaries/wages	30.3	45.0	22.7	35.0
Pension	3.0	0.0	7.6	2.5
Remittances	16.7	17.5	33.3	25.0

Mphande (2016) defined rural livelihood as a complex structure comprising mostly agriculture, with part of the population diversifying into non-farm activities to attain a sustainable livelihood and to get a better income for their households. Stats SA (2019b) has shown that the Eastern Cape Province has a large number of households engaged in agricultural activities, mainly for an extra source of food.

Agriculture is one of the rural economic sectors from which rural people derive their livelihoods, such as the provision of food, improving incomes and creating employment. However, the isolation of rural people from the mainstream economy has reduced their access to resources they need to improve their agriculture (Stevens *et al.,* 2012). Table 4.7 reflects that 85.8% of the respondents regarded farming as an important contributor to the livelihood of their households. Non-beneficiaries perceived farming as an important source for the sustaining of household food security, while beneficiaries of the SHFPP indicated that farming provides an extra source of household food and in some cases an extra household income. The 14.2% of the respondents who indicated not to depend on farming activities for their livelihoods have other non-farm economic activities, which complement farming such as small businesses.

Table 4. 7: Frequency of respondents perceiving farming as important for their livelihoods (n= 212)

Farming	AMAHLATHI				RAYMOND MHLABA				TOTAL	
	Beneficiary		Non-beneficiary		Beneficiary		Non-beneficiary			
	n	%	n	%	n	%	n	%	**n**	**%**
Yes	56	84.8	29	72.5	61	92.4	36	90.0	182	85.8
No	10	15.2	11	27.5	5	7.6	4	10.0	30	14.2
TOTAL	**66**	**100**	**40**	**100**	**66**	**100**	**40**	**100**	**212**	**100**

4.6 Land tenure status

The land is an important natural asset of sustainable rural livelihoods. The FAO (2002) defined land tenure as the relationship, whether legally or customarily defined, among people, as individuals or groups, concerning land. Farmers were asked to state their land tenure status. Figure 4.1 indicates that the respondents have access to agricultural land either through the communal land tenure systems or inheritance of land. The communal land tenure systems were the most popular land tenure system, with 85.8% in Amahlathi and 84% in Raymond Mhlaba respectively. Communal tenure is the most common type of land tenure in rural areas of South Africa in which land rights are allocated by traditional authorities. Communal land tenure is a situation where a group holds secure and exclusive collective rights to own, manage and/or use land and natural resources (Andersen, 2011). Fourteen percent of the respondents in Amahlathi and 16% in Raymond Mhlaba indicated that they accessed land rights through inheritance in terms of family ties.

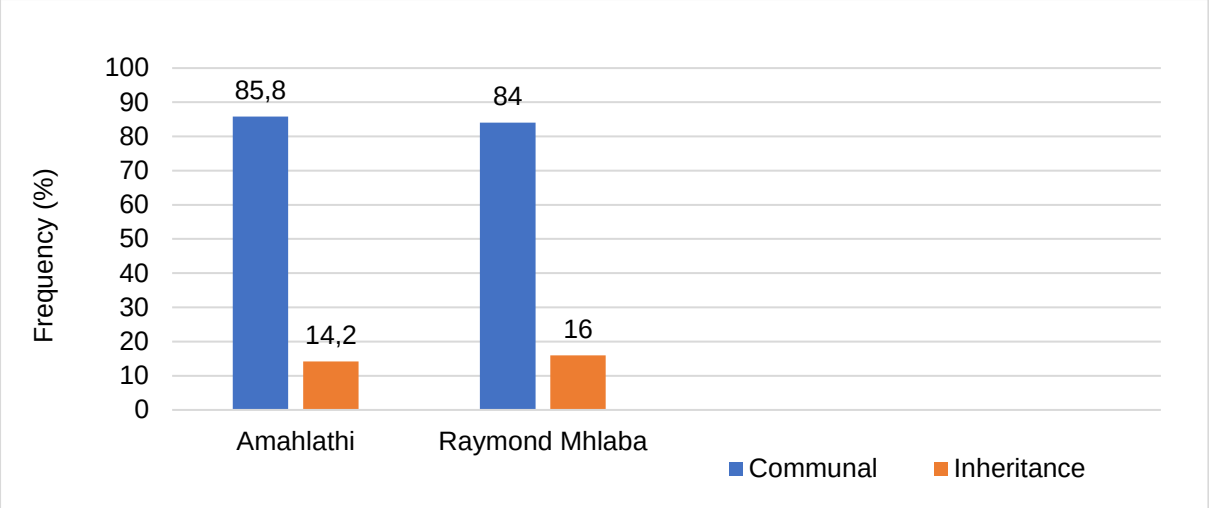

Figure 4. 1: Distribution of land tenure rights (n=212)

According to Ren *et al.,* (2019) farm size has a significant impact on agricultural sustainability. Ntai (2011) indicated that farmers operating on large-sized agricultural farms tend to be more profit-driven than those on small farms. Table 4.8 shows that the land holding sizes were categorized into four groups: <1ha; 1.0 - 2ha; 3 - 4ha and >4.0ha, with an average of 1.3 hectares. The small-scale farmers (≤2ha) constituted the largest group (83%), with the larger scale farmers (>3ha). The mean farm size is higher (1.4ha) for non-beneficiaries than for beneficiaries (1.3ha).

Table 4. 8: Land size (n=212)

Land size	**AMAHLATHI**				**RAYMOND MHLABA**				**TOTAL**	
	Beneficiary		**Non-beneficiary**		**Beneficiary**		**Non-beneficiary**			
	n	%	n	%	n	%	n	%	**n**	**%**
< 1ha	46	69.7	28	70.0	35	53.0	21	52.5	130	61.3
1.0 – 2ha	14	21.2	8	20.0	16	24.2	8	20.0	46	21.7
3 – 4ha	5	7.6	4	10.0	15	22.7	11	27.5	35	16.5
≥4ha	1	1.5	0	0.0	0	0.0	0	0.0	1	0.5
TOTAL	**66**	**100**	**40**	**100**	**66**	**100**	**40**	**100**	**212**	**100**
Mean farm size= 1.3ha Mean farm size for beneficiaries=1.3ha Mean farm size for non-beneficiaries=1.4ha										

4.7 Conclusion

Chapter Four provided a comparison of the socio-economic profile of the beneficiaries and non-beneficiaries in the chosen study areas. Results indicated high unemployment (67.9%) prevail among the beneficiaries as well as non-beneficiaries, and that the majority of respondents rely on social grants as a source of household income. These findings illustrated that SHFPP has, after several years of implementation, not been able to address employment amongst the beneficiaries of the SHFPP as nearly 70% of beneficiaries were still unemployed. The majority of beneficiaries in the programme were women (83%), since many of the men from the area were not residing there due to off-farm employment in other parts of South Africa.

CHAPTER 5

PERCEIVED EFFECTIVENESS OF SHFPP ON HOUSEHOLD FOOD SECURITY AND HOUSEHOLD INCOME

5.1 Introduction

The *Siyazondla* Homestead Food Production Programme (SHFPP) was introduced in the study area to support the production of vegetables in home gardens for household food security and possible household income purposes. Chapter Five presents the perceived effectiveness of the *Siyazondla* programme in improving household income and food security of beneficiary households by comparing the physical and financial accessibility of food between the beneficiaries and non-beneficiaries. The expectation was that land size and complementary support would increase food production of beneficiaries. The chapter also discusses the perceived challenges intervening with the outcomes of the programme.

5.2 Crops grown

Table 5.1 shows the distribution of crops and vegetables that were grown by the respondents in the two municipalities. The vegetables produced in priority order are as follows: spinach (80.2%), cabbages (75.7%), maize (62.7%), onions (58.7%), potatoes (36.3%), carrots (32.4%) and beetroot (28.3%). Beneficiaries have also grown the following vegetables: green pepper, turnip, pumpkin, broccoli, watermelon, drybean, lettuce, tomatoes, and butternut.

Table 5. 1: Distribution of the crops produced in the selected areas (priority order)

Crops	AMAHLATHI				RAYMOND MHLABA				Mean %
	Beneficiary		Non-beneficiary		Beneficiary		Non-beneficiary		
	n	%	n	%	n	%	n	%	%
Spinach	57	86.4	30	75.0	59	89.4	28	70.0	80.2
Cabbage	54	81.8	29	72.5	50	75.8	29	72.5	75.7
Maize	37	56.1	27	67.5	41	62.1	26	65.0	62.7
Onions	39	59.1	16	40.0	50	75.8	24	60.0	58.7
Potatoes	30	45.5	9	22.5	31	47.0	12	30.0	36.3
Carrots	32	48.5	7	17.5	32	48.5	6	15.0	32.4
Beetroot	29	43.9	7	17.5	26	39.4	5	12.5	28.3

Farmers were asked to indicate the produced yields for the crops they grow in their gardens. None of the respondents were able to quantify or estimate the yields they produce from their gardens. A possible reason for this could be that these production figures are not known by these farmers and secondly it is not important because they consume what they produced.

5.3 Livestock farming

Livestock farming plays an important role in household food supply and income generation in these areas. Table 5.2 illustrates that 62.7% of the respondents were involved in livestock farming. It appears that slightly more beneficiaries (65.9%) from both municipalities were involved in livestock farming than non-beneficiaries (57.5%) of the programme. A possible reason for this could be that beneficiaries have the advantage of diversifying more their agricultural enterprises than non-beneficiaries to alleviate household challenges. Also, farmers' perceptions of the importance of livestock production could influence whether the household will be engaged in both vegetable and livestock production.

Table 5. 2: Distribution of farmers involved in livestock farming in the selected areas (n=212)

Livestock	AMAHLATHI				RAYMOND MHLABA				TOTAL	
	Beneficiary		Non-beneficiary		Beneficiary		Non-beneficiary			
	n	%	n	%	n	%	n	%	**n**	**%**
Yes	46	69.7	24	60.0	41	62.1	22	55.0	133	62.7
No	20	30.3	16	40.0	25	37.9	18	45.0	79	37.3
TOTAL	**66**	**100**	**40**	**100**	**66**	**100**	**40**	**100**	**212**	**100**

Farmers were also asked to indicate the types of livestock enterprises they own on their farms. Table 5.3 indicates that farmers were involved in the following livestock enterprises in priority order: poultry (35.5%), goats (30.1%), cattle (27.7%) and pigs (17.9%). Poultry farming dominated the production of meat among respondents in Amahlathi (43.9%), while goat farming was dominant (39.4%) in Raymond Mhlaba. The respondents stated they use livestock for various purposes which included the performing of cultural and traditional activities, for selling as well as home consumption.

Table 5. 3: Distribution of the type of livestock owned by farmers (n=212)

Type of livestock	AMAHLATHI				RAYMOND MHLABA				Mean %
	Beneficiary		Non-beneficiary		Beneficiary		Non-beneficiary		
	n	%	n	%	n	%	n	%	%
Poultry	29	43.9	14	35.0	25	37.9	10	25.0	35.5
Goats	9	13.6	15	37.5	26	39.4	12	30.0	30.1
Cattle	17	25.8	10	25.0	18	27.3	13	32.5	27.7
Pigs	21	31.8	9	22.5	8	12.1	2	5.0	17.9

Poultry farmers were asked to indicate the numbers of poultry (chickens) they owned on their farms. Table 5.4 shows that 16.5% of these respondents kept between 11 and 20 poultry, while 9% of the respondents owned more than 21 poultry. The mean number of poultry farming for beneficiaries and non-beneficiaries was 15.1 and 16.1 chickens respectively.

Table 5. 4: Number of poultry owned by farmers (n=212)

Number of poultry	AMAHLATHI				RAYMOND MHLABA				TOTAL	
	Beneficiary		Non-beneficiary		Beneficiary		Non-beneficiary			
	n	%	n	%	n	%	n	%	**n**	**%**
None	37	56.1	26	65.0	41	62.1	30	75.0	134	63.2
1 - 10	9	13.6	3	7.5	9	13.6	3	7.5	24	11.3
11 - 20	13	19.7	7	17.5	10	15.2	5	12.5	35	16.5
21 - 35	7	10.6	4	10.0	6	9.1	2	5.0	19	9.0
TOTAL	**66**	**100**	**40**	**100**	**66**	**100**	**40**	**100**	**212**	**100**
Mean= 15.4 Mean for beneficiaries=15.1 Mean for non-beneficiaries=16.1										

The 27.7% of respondents who owned cattle used it mainly for draught power, social status, cultural rituals and to generate income by selling them.

The average size of herds ranges between 8 to 11 cattle (Table 5.5). Sebeho (2016) found that farmers in the Free State Province sold their cattle at auctions and where there are ritual activities in local communities.

