

**Towards an understanding of the relationships between homestead
farming and community gardens at the rural areas of Umbumbulu,
KwaZulu-Natal**

By

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Dedications

I would like to dedicate this to my parents
Mr. T.I and Mrs. N. D Ndlovu

ABSTRACT

This study explores the perceptions of the value of community gardens by members and the relationship between this activity and homestead farming activities in Ogagwini, Umbumbulu District, KwaZulu-Natal.

Establishing and supporting community gardens is consistent with the strategies adopted by South African national and provincial government to alleviate poverty, address food security and improve livelihoods for rural people. However, there is a lack of literature available on why rural people choose to involve themselves in community garden projects and whether these reasons are those intended by policy makers. There is abundant research on community gardening – most of it either urban or not specific as to setting. This literature is useful for the generic information it provides, but does not provide the scope of understanding that is unique to rural community gardening in South Africa. Thus this study contributes to understanding rural community gardens and possible adjustments needed by extension workers and development strategies to ensure effective food gardening practices in rural KwaZulu-Natal.

The first extension facilitated community garden activities in Ogagwini were established in 1993 with the support of the provincial DAEA. Some community garden members are also members of the Ezemvelo Farmers Organisation (EFO), a group of farmers engaged in commercial small-scale farming. This research attempted to find out how community gardening activities were related to small-scale commercial homestead activities. Specifically, the study sought to investigate issues such as preferences among farmers between community gardens and homestead farming; the social and economic benefits derived from community gardens; and perceptions around environmental/ecological issues surrounding community gardens and homestead farming.


A survey questionnaire on community garden activities and perceptions was given to EFO members and used to identify participants for this study. Committee members of the EFO (also members of community gardens) arranged for five gardens to be investigated. In-depth data was collected at the actual garden sites using semi-structured focus group discussions and participant observation. The data from the survey questionnaire was verified and clarified by semi structured probing during these discussions. A spiral approach was used to organise responses and make sense of the data within social, economic, and environmental themes. After three garden visits, no new knowledge was forthcoming and due to time constraints the study was limited to these three groups.

The study found that there were no distinct linkages between homestead farms and community gardens, but that the systems operated on different principles. Community gardens were used to produce cabbages, carrots, beetroot, onions, green peppers and spinach mainly for consumption, whereas homestead farms produce field crops such as maize, amadumbes (taro), sweet potato, potatoes, pumpkins and peanuts. The study further identified social and economic benefits and environmental impacts and reinforces the importance of knowledge sharing amongst participants. The main benefits identified were income generation, sharing of knowledge and technical support

The Department of Agriculture should carefully address sustainability issues when planning and implementing community gardens. This would include being able to carry on in the absence of an agricultural extension officer. Training programmes need to ensure that learning is transferable; that it is not overly commodity or technology specific and includes promotion of environmental awareness. This study has highlighted a number of potentially valuable issues for further situated research in the area of farming protocols, markets and the social value of community gardening within rural communities.

DECLARATION

I hereby declare that the research presented in this dissertation is of my own investigation and has been submitted in any form for a degree or diploma in any university. Where use has been made of the work of other, this has been duly acknowledged in the text.

Signed  _____
Mfundu. M. Ndlovu

Date _____

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

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LIST OF ACRONYMS

ACF-CGN	Australian City Farms and Community Garden networks
CEAD	Centre for Environment, Agriculture and Development
DEA	Department of Environment and Agriculture
DAEA	Department of Agriculture and environmental affair
EFO	Ezemvelo Farmers Organisation
FAO	Food and Agricultural Organization of the United Nation
FSG	Farmer Support Group
KZNDAEA	KwaZulu-Natal Department of Agriculture and Environmental affairs
MALA	Ministry of Agriculture and Land Affairs
NGOs	Non Governmental Organizations
SANPAD	South Africa Netherlands Research Programme on Alternatives in Development
SSFCGI	Semi-structured focus group interviews
PTO	Permission to occupy
WRI	World Resources Institute

CHAPTER ONE

INTRODUCTION TO RESEARCH

1. Introduction to research problem

As one of the oldest human activities, gardening has become an important part of people lives around the world, but especially more for the rural people in South Africa (Walter; 2003). According to Brookes (1991) gardens have become an important means by which the rural poor are able to feed their families and reduce their vulnerability to hunger.

