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INYUVESI YAKWAZULU-NATALI

# Impact Assessment of the Siyazondla Homestead Food Production Programme in Improving Household Food Security of Selected Households in the Amathole District, Eastern Cape

**Bongekile Precious Kubheka**

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African Centre for Food Security,
School of Agricultural, Earth and Environmental Sciences,
Faculty of Science and Agriculture,
University of KwaZulu-Natal,
Pietermaritzburg.

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## DECLARATION

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As supervisor, I agree to submission of this mini-dissertation for examination.

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**Prof F Veldman**

This work is dedicated to my mother, Jabulile Sikhakhane,
for showing me that it’s never too late to learn.

## ABSTRACT

This study assessed the impact of a homestead food production programme (Siyazondla) in improving household food security by comparing the incomes; food consumption frequencies and dietary diversity of selected beneficiaries against a control group of non-beneficiaries. The programme was introduced by the Provincial Government of the Eastern Cape to promote household food production due to high levels of poverty and malnutrition, especially in rural areas of the province. The Department of Agriculture supplied households with farming inputs and technical support to ensure access to sufficient food for the most vulnerable communities.

A list of programme participants was obtained from the coordinators and 41 participating and 25 non-participating households were selected using simple random sampling. Individual interviews and focus group discussions were conducted. Qualitative and quantitative data were collected and analysed using SPSS.

The findings showed that the crop types produced in the homestead gardens of respondents included mainly spinach, cabbage, potatoes, beetroot and carrots. Programme beneficiaries grew significantly more vegetables than non-beneficiaries, improving the availability of diverse foods to the participating households and community. The frequency of vegetable consumption was used as a measure of access to food, which had increased significantly for almost all beneficiaries and their households. The generation of income was one of the expected outcomes of the Siyazondla programme. The majority of beneficiaries generated income from selling vegetables while non-beneficiaries did not generate any income from their gardens.

Overall, the study indicated that the Siyazondla programme had potential to improve food security of households through increased vegetable consumption, dietary diversity and income to purchase other food items. It was recommended that such programme should form part of integrated developmental plans in order to achieve improved results.

## ACKNOWLEDGEMENTS

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# The problem and its setting

## 1.1 Introduction to the research problem

Three-quarters of the world's poor and hungry are located in rural areas, particularly in Sub Saharan Africa (International Food Policy Research Institute, 2006). These rural communities depend primarily - directly and indirectly - on agriculture and agriculture-related activities for food and as a source of income (Frayne & Pendleton, 2009). Increasing agricultural productivity can improve access to food and decrease dependence on purchased food (Baiphethi & Jacobs, 2009). The Eastern Cape is among the poorest provinces in South Africa in terms of average monthly expenditure (Statistics South Africa, 2004). High levels of unemployment and human immunodeficiency virus and acquired immune deficiency syndrome (HIV/AIDS) related morbidity and mortality contribute to high levels of unemployment (Anon., 2004).

The South African government identified food security as a priority policy objective in 1994, and has increased spending on social programme such as school feeding schemes, child support grants and community food gardens (Schwabe, 2004). One such effort was the introduction of the Siyazondla homestead food production programme in 2004 by the Eastern Cape Department of Agriculture. Siyazondla is a programme of the Provincial Growth and Development Plan (PGDP) and seeks to transfer people from the Emergency Food Programme into a programme to promote production of food rather than relying on hand-outs (Cull, 2004). The programme aims to increase food production to improve household food security and income generation for poor households. Beneficiaries are supplied with agricultural inputs such as seeds, fencing, water taps and pipes, and tools (spades, forks and wheelbarrows).

Subsistence farming is typical of traditional households in the rural setting of the Eastern Cape (May & Carter, 2009). However, it has declined over time due to urban

migration (Baiphethi & Jacobs, 2009) and loss of farmer support programmes in the former homelands after 1994 (Baiphethi & Jacobs, 2009). It was only after 1994, that development practitioners and policy makers focused on the potential of gardens (domestic or communal) as a means of improving the sustainability of livelihoods (Moller, 2005). Hynes & Howe (2004) claim that household and community gardening provides nutritious and affordable food, psychological and physical health, social cohesion, crime prevention, and recreation, as well as life satisfaction, particularly among low-income communities.

This study assessed the impact of the Siyazondla Homestead Food Production Program in improving household food security through a comparison of the frequency of food consumption, dietary diversity and income generation between programme beneficiaries and non-beneficiaries. The findings will help the Eastern Cape Department of Agriculture in monitoring project impacts and plan future interventions.

## 1.2 Research problem

The aim of this study was to assess the impact of the Siyazondla homestead food production programme in improving household food security of selected households in the Amathole District, Eastern Cape.
The investigation was divided into sub-problems as set out below.

**Sub-problem 1:** **What food crops were produced in the Siyazondla gardens?**

**Sub-problem 2:** **How frequently did participating households consume food produced from the Siyazondla gardens compared to other sources of food?**

**Sub-problem 3:** **How much income did households generate from selling food produced in the Siyazondla gardens?**

## 1.3 Importance of the study

This study aims to assess the impact of the Siyazondla homestead food production programme in improving household food security of the benefiting families. This will be done by comparing the physical and financial accessibility of food of benefiting households and those who do not benefit from the Siyazondla program. The Department of Agriculture in the Eastern Cape will receive feedback on this particular food security program. The findings of the study will be used as a monitoring tool and basis for planning for future projects by the Department of Agriculture and other organizations with a similar intention.

## 1.4 Assumptions

It was assumed that all information obtained from respondents would be honest and true. The study assumed that the households receiving inputs from the Siyazondla programme had used these inputs to produce food for their own consumption and sold any surplus produce. Another assumption was that all programme beneficiaries understood the purpose of the programme i.e. to ensure that only surplus would be sold for income generation. Lastly, the study assumed that the input distributors ensured that beneficiaries had basic knowledge of crop production and were physically capable of working in the garden, and that a lack of production was not related to a lack of capacity.

## 1.5 Structure of the mini-dissertation

This chapter presents the introduction to the research problem; importance of the study, the research problem and sub-problems; importance of the study and the study assumptions. The next chapter outlines the review of related literature. Chapter three gives the methodology. Chapter four is the results and discussion. Finally, chapter five is the conclusions and recommendations.

## Chapter 2
## Review of related literature

This chapter defines the concept of food security and presents an overview of the global state of food security focusing on developing, and particularly African countries, and discusses interventions to improve household food security – specifically home garden projects. This section provides a discussion on benefits and critiques of the food security impact made by home gardens. It also illustrates that most studies have rated some or all the measures used in this study in order to ascertain the impact of the home gardens on food security: income (Chadha & Oluoch, 2007; Morton *et al.*, 2008), food or dietary diversity (Ndaeyo, 2007), and food consumption (Knisley & Nyomora, 2007).

### 2.1 Food security – definition and current global status

#### 2.1.1 Defining food security

"Food security, at the individual, household, national, regional and global levels [is achieved] 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" (FAO, 1996). Food security has four main pillars, namely availability, stability of supplies, access and utilization (Misselhorn *et al.*, 2012). Food availability refers to the physical presence of food, acquired through production, purchase, donation or other exchanges. Stability of supplies refers to seasonality from year to year. Food access refers to the ability to obtain food (physically, financially and socially) whereas food utilisation involves the absorption of nutrients by the body (Poppy *et al*, 2014).