Table 5. 5: Number of cattle owned by farmers (n=212)

Number of Cattle	AMAHLATHI				RAYMOND MHLABA				TOTAL	
	Beneficiary		Non-beneficiary		Beneficiary		Non-beneficiary			
	n	%	n	%	n	%	n	%	**n**	**%**
None	49	74.2	30	75.0	48	72.7	27	67.5	154	72.6
1 - 10	14	21.2	4	10.0	8	12.1	7	17.5	33	15.6
≥11	3	4.5	6	15.0	10	15.2	6	15.0	25	11.8
TOTAL	**66**	**100**	**40**	**100**	**66**	**100**	**40**	**100**	**212**	**100**
Mean= 7.8 Mean for beneficiaries=7.5 Mean for non-beneficiaries=8.3										

There are various reasons for goat farming in many subsistence farming households in South Africa. Braker, Udo and Webb (2002) indicated that the main reasons for goat farming in South Africa include household meat production, traditional purposes, commercial purposes, as well as a safety net since they are easily convertible into cash during desperate times. The 30% of respondents owning goats own mean herd sizes of 13 goats. The mean number of goats owned by the beneficiaries and non-beneficiaries was 13.6 and 12.2 goats, respectively (Table 5.6).

Table 5. 6: Number of goats owned in the two selected areas (n=212)

Number of goats	AMAHLATHI				RAYMOND MHLABA				TOTAL	
	Beneficiary		Non-beneficiary		Beneficiary		Non-beneficiary			
	n	%	n	%	n	%	n	%	**n**	**%**
None	57	89.4	24	60.0	40	60.6	28	70.0	149	70.1
1 - 10	5	7.6	7	17.5	6	9.1	5	12.5	23	11.0
11 - 20	4	6.1	8	20.0	17	25.8	6	15.0	35	16.5
21 - 40	0	0.0	1	2.5	3	4.5	1	2.5	5	2.4
TOTAL	**66**	**100**	**40**	**100**	**66**	**100**	**40**	**100**	**212**	**100**
Mean= 13.0 Mean for beneficiaries=13.6 Mean for non-beneficiaries=12.2										

5.4 Proportion of on-farm produce consumed

Baiphethi and Jacobs (2009) indicated that subsistence farming can contribute to household food security by increasing food supply and reducing the dependency on purchasing food at the markets. Table 5.7 shows that on-farm produce played proportionally a more important role amongst the beneficiaries and non-beneficiaries in Raymond Mhlaba than in Amahlathi with regard to providing food for household food consumption.

Table 5. 7: Proportion of on-farm produce used to sustain household food consumption (n=212)

Proportion (%) of food	AMAHLATHI				RAYMOND MHLABA				TOTAL	
	Beneficiary		Non-beneficiary		Beneficiary		Non-beneficiary			
	n	%	n	%	n	%	n	%	**n**	**%**
0 - 20	25	37.9	5	12.5	6	9.1	4	10.0	40	18.9
20 - 40	23	34.8	10	25.0	28	42.4	12	30.0	73	34.4
40 - 60	18	27.3	15	37.5	32	48.5	10	25.0	75	35.4
≥60	0	0.0	10	25.0	0	0.0	14	35.0	24	11.3
TOTAL	**66**	**100**	**40**	**100**	**66**	**100**	**40**	**100**	**212**	**100**

In Raymond Mhlaba, 49% of beneficiaries in comparison to 27% of beneficiaries in Amahlathi indicated to use between 40 to 60% of the farm produce to sustain household consumption. Possible reasons for this could be that the beneficiaries in Amahlathi relied more on market purchases for household food consumption than in Raymond Mhlaba due to a bigger proportion of produce sold. Among the non-beneficiaries, 62.5% and 60% of respondents in Amahlathi and Raymond Mhlaba respectively have used between 40 and 60% of on-farm produce for sustaining household food consumption.

5.5 Perceived contribution of the SHFPP to agricultural production and household income

In this section, the study assessed the potential contribution of the SHFPP to on-farm production, household income and food security.

5.5.1 Improved agricultural production

Improved agricultural production is important for sustaining food security. Access to relevant and reliable agricultural information is an entry point for improving agricultural production and sustainable food security in South Africa (Raidimi & Kabiti, 2019). Table 5.8 illustrates that 73.5% of the respondents indicated the agricultural production has improved significantly due to their involvement in the programme. Eighty-two percent of beneficiaries from Amahlathi perceived major improvement in agricultural production, while 65% of the beneficiaries in Raymond Mhlaba perceived the same improvement based on visual observation as none of them could quantify the yields obtained.

Table 5. 8: Perceived improvement of agricultural production (n=132)

Improvement in agricultural production	**AMAHLATHI**		**RAYMOND MHLABA**		**TOTAL**	
	Beneficiaries		**Beneficiaries**			
	n	%	n	%	**n**	**%**
No improvement	0	0.0	5	7.6	5	3.8
Little improvement	12	18.2	18	27.3	30	22.7
Major improvement	54	81.8	43	65.2	97	73.5
TOTAL	**66**	**100**	**66**	**100**	**132**	**100**

5.5.2 Household income

Beneficiaries were also asked to illustrate whether participation in the SHFPP influenced household income. Increased household income was supposed to be achieved through the growing of vegetable crops that could be sold. Table 5.9 illustrates that 35.8% of the beneficiaries sell some of their agricultural produce. It appears that more beneficiaries (68.2%) in Amahlathi sell some proportion of their produce than in Raymond Mhlaba (47%). A possible reason could be that beneficiaries in Raymond Mhlaba used a greater percentage of on-farm produce for sustaining household food requirements. In comparison, none of the non-beneficiaries in both municipalities indicated that they could sell on-farm produce since on-farm produce was mainly used for household food consumption (Table 5.9).

Table 5. 9: Distribution of on-farm produce sold (n=212)

Selling of on-farm produce	AMAHLATHI				RAYMOND MHLABA				TOTAL	
	Beneficiary		Non-beneficiary		Beneficiary		Non-beneficiary			
	n	%	n	%	n	%	n	%	**n**	**%**
Yes	45	68.2	0	0.0	31	47.0	0	0.0	76	35.8
No	21	31.8	40	100	35	53.0	40	100	136	64.2
TOTAL	**66**	**100**	**40**	**100**	**66**	**100**	**40**	**100**	**212**	**100**

Gaining access to markets is a prerequisite for the rural poor to realise the benefits of agricultural growth (Baloyi, 2010). Respondents that are selling agricultural produce were asked to indicate their target market. Table 5.10 illustrates that the target market for beneficiaries in priority order was firstly the local informal market (57.6%) where they sell it to community members. Secondly, beneficiaries also sell it to family members (46.2%) and thirdly they sell it to hawkers (15.9%) who approached them on the farm. In the case of Amahlathi, 9% of beneficiaries indicated that they were able to close a contract with a local supermarket to sell some of their farm produce due to extension support in the negotiation process.

Table 5. 10: Target market as per selected municipality

Target market	AMAHLATHI		RAYMOND MHLABA		Average %
	Beneficiary		Beneficiary		
	n	%	n	%	
Local informal market	45	68.2	31	46.9	57.6
Family members	33	50.0	28	42.4	46.2
Hawkers	18	27.3	3	4.5	15.9
Local supermarket	6	9.1	0	0.0	4.6

Only beneficiaries (n=76) who were selling their vegetables were asked to estimate the contribution of on-farm sales to household income. Table 5.11 shows that the beneficiary households of SHFPP in two municipalities generated a fair income from the on-farm sales of vegetables to their households. Incomes were categorised into three broad groups: less than 20%; 20-60% and 60-80%. Table 5.11 illustrates that 26.7% and 6.5% of the beneficiaries in Raymond Mhlaba and Amahlathi respectively indicated that they generate more than 60% of household income from the sales of vegetables. This illustrates that the programme significantly contributed to the ability of participating households to generate additional income through the sale of on-farm produce.

Table 5. 11: Proportion of household income derived from on-farm sales (n=76)

Household income (%)	AMAHLATHI		RAYMOND MHLABA		TOTAL	
	Beneficiary		Beneficiary			
	n	%	n	%	**n**	**%**
< 20	5	11.1	5	16.1	10	13.2
20 - 60	28	62.2	24	77.4	52	68.4
60 - 80	12	26.7	2	6.5	14	18.4
TOTAL	**45**	**100**	**31**	**100**	**76**	**100**

The level of household income determines how much households spend on food items. Van Wyk and Dlamini (2018) indicated a negative relationship between food prices and household welfare in South Africa. Poor households tend to spend a large proportion of their total household income on food purchases (Pinstrup-Andersen, 1985). Jacobs (2009) indicated that food price inflation affects the purchasing power of poor households and therefore impact negatively on food security. Beneficiaries and non-beneficiaries were asked to indicate the proportion of household income spent on buying additional food not produced on the farm.

Table 5. 12: Percentage of household income spent on food purchases (n=212)

Household Income (%)	AMAHLATHI				RAYMOND MHLABA				TOTAL	
	Beneficiary		Non-beneficiary		Beneficiary		Non-beneficiary			
	n	%	n	%	n	%	n	%	**n**	**%**
< 20	8	12.1	1	2.5	11	16.7	3	7.5	23	10.8
20 - 60	40	60.6	15	37.5	50	75.8	11	27.5	116	54.7
60 - 80	18	27.3	24	60.0	5	7.6	25	62.5	72	34.0
>80	0	0.0	0	0.0	0	0.0	1	2.5	1	0.5
TOTAL	**66**	**100**	**40**	**100**	**66**	**100**	**40**	**100**	**212**	**100**

Table 5.12 shows that 54.7% of the respondents spend between 20 and 60% of their household income on food purchases. Among the beneficiaries, 75.8% of the respondents in Raymond Mhlaba and 60.6% in Amahlathi respectively spend between 20 and 60% of their household income on food. The non-beneficiaries in both municipalities spend proportionally a greater percentage of household income (between 60 – 80%) on food purchases. A possible reason for this finding could be that the non-beneficiaries produced relatively low yields from their gardens.

5.6 Perceived effectiveness of the SHFPP with regard to agricultural inputs and extension services

The *Siyazondla* programme was implemented to increase access to agricultural inputs and extension support services, with the purpose of improving access to nutritious food and possible income generation by selling the surplus.

5.6.1 Farmer's access to production inputs

Increasing the productivity of smallholder and subsistence farmers requires a significant increase in farmer's access and use of improved farm inputs such as fertilisers, organic inputs, and conservation investments (Baiphethi & Jacobs, 2009). However, Sinyolo and Mudhara (2018) found that smallholder farmers in many developing countries are challenged with limited access to improved farm inputs and markets.

a) Improvement of production inputs

Departmental extension officers were responsible for the delivery of agricultural inputs to beneficiaries of the SFHPP in the two selected areas and to form farmer groups in the communities to facilitate easy access during the delivery of inputs. The production inputs provided include seeds, seedlings, fertilisers, pesticides and garden tools. Table 5.13 shows that 59.1% of the beneficiaries did not perceive any or little improvement in terms of accessing farm inputs apart from seed from the government since the introduction of SHFPP.

Table 5. 13: Perceived improvement with access to production inputs (n=132)

Improvement in input access	AMAHLATHI		RAYMOND MHLABA		TOTAL	
	Beneficiaries		Beneficiaries			
	n	%	n	%	n	%
No improvement	10	15.2	4	6.1	14	10.6
Little improvement	25	37.9	39	59.1	64	48.5
Major improvement	31	47.0	23	34.8	54	40.9
TOTAL	**66**	**100**	**66**	**100**	**132**	**100**

b) Seed

Farmers were asked how they have accessed seeds they use on their farms. Table 5.14 illustrates that 43.4% of the beneficiaries obtained seeds from the government through DRDAR. A relatively high percentage of beneficiaries in Raymond Mhlaba and Amahlathi bought seeds from local seed companies (23.5%) and agrodealers (12.1%).

Table 5. 14: Farmer's access to seeds (n=212)

Seed supplier	AMAHLATHI				RAYMOND MHLABA				TOTAL	
	Beneficiary		Non-beneficiary		Beneficiary		Non-beneficiary			
	n	%	n	%	n	%	n	%	**n**	**%**
Government	53	80.3	0	0.0	39	59.1	0	0.0	92	43.4
Seed company	13	19.7	15	37.5	18	27.3	16	40.0	62	29.2
Agro-dealer	0	0.0	21	52.5	8	12.1	14	35.0	43	20.3
Fellow farmers	0	0.0	4	10.0	1	1.5	10	25.0	15	7.1
TOTAL	**66**	**100**	**40**	**100**	**66**	**100**	**40**	**100**	**212**	**100**

c) Fertilisers

Table 5.15 shows that 37.3% of the respondents indicated that they buy inorganic fertilisers from fertiliser companies and agro-dealers. Fifty-six percent of the respondents indicated that they do not have access to inorganic fertilisers and used kraal manure and compost instead. These findings concur with Khapayi and Celliers (2016) who reported that 54% of smallholder farmers in King William's Town in the Eastern Cape Province have no or inadequate experience of accessing and using chemical fertilisers due to high prices.