Moreover gardens have become more than just about the production of food. They also perform a social function (Lund; 2004). Fernandez (2003) confirms the complexity of community gardens and identifies three benefits to community gardens, namely social, economic and environmental benefits. Community gardens have become a 'safety net' for many in rural South Africa. They provide for those without formal employment with community based employment (Brooks; 1991, Light et al; 1996).

A review of literature has shown that there is apparently very little research published that specifically looks at rural community gardens. There is abundant research on community gardening – most of it either urban or non-geographically based. This literature is useful for the generic information it provides, but does not provide the scope of understanding that is unique to rural community gardening. Specifically (Brooks (1991) and Friedrich (2004) while confirming the complexity of community gardens also note that insufficient research has been conducted on community gardens, particularly in South Africa

Because gardens serve multiple purposes, it can be assumed that people enter into gardening for varying reasons. Further, whether gardening is in a homestead or is communal would depend on the individual motivations and needs. Herbach (1998) argues that gardening should not be viewed in a single dimensional manner, but should be viewed in all aspects of its being and the benefits it brings.

Against this background of complexity and the lack of published research the KwaZulu-Natal Department of Agriculture and Environmental Affairs (KZNDAEA) operates on a policy on community gardens, where community gardens mostly about food and nutrition.

It appears that this is the primary reason why the KZNDAEA supports community gardens.

1.1. Food gardens in perspective

Gardening is one of the oldest human agricultural activities (Walter; 2003). Over the centuries, the reasons for gardening have changed and diversified. Food gardens were initially used solely for growing food for the sustenance of its owners. These days food gardens are used for various reasons including that of producing food for home consumption. Walter (2003) stated that participants of food gardens went into gardening for different reasons. Food gardens, especially community gardens, are used as a catalyst for community building. Food gardens function as informal parks. They are also perceived to have a rich social nature as they are a place where people meet and interact, thus enhance social integration.

Nell *et al* (2000) argues that there should be an understanding that food gardening does not only mean the production of vegetables but that food gardening also includes the production of chickens, rabbits and these are all done for consumption purposes. It is therefore not a single dimensional system but a rather very complex system (Friedrick; 2004)

One of the most important factors or elements of food gardening these days is that food gardens are seen as an imperative tool for improving quality of life (Nell *et al*; 2000). Cassara (2005) stresses this point by stating that for the many (approximately 1.1 billion) poor people living in severe poverty, nature is their lifeline. Therefore these natural resources (especially land) are peoples hope for improving their livelihood options and quality of life.

To some people food gardens have become a way of moral and social training for the children (Walter; 2003). In that children are brought in to the food gardening in order to build in some moral principle into them and also some sense of responsibility. Walter (2003) further states that contact with nature, efficiency and manual labour built a strong moral and social fibre for the children.

Most authors including Nell (2000), Hall (1996) and Fernandez (2003) agree that involvement of the state and development agencies in the establishment of food gardens in the developing countries was in response to poverty as a part of poverty alleviation

programmes. In English society, community gardens came about in the late 1800's because of the need for poverty alleviation (Walter; 2003)

With reference to Southern Africa, most of rural communities are the victims of and are vulnerable to poverty. Their main coping strategy has been food gardening specifically in South Africa, community gardens were introduced because of the mounting concern over malnutrition (Brooks *et al*; 1991). Malnutrition is clearly one of the manifestations of poverty. Establishing community gardens appears to correspond to South African agricultural policy which states that agriculture in general is the means of increasing incomes of the poorest groups in society through opportunities (Ministry of Agriculture and Land Affairs (MALA), 1998). South Africa annually budgets about R50 million for agricultural projects including community gardens (DAE, 2004).

KwaZulu-Natal has witnessed an extraordinary spread of community gardens in its rural areas. By the end of 1999, KwaZulu-Natal had approximately 2635 community gardens and these gardens covered 2055 ha with an estimated 51700 participants (Elkind *et al*, 2000). This can be evidence that rural poor people have taken great interest in community gardens for their agricultural production.