#### 2.1.2 The global world food security status

The scale of global hunger is alarmingly high, with an estimated 840 million people being undernourished globally (Clapp, 2014).Despite ample food production and, in

some cases, surpluses in developed countries, millions of people in the developing world still go hungry. Inadequate food supply may be attributed to various causes, which include natural, social and economic clusters (Smith *et al.*, 2000). Natural causes include droughts, floods or pests, whilst social and political issues such as war and political strife may cause food insecurity (Battisti *et al*, 2009). Economic causes of food scarcity include high inflation rates and unemployment. Diseases such as HIV/AIDS and the absence of good governance aggravate food insecurity (Bukusuba *et al*., 2007).

The Food and Agriculture Organisation estimated that 15% (1.02 billion) of the world population was undernourished in 2009. Most of these people live in developing countries (FAO, 2010). Sixty percent of the undernourished live in Asia, 30% in sub-Saharan Africa and 10% in Latin America. The absolute number of undernourished people is growing more rapidly in Africa. Although the vast majority of hungry people live in countries with low average *per capita* incomes, food insecurity is not restricted to these countries. Food insecurity is also a concern in developing counties. For example, in the United States of America food insecurity increased from 11.3% in 2003 to 11.9% in 2004 (Nord *et al*., 2005). Due to the 2008 global high food price crisis and 2009 economic crisis, many people in America could not afford to buy all the food they needed for a balanced healthy life (FAO, 2010).

Eradication of extreme poverty and hunger is the first goal of the United Nation's Millennium Development Goals (MDG's) due to the critical nature and extent of hunger universally. This goal remains pivotal to the achievement of other MDG's because 'food comes first' (FAO, 2005). The State of Food Insecurity in the World report (FAO, 2005) illustrated the cycle of hunger and poverty as: "Hunger undermines health, education, productivity and environmental sustainability. Hungry women give birth to hungry babies, with greatly increased risks of both maternal and infant mortality. Hungry children cannot learn. Hungry adults cannot work as hard or earn as much. Hungry people are more likely to catch infectious diseases and to suffer severe illness and death once they do. Hungry people need to use all the means at their disposal to

survive, even if that means despoiling the natural resources upon which they depend". In most Sub-Saharan countries hunger and malnutrition continue to compromise the attainment of the MDG of halving hunger and extreme poverty by 2015 (FAO, 2005). In developing countries, it is estimated that one quarter of all children are considered underweight or undernourished (United Nations, 2008). The cycle of hunger and poverty calls for urgent intervention.

## 2.2 Food security situation in African countries

Africa is considered rich in terms of its natural resources. However, many African people experience chronic and acute hunger and food insecurity, particularly in sub-Saharan Africa where hunger has increased since 1990 (International Food Policy Research Institute, 2009). This region has the highest prevalence of undernourishment, with one in three people deprived of access to sufficient food, especially in rural areas. Urban poverty is an increasing concern and tends to be fuelled by people migrating towards the cities in an attempt to escape unsustainable rural livelihoods (FAO, 2008).

Aggregate global food supplies are more than adequate to provide all citizens with all the energy required for an active and healthy life, but the supply is not distributed equally. In 2008, 34 countries in the world experienced severe impacts of the global food crisis and required external assistance (FAO, 2008). Twenty-one of these countries are in Africa (FAO, 2008). The global crises exacerbated perpetual shortfalls in food distribution in Africa due to adverse weather conditions, social or political conflict, the HIV/AIDS pandemic, and generally low productivity (Boggs, 2012; Zuberi & Thomas, 2012).

## 2.3 Interventions to improve food security status

There are several approaches to address food insecurity, and these may be classified into three groups, namely relief, mitigation and development interventions. Relief

interventions may be adopted in times of crisis or emergencies, for example, during times of war or when natural disasters strike and people are unable to access food.

The solution to the food problem requires the provision of additional food supply to the population in need (Berck & Bigman, 1993). Relief interventions should be temporary measures. Food aid is considered a short term emergency food security intervention because it is not sustainable in the long term. It involves providing food parcels or subsidized meals to food insecure households or individuals (New South Wales Department of Health, 2003). Food aid is often seen as a way to cope with variable food import requirements and restricted commercial import capacity in low-income economies (Barrett, 2001). The basic logic of food aid for food security is therefore simple. Food aid is meant to address food availability shortfalls that might cause under nutrition, and it should be provided in response to such shortfall (Barrett, 2001).

Mitigation interventions seek to prevent future disasters and crises, such as improving crop yields and the development of early warning systems to anticipate crises. Another food security intervention is the provision of subsidies to the poor to increase their economic activities. This approach in fighting food insecurity has been shown as effective in India, whereby recipients were able to provide for their families as a result of the project (Ramachandran, 2007). Development interventions to food insecurity are more sustainable and encourage beneficiary participation and empowerment. Promoting agricultural production is one of these interventions.

## 2.4 Home gardens for improved household food security

Agricultural programs promote increased food production as a means to alleviate food insecurity (Bukusuba *et al.*, 2007). Increased food production has been shown to improve food security status through increased food availability (Ndaeyo, 2007). Home gardens offer the potential to improve household food security by alleviating micronutrient deficiencies. Home gardening can enhance food security by providing

direct access to a diversity of nutritionally rich foods, reducing pressure on household budgets. The majority of South African households rely largely on purchased foods (Schmidt, 2005), which makes them more vulnerable to food price inflation (Schwabe, 2004). Household food production becomes a reasonable intervention to reduce the effects of high food prices while offering a fallback food provision during seasonal lean periods (FAO, 2009).

Home gardens can contribute to household food security by providing people with direct access to food that can be harvested, prepared and consumed (Faber *et al.*, 2002). Home gardens require few inputs and have the potential to provide households with direct access to vegetable supplies year-round and additional income from the sale of surplus produce (Marsh, 1998). This has been shown in Swaziland, where home gardening has improved food security by increasing food, as well as income for households (Terry & Ryder, 2007).

Home gardens are often promoted as a way of promoting enterprise, optimizing nutrition, and encouraging self-sufficiency to strengthen food security (Kaschula & Arbuckle, 2007). A study on the contribution of household gardens on the nutritional status of pre-schoolers in Lesotho, found a significant association between the presence of home gardens and lower incidences of wasted and underweight children (Makhotla & Hendriks, 2004). This example concurs on the fact that home gardens can provide a significant contribution to household food security by improving direct access to food.

Gardening projects can also improve diet diversity of benefiting households (Faber *et al*., 2002). Increasing the intake of different vegetables is important in food security as it promotes food diversification – a common food security measure (Gunasena, 2007; Chadha, & Oluoch, 2007; Knisley & Nyomora, 2007). A study conducted in Nepal investigated whether home gardens were an option for improving dietary diversity of Chepang households (Regmi *et al.*, 2004). This particular study adopted participatory

and collaborative approaches in designing and implementing the project activities. A number of vegetables, fruit and fodder seeds and samplings were provided for home gardening. Furthermore, training and capacity development activities were initiated to increase awareness and strengthen the capacity of farmers. Findings indicated that participants had more choices of products and faced fewer problems with food shortages. It was also observed that the dietary diversity and nutritional status of households improved, which had a positive effect on the health of women and children. The study concluded that home gardens had potential to contribute to household food security and dietary diversity (Regmi *et al.,* 2004).