Table 5. 15: Farmer's access to inorganic fertilizers (n=212)

Supplier of inorganic fertilisers	AMAHLATHI				RAYMOND MHLABA				TOTAL	
	Beneficiary		Non-beneficiary		Beneficiary		Non-beneficiary			
	n	%	n	%	n	%	n	%	**n**	**%**
Fertiliser company	21	31.8	12	30.0	23	34.8	8	20.0	64	30.2
Agro-dealer	6	9.1	0	0.0	9	13.6	0	0.0	15	7.1
Fellow farmers	2	3.0	2	5.0	2	3.0	8	20.0	14	6.6
No access	37	56.1	26	65.0	32	48.5	24	60.0	119	56.1
TOTAL	**66**	**100**	**40**	**100**	**66**	**100**	**40**	**100**	**212**	**100**

d) Agrochemicals

Agrochemical refers to any agricultural remedy that is registered in terms of Act 36 of 1947, which includes herbicides, miticides, insecticides, nematicides and fungicides (du Plessis & Allsopp., n.d). Table 5.16 illustrates that 74.1% of the respondents did not have access to agrochemicals, while 25.9% reported that they bought these chemicals from agrodealers. It appears that beneficiaries in Amahlathi (34.8%) and Raymond Mhlaba (27.3%) have better access to agrochemicals through agrodealers in comparison to non-beneficiaries. A possible reason for this is the fact that the beneficiaries of SHFPP received extension support in terms of where and how to access agrochemicals, while the non-beneficiaries did not have this support.

Table 5. 16: Farmer's access to agrochemicals (n=212)

Supplier of agrochemicals	AMAHLATHI				RAYMOND MHLABA				TOTAL	
	Beneficiary		Non-beneficiary		Beneficiary		Non-beneficiary			
	n	%	n	%	n	%	n	%	**n**	**%**
Agro-dealer	23	34.8	7	17.5	19	27.3	6	15.0	55	25.9
No access	43	65.2	33	82.5	47	71.2	34	85.0	157	74.1
TOTAL	**66**	**100**	**40**	**100**	**66**	**100**	**40**	**100**	**212**	**100**

e) Livestock feed and medicine

Livestock farmers were asked to indicate how they access livestock feeds and medicine. Table 5.17 illustrates that 52% of the beneficiaries in Amahlathi purchase livestock feed and medicine from agro-dealers, while only 39.1% of beneficiaries in Raymond Mhlaba buy livestock feeds and medicine from agro-dealers. A possible reason for this finding could be that beneficiaries in Raymond Mhlaba sell a relatively low proportion of on-farm produce, and therefore have less funds to purchase livestock feed and medicine.

Table 5. 17: Farmer's access to livestock feed and medicine (n=133)

Feed suppliers	AMAHLATHI				RAYMOND MHLABA				TOTAL	
	Beneficiary		Non-beneficiary		Beneficiary		Non-beneficiary			
	n	%	n	%	n	%	n	%	**n**	**%**
Agro-dealer	24	52.2	10	41.7	16	39.1	9	40.9	59	44.4
No access	22	47.8	14	58.3	25	60.9	13	59.1	74	55.6
TOTAL	**46**	**100**	**24**	**100**	**41**	**100**	**22**	**100**	**133**	**100**

5.6.2 Access to extension services

Sebeho and Stevens (2019) pointed out that agricultural extension plays a central role in promoting and supporting farmers to achieve sustainable agricultural growth and ensuring access to means of production in many developing countries. Since one of the objectives of the SHFPP was to improve access to extension support to programme participants, respondents were probed to indicate any changes with respect to the availability of public extension services. Table 5.18 shows that 91.7% of the beneficiaries did not experience any or little improvement in accessing agricultural extension services. This is a concerning observation as extension support with the implementation of the programme is crucial for its success.

Table 5. 18: Perceived improvement of access to extension services (n=132)

Improvement in access to extension	AMAHLATHI		RAYMOND MHLABA		TOTAL	
	Beneficiary		Beneficiary			
	n	%	n	%	**n**	**%**
No improvement	23	35.0	31	47.0	54	40.9
Little improvement	34	51.5	33	50.0	67	50.8
Major improvement	9	13.6	2	3.0	11	8.3
TOTAL	**66**	**100**	**66**	**100**	**132**	**100**

5.6.3 Access to markets

Sustainable access to markets motivates smallholder farmers to increase their production. Most of the smallholder and subsistence farmers in South Africa find it difficult to participate in modern agricultural value chains (Von Loeper *et al.,* 2016). SHFPP also aimed to increase farmer's access to market opportunities through improved extension services. However, Table 5.19 indicates that 78% of the respondents did not perceive any improvement in access to market opportunities. Some of the improved market conditions perceived included the farmers (4.5%) who were able to close contracts with local supermarkets and those who sell to hawkers. These findings should raise concern among the extension officers who are responsible for facilitating and supporting farmers to find appropriate markets.

Table 5. 19: Perceived improvement of access to markets (n=132)

Improvement in market access	AMAHLATHI		RAYMOND MHLABA		TOTAL	
	Beneficiaries		Beneficiaries			
	n	%	n	%	n	%
No improvement	47	71.2	56	84.8	103	78.1
Little improvement	13	19.7	10	15.2	23	17.4
Major improvement	6	9.1	0	0.0	6	4.5
TOTAL	**66**	**100**	**66**	**100**	**132**	**100**

5.7 Job opportunities and improved food security

Small-scale farming usually incorporates family labour (DAFF, 2014). Table 5.20 illustrates that 75.8% of the programme beneficiaries in both municipalities perceived an improvement in opportunities for family members to get involved with production on the farm.

Table 5. 20: Perceived improvement of job opportunities due to SHFPP (n=132)

Improvement in job opportunities	AMAHLATHI		RAYMOND MHLABA		TOTAL	
	Beneficiary		Beneficiary			
	n	%	n	%	**n**	**%**
No improvement	21	31.8	11	16.7	32	24.2
Little improvement	27	40.9	30	45.5	57	43.2
Major Improvement	18	27.3	25	37.9	43	32.6
TOTAL	**66**	**100**	**66**	**100**	**132**	**100**

Table 5.21 illustrates that 68.2% of the beneficiaries in Amahlathi and Raymond Mhlaba reported that the programme had a major improvement on their food security status. This was also confirmed by Kubheka (2015) who indicated that the SHFPP improved the household food security of the beneficiaries by having a higher vegetable consumption, dietary diversity and household income to supplement household food.

Table 5. 21: Perceived improvement in food security status due to SHFPP (n=132)

Improvement in food security	AMAHLATHI		RAYMOND MHLABA		TOTAL	
	Beneficiaries		Beneficiaries			
	n	**%**	**n**	**%**	**n**	**%**
No improvement	3	4.5	0	0.0	3	2.3
Little improvement	18	27.3	21	31.8	39	29.5
Major improvement	45	68.2	45	68.2	90	68.2
TOTAL	**66**	**100**	**66**	**100**	**132**	**100**

The *Siyazondla* programme aimed to increase the availability of fresh vegetables to its beneficiaries in the Amathole District Municipality. Figure 5.1 illustrates that all the beneficiaries in Amahlathi (100%) and 92.4% in Raymond Mhlaba perceived an increase in the availability of fresh vegetables in their households due to the programme.

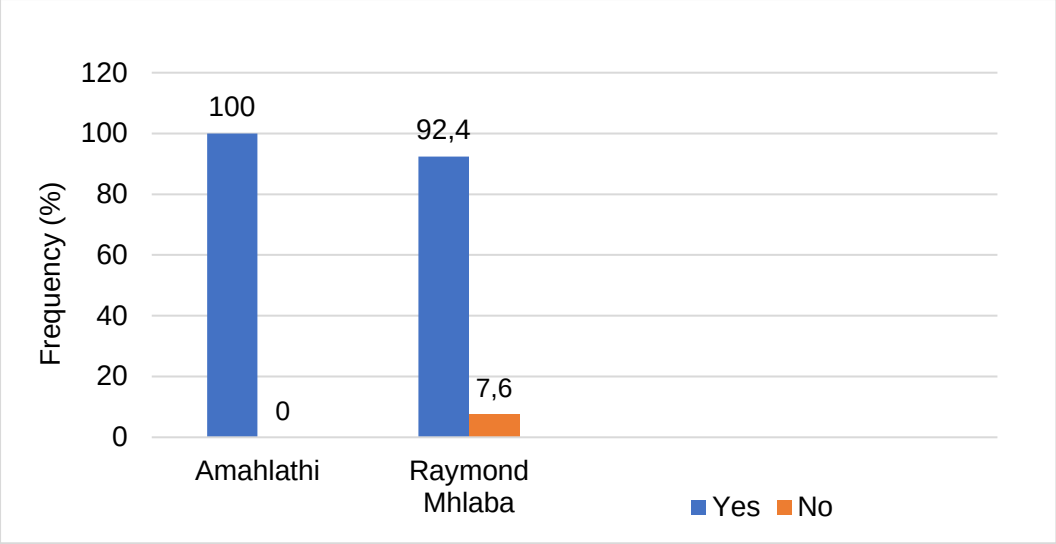

Figure 5. 1: The perceived increase in vegetable production among the beneficiaries (n=132)

Table 5.22 shows the number of households who faced food shortages between the 2017/18 and 2018/19 production seasons. Thirty percent of the respondents faced food shortages between the 2017 and 2018 production seasons, while 23.6% indicated food shortages during 2018/19. This noticeable decline in food shortages during 2018/19 shows that the SHFPP has indeed addressed food security at the household level. The increase in food shortages experienced among the non-beneficiaries of SHFPP, on the other hand conclusively shows the advantages of food security programmes like the SHFPP. Despite the available land sizes and complimentary support provided, the proportion of the beneficiaries of SHFPP not able to sustain household food security is still concerning.

Table 5. 22: Proportion of SHFPP beneficiaries and non-beneficiary households experienced food shortages during 2017/2018 and 2018/2019 seasons (n=212)

Production seasons	AMAHLATHI				RAYMOND MHLABA				TOTAL	
	Beneficiary		Non-beneficiary		Beneficiary		Non-beneficiary			
2017/2018	n	%	n	%	n	%	n	%	**n**	**%**
Yes	18	27.3	13	32.5	16	24.2	17	42.5	64	30.2
No	48	72.7	27	67.5	50	75.8	23	57.5	148	69.8
TOTAL	**66**	**100**	**40**	**100**	**66**	**100**	**40**	**100**	**212**	**100**
2018/2019	n	%	n	%	n	%	n	%	**n**	**%**
Yes	9	13.6	12	30.0	15	22.7	14	35.0	50	23.6
No	57	86.4	28	70.0	51	77.3	26	65.0	162	76.4
TOTAL	**66**	**100**	**40**	**100**	**66**	**100**	**40**	**100**	**212**	**100**

Kisi *et al.,* (2018) stated that households experiencing food insecurity tend to adopt coping strategies related to consumption behaviour and asset management such as eating less preferred food, lower quality or less expensive foods. Respondents who experienced food shortages reported adopting a number of coping strategies to avert the effects of food shortages in their households. Table 5.23 illustrates a greater proportion of respondents reducing food portions or skipping meals (reduced number of meals per day) (39.5%) or were relying on family support for food (33.3%). Nearly nine percent of respondents took up job opportunities on neighbour farms. Coping mechanisms are unstainable and negative in nature because they could lead to a degradation of household assets, thus further exacerbating food insecurity.

Table 5. 23: Coping strategies adopted by food-insecure households (n=114)

Coping Strategies	AMAHLATHI				RAYMOND MHLABA				TOTAL	
	Beneficiary		Non-beneficiary		Beneficiary		Non-beneficiary			
	n	%	n	%	n	%	n	%	**n**	**%**
Asking from family	12	44.4	7	28.0	10	32.3	9	29.0	38	33.3
Reducing food portions	6	22.2	5	20.0	11	35.5	6	19.4	28	24.6
Skipping meals	2	7.4	6	24.0	2	6.5	7	22.6	17	14.9
Selling household assets and livestock	4	14.8	3	12	6	19.4	8	25.8	21	18.4
Working in other people's fields	3	11.1	4	16.0	2	6.5	1	3.2	10	8.8
TOTAL	**27**	**100**	**25**	**100**	**31**	**100**	**31**	**100**	**114**	**100**

5.8 Perceived challenges faced with agricultural production

Beneficiaries and non-beneficiaries were asked to indicate challenges they experience in farming. Table 5.24 illustrates that 71.3% of the non-beneficiaries in comparison with 46% of the beneficiaries of SHFPP reported the lack of access to production inputs such as seeds, fertilisers and agrochemicals as an inhibiting factor. Respondents also indicated that agricultural pests are a challenge on their farms, and they experience a lack of funds to buy the necessary agrochemicals as well as they received poor extension support with regard to addressing the problem. Other challenges faced included access to appropriate agricultural finance and poor fencing of crop fields which makes it susceptible to damage by livestock, and also the need for farm equipment.