1.2 Research Problem

There is substantial investment into community gardens in South Africa. Millions of Rands are expended each year on the establishment and support of community gardens. This comes in the form of direct expenditures and in the form of salaries and operating costs of agricultural extension officers. Further, community members devote many hours of their time to working on and in community gardens. Yet there is uncertainty about the value of this investment. The benefits are not clear.

The study was focussed towards the understanding of how community gardening affect homestead farming in Umbumbulu, a rural district in KwaZulu-Natal, with particular attention on the social, economic and environmental impacts

Research question: *How community gardens affect homestead farming in Umbumbulu, a rural district in KwaZulu-Natal, with particular attention to the social, economic and environmental impacts?*

1.3 Sub-problems

1. Were there any preferences between community gardens and homestead farming?
2. Why are people in the Umbumbulu engaged homestead farming and community gardening and the purpose and nature of that engagement?
3. What are the social benefits derived from community gardens and homestead farming?
4. What are the economic benefits derived community gardens and homestead farming?
5. What are the perceptions of the environmental/ecological issues surrounding community gardens and homestead farming?

The research will be exploring the impact of community gardens on household/homestead farming. The study will attempt to uncover the impacts of community gardens whether positive or negative. These impacts would be focus on the social, economical and environmental impacts of the gardens.

In addition the research will investigate the perceptions of various stakeholders as to the differences in impact of both the community and homestead gardens. The study is also going to explore what the stakeholders think are the reasons behind the establishment of community gardens and also their impact on peoples' lives, both the perceived and actual impacts. The stakeholders would include the households and the individual of the community; it would also go to investigate the "eye of the service provider". What this means is that the service providers would also have to be approached and therefore their perception heard. The service provides would be the department of Agriculture, the NGOs that are present in the area.

1.4 Importance of the study

The study focuses on the community and homestead gardens because the South African government invests substantial amounts of money and skill in this sector of agriculture. This study will therefore shed some light on the "return on investment". It should give an

understanding to whether or not the investment by the government on these projects is appropriately allocated and being used effectively for the general good of the communities they are trying to support. It should also answer some questions in relation to any alternatives available; should the investment be not feasible.

The study will also give the government departments a clear understanding of why people choose these types of gardens; this will give the idea if the people are only entering the gardens because they are attracted by the investment made and is it their intention for people to choose their garden preferences this way.

It will also cover some gaps to the reasons why the people choose and are these reasons fair for the people in the rural areas. Are these reasons the ones intended by the policy makers and if not what are the changes that can be made to the policies. The policies were made so that the people are able to increase their income and therefore improve their livelihoods. Could this perhaps change the perceptions of the extension work and therefore the development strategies when it comes to food gardening practices in KwaZulu-Natal.

1.5 Limitations of study

The study dealt only with primary agricultural production by farmers on state funded community gardens and their homestead farms. The research framework was further limited to social, economic and environmental aspects related to production by their farms. The results therefore cannot be generalised to the whole of South Africa. Furthermore the study does not engage in statistical analysis; however it gives frequencies and distribution of the responses.

1.6 Definition of terms

Home garden: A piece of land in a homestead (can be in front or behind the house) and is used for agricultural production and mainly for own consumption, the size of the plot may vary from household to household (Nell *et al.*, 2000).

Small-scale (homestead) Farming: Small-scale farming is extensive farming, largely directed towards specialisation and growth. It is usually operated in a large-scale and

in an intensive way. Therefore it should not be viewed as backyard subsistence farming but it should take into account the farm size, the economic element of the farm (Kirsten, 1998 and Korthals, 2004).

Community garden: it is a plot of land that is allocated by local authority for a group of farmers or community and is used for agricultural production; this is mainly for consumption and also for commercial uses (Patel, 1991; DAE, 1999 and Holland 2004). For the purpose of the project, the allocation of land is by an owner of land [that person who has been awarded the PTO (Permission To Occupy)].