Labadarios *et al.* (2005) reported that the diets of children in South Africa consist mainly of staple starchy foods and lack dietary diversity. This has a negative effect on their nutrient or micronutrient consumption and results in micronutrient deficiencies (Labadarios *et al.*, 2005). Home gardens could make a significant contribution to better nutrition and health of children as they improve dietary diversity (Musotsi *et al.,* 2008).

Home gardens do not only have nutritional benefits, but financial benefits too. Increased vegetable production can improve food security and offer income opportunities to small farmers (Chadha & Oluoch, 2003; Morton *et al.,* 2008). A survey conducted in Southern Nigeria to study the structure and benefits of home gardens (Egharevba *et al.*, 2004). Data was collected through surveys using questionnaires and direct contact followed by benchmark studies. Seven local government areas that constituted the district were visited. Among these, twelve home gardens per area were demarcated and garden size, food crops and vegetables grown, labour input, level of income and economic potentials were studied. Findings indicated that staple crop species (*manihot, zea mays, musa* and *dioscorea*) were commonly grown along with cash crops (cocoa, kola, and citrus). The findings showed that although home gardens were small, most household food came from them. The study indicated that home gardens were very important for food security and can increase household income through savings or earnings (Egharevba *et al.*, 2004).

An assessment of the contribution of homestead farming in Southern Nigeria confirms that homestead farms contributed remarkably to food security and farm income (Ndaeyo, 2007). Morton *et al*. (2008) concur that having access to a garden can significantly improve the variety of fruit and vegetables in one's diet, increasing the chances of consuming recommended daily vegetable and fruit servings. Chadha & Oluoch, 2003 also stated that vegetable production makes vegetables more affordable and accessible to families.

An evaluation of a two-year community garden project for people living with HIV/AIDS that promoted food gardens and particularly the use of traditional crops using organic farming techniques in the Umsunduzi area, Pietermaritzburg found that community nutrition, skills and overall food security were strengthened (Kaschula & Arbuckle, 2007). Even the amount of food available to the community itself was improved (Kaschula & Arbuckle, 2007; Faber *et al*., 2002).

Home gardens may have many advantages, but not all studies show distinctly positive results. For example, a cross-sectional pre- and post-study comparison of the vitamin A intake of 100 children (50 from homes with gardens and a control of 50 children form households without gardens) aged 2–5 years in KwaZulu-Natal, South Africa evaluated the impact of a home-based food production programme targeting β-carotene-rich fruits and vegetables (Faber *et al.*, 2002). The findings showed an increase in vitamin A intake in children from households with project gardens as well as those from households without home gardens. The increase of vitamin A in children from non-participating households was attributed to the availability of vitamin A rich foods in the local shop. Furthermore, fruits and vegetables were also obtained by means of negotiation (Faber *et al.*, 2002). However, this cannot be conclusively shown from the study.

A recent study by Selepe (2011) evaluated the impact of home gardens on the nutritional status of pre-school children in an informal settlement in Gauteng, South Africa. Forty children were divided into three groups: 24-35 months (four boys and one girl), 36-47 months (four boys and five girls) and 48-60 months (14 boys and 12 girls).The children's anthropometric measurements were taken and recorded. The results showed that home gardens had no statistically significant impact on anthropometric measurements of the children. A concerning, negative statistical difference was evident between pre- and post-study height-for-age z-scores for boys, showing significant deterioration of nutritional status among boys. The study concluded that home gardens alone does not have adequate impact on children's nutrition since carbohydrate and fat intake were not significantly improved through garden produce but are necessary to reduce malnutrition. It was discovered that agricultural activities contribute to household nutrition only when production leads to the sales of surplus produce (Selepe, 2011).

Some studies indicate that gardening is not as cost-effective as a nutrition intervention compared to fortification, supplementation and targeted subsidies (Marsh 1998). In addition, home gardening is only feasible for households with access to land, water and technical assistance, leaving out many of the food insecure (Marsh, 1998). A comparison of three African case studies from North West Province in South Africa, Eastern Cape in South Africa and Zimbabwe did not show substantial evidence about the relationship between home gardening or food cultivation and nutrition (Webb, 2000).

## 2.5 Synthesis

This chapter has focused on the definitions of food security and provided an overview of food security at the global level, as well as in developing countries, particularly in Africa. Some common interventions that are employed to improve the food security status of communities, households or individuals were discussed, with special attention was

given to home or homestead food gardens. The major advantages of home gardens were outlined and disadvantages discussed.

As discussed above, home gardens may offer many benefits to participants and their households such as increased food production; access to a variety of nutritionally rich foods; alleviating micronutrient deficiencies; lowered need for purchased food and an opportunity for income generation. This study seeks to discover whether the participants of Siyazondla in the Amathole district enjoyed any of the benefits discussed above and how they compared with other home garden farmers who did not receive the support from the Siyazondla programme.

# Chapter 3
# Methodology

## 3.1 Research design

The purpose of the study was to assess the impact of a homestead food production programme (Siyazondla) in improving household food security status. This was done by comparing the incomes, food consumption frequencies and dietary diversity of selected beneficiaries against a control group of non-beneficiaries of the programme.

## 3.2 Population and sample selection

A list of beneficiaries was obtained from the Regional Programme Coordinator and beneficiaries were selected using simple random sampling. Forty-one household names (30% of the total list) were selected from the beneficiary list and twenty-five non-beneficiaries (all members of identified projects) were identified with the help of responsible extension officers. The study was limited to four Local Municipalities of the Amathole District Municipality namely: Mbhashe; Nkonkobe; Amahlathi and Buffalo City due to geographical demarcation and financial resources.

According to Riley & Moock (1995), comparisons of food security status of intervention recipient and non-recipients that exhibit identical characteristics is necessary to capture the actual impact of the food security intervention. Therefore, a control sample was selected from non-beneficiaries of the Siyazondla programme who were also active subsistence farmers within the same geographical area as the study group. Purposive sampling was used to select participant households as the control group. The participants were identified by local extension officers as active farmers who had not received support or benefits from the Siyazondla programme.

## 3.3 Survey area characteristics

This study was conducted in the Amathole District of the Eastern Cape Province in South Africa. The Eastern Cape Province is the second largest province in South Africa (Statistics South Africa (Stats SA), 2004). It is situated in the southeast of the country and encompasses what were traditionally known as the Eastern Province, Border and North-Eastern Cape areas, as well as the former 'homelands' of Transkei and Ciskei. The western borders are formed by the towns Middelburg, Graaff-Reinet, Aberdeen and Willowmore. On the northern side, The Eastern Cape is bordered by the Kingdom of Lesotho and the Free State, while the southern and southeastern borders are the Indian Ocean and the KwaZulu-Natal Province respectively, as shown in figure 3.1.

The Eastern Cape has a wealth of natural resources, with countless species of animals, birds, plants and insects protected in reserve areas, making it one of the popular destinations for tourists (Stats SA, 2004). In a country where water is precious, the Eastern Cape has large areas of unused irrigable land. At least 25,000 ha of land can be irrigated in the former Transkei. Due to the richness of the soil and stable climate, a wide variety of crops can be grown (Eastern Cape Development Corporation (ECDC), undated). The Eastern Cape is the country's premier livestock region (ECDC, undated).