The non-beneficiaries (100%) experienced challenges with regard to access to markets, while 78% of the beneficiaries indicated that market access remains a challenge. A lack of farming skills was indicated as a challenge by the beneficiaries (4.6%) and non-beneficiaries (12.5%) of SHFPP due to low or poor extension support.

Table 5. 24: Challenges facing farmers with regard to agricultural production in the selected municipalities (n=212)

Challenges	AMAHLATHI				RAYMOND MHLABA				Mean % beneficiary	Mean % non-beneficiary
	Beneficiary		Non-beneficiary		Beneficiary		Non-beneficiary			
	n	%	n	%	n	%	n	%		
Lack of farming inputs	14	21.2	28	70.0	46	69.7	29	72.5	45.5	71.3
Agricultural pests	47	71.2	34	85.0	39	59.1	27	67.5	65.2	76.3
Access to agricultural finance	21	31.8	40	100	20	30.3	12	30.0	31.2	65.0
Poor/no fencing of agricultural land	17	25.8	8	20.0	27	40.9	10	25.0	33.4	22.5
Agricultural land issues	2	3.0	4	10.0	0	0.0	2	5.0	1.5	7.5
Lack of irrigation equipment	21	31.8	3	7.5	18	27.3	5	12.5	29.6	10.0
Access to markets	47	71.2	40	100	56	84.8	40	100	78.0	100
Inadequate farming skills	2	3.0	5	12.5	4	6.1	5	12.5	4.6	12.5
Other challenges	13	19.7	18	45.0	25	37.9	19	47.5	28.8	46.3

Other important challenges faced by the beneficiaries (28.8%) and non-beneficiaries (46.3%) with agricultural production included environmental factors such as drought and relatively low production yields. The difference perceived in agricultural production challenges between the beneficiaries and non-beneficiaries were varying due to the effect of the SHFPP on the access to inputs and markets.

According to Mdlalose (2016), agricultural marketing is key to economic development and poverty alleviation. It is vital for small-scale farmers to fully understand the complexity of

agricultural marketing since it influences their decision making and incomes (Mdlalose, 2016). The major marketing challenges as indicated by the beneficiaries of SHFPP include a lack of marketing information (59.9%), long distances to markets (38.6%), lack of transportation to markets (37.1%) and low-quality produce (14.4%).

5.9 Farmer recommendations to improve the programme

It is important to recognise that farmer's recommendations are essential for policy formulation and programme design. Farmers were asked to recommend how to improve the impact and sustainability of the *Siyazondla* programme (Table 5.25). Eighty-five percent of the beneficiaries in Amahlathi while 87.9% of the beneficiaries in Raymond Mhlaba respectively recommended that access to production inputs such as fertilisers, agrochemicals and seeds should be improved. This was no surprise since the majority of beneficiaries identified inadequate input access as their biggest challenge with regard to agricultural production (Table 5.24).

Access to extension services was also perceived as a challenge in the study areas. 47% of the beneficiaries in Amahlathi and 78.8% of the beneficiaries in Raymond Mhlaba respectively recommended that there is an urgent need to increase access to extension services. This need perceived was even more urgent amongst the non-beneficiaries of the programme. The third recommendation in priority order was to improve information support. Agricultural training was also perceived as inadequate, and respondents also raised concerns about the way that programmes like SHFPP were advertised and rolled out to farmers. Respondents perceived that information about the programme was not widely and fairly communicated in the communities in which they live but was targeted to particular groups of farmers.

Table 5. 25: Farmer's recommendations on improvement of SHFPP

Farmer's recommendation	AMAHLATHI				RAYMOND MHLABA			
	Beneficiary		Non-beneficiary		Beneficiary		Non-beneficiary	
	n	%	n	%	n	%	n	%
Increase input supply/access	56	84.8	35	87.5	58	87.9	37	92.5
Extension services needed	31	47.0	31	77.5	52	78.8	32	80.0
Market information support	30	45.5	19	47.5	37	56.1	18	45.0
Agricultural training	20	30.3	10	25.0	18	27.3	15	37.5
Fencing of agricultural land	7	10.6	6	15.0	19	28.8	9	22.5
Raise awareness of SHFPP	8	12.1	9	22.5	0	0.0	8	20.0
Irrigation equipment	5	7.6	10	25.0	29	43.9	8	20.0
Agricultural land needed	10	15.2	6	15.0	0	0.0	1	2.5

5.10 Conclusion

This chapter discussed the perceived effectiveness of the *Siyazondla* programme in improving the household income and food security of the beneficiaries in the chosen study areas. Findings show that the beneficiaries of the SHFPP perceived the programme as effective in improving their food security status and household income by increasing the availability of fresh vegetables. Beneficiaries of SHFPP had better access to fresh vegetables, in comparison with non-beneficiaries. This has enabled the beneficiaries to sell some part of the produce to generate extra household income, while none of the non-beneficiaries embarked on this activity. The chapter also presented the perceived challenges facing the beneficiaries and non-beneficiaries of SHFPP in the study areas. Findings showed that beneficiaries and non-beneficiaries experienced many challenges such as low access to markets, inadequate production inputs and weak extension support.

CHAPTER 6

PERCEIVED EFFICACY OF EXTENSION SUPPORT FOR SHFPP BENEFICIARIES

6.1 Introduction

Agricultural development is about an improvement in the quality of life and economic well-being of farmers, herders and agricultural workers (IFAD, 2016). Agricultural development involves improving agricultural services, agricultural incentives and technologies, and the resources used in agriculture such as human capital and rural infrastructure (IFAD, 2016). Sebeho and Stevens (2019) asserted that in developing countries, agricultural extension is responsible for promoting and supporting farmers to ensure sustainable agricultural growth and access to key means of production. Therefore, agricultural extension has unique roles to play in agricultural support programmes like SHFPP.

This chapter provides the profile of 10 service providers that have played a role in the implementation of the *Siyazondla* programme in these two municipalities. It also discusses the perceptions of SHFPP beneficiaries and extension staff with regard to the efficacy of the programme in addressing the objectives set for it.

6.2 Service providers involved with the implementation of the *Siyazondla*

The nature of agricultural development requires that services be provided not only by the government departments but also by other partners, such as non-government organisations (NGOs) and private sector companies. According to Gemo, Stevens and Chilonda (2013), the provision of extension services in many countries across the world involves multiple service providers responding to the needs and demands of farmers. Beneficiaries of SHFPP received knowledge support and other services from the following role players:

(a) Umtiza Farmer's Corporation

Umtiza Farmer's Corporation is operating only in the Eastern Cape Province, and provides advice, training programs, market linkages and agricultural inputs at affordable costs to commercial and emerging farmers, and small-scale stock and crop owners. The *Umtiza* Corporation provided training courses on vegetable and crop production and agricultural inputs including seeds and seedlings to beneficiaries.

(b) Arysta

Arysta is a global agricultural company specializing in the marketing and distribution of innovative crop protection and life science brand to improve the standard of living of farmers.

Arysta provided inputs such as agrochemicals and training on pest control measures to beneficiaries.

(c) Solidaridad

Solidaridad operates in many countries worldwide to help smallholders to access inputs and promote good practices in a range of commodities. Solidaridad's role in the *Siyazondla* programme was to train the beneficiaries on input application and vegetable production.

(d) Department of Rural Development and Agrarian Reform (DRDAR)

In the SHFPP, DRDAR is responsible for supporting agricultural production, supporting farmers with the marketing of the produce and providing garden maintenance (Phezisa, 2016). The extension staff from DRDAR indicated that their support to farmers participating in the programme included providing technical advice to farmers (80%); organising and coordinating the workshops and training of farmers (60%) and in the identification of suitable beneficiaries (20%) for the programme. The SHFPP is primarily targeted to poor and food insecure rural households. The identification of suitable participants was achieved through the interaction of extension staff and community leaders, influential farmers, and social workers. Beneficiaries were identified when they attend extension meetings and farmer group gatherings in the communities (Phezisa, 2016).

6.3 Profile of Departmental (DRDAR) Eastern Cape extension officers

The majority of extension officers that have participated in this study were males (70%) (Table 6.1) and comprised of Agricultural Advisors (70%); Control Agricultural Development Technicians (20%) and a Chief Agricultural Development Technician (10%). Sebeho (2016) stated that knowledge and experience in agriculture influence the performance of extension officers. Makapela (2015) suggested that agricultural extension officers should have a good level of educational background to be able to diffuse the early adoption of technologies and record-keeping skills to farmers. Table 6.1 reflects that the majority of extension staff achieved a Bachelor's degree (70%), while 20% obtained an Honours degree. Fifty percent of extension staff have more than 10 years of working experience. This is encouraging since it reflected staff with extensive experience responsible for the implementation of the programme.

Table 6. 1: Profile of departmental extension officers (n=10)

Gender	**AMAHLATHI and RAYMOND MHLABA**	
	n	**%**
Male	7	70.0
Female	3	30.0
TOTAL	**10**	**100**
Position in the Department	**n**	**%**
Control Agricultural Development Technician	2	20.0
Chief Agricultural Development Technician	1	10.0
Agricultural Advisor	7	70.0
TOTAL	**10**	**100**
Years of working experience	**n**	**%**
6 – 10 years	5	50.0
11 - 15 years	4	40.0
≥16 years	1	10.0
TOTAL	**10**	**100**
Educational qualifications	**n**	**%**
National diploma	1	10.0
Bachelor's degree	7	70.0
Honours degree	2	20.0
TOTAL	**10**	**100**
Area of Specialisation	**n**	**%**
Crop Production	6	60.0
Animal Production	0	0.0
Agricultural Extension	3	30.0
Other	1	10.0
TOTAL	**10**	**100**

Stevens and Van Heerden (2007) suggested that agricultural extension officers should not only have an adequate level of tertiary qualification in agriculture but also subject matter specialisation in an appropriate field which is critical for agricultural development. Extension staff were asked to indicate the area of specialisation they have obtained through their tertiary qualifications (Table 6.1). It was encouraging to witness that the majority of the extension officers supporting farmers in the SHFPP had a specialisation in Crop Production (60%), which illustrates that they were technically well educated to deliver the necessary support services.

The dynamic nature of the agriculture sector requires that both farmers and extension staff be frequently trained (Sebeho & Stevens, 2019). Their work further suggested that in-service training of extension staff on technical and soft skills should be conducted more frequently to enable the staff to perform their work effectively and with efficiency. Although training of public extension staff is rarely conducted mainly due to limited budgets, Sebeho and Stevens (2019) recommended that government departments should make adequate budget allocations for this training. Table 6.2 illustrates that 60% of the extension staff received training before the implementation of the programme mainly in vegetable and crop production (40%) and the use of agrochemicals (40%) such as herbicides and pesticides. Extension staff also received training on bookkeeping and the keeping of farm records. The extension staff did not indicate any training on soft skills such as organising of farmer groups and agripreneurship. Extension staff indicated that follow-up in-service training was not received due to limited financial resources available.

Table 6. 2: Training received before the implementation of the SHFPP (n=10)

Received training	**AMAHLATHI and RAYMOND MHLABA**	
	n	**%**
Yes	6	60.0
No	4	40.0
TOTAL	**10**	**100**
Areas of training received	**n**	**%**
Vegetable/crop production	4	40.0
Use of agrochemicals	6	40.0
Calibration	2	20.0
Bookkeeping	2	20.0

6.3.1 Number of years involved in SHFPP

The *Siyazondla* programme was first implemented in the Eastern Cape Province during the 2003/4 financial year by the Eastern Cape Department of Agriculture (ECPGDP, 2004). Sixty percent of the extension staff have been working on the programme for more than 10 years. During the time since the inception of the programme, the extension staff have witnessed numerous changes in the programme, which include the reduction of funding allocated for the SHFPP and changes to the implementation strategy of the programme. They indicated that, initially, the SHFPP aimed at supplying a whole package of production inputs. Currently, the focus is only on supplying seeds and seedlings, which has lowered the impact of the programme on household food security status.

6.3.2 Extension contact with beneficiaries

Gemo, Stevens and Chilonda (2013) stated that access to extension services can involve physical interaction between farmers and extension workers or trained local people that support extension activities. Sebeho (2016) indicated that continuous interaction between the extension officers and the farmer is vitally important for building a good relationship between them. Figure 6.1 illustrates the differential perceptions of farmers and extension staff with regard to the frequency of contact in the two municipalities. Seventy percent of extension staff indicated they have at least weekly meetings with farmers, which is largely different from the opinions of farmers as illustrated. Nearly fifteen percent of the beneficiaries reported that they meet with extension staff every month or every second month (26%), which is also largely different from the opinions of extension staff. Twenty percent of the extension staff indicated that they meet farmers on an *ad hoc* basis. It is concerning that 21.2% of the beneficiaries reported that they last had contact with the extension staff when the SHFPP was first implemented in their areas.