Socio-economic status: It is the standing, the honour or prestige attached to one's position in society. It is said that the social status of an individual is influenced by the social position of that individual in society. In our current society occupation is said to be one of the dimensions of economic status. To socio-economic status; ethnicity, religion and gender issues are also attached (Webber, 2005).

Environment: the definition of environment is not definite and therefore it is differentiated into physical and geographical environment (Webber; 2005).

- Physical environment: describes the characteristics of a landscape, which have not necessarily changed because of human interference/impact.
- Geographical environment: includes the physical environment together with any other human modification, these modifications would include agricultural systems, industrialisation, etc. The relationship between these living organisms and non living organisms forms part of an ecosystem.

1.7 Assumptions

The first assumptions made for this study is that the tools that would be used in gaining the information would be the right and valid tools to gather the information that is needed from the community. Secondly this study assumes that the community members, the gardening members or any other participants that would be interviewed would be honest in giving their responses. It further assumed that the groups that are going to be interviewed would be the true reflection and representation of the community.

1.8 Literature review framework and conceptual framework

Figures 1 and 2 illustrate the framework to be followed for the literature review and also for the research. It looks at both the homestead and community gardens with respect to social, economic and environmental factors. It should also reflect the differences in production of the two gardens types.

1.8.1 Literature review framework (figure one)

The central focus of the literature review framework would be the three aspects of community gardens and homestead farms, which were identified as social, economical and environmental aspects. The social impacts would focus on the social capital, the socio-economic issues and the attitudes and behaviours of the farmers with different gardens.

The literature further investigated the environmental impacts of both the homestead farms and community gardens. It focussed on the soil fertility and their knowledge about the fertility, the monoculture versus polyculture practices. Literature would further investigate the production changes over time and thus the causes of the changes, which might also be linked to soil fertility. Moreover literature focussed on the economic impacts of the community gardens and homestead farms. The economic aspects entail the income generation, the investment, economic status, employment creation and the utilisation of gardens, whether it is for commercial or subsistence uses. In addition, it further focussed on access to basic needs and thus the economic status.

1.8.2 Conceptual framework for research project

The focus of the research is the relationship between homestead farms and community and how do community gardens affect homestead farming. The research initially centred on the purpose of homestead farms and identified the perceived values and purpose of community gardens. These in turn expose reasons why people use and support either garden type (homestead farm and community gardens).

From the identified values and purposes of the gardens, the social, economic and environmental objectives will be uncovered. The relationships were then uncovered using the purpose, values and objectives of the gardens (homestead farms and community

gardens). This information and knowledge from this research will be useful to governments, NGO's and other stakeholders involved with community gardens and homestead farms thereby improving their contribution to development.