**Figure 3.1**: Eastern Cape Province Map (ECDC, 2010).

The province is divided into six district municipalities (namely Alfred Nzo, Amathole, Chris Hani, Ukhahlamba, OR Tambo and Cacadu), and the Nelson Mandela Metropole. This study was conducted in the Amathole district. This district is on the eastern seaboard of South Africa. It stretches from the Indian ocean coastline in the south to the Amathole mountains in the north, and from Mbolompo Point in the east, to the Great Fish River along the Sunshine Coast in the west. It is a land of rivers and fertile floodplains, undulating grasslands, valley bush, pristine estuaries, beaches, forests and waterfalls. The district lies at the heart of the Eastern Cape Province and is presently home to about 1.7 million people (25% of the Province's total population). The district has eight local municipalities under its area of jurisdiction namely: Buffalo City,

Nkonkobe, Nxuba, Ngqushwa, Amahlati, Great Kei, Mnquma and Mbhashe (ECDC, undated).

The largest population of the province is situated in the OR Tambo District Municipality with 26% of the total population, and the Amathole District Municipality with 25, 9% (Stats SA, 2004). Table 3.1 reports the population density of the Eastern Cape Province per Municipality.

**Table 3.1: Area, population and population density for each District council in the Eastern Cape, 2001 (Municipal Demarcation Board, 2001 cited by Stats SA, 2004).**

| **District Municipality** | **Area (km²)** | | **Population** | | |
|---|---|---|---|---|---|
| | **N** | **%** | **N** | **%** | **Density** |
| Cacadu | 58 243 | 34,3 | 388 204 | 6,0 | 6,7 |
| **Amathole** | **23 577** | **13,9** | **1 664 253** | **25,9** | **70,6** |
| Chris Hani | 36 963 | 21,7 | 810 300 | 12,6 | 21,9 |
| Ukhahlamba | 25 401 | 14,9 | 341 345 | 5,3 | 13,4 |
| O. R. Tambo | 15 946 | 9,4 | 1 676 842 | 26,0 | 105,1 |
| Alfred Nzo | 7 870 | 4,6 | 550 405 | 8,6 | 69,9 |
| Nelson Mandela Metro | 1 952 | 1,2 | 1 005 774 | 15,6 | 515,3 |
| **Eastern Cape** | **169 952** | **100,0** | **6 436 763** | **100,0** | **37,9** |

## 3.4 Employment and poverty levels

Limpopo and Eastern Cape had the highest proportion of people living below the poverty income line, with 77% and 72% respectively (Schwabe, 2004). In 2004, the Eastern Cape had the highest unemployment rate (29,6%) in the country (Stats SA, 2004). Statistics show that in 2004, 31,9% of the working-age population was employed, 13,4% unemployed and 54,7% not economically active in the Eastern Cape (Stats SA,

2004). Stats SA (2004) further showed that the Eastern Cape had the lowest proportion of people who were employed in the formal sector (66,5%), and accounted also for the largest proportion of the informal sector employment (36,4%). The Gross Domestic Product per Region (GDPR) contribution of Eastern Cape to the country was 8,1% - making it the fourth highest overall (Stats SA, 2004).

According to Stats SA (2004), the Eastern Cape has the fourth lowest HIV prevalence (23.6%) rate, after Limpopo. However, figure 3.2 shows a steadily increasing trend in the rate of infection between 1990 and 2002.

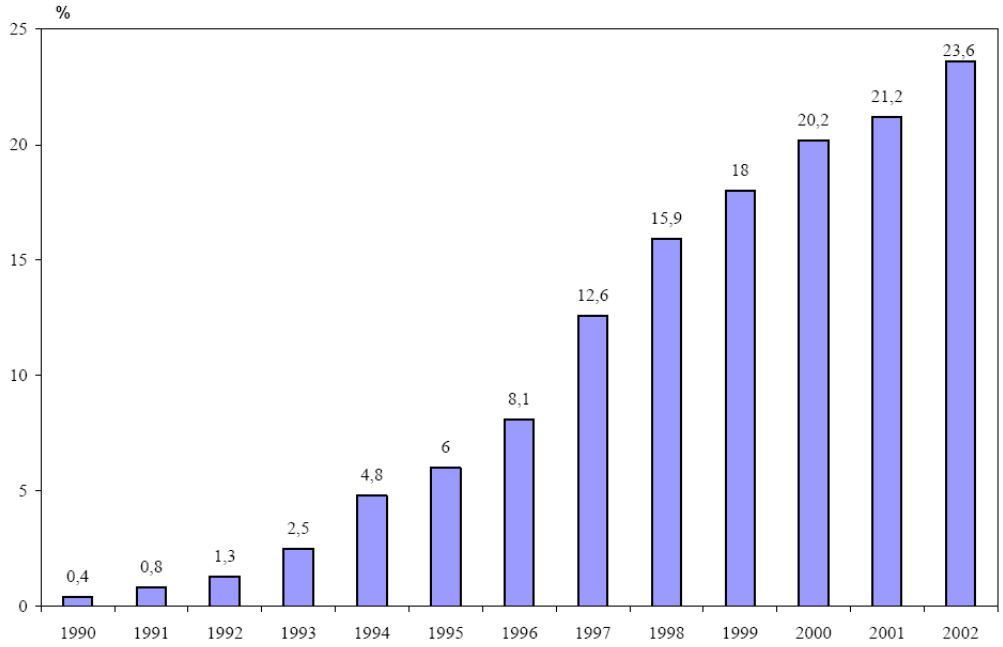


**Figure 3.2:** HIV prevalence among antenatal clinic attendees in the Eastern Cape, 1990-2002 (Stats SA, 2004).

### 3.5 Agricultural activity in the Eastern Cape

Agriculture is historically the backbone of the provincial economy. However, agricultural land in the former homelands is under-utilised, and livestock and horticulture production

have expansion potential (ECDC, undated). There is scope for many different types of farming, including forestry and small-scale fishing (ECDC, undated).

### 3.5.1 The Siyazondla homestead food production programme

The Siyazondla homestead food production programme was initiated in to address hunger among the poor, vulnerable and food insecure households with access to at least a small piece of land. The programme was a joint initiative between the then Eastern Cape Premier's office during the time of Honourable Nosimo Balindlela and the Provincial Department of Agriculture. The objectives of the programme were to:

- Address food insecurity in the Province
- Guarantee food security for rural and urban people, and
- Ensure supply and access to nutritional food all year round.

The target beneficiaries of the programme were classified into two groups. The first group of beneficiaries included:

- Beneficiaries of food parcels (by the Department of Social Development)
- Unemployed breadwinners
- HIV infected and affected families
- Households earning less than the accepted minimum social grant level
- Child-headed families (15 years and upwards); and
- Physically challenged people.

The second group of beneficiaries included micro projects and youth development projects such as unemployed youth. The programme involved handing out a package that included production inputs (seeds, fertilizer, seedlings and insecticides), garden tools (wheel barrows, forks, spades, rakes, watering cans, irrigation pipes), fencing and water harvesting equipment i.e. water tanks. The inputs were intended to assist average sized households with some land for home gardening.