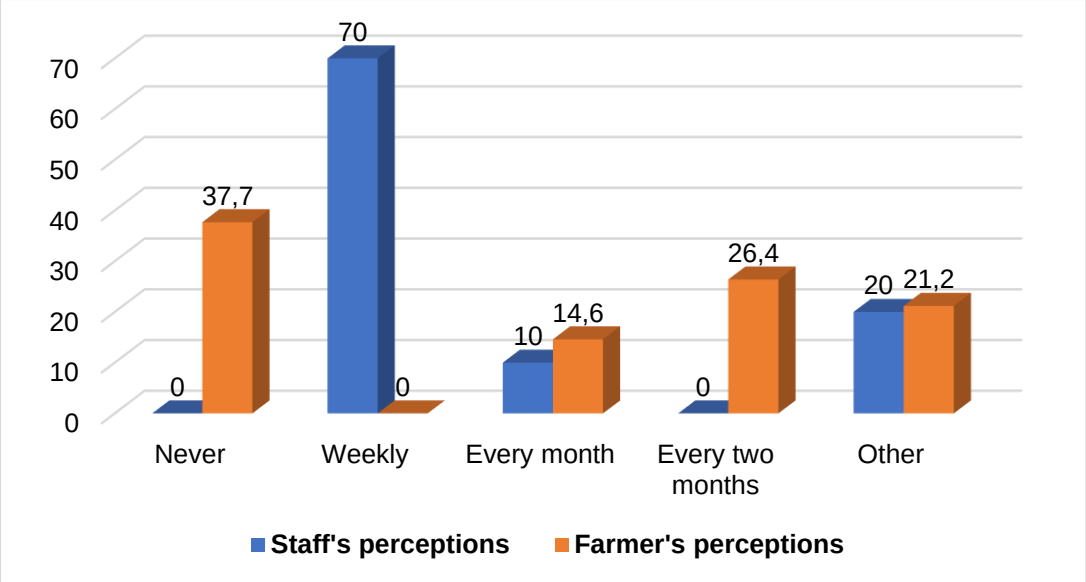

Figure 6. 1: Frequency of extension contact with beneficiaries of SHFPP

Farmers were asked to indicate whether they perceive working closer with extension is important for the improvement of agricultural production on the farm. All (100%) respondents agree that working closer with extension can help them to improve production on their farms.

6.3.3 Extension services provided to beneficiaries

The agricultural extension provides a wide range of services to farmers to improve farmer's livelihoods, of which one is information and knowledge (Stevens & Van Heerden, 2007). Table 6.3 shows that departmental extension staff provided support on soil classification and preparation (40%), pest and weed control (50%), provision of farm inputs (20%), fertiliser application (20%) and organising farmer groups (50%). Phezisa (2016) reported similar findings that agricultural officers assisted farmers with agricultural production practices such as soil preparations, weeding, planting of seedlings and irrigation.

Table 6. 3: Extension services provided to beneficiaries

Extension services	AMAHLATHI and RAYMOND MHLABA	
	n	%
Soil classification and preparation	4	40.0
Pest and weed control identification	5	50.0
Provide farm inputs	2	20.0
Organising farmer groups	3	30.0
Fertiliser application	2	20.0

6.3.4 Perceived effectiveness of extension services

The extension staff were asked to indicate their perceived effectiveness of extension services with the implementation of SHFPP on a three-point Likert scale (1= very effective, 2= somewhat effective and 3= not effective). Table 6.4 illustrates that the extension staff, in general, perceived their services as effective. Possible reasons for this finding could be that extension staff perceived that the SHFPP managed to reach more beneficiaries and provide extension support on technical skills to beneficiaries.

Table 6. 4: Perceptions of extension staff on the effectiveness with the implementation of the SHFPP

Perceived effectiveness of services	AMAHLATHI and RAYMOND MHLABA	
	n	%
Very effective	4	40.0
Somewhat effective	6	60.0
Not effective	0	0.0
TOTAL	**10**	**100**

6.4 Perceived technical competency of extension staff

Farmers in rural communities rely upon the extension officers for technical information and advice that is important for improved returns (Sebeho, 2017). Table 6.5 shows that 75% of SHFPP beneficiaries perceived extension staff as mostly competent to very competent in providing technical support on the farm. A possible reason for perceiving extension staff as not being competent (25%) include the inability of the extension staff to help farmers with the practical application of extension recommendations on the farm.

Table 6. 5: Perceived level of extension competency in technical support (n=132)

Level of competency	**AMAHLATHI**		**RAYMOND MHLABA**		**TOTAL**	
	Beneficiary		**Beneficiary**			
	n	%	n	%	**n**	**%**
Not competent	13	19.7	20	30.3	33	25.0
Mostly competent	26	39.4	22	33.3	48	36.4
Competent	18	27.3	21	31.8	39	29.5
Very competent	9	13.6	3	4.5	12	9.1
TOTAL	**66**	**100**	**66**	**100**	**132**	**100**

6.5 Perceived level of soft skills competency

Farmer groups are an important component of agricultural development in developing countries. Stevens and Terblanche (2004) stated that effective farmer groups do not just emerge, but the mobilisation of farmers into effective groups involves a step-by-step process over time to a point where the group is well functioning, and coherence is fully developed. Hence, extension should take a centre stage to support and assist farmers in the mobilisation and development of organisations of local farmers (Stevens *et al.,* 2012). Table 6.6 shows that 69.6% of the respondents perceived the extension staff as mostly competent to very competent in providing support with regard to farmer group mobilisation and organisation.

Table 6. 6: Perceived level of extension competency in providing support with the farmer group organisation (n=132)

Level of competency	AMAHLATHI		RAYMOND MHLABA		TOTAL	
	Beneficiary		Beneficiary			
	N	%	n	%	**n**	**%**
Not competent	19	28.8	21	31.8	40	30.3
Mostly competent	25	37.9	24	36.4	49	37.1
Competent	14	21.2	15	22.7	29	21.9
Very competent	8	12.1	6	9.1	14	10.6
TOTAL	**66**	**100**	**66**	**100**	**132**	**100**

6.6 Perceived success with SHFPP implementation

A development programme is said to be successfully implemented when it sustainably achieves the objectives set for it. The majority of extension staff (80%) reported that the implementation was good, while 20% of the extension staff indicated that they experienced some problems with the implementation such as a lack of commitment from the beneficiaries who were not considering the programme as a potential solution to household food insecurity and also a lack of cooperation between the beneficiaries. Contrary to extension staff's perceptions, the beneficiaries perceived that the SHFPP was not successfully implemented because many of its objectives set like access to extension services (Table 5.18); access to markets (Table 5.19); and access to production inputs (Table 5.13), were not achieved.

6.7 Perceived challenges facing the SHFPP

The extension staff indicated the following challenges with the execution of the *Siyazondla* programme:

- *Limited funding for the Siyazondla programme* (60%): the extension staff reported that the budget allocated for the SHFPP is not sufficient for the full implementation of the programme. This is further exacerbated by poor procurement and spending in the Department (20%), which affect the purchasing of production packages for all the beneficiaries and therefore also impacted negatively in addressing household food security status in these areas.

- *Drought and climate change* (40%): erratic rainfall affects the production of vegetables for a majority of beneficiaries in the selected areas. This is exacerbated by a lack of irrigation equipment among the beneficiaries.
- *Limited access to agricultural land by farmers and a lack of fencing:* twenty percent of the extension staff reported that beneficiaries do not have access to large areas of agricultural land and have no fencing material to protect their vegetable crops.
- There has been *political interference* in the budget allocation for the programme, which lead to the diverting of budget from the SHFPP to other priorities (20%).
- *Extension staff: farmer ratio* (20%): a large number of beneficiaries to be served.
- *Poor targeting of beneficiaries* (20%): the extension staff indicated that targeting of participants in the programme was biased and mostly directed to people who were not destitute with no commitment to farming. One extension staff was quoted as, "*beneficiaries are not taking the programme as a way of life".*
- *Failure of input suppliers* (20%): The delivery of production inputs was not promptly, which influenced the planting and harvesting of beneficiaries.

6.8 Suggestions by extension staff

When extension officers were asked to provide suggestions to improve the programme, the following were given:

- *Eliminate political interferences from the programme (20%):* especially when the budget for the *Siyazondla* is distributed. Politicians tend to disturb the fair distribution of the budget for the programme.
- *Select beneficiaries of the programme based on their interest and commitment to farming (40%):* Households that are not needy and have little interest in homestead gardening should not be considered to benefit from the programme. Therefore, consultation with farmers is key, which was lacking in the programme.
- *Improve the budget for the programme (80%):* Increasing funding/budget for the programme will lead to a higher impact on food security since more inputs will be purchased and distributed to beneficiaries.
- *Need for farm infrastructure (20%):* There should also be garden equipment and tools such as irrigation systems, spades, wheelbarrows and fencing since beneficiaries are lacking in these.
- *Ownership:* The communities in which the programme is running should be mobilised to take full ownership of the programme as this will enhance the sustainability of the *Siyazondla* (20%).

6.9 Conclusion

This chapter discussed the perceived efficacy of extension support for the beneficiaries of SHFPP in Amathole District. Findings showed that extension officers played a number of critical roles to ensure that the programme has an impact on food security of the beneficiary households. The roles included providing technical advice to beneficiaries, coordinating the programme, and organising training and workshops. However, the extension staff indicated that SHFPP experienced challenges such as low funding from the Department of Rural Development and Agrarian Reform and political interference. The extension staff recommended that more funding for the programme should be made available and political interference should be avoided. In terms of the technical competency level of extension staff, the majority of beneficiaries (75%) were satisfied with the extension services in the programme. Differential perceptions occurred between farmers and extension staff with regard to frequency of extension contact.

CHAPTER 7

CONCLUSION AND RECOMMENDATIONS

7.1 Introduction

The study was conducted to assess the impact of the *Siyazondla* Homestead Food Production Programme in improving household food security and the socio-economic conditions of selected communities in the Amathole District of the Eastern Cape Province. The specific objectives of the study were:

1. To compare the socio-economic profile of beneficiaries of the *Siyazondla* programme with non-beneficiaries.
2. To determine the perceived effectiveness of the *Siyazondla* programme in improving food security and income of beneficiary households.
3. To identify the perceived challenges impacting on the outcomes of the *Siyazondla* programme.
4. To assess the role of extension support with the implementation of the programme.

7.2 Comparison of the socio-economic profile of beneficiaries of SHFPP with non-beneficiaries (Objective 1)

To address this objective, the beneficiaries of SHFPP and non-beneficiaries in both municipalities were compared in terms of gender, age, marital status, household size, educational level, employment status, sources of household income and land tenure status. The majority of the beneficiaries (83.3%) in both municipalities were females, while 62.5% of the non-beneficiaries in Amahlathi were males. The programme in the two selected areas purposefully selected female farmers who indicated to be concerned about sustaining household food security through vegetable production.

The mean age of the beneficiaries was 47.4 years, while it was 46.6 years in non-beneficiary households. It was found that 73% of the respondents were older than 50 years of age, with only 1.4% (<30 years) young people participating in the programme. This characteristic plus the relatively lower educational level of persons older than 50 years have an influence on training methods and approaches that extension apply in these communities. Fifty four percent of the respondents were married, and the average household sizes vary between 5.12 and 5.18 members for beneficiaries and non-beneficiaries respectively. A large household size can be an advantage in vegetable farming as some of the family members can provide family labour, but it also has definite implications on the food security needs of large households.

Notwithstanding the relatively high educational level, 68% of the respondents indicated that they are unemployed. The unemployment rate was significantly higher in Raymond Mhlaba amongst the beneficiaries and non-beneficiaries. This was also disappointing to hear that after 17 years since the inception of the SHFPP, the unemployment figure is still relatively high. Seventy-six percent of the beneficiaries still rely on social grants as their major source of household income, and only 57.6% relied on farming as an extra household income generated. Farmers have access to productive land mainly through the communal land tenure system (85%), while a small percentage also inherited land. The land sizes vary from less than 1ha to >4.0 hectares, with the majority of respondents (61.3%) farming on less than 1 hectare.

7.3 Perceived effectiveness of SHFPP on household food security and household income (Objective 2)

Given the high prevalence of household food insecurity in the Amathole District, homestead production of vegetables has a great potential to improve food security and the household income of beneficiaries. The expectation was that with available land and complementary extension support provided, the beneficiary households would improve their food production substantially. Beneficiaries and non-beneficiaries access household food through own production and buying additional food from local and supermarkets. The study illustrates that SHFPP beneficiaries had greater access to fresh vegetables than the non-beneficiaries in both municipalities and were therefore less dependent on buying food from local and supermarkets. Vegetables that were largely produced by the beneficiaries and non-beneficiaries include spinach, cabbages, onions, potatoes, carrots and beetroot. In both municipalities, on-farm food production sustained household food consumption significantly.

One of the objectives of SHFPP was to increase access to production inputs such as seeds, fertilisers, agrochemicals and garden tools, and livestock medicine. The results showed that 89.4% of the beneficiaries perceived an improvement with regard to the access of production inputs. The *Siyazondla* programme was perceived to contribute to an increase in agricultural production. Although none of the beneficiaries of SHFPP was able to quantify production yields, they experienced an increase in vegetable production.