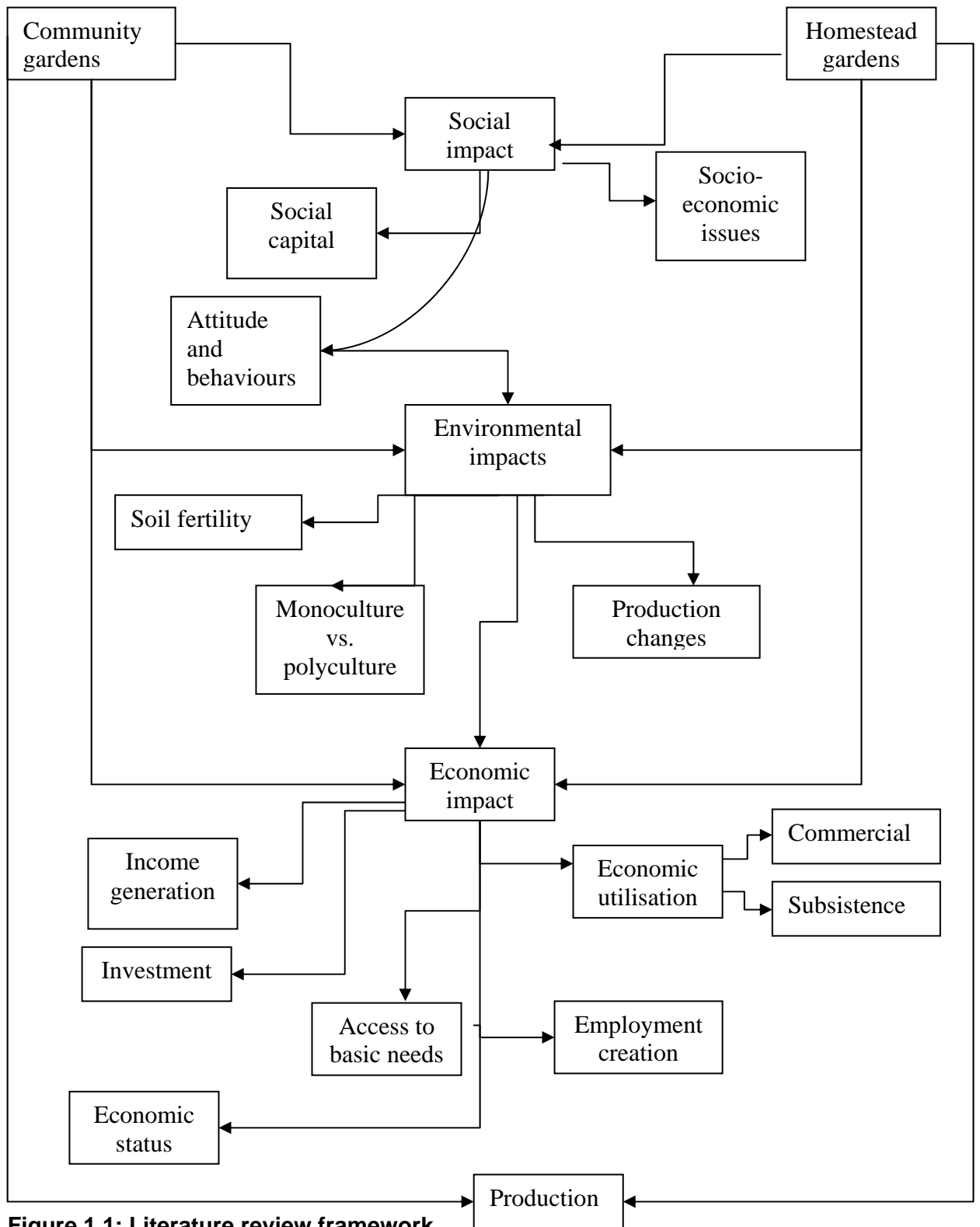


Figure 1.1: Literature review framework

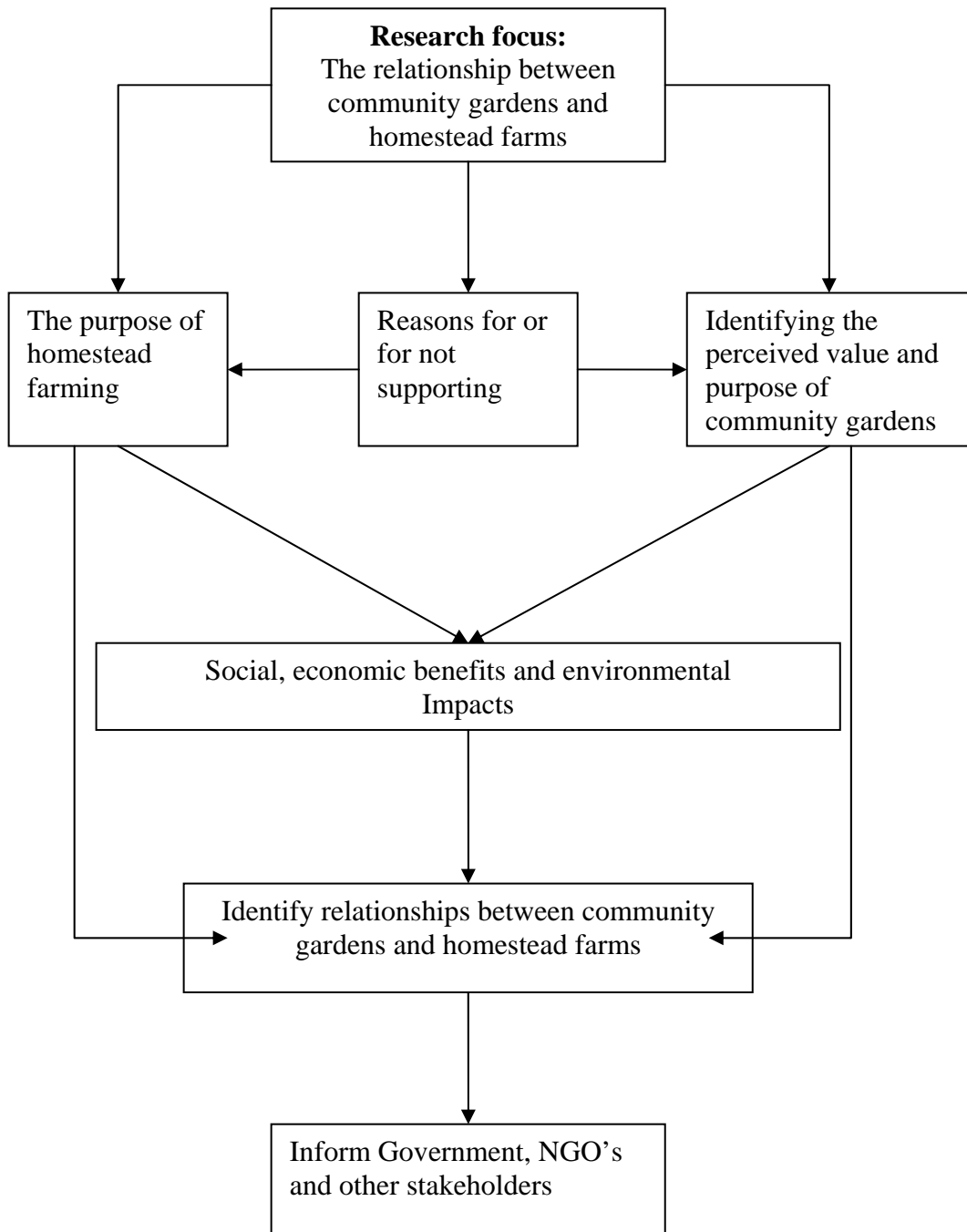


Figure 1.2: Conceptual framework for research project

1.9 Summary

The research will look at the impact of community gardens on homestead gardens and the reasons for the preferences. The study will also look at the attitudes of the people in relation to the preferred gardening and these play a major role in the production. In addition to that it would look at the impacts of each garden type.

This will give a better understanding of the impacts (social, economic and environmental) of these gardens have on sustainability of resources and also the investment of the government on these projects. The study is hoping to also give the policy makers the reasons for the preferences of gardens, thus making them aware of the feelings of the people with regards to the garden types they prefer and also the reasons why people prefer these types of gardens.

1.10 Structure of thesis

The first chapter is the introduction to research. The chapter introduces the conceptual framework that will eventually shape the research project.

The second chapter is the literature review, which explores research conducted on community gardens and how these affect different farmers. It also outlines the different models of gardens that are available to/for farmers.

The third chapter is the methodology chapter. It outlines the approach followed, the tools that were used in the field. The chapter further outlines the data collection and analysis method.

The fourth chapter presents the results of the study.

Chapter five presents the discussions of the study.

The conclusion of the whole study is found in the sixth chapter, which consolidates argument presented in the preceding chapter. It further draws conclusions from the literature presented and findings in relation to the research question

CHAPTER TWO LITERATURE REVIEW

Introduction

According to the World Resource Institute (WRI) (2005) there are currently more than one billion people in the world living in rural areas. Most of these poor rural people rely on the ecosystem for as a lifeline and the possibility of a better life. As part of the ecosystem, food gardens have become a significant factor in rural peoples' lives across the globe. They are important because they supply individuals with sustenance they need for everyday living.

In many ways South Africa reflects the world situation. More than 16 million people in South Africa are living in poverty, and most of these people are in the rural areas and they are usually female-headed household (Ministry of Agriculture and Land Affairs (MALA), 1998). According to the MALA (1998) increasing food production of the small-scale farmers will improve poor people well-being and thus reducing their vulnerability to poverty. The potential of small-scale agriculture has been recognised in many developing countries including South Africa, for their ability create employment, thus generating income and contributing vastly to household food security in poor people's lives (Hedden-Dunkhorst *et al.*, 1999).