## 3.6 Survey method & tools

Contact details of the leaders of these groups were obtained from the local extension officers. Arrangements were then made to meet with the farming groups where they would be informed about the study and asked to volunteer. After the agreement was reached with the group leaders, focus group discussions were arranged and held at a nearby school (with two groups comprised of 12 and 13 participants respectively). Though each member works their own plot, they shared resources, such as tools. A comprehensive questionnaire was used to collect data from both the beneficiaries and non-beneficiaries (see appendix A).Data was analysed using Statistical Package for the Social Sciences (SPSS).

## 3.7 Variables included in the questionnaire

### 3.7.1 Name of village

Physical place of residence was important as it would be used to classify the respondents by their local municipality.

### 3.7.2 Gender

The gender of each respondent was needed to show which gender plays a bigger role in household farming.

### 3.7.3 Age

The age of respondents would give an indication of which age groups are more involved in household food production.

### 3.7.4 Number of household members

The name, age and gender of respondents' household members would be used to show size of family that depended on the household garden as a source of food and also to show if the produce of the garden was enough to feed everyone within the household.

### 3.7.5 Introduction of the Siyazondla programme

The respondents were asked when the programme was introduced in their villages, if at all. This information would assist the researcher to understand if the programme is new to the respondents or not.

### 3.7.6 Selection criteria

Respondents were asked about the criteria used by the Department of Agriculture for one to become a member of the project. This information would give an idea of people's perceptions about who benefits from the project and whether the farmers are able to take initiative if they want to become beneficiaries of the Siyazondla programme.

### 3.7.7 Period participating

The respondents were asked about the period they had been participating in the Siyazondla programme. This information would give an indication of whether the programme was able to sustain its beneficiaries over a period of time and also to show whether it was able to attract new members. The understanding of farming practices and food production would be related to the length of time that one had been part of such a programme.

### 3.7.8 Size of arable land/ home garden

The size of arable would show the potential of each household garden as opposed to what is currently being produced

### 3.7.9 Proportion of arable land used for gardening

The respondents were asked to estimate the proportion of arable land that was used for vegetable production under the Siyazondla programme (e.g. quarter, half, or all of it)

### 3.7.10 Types of crops grown

Respondents were asked to list all crops grown in their vegetable gardens as an indication of dietary diversity for the household members.

### 3.7.11 Inputs from Government

The Departments of Agriculture and Social Development would subsidise qualifying households with planting inputs through the Siyazondla programme. A list of these inputs would show if the farmers were fully equipped to start or sustain their home gardens.

### 3.7.12 Additional inputs

Respondents were asked whether there were inputs that were needed but not supplied by the Government through this food production programme. This would assist in understanding of costs involved in household farming. Respondents were expected to indicate with a yes/ no and then list additional inputs if they answered yes.

### 3.7.13 Seasons of growing vegetables

It was important to understand if respondents faced difficulties in their farming due to seasonal changes in order to give relevant recommendations towards the improvement of the programme.

### 3.7.14 Source of water

Since access to water is very important in determining the success of a farming project such as Siyazondla, respondents were asked where they obtained water for irrigating their vegetable gardens.

### 3.7.15 Roles in farming

It was important to understand who performed the following roles in the home garden: Roles were listed in a table and the respondents had to tick the person(s) responsible for each. Additionally, the cost of each activity also had to be included.

| Activity | Self | Spouse | Children | Relatives | Hired labour | Cost (R) |
|---|---|---|---|---|---|---|
| Ploughing | | | | | | |
| Sowing | | | | | | |
| Watering | | | | | | |
| Weeding | | | | | | |
| Garden management | | | | | | |
| Harvesting | | | | | | |
| Other | | | | | | |

### 3.7.16 Consumption of garden vegetables

Respondents were requested to indicate the proportion of consumed vegetables that was from their Siyazondla garden. The answers were rated as being some, most or all vegetables consumed.

### 3.7.17 Frequency of consumption

The respondents were asked to estimate how often they consumed vegetables in their households per week as an indication of the importance of vegetables as part of their diet.

### 3.7.18 Changes in frequency of consumption

The respondents were asked whether the frequency of eating vegetables had increased or decreased since the start of the project. This would indicate if the programme was changing the pattern of vegetable consumption by households.

### 3.7.19 Existence of vegetable garden before intervention

The respondents were asked if they had a vegetable garden before the Siyazondla programme started in their area. The answers were classified as yes or no.

### 3.7.20 Input cost

Respondents were requested to estimate the money spent on inputs and labour to produce vegetables in the garden per season. This would indicate the feasibility/ sustainability of the programme.

### 3.7.21 Changes in household due to the programme

Respondents were asked if they had noticed any changes in their households as a result of the programme in the following areas: diet, food security, appearance, working together, income, or other. Answers were listed as improved, became worse or remained unchanged.

### 3.7.22 Changes needed in the project

Respondents were asked whether they thought the programme needed some changes and to specify if any. This would assist to identify gaps and areas of improvement

### 3.7.23 Role of stakeholders

Respondents were asked about other stakeholders who were involved in the programme and their specific roles.

### 3.7.24 Training received

Respondents were asked whether they had been trained on vegetable production and to specify the type of training received.

## 3.8 Data Analysis

Both qualitative and quantitative data were collected. According to (Maxwell *et al.* (1992), both types of data have advantages and disadvantages. Quantitative methods are often believed to yield more objective and accurate data because they are standardized and can be replicated. Data collected quantitatively can be analysed using sophisticated statistical techniques. This is not the case with qualitative data.

There are some key issues to be considered in choosing research methods. Firstly, the credibility of findings and the level of detail that the researcher wants to reach affects the choice of method is considered. For example, if the researcher only wants a general overview of the matter at hand, s/he may opt to use a less technical method, but if the findings have to be very precise then the researcher may choose to use a method that will yield such specific results. Secondly, the skills of the staff who would be conducting the research survey also affect the choice of method. For example, qualitative method requires the researcher to interpret events, observe the participants and 'read what they think'. Quantitative methods require precise measurements and analyses (Miles & Huberman, 1994). The third key issue in choosing research method is consideration of the cost involved. Lastly, time constraints have to be considered when planning to undertake a research project. Qualitative methods are time consuming and produce data that are hard to generalise. Quantitative methods are more efficient and require less time.

# Chapter 4
# Results and discussion

## 4.1 Demographic characteristics of the sample households

Eighty-three percent of beneficiary respondents were female (n=34), compared to 58% of sampled non-beneficiaries. The average age of the beneficiaries was 50, with the youngest being 37 and the oldest member being 87. For the non-beneficiaries, the average age was 62. The youngest respondent was 28 and the oldest was 90. This means that in the beneficiaries there were no youths as compared to the non-beneficiary group. Beneficiary household sizes ranged from one to 22 and one to eight for the non-beneficiaries.

The period of participating in the programme, selection criteria and requirements for one to become a member were among the questions that were asked of beneficiaries. Findings showed that 75% of respondents had participated in the programme for a period of 7-24 months, 12% for more than 24 months, whilst the rest were new members. Sixty-three percent of beneficiaries had been selected by the Department of Agriculture because they were considered poor and also had access to arable land. Thirty seven percent were also classified as poor and had interest in farming.