The potential improvement of household food security status was determined by looking at the number of households experiencing food shortages during 2017-2019. The expectation was that the SHFPP will support household food production significantly. Food insecurity decreased from 30.2% during 2017/18 to 23.6% during 2018/19, which is encouraging. These results indicate that landholding size is not the only limiting factor, but that factors like extension support and other factors are also critical.

One of the objectives of the SHFPP was to improve household income of participating farmers through the selling of surplus farm produce. Thirty-six percent of the beneficiaries were able to sell part of their on-farm produce, with Amahlathi selling the largest proportion (68.2%). None of the non-benefiting households was selling on-farm produce, since it was entirely used to sustain household food security. The household income derived from the sales of on-farm production was categorised into three groups: less than 20%; 20-60% and 60-80%. The majority (68.4%) of the benefiting households indicated that between 20-60% of their household income was derived from the selling of on-farm produce. The ability to sell some of the surplus farm produce helped beneficiaries to spend less of their household income to sustain food security. The main markets used for selling produce include the following: local informal markets (58%) where they sell it to community members; they sell to family members (46%); hawkers (16%) and a few (9%) managed to close off contract with local supermarkets.

7.4 Perceived challenges impacting the outcomes of SHFPP (Objective 3)

In any agricultural support programme like SHFPP, many challenges exist. The study aimed to identify the perceived challenges facing the outcomes of SHFPP and non-beneficiaries in the two selected study areas. Beneficiaries and non-beneficiaries of SHFPP indicated four major challenges which affect agricultural production on their farms, namely poor access to production inputs; agricultural pests; lack of access to agricultural finance to buy the necessary agrochemicals; and poor extension support. Other challenges faced included poor fencing of crop fields which makes it susceptible to damage by livestock; a lack of farm equipment as well as farming skills as indicated by the beneficiaries (4.6%) and non-beneficiaries (12.5%) of SHFPP. The non-beneficiaries (100%) experienced challenges with regard to access to markets, while 78% of the beneficiaries indicated that market access remains a challenge.

Farmers made suggestions in response to the challenges they face on their farms. The first recommendation in priority order includes the need to improve access to production inputs such as fertilisers, agrochemicals and seeds. Secondly, farmers suggested that there is an urgent need to increase access to extension services. This need perceived was even more urgent amongst the non-beneficiaries of the programme. Thirdly, farmers suggested that the lack of information support and agricultural training should be addressed.

Extension staff also indicated the perceived challenges which impact on the outcomes of SHFPP, which include limited funding for the SHFPP (60%), drought and climate change (40%), political interference (20%), poor targeting of beneficiaries (20%), and low extension to farmer ratio (20%). In order to improve the programme, the extension staff suggested that political interference should be avoided in the programme; beneficiaries should be selected

based on their interest and commitment to farming, as well as considering funding opportunities to address the current budget constraints in the programme.

7.5 Perceived efficacy of extension support for the beneficiaries of SHFPP (Objective 4)

The Department of Rural Development and Agrarian Reform (DRDAR) is the implementer of SHFPP and has the responsibility to fund the purchasing and distribution of production inputs to SHFPP beneficiaries. DRDAR also provides extension services to the beneficiaries of SHFPP in Amathole District. In addition to DRDAR, findings showed that there are other service providers involved in the SHFPP, namely the *Umtiza* Farmer's Corporation; Arysta; and Solidaridad.

Sixty percent of the departmental extension officers received training in vegetable production, use of agrochemicals, and basic bookkeeping and record keeping before the implementation of SHFPP. Findings indicated that departmental extension staff played major roles in the implementation of SHFPP, which included providing technical advice; identifying suitable beneficiaries; organising and coordinating workshops; and training of beneficiaries. Seventy-five percent of beneficiaries perceived the departmental extension staff as technically competent in supporting farmers. However, in Raymond Mhlaba it appears that farmers had doubts with regard to the technical competency level of extension staff. Interviews with extension staff indicated that in general, 80% of extension officers were of the opinion that the SHFPP was implemented well and successfully. Contrary to the low frequency of contact indicated by farmers, 70% of the extension staff are of the opinion that they have weekly contact with farmers. Extension staff showed the extension staff to farmer ratio and funding as major constraints perceived for rendering extension support.

7.6 Recommendations

The following operational recommendations are made to improve the outcomes of the SHFPP and to bring more non-benefiting households into the programme:

a) **Integrating the programme into the Provincial Growth and Development Plan**: The *Siyazondla* and other programmes of this nature should form a part of provincial development plans and integrated development plans in order to reach more district municipalities and rural communities in the province. This could help to ensure that the programme is given the necessary support by all decision makers in the province.
b) **Improving the selection criteria of beneficiaries and gender consideration**: The study indicated that SHFPP has a large number of elderly people and female beneficiaries. It is recommended that programmes of this nature should be made also

attractive to young people for the purpose of enhancing the sustainability. It should also consider male farmers when selecting eligible beneficiaries for the programme. This could involve undertaking a situation analysis to identify eligible households in communities.

c) **Strengthening the linkages with other stakeholders in the programme**: the study indicated that other role players such as the Solidaridad, Umtiza Farmer's Corporation and Arysta are involved in the implementation of SHFPP. However, it appears that the capacity of DRDAR is limited in the implementation of the *Siyazondla* programme in the two selected areas as illustrated through inadequate production inputs and low extension support provided to the beneficiaries. Therefore, it is recommended that an enabling environment be created for the participation of other stakeholders in the programme to complement and boost the capacity of DRDAR, which could enhance the impact of SHFPP on food security and income of benefiting households. The DRDAR should facilitate this coordination activity.

d) **Improvement of funding for the programme:** It is recommended that the DRDAR should address budget constraints for the programme in order to purchase and distribute adequate production inputs to all the beneficiaries.

e) **Addressing political interference in the SHFPP:** Measures should be put into place to address political interference in the programme.

f) **Capacity building of beneficiaries:** It is recommended that training of beneficiaries on areas such as technical skills, agribusiness, farmer group organisation and farm management should be provided. DRDAR is a crucial role player in the provision of capacity building activities to beneficiaries and therefore the competency level of extension staff should also be reviewed to ensure they have the necessary capabilities.

g) **Commitment of extension staff:** this is an important quality of the extension staff. It appears from the findings that the majority of farmers are not satisfied with the frequency of extension support provided. It is therefore crucial for the extension staff to be highly committed to their extension work and farmers.

LIST OF REFERENCES

Abdu-Raheem, K.A. and Worth, S.H., 2011. Household food security in South Africa: evaluating extension's paradigms relative to the current food security and development goals. *South African Journal of Agricultural Extension*, 39(2).

Adekunle, O.O., 2013. The role of home gardens in household food security in Eastern Cape: A case study of three villages in Nkonkobe Municipality. *Journal of Agricultural Science,* 5(10), pp.67.

Adekunle, O.O., 2014. An investigation of challenges facing home gardening farmers in South Africa: A case study of three villages in Nkokonbe municipality Eastern Cape Province. *Journal of Agricultural Science, 6*(1), pp.102.

African Centre for Biodiversity., 2018. Input supply in South Africa's smallholder farmer support programmes.

Aliber, M. and Hart, T.G., 2009. Should subsistence agriculture be supported as a strategy to address rural food insecurity?. *Agrekon*, 48(4), pp.434-458.

Altman, M., Hart, T.G. and Jacobs, P.T., 2009. Household food security status in South Africa. *Agrekon*, 48(4), pp.345-361.

Andersen, K.E., 2011. Communal tenure and the governance of common property resources in Asia: Lessons from experiences in selected countries. *Land Tenure*, pp.1-45.

Arene, C.J. and Anyaeji, R.C., 2010. Determinants of food security among households in Nsukka Metropolis of Enugu State, Nigeria. *Pakistan Journal of Social Sciences*, *30*(1), pp.9-16.

Bahta, Y.T. and Owusu-Sekyere, E., 2019. Improving the income status of smallholder vegetable farmers through a homestead food garden intervention. *Outlook on Agriculture*, *48*(3), pp.246-254.

Baiphethi, M.N. and Jacobs, P.T., 2009. The contribution of subsistence farming to food security in South Africa. *Agrekon*, *48*(4), pp.459-482.

Baloyi, J.K., 2010. An analysis of constraints facing smallholder farmers in the Agribusiness value chain: A case study of farmers in the Limpopo Province. Master's dissertation, University of Pretoria.

Beegle, K. and Christiaensen, L., 2019. Accelerating poverty reduction in Africa. *World Bank Publications.* Washington, DC.

Blaai-Mdolo, B., 2009. The Green Revolution and Poverty Alleviation Challenges Faced by Women in Small-scale Agriculture: An Investigation Into the Siyazondla Homestead Food Production Programme, Mbhashe Local Municipality Eastern Cape. Master's dissertation, University of Fort Hare.

Boliko, M.C., 2019. FAO and the Situation of Food Security and Nutrition in the World. *Journal of Nutritional Science and Vitaminology*, 65(Supplement), p.S4-S8.

Bongiwa, M. and Obi, A.,2015. Home gardening as a strategy for food security and poverty alleviation in low income households in South Africa. *Administration*, 42 (6), pp.441-457.

Boon, E.K., 2007. Food security in Africa: challenges and prospects. *Regional Sustainable Development Review, Africa*.

Braker, M.J.E., Udo, H.M.J. and Webb, E.C., 2002. Impacts of intervention objectives in goat production within subsistence farming systems in South Africa. *South African Journal of Animal Science*, *32*(3), pp.185-191.

Craigie, T.A.L., Brooks-Gunn, J. and Waldfogel, J., 2012. Family structure, family stability and outcomes of five-year-old children. *Families, Relationships and Societies, 1*(1), pp.43-61.

Chitiga-Mabugu, M., Nhemachena, C., Karuaihe, S., Motala, S., Tsoanamatsie, N., Mashile, L., Ngwenya, T. and Magongo, B., 2016. Civil society organisations' participation in food security activities in South Africa.

DAFF., 2010. Estimate of the Contribution of the Agriculture Sector to Employment In The South African Economy. Compiled by: Directorate: Economic Services.

DAFF., 2013. Fetsa Tlala Integrated Food Production Initiative. Pretoria. Republic of South Africa.

DAFF., 2014. Economic review of the South African agriculture. Pretoria. Republic of South Africa.

DAFF., 2015. Alignment between Agri-parks and DAFF Programs. Land and Minerals Select Committee. Available from: https://agbiz.co.za/uploads/AgbizNews/15917_DAFFonAgriparks.pdf (accessed on 29 June 2019).

DAFF., 2017. CASP and Ilima/Letsema presentation to select committee on appropriations.

DAFF., 2019. Comprehensive Agricultural Support Programme (CASP), and Ilima/Letsema Conditional Grants (Focus On 2019/20 Business Plan. Presentation to the Portfolio Committee on Agriculture, Land Reform and Rural Development.

Davis, K.E. and Terblanche, S.E., 2016. Challenges facing the agricultural extension landscape in South Africa, Quo Vadis?. *South African Journal of Agricultural Extension*, 44(2), pp.231-247.

Davis, K.E., von Maltitz, L., de Bruyn, M., van Niekerk, J. and Ngomane, T., 2021. South African extension agent competencies and attitudes for the future: Results of a survey. *Intl Food Policy Res Inst.*

Department of Agriculture., 2003/05. Comprehensive Agricultural Support Programme (CASP): Draft Progress Report.

Dlamini, N.E., 2013. Dietary diversity and food access of deep-rural households of Idutywa, Eastern Cape. Master's dissertation, University of South Africa.

Dube, E.M., 2013. Food security in South Africa: A comprehensive review of the past two decades. Master's dissertation, Ghent University.

Du Plessis, K. and Allsopp, E., Guidelines for handling, storage and disposal of agrochemicals in the South African wine industry. ARC Infruitec-Nietvoorbij, Stellenbosch, South Africa.

Du Toit, D.C., Ramonyai, M.L. and Ntushelo, V., 2011. Food Security by Directorate Economic Services. Production Economics Unit. *Department of Agriculture, Forestry and Fisheries, South Africa. Available online at: http://www. nda. agric. za/docs/GenReports/FoodSecurity. pdf*. (Accessed on 12 May 2019).

ECPGDP., 2004. Provincial Growth and Development Plan: 2004-2014.

ECSECC., 2009. Assessment of the Eastern Cape Provincial Growth and Development Plan.

ECSECC., 2013. Department of Rural Development and Agrarian Reform Core Functions. Discussion Draft.

ECSECC., 2019. Eastern Cape Vision 2030 Provincial Development Plan. An enterprising and connected province where its people reach their potential.

FAO., 2002. Land tenure and rural development. *Land tenure studies.*

FAO., 2008. An introduction to the basic concepts of food security. FAO, *Rome*, Italy.

FAO., 2010. The State of Food Insecurity in the World 2010: Addressing food insecurity in protracted crises. Rome, Italy.