Sixty percent of respondents heard about the programme from the Agricultural Extension Officers, 23.3% from community meetings and 16.7% from other community members (informally). The proportion of respondents that had a home garden before the Siyazondla programme started was 92.7% and 7.3% did not. Among sampled beneficiaries, 20.5% used water from taps, 30.8% from tanks, 33.3% from rivers and 15.4% from dams or communal boreholes to water their home gardens.

## 4.2 Siyazondla garden food crops

Home gardening had been identified as a means of providing year-round access to food for rural households. Having access to arable land was key for selection in the programme as all respondents had to participate in some farming activity. Table 4.1 shows that each household had access to some arable land even though some respondents were unable to estimate its size.

**Table 4.1: Size of arable land available to respondents for home gardening in the Amathole District Municipality, 2008**

| Size of arable land | Beneficiaries (%) | Non-beneficiaries (%) |
|---|---|---|
| Quarter of Ha | 49 | 48 |
| Half Ha | 15 | 4 |
| Three quarters of Ha | 10 | 0 |
| One Ha | 7 | 0 |
| More than Ha | 0 | 28 |
| Unable to estimate land size | 19 | 20 |
| Total | 62** | 38 |

** Significantly different from the non-beneficiaries for $p < 0.001$.

The size of arable land did not necessarily match the size of home gardens, as some respondents used the rest of the land for other activities, such as keeping chickens. It was therefore important to enquire what proportion of available land was used for the home gardening. The beneficiaries had significantly larger areas of arable land as compared to the non-beneficiaries of the Siyazondla programme (Table 4.1). Table 4.2 shows that more respondents used all their available land for gardening regardless of whether they are beneficiaries of the programme or not. This means that the majority of

the people sampled in this community relied on the land for their food security, which correlates with the findings of Davenport *et al.* (2012).

**Table 4.2: Proportion of land used for home gardening by respondents in the Amathole District Municipality, 2008**

| Proportion of land used for home-garden | Beneficiaries (%) | Non-beneficiaries (%) |
|---|---|---|
| All | 42 | 77 |
| Three-quarters | 17 | 6 |
| Half | 34 | 11 |
| Quarter | 7 | 6 |

Figure 4.1 illustrates the types of vegetables and crops produced in the homestead gardens of respondents. Spinach, cabbage, carrot, beetroot, turnip, tomato and potatoes were grown significantly more ($p<0.05$) by beneficiaries than non-beneficiaries. This indicates that the programme was important in encouraging household gardens to have diverse crops, which is important for their nutrition as expressed by Faber & Wenhold (2007). There was no significant difference between the beneficiaries and non-beneficiaries on growing crops such as garlic, pepper, beans, pumpkins, onion and lettuce. Of interest were the differences in the proportions of crops grown by the beneficiaries and non-beneficiaries, for example, potatoes were grown by 87.8% of beneficiaries and only 42% non-beneficiaries, whilst beetroot was grown by 75.6% beneficiaries and 38.1% non-beneficiaries. More beneficiaries were also actively involved in growing each crop than non-beneficiaries, with the exception of onions and maize. Onions were grown by 61.0% beneficiaries and 61.9% of the non-beneficiaries. The results indicated that maize was produced by only 12.2% of beneficiaries and 38.1% non-beneficiaries, which was significantly higher. This suggests that households in this community grew maize regardless of the government support. Lesser

beneficiaries grew maize because their lands were used to diversify from the stable crop which is maize to vegetables as supplied by the Siyazondla programme. This confirms that poor communities have dependency syndrome to government support (Andersson *et al.* 2011). The data presented indicates that the Siyazondla programme increased the amount of crops especially vegetables grown by the community. Furthermore, beneficiaries produced more crops than the non-beneficiaries, except for maize. This is an important finding since more food will be available in the community for either consumption or generating income and more people will have access to food.

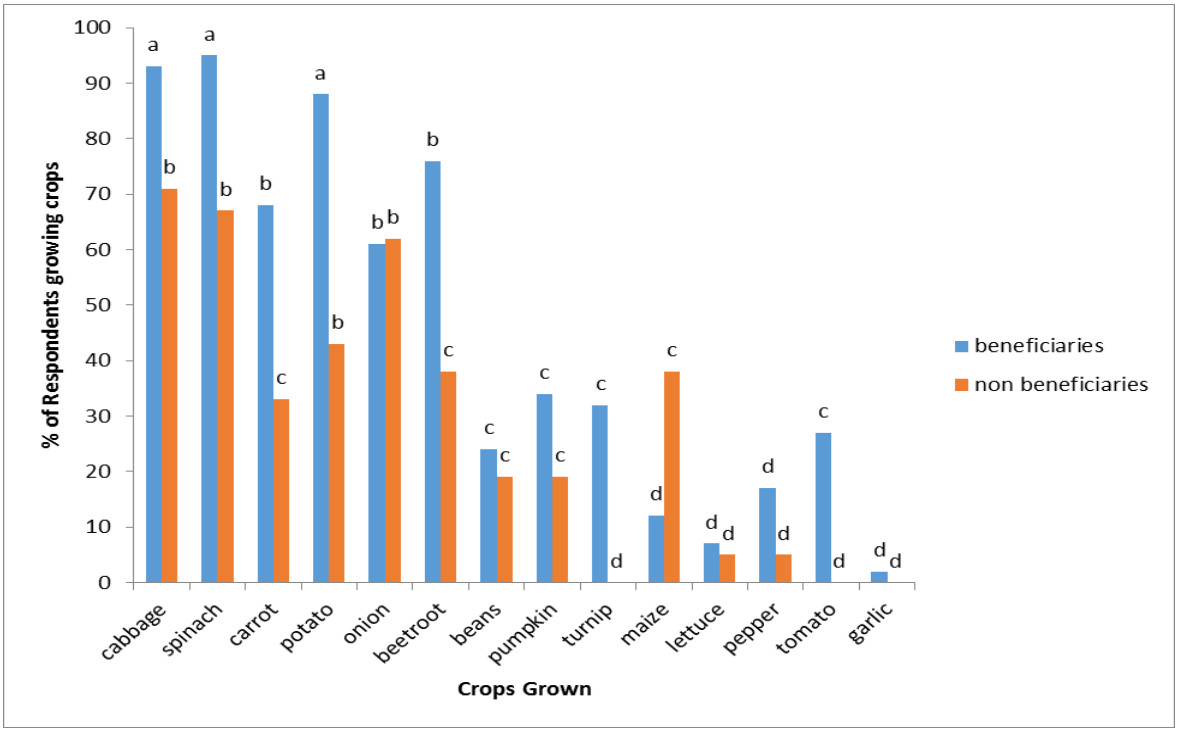


**Fig. 4.1: Graph illustrating the crops grown by beneficiaries and non-beneficiaries of the Siyazondla programme in the Amathole district, 2008 (n= 66).**

*(Crops with different letters differ significantly between beneficiaries and non-beneficiaries for the same crop; p<0.05.)*

Responses on whether there were times in a year when communities could not grow vegetables were similar for both groups, with 19.5% of beneficiaries reporting that there were such times compared to 25% of non-beneficiaries. Water was reported as the main constraint to year-round production. This means that there is a struggle in fighting

food security in this Siyazondla programme because only a few percentages of beneficiaries had access to food at all times through this programme. It is therefore recommended that the Siyazondla programme focusses on providing water resources as part of the inputs provided by the programme.