FAO., 2017. Regional Overview of Food Security and Nutrition in Africa 2016. The challenges of building resilience to shocks and stresses. *Accra*.

FAO and ECA. 2018. Regional Overview of Food Security and Nutrition. Addressing the threat from climate variability and extremes for food security and nutrition*. Accra*. 116 pp.

FAO., 2019a. Reducing Rural Poverty: Available at http://www.fao.org/3/ca3920en/ca3920en.pdf (accessed on 05 February 2020).

FAO, IFAD, UNICEF, WFP and WHO. 2019b. The State of Food Security and Nutrition in the World 2019. Safeguarding against economic slowdowns and downturns. *Rome*, FAO.

FAO, IFAD, UNICEF, WFP and WHO. 2020. The State of Food Security and Nutrition in the World 2020. Transforming food systems for affordable healthy diets. *Rome, FAO.*

Florian. K., Moira, B., Segantin, O., Rudolph, M., 2012. Mid-Term Evaluation of the Siyazondla Homestead Food Gardens Programme. Siyakhana Initiative for Ecological Health and Food Security.. Wits Health Consortium

Galhena, D.H., Freed, R. and Maredia, K.M., 2013. Home gardens: a promising approach to enhance household food security and wellbeing. *Agriculture and Food Security*, 2(1), p.8.

Gemo, H.R., Stevens, J.B. and Chilonda, P., 2013. The role of a pluralistic extension system in enhancing agriculture productivity in Mozambique. *South African Journal of Agricultural Extension*, *41*, pp.59-75.

Gibson, M., 2012. Food Security, A Commentary: What Is It and Why Is It So Complicated?. *Foods*, *1*(1), pp.18-27.

Gwala, L., 2013. Effect of agricultural extension services on beneficiaries of the Nguni cattle project: the case of Ncera and Kwezana villages, Eastern Cape Province. Master's dissertation, University of Fort Hare.

Hahlani, C.D., 2012. Bottlenecks to integrated rural development planning in Zimbabwe: a focus on the Midlands Province. Midlands State University. *The Dyke*, 6 (2), pp.136.

Hendriks, S.L., 2014. Food security in South Africa: Status quo and policy imperatives, *Agrekon*, 53:2, 1-24, DOI: 10.1080/03031853.2014.915468.

Hendriks, S.L., 2015. The food security continuum: a novel tool for understanding food insecurity as a range of experiences. *Food Security*, *7*(3), pp.609-619.

Hendriks, S.L., 2016. The food security continuum: a novel tool for understanding food insecurity as a range of experiences. *Food Security and Child Malnutrition*, Apple Academic Press, pp. 27-48.

Hendriks, SL., 2018. Food policy and nutrition economics in the SDG era, *Agrekon*, 57:3-4, 167-180, DOI: 10.1080/03031853.2018.1479974.

IDP., 2018/19. Amathole District Municipality. East London.

IDP., 2021. Amathole District Municipality. Vision 2058. East London.

IFAD., 2016. Rural Development: Report 2016: Fostering Inclusive Rural Transformation. Rome, Italy.

Jacobs, F.T., 2009. The status of household food security targets in South Africa. *Agrekon, 48*(4), pp.410-433.

Joala, R. and Gumede, N., 2018. Realising the Right to Food in South Africa. *Studies in Poverty and Inequality Institute.* Woking Paper 21, ISBN-978-0-6399518-5-0.pp.21-27.

Kalazani-Mtya, L., 2011. The empowerment of women in agriculture: does it contribute to poverty alleviation and improvement of quality of lives in rural areas?. Master's dissertation, University of Fort Hare.

Kangas, A., Haider, H., and Fraser, E., 2014. Gender: Topic Guide. *Revised edition with E. Browne. Birmingham: GSDRC*, University of Birmingham, UK.

Keka, A., 2019. Changes in the Quality of Extension Services in the Department of Rural Development and Agrarian Reform Between 2006 and 2013: An Exploration of Joe Gqabi District. Master' dissertation, University of the Cape Town.

Khapayi, M. and Celliers, P.R., 2016. Factors limiting and preventing emerging farmers to progress to commercial agricultural farming in the King William's Town area of the Eastern Cape Province, South Africa. *South African Journal of Agricultural Extension*, *44*(1), pp.25-41.

Kimenyi, M.S., Routman, B., Westbury, A., Omiti, J. and Akande, T., 2013. CAADP at 10: progress towards agricultural prosperity. Africa Growth Initiative at Brookings.

Kisi, M.A., Tamiru, D., Teshome, M.S., Tamiru, M. and Feyissa, G.T., 2018. Household food insecurity and coping strategies among pensioners in Jimma Town, Southwest Ethiopia. *BMC Public Health, 18*(1), pp.1373.

Koch, B.H. and Terblanche, S.E., 2013. An overview of agricultural extension in South Africa. *South African Journal of Agricultural Extension*, 41(1), pp.107-117.

Koch, J., 2011. The food security policy context in South Africa (No. 21). Country study.

Kubheka, B.P., 2015. Impact assessment of the Siyazondla Homestead Food Production Programme in improving household food security of selected households in the Amathole District, Eastern Cape, Master's dissertation, University of KwaZulu-Natal.

Khwidzhili, R.H. and Worth, S., 2019. Evaluation of South Africa's public agricultural extension in the context of sustainable agriculture. *South African Journal of Agricultural Extension,* 47(1), pp.20-35.

Labadarios, D., Mchiza, Z.J.R., Steyn, N.P., Gericke, G., Maunder, E.M.W., Davids, Y.D. and Parker, W.A., 2011. Food security in South Africa: A Review of National Surveys. *Bulletin of the World Health Organization*, 89, pp.891-899.

Luwanda, M.C., 2015. Evaluating the Impact of Land Reform: case of Community Based Rural Land Development Project (Machinga District Malawi). Master's dissertation, University of Pretoria.

Machethe, C.L., 2004. Agriculture and poverty in South Africa: Can agriculture reduce poverty. *Paper presented at the Overcoming Underdevelopment Conference held in Pretoria*, 28 (1), pp. 29.

Mafu, N., 2015. The Socio-economic Impact of a Food Production Programme: Qamata Irrigation Scheme. Master's dissertation, Nelson Mandela Metropolitan University.

Mahlombe, C., 2018. The role of agricultural development projects in poverty reduction in the OR Tambo District Municipality of the Eastern Cape Province South Africa. Master's dissertation, University of Pretoria.

Makapela, M., 2015. Effectiveness of agricultural extension organisation in rural areas: the case of Amathole District Municipality (Eastern Cape). Master's dissertation, University of South Africa.

Makhura, M.N., 2016. Agriculture in a developmental state: finding the nexus for development (al) agricultural economists. *Agrekon*, 55(4), pp.303-330.

Masuku, M., Selepe, M. and Ngcobo, N., 2017. Status of Household Food Security in Rural Areas at uThungulu District, Kwa-Zulu Natal, South Africa. *African Journal of Hospitality, Tourisim and Leisure*, 6, pp.1-11.

Matebeni, F., 2018. Measuring rural household food security in the Nkonkobe local municipality, Eastern Cape Province of South Africa. Master's dissertation, Stellenbosch University.

Mcata, B., 2019. Garden ownership as a solution to food insecurity in urban areas of South Africa: case of food gardens in Alice Town, Eastern Cape province. *Journal of Agribusiness and Rural Development*., 3(53), 215–224. http://dx.doi.org/10.17306/J.JARD.2019.01157.

Mdlalose, N., 2016. Marketing of fresh produce by smallholder farmers: A case study of uThungulu District Municipality, KwaZulu-Natal, South Africa. Master's dissertation, University of KwaZulu-Natal.

Mphande, F.A., 2016. *Infectious diseases and rural livelihood in developing countries*, Springer Publishing, Singapore.

Msutwana, N., 2017. Assessment of CRDP in empowering women at uMhlontlo Local Municipality in the Eastern Cape Province. Master's dissertation, University of KwaZulu Natal.

Muleya, E., 2013. Sustainable Community Development Programmes and Rural Poverty Eradication in the Eastern Cape: The case study of Buffalo Municipality. Master's dissertation, University of Fort Hare.

Musemwa, L., Muchenje, V., Mushunje, A., Aghdasi, F. and Zhou, L., 2015. Household food insecurity in the poorest province of South Africa: level, causes and coping strategies. *Food Security,* 7(3), pp.647-655.

Musvoto, C., Nortje, K., De Wet, B., Mahumani, B.K. and Nahman, A., 2015. Imperatives for an agricultural green economy in South Africa. *South African Journal of Science*, *111*(1-2), pp.01-08.

Napoli, M., De Muro, P. and Mazziotta, M., 2011. Towards a Food Insecurity Multidimensional Index (FIMI). Master in Human Development and Food Security, University of Milan.

National Treasury., 2017. Select Committee on Appropriations Provincial Agriculture Grants. *National Treasury Republic of South Africa*.

Ndobo, F.P., 2013. Determining the food security status of households in a South African township. Master's dissertation, North-West University.

Ngqulana, R.C., 2017. Constraints and opportunities in communal livestock production development in Nyandeni Local Municipality, Eastern Cape Province, South Africa. MSc Agric (Extension) dissertation. University of Pretoria.

Ngumbela, X.G. & Mle, T.R., 2019. Assessing the role of civil society in poverty alleviation: A case study of Amathole district in the Eastern Cape province of South Africa. *The Journal for Transdisciplinary Research in Southern Africa* 15(1).pp12-13.

Ngumbela, X.G., Khalema, E.N. and Nzimakwe, T.I., 2019. Food insecurity conundrum: a case study of Amathole district in the Eastern Cape province of South Africa. *International NGO Journal,* 14(3), pp.13-21.

Ntai, P.J., 2011. Critical factors determining successful irrigation farming in Lesotho. Master's dissertation, University of Pretoria.

Olayemi, A.O., 2012. Effects of family size on household food security in Osun State, Nigeria. *Asian Journal of Agriculture and Rural Development*, *2*(393-2016-23999), pp.136-141.

Ortmann, G.F. and King, R.P., 2006. Small-scale farmers in South Africa: Can agricultural cooperatives facilitate access to input and product markets?. *Agrekon*, 46(2), pp.219-244.

Ozor, N., Umunnakwe, P.C. and Acheampong, E., 2013. Challenges of food security in Africa and the way forward. *Development*, *56*(3), pp.404-411.

Paltasingh, K.R. and Goyari, P., 2018. Impact of farmer education on farm productivity under varying technologies: case of paddy growers in India. *Agricultural and Food Economics*, *6*(1), pp.7.

Pérez-Escamilla, R., 2017. Food security and the 2015–2030 sustainable development goals: From human to planetary health: Perspectives and opinions. *Current developments in nutrition*, *1*(7), p13.

Phezisa, B., 2016. A situational survey of Siyazondla homestead food production programme and food security, poverty alleviation in selected communities of Nkonkobe local municipality of the Eastern Cape. Master's dissertation, University of Fort Hare.

Pinstrup-Andersen, P., 1985. Food prices and the poor in developing countries. International Food Policy Research Institute. *European Review of Agricultural Economics*, 12(1-2), pp.69-81).

Posel, D.R., 2001. Who are the heads of household, what do they do, and is the concept of headship useful? An analysis of headship in South Africa. *Development Southern Africa*, *18*(5), pp.651-670.

Raidimi, E.N. and Kabiti, H.M., 2017. Agricultural extension, research, and development for increased food security: the need for public-private sector partnerships in South Africa. *South African Journal of Agricultural Extension*, 45(1), pp.49-63.

Raidimi, E.N. and Kabiti, H.M., 2019. A review of the role of agricultural extension and training in achieving sustainable food security: a case of South Africa. *South African Journal of Agricultural Extension, 47*(3), pp.120-130.

Ren, C., Liu, S., Van Grinsven, H., Reis, S., Jin, S., Liu, H. and Gu, B., 2019. The impact of farm size on agricultural sustainability. *Journal of Cleaner Production*, *220*, pp.357-367.

Sasson, A., 2012. Food security for Africa: an urgent global challenge. *Agriculture and Food Security*, *1*(1), pp.2.

Sebeho, M.A. and Stevens, J.B., 2019. An overview of perceptions and attitudes towards extension service delivery in Fezile Dabi District, Free State Province. *South African Journal of Agricultural Extension*, 47(1), pp.61-72.

Sebeho, M.A., 2016. Perceptions and attitude of farmers and extensionists towards extension service delivery in the Free State Province, South Africa. Master's dissertation, University of Pretoria.

Sekhampu, T.J., 2017. Association of food security and household demographics in a South African township. *The International Journal of Social Sciences and Humanity Studies*, *9*(2), pp.157-170.

Selepe, B.M., Mtyingizane, S.S. and FM, M., 2015. Factors contributing to household food insecurity in Mhlontlo area, Eastern Cape, South Africa. *African Journal of Hospitality, Tourism and Leisure,* 4(1), pp. 2-8.