### 4. 3 Frequency of food consumed from the Siyazondla gardens compared to other sources

Table 4.3 shows the proportions of vegetables that were picked from the home garden as compared to the total amount of vegetables consumed by participating households.

**Table 4. 3** Proportion of vegetables consumed from the participants' home gardens in the Amathole district municipality, 2008

| **What proportion of your total household consumption of vegetables comes from the home garden?** | **Beneficiaries (%)** | **Non-beneficiaries (%)** |
|---|---|---|
| All | 37 | 20 |
| Most | 41 | 44 |
| Some | 22 | 36 |

The results indicate that 37% of the beneficiaries consume all their vegetables from their home garden as compared to 20% of the non-beneficiaries. There is a 17%, increase in people who obtain all their vegetables from the home garden. This positive outcome of the programme assists in fighting food insecurity since the finances that were used to buy vegetables will now be used elsewhere, e.g. in buying clothes etc. The highest percentage of respondents regardless of whether they are beneficiaries or not get most of their vegetables from home gardens. This confirms results from the study by Kortright & Wakefield (2011) that discovered that home gardens play a major role in fighting food insecurity by providing diverse vegetables to poor households.

**Table 4.4** Weekly vegetable consumption by respondents' households in the Amathole District Municipality, 2008

| Number of days per week where vegetables are consumed | Beneficiaries (%) | Non-beneficiaries (%) |
|---|---|---|
| 2 | 4.9 | 11.1 |
| 3 | 24.4 | 22.2 |
| 4 | 12.2 | 22.2 |
| 5 | 2.4 | 11.1 |
| 7 | 56.1 | 33.3 |

The frequency of vegetable consumption was used as a measure of access to food. The beneficiaries were asked whether there had been a change in the frequency of their vegetable consumption pattern since they became involved in the program. Ninety-eight percent of beneficiaries said the frequency of consumption had increased, whilst only 2% felt there was no change. The Siyazondla programme therefore contributed positively on improving vegetable consumption. On the other hand, the non-beneficiaries relied mainly on purchased food. This would put a strain on the household's financial resources, especially in the face of high unemployment and poverty in the Eastern Cape Province (Lemon, A., 2004). Results in table 4.4 showed that 56% of beneficiaries ate vegetables everyday (7 days a week), compared to 33% of non-beneficiaries. This indicates that the intervention programme has increased the number of people who ate vegetables every day by 22.8%. The access to food has increased in the community that benefited in the programme.

The food production programme under review was aimed at increasing the physical access to fresh, healthy food for the benefiting households to improve their state of food security. The results above show an increased frequency of vegetable consumption by beneficiaries which was attributed to their involvement in the programme.

### 4.4 Income generated from selling food produced in the Siyazondla gardens

Home gardening has been shown through other studies (see Chapter 2) to be a source of additional income for the household through the sale of a portion of the garden produce. It is suggested that this additional income is generally used to purchase additional food items, further increasing dietary diversification (Cull, 2004). The generation of income was one of the expected outcomes of the Siyazondla programme. The majority (86.1%) of beneficiaries generated some income from selling vegetables, while 13.9% reported generating no income from their home gardens. No non-beneficiaries generated income from their gardens, which proves that the programme had a positive impact on food security on the beneficiaries.

The source of inputs gives an indication of how much a household spent on inputs and hiring labour (where applicable). Figure 4.2 shows that inputs such as seeds and planting tools were provided by the government (Provincial Department of Agriculture) for programme beneficiaries during the planting season in 2008.

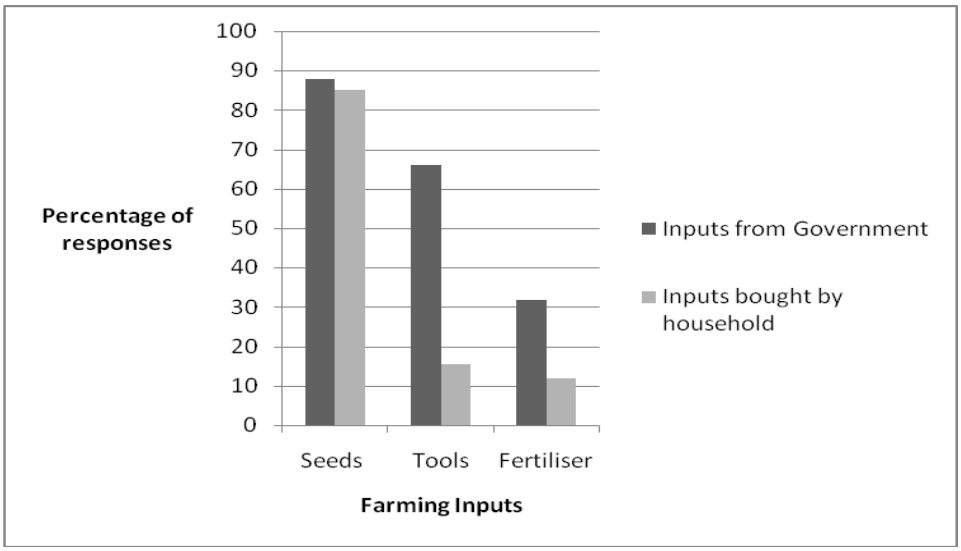


**Figure 4.2:** Source of farming inputs for selected Siyazondla beneficiaries, Amathole district, 2008 (n=66).

It was noted that although 88% of respondents received seeds from the government, 85% bought additional seeds in the same planting season. This was due to beneficiaries having no say in the type of seeds sponsored as well as the fact that the beneficiaries felt that not enough seeds were provided to meet household demand. The trend is different for tools and fertilizer. As the government donated these inputs, fewer people purchased the tools. Non-beneficiaries purchased all their inputs.

Record keeping proved to be a challenge for both the beneficiaries and non-beneficiaries. It was difficult to provide accurate records of production costs. Nonetheless, 68% of beneficiaries estimated input costs as R300-R400 for the season, while 32% reported investing approximately R200. Non-beneficiaries spent more on their production, with 72% of respondents estimating that they invested approximately R500 and 28% invested between R200 and R400. Participants were probed with questions such as ‘is there any household item you managed to buy after selling your garden produce?’ In the Mbhashe District, where the programme had been piloted and members had participated for a longer period than in other Districts, some beneficiaries named items (television sets, fridges and stoves) they had purchased with profit from the sale of produce from the programme. Some respondents reported that they could now afford to eat better because they could afford to buy meat without waiting for monthly pension or state grant payouts.

Table 4.5 illustrates the activities involved in home gardening and the people who carried out these activities. Each participating household had an arrangement of who would do which activity in each stage of the production.

**Table 4.5:** Labour input among participating households at each stage of production in the Amathole district, 2008

| Responsible person(s) | Activities | | | | | |
|---|---|---|---|---|---|---|
| | Ploughing (%) | Sowing (%) | Irrigation (%) | Weeding (%) | Daily management of garden (%) | Harvesting (%) |
| **Project participant** | 48** | 49** | 52** | 49** | 61** | 50** |
| **Spouse** | 9 | 11 | 8 | 9 | 14 | 12 |
| **Children** | 27* | 30* | 33** | 32** | 23* | 30* |
| **Relative/s** | 3 | 3 | 3 | 2 | 1 | 4 |
| **Hired labour** | 13 | 7 | 4 | 8 | 1 | 4 |

* Labor input significantly different between responsible persons per activity; $p < 0.05$.