Simelane, S.M., 2018. Perceptions of smallholder vegetable farmers and extension officers regarding the extension service in the Hhohho region Swaziland. Master's dissertation, University of Pretoria.

Sinyolo, S. and Mudhara, M., 2018. Farmer groups and inorganic fertiliser use among smallholders in rural South Africa. *South African Journal of Science, 114*(5-6), pp.1-9.

Sonandi, A., 2018. Determining the nutritional status of children from agri-business families in the Eastern Cape, South Africa, PhD thesis, University of the Free State.

Statistics South Africa and Department of Agriculture (DAFF)., 2000. Employment trends in agriculture in South Africa.

Statistics South Africa., 2011. Provincial profile: Eastern Cape. Census 2011.

Statistics South Africa., 2012. GHS Series Volume IV: Food security and agriculture 2002–2011. *Depth analysis of the General Household Survey data*, pp.2002-2011.

Statistics South Africa., 2017. General Household Survey 2017. Statistical release.

Statistics South Africa., 2018. Provincial profile: Eastern Cape. *Community Survey 2016*. Report 03-01-08.

Statistics South Africa., 2019a. Towards measuring the extent of food security in South Africa: *An examination of hunger and food inadequacy*. Report No. 03-00-14

Statistics South Africa., 2019b. General Household Survey 2019. *Statistical Release*.

Stevens, J.B. and Terblanché, S.E., 2004. Sustainable agriculture development through effective farmer groups. *South African Journal of Agricultural Extension*, 33(1), pp.40-51.

Stevens, J.B. and Van Heerden, P.S., 2007. A conceptual framework of a possible curriculum for training of extensionists and advisors in irrigation management. *WRC No KV*, *178*(07).

Stevens, J.B., Van Heerden, P.S., Reid, P., Liebenberg, A., Hagedoorn, E. and de Kock, G., 2012. Training material for extension advisors in irrigation water management. *Volume 3: Extension Learner Guide.* Report to the Water Research Commission.

Taherdoost, H., 2016. Sampling methods in research methodology; how to choose a sampling technique for research. How to Choose a Sampling Technique for Research. *International Journal of Academic Research in Management,* 5(2), pp.18-27.

Tesfamariam, B.Y., Owusu-Sekyere, E., Emmanuel, D. and Elizabeth, T.B., 2018. The impact of the homestead food garden programme on food security in South Africa. *Food Security,* 10(1), pp.95-110.

Thamaga-Chitja, J.M. and Morojele, P., 2014. The context of smallholder farming in South Africa: Towards a livelihood asset building framework. *Journal of Human Ecology*, 45(2), pp.147-155.

Thome, K., Michael D., Smith, K.D., Nicholas R., Cheryl C., and Birgit M., 2019. *International Food Security Assessment, 2019-2029*. GFA-30, U.S. Department of Agriculture, Economic Research Service.

Tregurtha, N., 2009. Review of the Eastern Cape's Siyakhula/Massive maize project. Inequality and Economic Marginalisation. TIPS. Pretoria, South Africa.

United Nations., 2015. The Millennium Development Goals Report. Available from: https://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20(July%201).pdf (accessed on 28 April 2020).

Van Wyk, R.B. and Dlamini, C.S., 2018. The impact of food prices on the welfare of households in South Africa. *South African Journal of Economic and Management Sciences*, *21*(1), pp.1-9.

Van Zyl, J., Nel, H.J.G. and Groenewald, J.A., 1988. Agriculture's contribution to the South African economy. *Agrekon*, 27(2), pp.1-9.

Von Loeper, W., Musango, J., Brent, A. and Drimie, S., 2016. Analysing challenges facing smallholder farmers and conservation agriculture in South Africa: A system dynamics approach. *South African Journal of Economic and Management Sciences*, 19(5), pp.747-773.

Webb, W. and Auriacombe, C.J., 2006. 'Research Design in Public Administration: Critical Considerations. *Journal of Public Administration*, 41(3), pp.588-602.

World Bank., 2018. Poverty and Shared Prosperity: Piecing Together the Poverty Puzzle.

World Bank., 2020a. International Labour Organization, ILOSTAT database. Available from: https://data.worldbank.org/indicator/SL.AGR.EMPL.ZS?locations=ZA&view=chart (accessed on the 18 April 2020).

World Bank, 2020b. Poverty and Shared Prosperity 2020: Reversals of Fortune. The World Bank.

World Food Programme (WFP)., 2020. Global Report on Food Crises: Joint Analysis for Better Decisions. *Food Security Information Network.*

APPENDIX 1

QUESTIONNAIRE FOR THE PROGRAMME BENEFICIARIES

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Natural and Agricultural Sciences

Department of Agricultural Economics, Extension and Rural Development

Research Title: Evaluating the impact of the *Siyazondla* Homestead Food Production Programme on the food security of selected households in the Amathole District, Eastern Cape Province, South Africa

Dear Respondent

I am coming from the University of Pretoria in the Department of Agricultural Economics, Extension and Rural Development. This research project is an essential part of meeting the requirements for the degree of Master of Agriculture in Rural Development. This questionnaire is designed to collect information from beneficiaries of the *Siyazondla* Homestead Food Production Programme in Amathole District of the Eastern Cape Province. The information collected will be kept confidential and be used only for the purpose of this study.

SECTION A: GENERAL INFORMATION

Name of the Interviewer……Name of the Enumerator……

Date of the Interview……Village……..……...

Ward……Municipality…….

SECTION B: SOCIO-ECONOMIC CHARACTERISTICS OF THE RESPONDENTS

B1: Name of Respondent…….

B2: Gender

Male		Female	

B3: Indicate your age group below:

< 18 years	19 – 30 years	31 – 49 years	> 50 years

B4: Indicate your marital status:

Never married	Married	Widowed	Divorced	Other:

B5: Are you a household head?

Yes		**No**	

B6: How many members are in your household?

B7: Indicate your current occupation below:

Employed	Unemployed	Self-employed	Other (specify):

B8: What is your highest level of education obtained?

No education	Primary school	Secondary school	Tertiary education

SECTION C: LIVELIHOOD SOURCES OF THE RESPONDENTS

C1: Do you depend on farming for your living?

Yes	
No	

C2: Please indicate the source(s) of your household income:

Remittances	Social grants	Farming	Salaries and wages	Pension funds

SECTION D: EFFECTIVENESS OF THE *SIYAZONDLA* PROGRAMME ON HOUSEHOLD INCOME

D1: Do you own agricultural land?

Yes		**No**	

D2: If yes, please indicate how you access land rights:

Own	Lease	Rent	Customary	Communal	Inheritance	Other (specify):

D3: Please indicate the size of the land you have access to (ha):

D4: Please indicate the crop types that you currently grow:

List the Crops	**Average yield (Kg or tons)**	**Hectare (ha)**

D5: Do you have livestock on your farm?

Yes		**No**	

D6: If yes, please indicate what livestock and how many you own?

Livestock (e.g., sheep, goats, etc.)	**Number**

D7: What proportion of household food do you obtain from the farm? **%**

D8: Do you sell your agricultural produce on the farm?

Yes		**No**	

D9: If yes, please indicate your target market:

Local community	Family members	Hawkers	Supermarkets	Other (specify):

D10: What is the share of farm income to your total household income?

% share of farming income	**Please tick ✓**
Less than 20%	
Between 20% and 60%	
Between 60% and 80%	
Above 80%	

SECTION E: EFFECTIVENESS OF THE *SIYAZONDLA* PROGRAMME ON HOUSEHOLD FOOD SECURITY

E1: How do you ensure there is food on the table?

Own produce	Market	Street vendors	Other (specify):

E2: If you buy food, how much of your household income do you spend? **%**

E3: Did you experience any food shortage during the past 2 seasons?

2017/2018	**Yes**	
	No	
2018/2019	**Yes**	
	No	

E4: If yes, state what coping mechanisms you have adopted in your household? For example, selling household assets, fertilisers for cash, cutting food portions.

……

……

……

E5: Please indicate the changes you have noticed since you joined the programme:

Aspect of Change	Level of Change		
	Not effect	**Neutral**	**Major effect**
Access to agricultural inputs			
Increase in agricultural production			
Access to extension services			
Employment			
Food security			
Access to markets			

E7: Did the programme increase the availability of fresh vegetables/food in your household?

Yes	
No	

E8: How satisfied are you with the production of fresh produce on the farm?

Not satisfied	**Satisfied**	**Very satisfied**

<u>SECTION F: THE ROLE OF EXTENSION SUPPORT IN THE IMPLEMENTATION OF THE PROGRAMME:</u>

F1: Do you belong to a farmer group?

Yes	
No	

F2: How do you access inputs for crop and livestock production? Please tick.

Farm inputs	**Possible service providers**				
	1= Gov.	2= Agro dealer (e.g. Coop)	3= Fertiliser company	4= Fellow farmers	5= Seed company
Seeds/vegetative material					
Fertilisers					
Agrochemicals					
Livestock feeds and chemicals					

F3: Is the Department of Rural Development and Agrarian Form supporting you with agricultural extension services on the farm?

Yes	
No	

F4: If yes, how satisfied are you with the service provided?

Not satisfied	**Mostly satisfied**	**Satisfied**	**Very satisfied**

F5: Please indicate the roles of Department's extension support on the farm and rate their competence on a scale of 1 to 4. (1 = Not competent; 2 = Mostly competent; 3 = Competent; 4 = Very competent).

Roles of extension	**Rate their competence**
Technical support (Farming skills)	
Farmer group organisation (soft skills)	

F6: How often do you have contact with the Department's extension officer?

Weekly	Every month	Every 2 months	Never	Other (specify):

F7: How often do you use the advice given by the extension officer?

Always	Often	Sometimes	Never use them

F8: Do you think working closer with extension is important for improving production on the farm?

Yes	
No	

SECTION G: IDENTIFICATION OF THE CONSTRAINTS INTERVENING WITH THE OUTCOMES OF THE *SIYAZONDLA* PROGRAMME

G1: Do you face constraints or challenges in the programme?

Yes	
No	

G2: If yes, please list possible challenges that you face with the production of your produce.

……

……

……

……

G3: If you are selling your produce, what are the main marketing problems that you face? E.g., Market too far, market prices too low, no transport, etc. Please list them:

……

……

……

G4: Recommendations on how to improve the impact and sustainability of the programmes of this nature for food security?

……

……

……

……

Thank you for your valuable contributions to this study!!!

APPENDIX 2

QUESTIONNAIRE FOR KEY INFORMANTS

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Natural and Agricultural Sciences

Department of Agricultural Economics, Extension and Rural Development

Research Title: Evaluating the impact of the *Siyazondla* Homestead Food Production Programme on the food security of selected households in the Amathole District, Eastern Cape Province, South Africa

Dear Respondent

I am coming from the University of Pretoria in the Department of Agricultural Economics, Extension and Rural Development. This research project forms an essential part of fulfilling the requirements for the degree of Master of Agriculture in Rural Development. This questionnaire is designed to collect information on the key informants involved in the *Siyazondla* Homestead Food Production Programme in Amathole District of the Eastern Cape Province. The information collected will be kept confidential and be used only for the purpose of this study.

SECTION A: GENERAL INFORMATION

Name of the Interviewer……Name of the Enumerator……..

Date of the Interview…… Village……...

Ward……Municipality……..

SECTION B: INFORMATION ABOUT THE OFFICIAL

B1: Name of the Official (optional)……...

B2: Gender | M | F |

B3: Ward……..

B4: Organization……

B5: Position……

B6: Years of working experience | |

B7: Please indicate your highest level of educational qualification obtained.

Qualification	**Please tick✓**
PhD	
Masters	
Honours	
Bachelor's degree	
National Diploma	
Matric	
Other:	

B8: Please indicate your area of specialisation:

……

SECTION C: INFORMATION ABOUT THE PROGRAMME

C1: Since when are you involved with the implementation of the *Siyazondla* programme? Please indicate a year. | |

C2: Please indicate your role in the programme.

……

……

……

……

C3: Did you receive specific training before the implementation of the programme?

Yes	
No	

C4: If yes, please indicate what training you have received?

……

……

……

C5: Do the programme involve other service providers (private sector, NGOs etc.) in the implementation?

Yes	
No	

C6: Please list the service providers and their respective roles in the programme.

Service providers	**Their roles (Please indicate)**

C7: How often are you visiting your farmers?

Weekly	**Every month**	**Every 2 months**	**Never**	**Other:**

C8: What type of service are you providing to farmers?

……

……

C9 (a): How effective do you think are the services provided by you in sustaining food production and income generation?

Very effective	Somewhat effective	Not effective

(b) If not very effective, please provide possible reasons for less effective service.

……

……

……

……

C10: How successful was the programme implemented?

Not good	Good	Excellent

C11: List the major constraints you have experienced with the implementation of the programme.

……

……

……

C12: What recommendations will you give to improve the implementation of the programme?

……

……

……

……

……

THANK YOU VERY MUCH FOR YOUR COOPERATION!!!!!