** Labor input significantly different between responsible persons per activity; $p < 0.001$.

From table 4.5, it is clear that the project participants did most of the work in the gardens. The table shows that the children were more involved in the garden than beneficiaries' spouses, relatives and hired labourers. The difference was highly significant in irrigation and weeding activities ($p<0.001$), as well as ploughing, sowing and harvesting ($p<0.05$). This is because in a household there were significantly more children than adults hence the use of children. The labour on daily management of the garden was not significantly different between beneficiaries and non-beneficiaries. Hired labour was needed for ploughing and weeding the garden. When compared to the beneficiaries, non-beneficiaries use significantly less hired labour due to the smaller size of their arable land (Table 4.1)

Although the project was perceived to be doing well, some changes were needed. Eighty-five percent of the beneficiaries felt that the time of the delivery of inputs and the variety of seeds needed to be improved. Another 12.2% felt that the project needed to

reach more households in order to make meaningful impact in their communities. The remaining 2.4% did not see anything that needed to change. The programme involved several stakeholders who played different roles. The Department of Agriculture provided inputs and technical advice (reported by 44.4%), local municipalities provided water (reported by 55.6%). The project was mainly supported by these two stakeholders.

# Chapter 5
# Conclusions and recommendations

## 5.1 Introduction

The purpose of the study was to assess the effect or impact of a programme to improve household food security of beneficiaries of the Siyazondla homestead food production programme. Additionally, this project aimed to improve household food security by offering farming inputs to beneficiaries for their home gardens. The findings of the study would be used as a monitoring tool and basis for planning of future projects by the Eastern Cape Department of Agriculture and other organizations.

Individual interviews and focus group discussions were held with two groups – a randomly selected group of beneficiaries and a purposively selected control group from the same area. Three indicators measured of the effect of the programme in improving food security. Available crops were used to indicate dietary diversity and nutrient availability, frequency of vegetable consumption as well as income generation were also used as measures to indicate the effect of the project in improving household food security.

Both groups of respondents produced similar crops; however it was important to note that a higher proportion of the beneficiaries group produced a significantly wider range of vegetables as opposed to non-beneficiaries. Crops such as spinach, cabbage, carrot, beetroot, turnip, tomato and potatoes reflected this pattern, however maize was predominantly produced by non-beneficiaries who produced this crop than beneficiaries. This raised a concern regarding the diet diversity of the non-beneficiaries group.

The frequency of vegetable consumption was used to discover the proportion of food that comes from the home garden as compared to other sources, i.e. how frequently do participants have to think about buying/ borrowing vegetables as opposed to those who

are not part of the programme. The findings clearly showed that most of the vegetables consumed by beneficiaries actually came from their home garden. In this regard, the Siyazondla programme proved to be making a positive contribution in ensuring a more sustainable food source for the poor households.

The Siyazondla programme was primarily aimed at putting food on the table and secondly to generate income by selling surplus produce. In one of the local municipalities in particular (Mbhashe Municipality), the programme participants were very excited about the Siyazondla programme, confirming that the programme did indeed empower the participants to feed themselves (as the programme name translates). As recorded in the previous chapter, 86.1% of the beneficiaries made some income from the project, though it was difficult for respondents to give accurate records of their costs and profit.

## 5.2 Conclusions

Overall, the study revealed that the Siyazondla programme has great potential to improve food security of the benefiting households. However, it must be added that such a programme can only have a limited impact in the overall development of communities unless it forms part of an integrated plan that would include capacity building e.g. on seasonality of crops; nutritional content; marketing; nutritional requirements for household members such as women and children; infrastructure to protect and store their produce.

## 5.3 Recommendations

The programme appears to have potential to improve the household food security of poor communities, however a few issues would need to be addressed such as the criteria of selecting beneficiaries. The study showed that most participants were elderly people. It would be advisable to find means of attracting younger people to such programmes for purposes of sustainability and also for labour as agriculture is labour intensive.

Introducing nutrition education into the programme could improve the impact as participants would be better equipped to select high value crops. Furthermore, they would know better about high yield production as well as preparation of vegetables for maximum nutritional value.

### 5.3.1 Recommendations for further research

A sound pre- and post-test assessment would assist in clear impact assessment. Such an element should be built into the programme. Given that this was not set up earlier, a longitudinal study that follows the progress of the respondent households would be most beneficial to the Siyazondla Homestead Food Production programme in improving the food security of households.

### 5.3.2. Recommendations for improvement of the study

The study could have been more enriched if there were enough financial resources to move to all the districts where the programme was run. At the start of the study, it was assumed that all participants had basic knowledge of crop production, however this was not tested. Additionally, it was assumed that all participants understood that the main purpose of the programme was household food security and only surplus produce could be sold for income. It would be recommended that proper records of the whole production process should be kept, as well as financial records.

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**Appendix A**

**SIYAZONDLA HOUSEHOLD QUESTIONNAIRE**

To assess the role of the Siyazondla homestead food production programme in the livelihoods of selected villages in the Amathole District Municipality

1. Name of village ……
2. Gender …….
3. Age ……..
4. Number of household members ……..

| | **Name** | **Gender** | **Age** |
|---|---|---|---|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |

5. When and how was Siyazondla introduced in your village?

……

……

6. What are the criteria for one to become a member of the project i.e. how did you and your household become members of the project?

   ……

   ……

7. For how long have you been participating in Siyazondla activities?

……

8. What is the size of your arable land/ home garden (estimate)?

……

9. How much of this land is used for Siyazondla garden (e.g. quarter, half, all of it)?

……..

10. Which crops or vegetables do you grow?

……

……

……...

11. What inputs did you receive from the government?

……

……

……

12. Are there any inputs that you have to buy or pay for yourself? If yes, what?

……

……

13 Are there times in the year when you cannot grow vegetables? Explain

……

……

……

14. Where do you get water for irrigation?

……

……

15. Who performs the following roles in the garden? Tick the correct answer.

| **Activity** | **Self** | **Spouse** | **Children** | **Relatives** | **Hired labour** | **Cost (R)** |
|---|---|---|---|---|---|---|
| Ploughing | | | | | | |
| Sowing | | | | | | |
| Watering | | | | | | |
| Weeding | | | | | | |
| Garden management | | | | | | |
| Harvesting | | | | | | |
| Other | | | | | | |

16. How much of the vegetables that you consume in your household come from your Siyazondla garden? (Tick the correct answer)

| Some | Most | All |
|---|---|---|

17. How often do you eat vegetables in your home per week?

……

……

18. Has the frequency of eating vegetables increased or decreased since the project started?

19. Did you have a vegetable garden before Siyazondla programme started in your area?

……

20. Estimate how much money you spend on inputs and labour to produce vegetables in your garden

……

……

……

21. Are there any changes/ improvements in your home/ household since you were involved in the programme in the following areas?

| | **Improved** | **Became worse** | **Remained the same** |
|---|---|---|---|
| Diet | | | |
| Food security | | | |
| Appearance | | | |
| Working together | | | |
| Income | | | |
| Other | | | |

22. In your opinion are there changes that need to be made in the project? If so describe.

……

……

……

23. What is the role of various stakeholders?

……

……

24. Did you receive any training on vegetable production? Briefly explain.

……

……

Further comments

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