A major breakthrough was the development and growth of home gardens. The policy however does not mention homestead farms, but only mentions commercial (monocropping) farms (MALA; 1998). Whereas small-farms have become an ideal strategy for the rural development the last half century (Ashley *et al*, 2001).

Home garden growth however should be encouraged to significantly contribute to the livelihoods of the rural poor. The reason for growth to be encouraged is that agricultural production, which includes vegetable and livestock farming, is the primary source of livelihoods for a large number of households in rural areas (MALA, 1998).

Community gardens as the greatest investments in our society, they are seen as an important element of wealth creation among the poor (Sotshongaye, 2000). From an increase in the production in these community gardens, the agricultural sector would realise a significant rise in the economic benefits of small-scale farmers (MALA, 1998). However with the intensification of agricultural production, issues of labour would come

into play (Stone, 1990). Notwithstanding the significant importance of, the investment in and the expected contributions from community gardens in rural areas, little research has been conducted on community gardens in rural area. Much of the published literature about community gardens is based on the positive social, economic and environmental effects of community gardens on urban livelihoods. Study of the role of community gardens in rural livelihoods has been largely neglected.

This review seeks to contribute to the understanding rural community gardens. It will begin by defining what food gardens are. It will then focus on the different types of gardens. It will then go on to talk about the different uses of community gardens. After which it would focus on food gardens in South Africa and then food gardens in KwaZulu-Natal.

2.1 Defining food gardens

Food gardens are a piece of land, whether individual or communal used and managed for the production of food. Agricultural production may include production of livestock (chickens and rabbits) and these are produced for personal consumption (Gelsi, 1999; Nell *et al*, 2000; Fernandez, 2003; Walter, 2003).

Furthermore literature defines food gardens as farming system, a system that incorporates a number of factors; these would include social, economical and physical factors (London-lane, 2004). All these factors and function are on the area of land that is being farmed or cultivated, whether it be in the backyard or in the communal land (London-lane, 2004).

Gelsi (1999) and Walter (2003) further asserts that food gardens are a participatory relationship with a place or the piece of land and they are sites where people produce vegetables and fruit but also use these spaces to educate about agriculture. There are three categories where one can place food gardens, these include gardening as a strategy to transmit cultural heritage, as an enjoyable practice and as a platform to come together with the natural environment (Lackey, 1998). This perspective is held from a social point of view rather than the agronomic point of view.

The problem with trying to define what food gardens are, is the fact that the gardens are very diverse in size, form or function (London-Lane, 2004). However, gardens are generally identified as combining production, as they produce different vegetables, crops

and even livestock (London-Lane, 2004). Gardens therefore can be divided into homestead and community gardens, which will be addressed in the sections that follow.

2.1.1 Home gardens

Different people understand gardening and gardens differently; Herbach (1998) noted that gardens should not be viewed in a single dimensional manner; however they should be viewed in all aspects of their being and the benefits they bring. London-Lane (2004) further identifies eight types of home gardens. These gardens have been presented Table 2.1:

Table 2.1: Different food garden and the descriptions of the various food gardens

Garden type	Description
1. Traditional gardens	These gardens are formed as a result of a history of adaptation by plants to their local needs and conditions.
3. Kitchen gardens	These are particularly small gardens that are grown to improve meals.
4. Mixed gardens	This is an integration of a number of things; this would include poultry, livestock and fish ponds. It is therefore more than just an ordinary garden because it also provides opportunities for waste transformation and nutrient cycle.
5. Agroforestry gardens	Takes full advantage of the scarce resource (e.g. land) through multi-layer cropping, including trees, vines and root trees.
6. Floriculture gardens	This is a market inclined garden. It includes potted and ornamental plants for households. The decision about the type of plant being grown is entirely up to the household.
7. Market gardens	These are made to meet market opportunity and demand; these include seasonal fruits and vegetables that people might need.
8. Nurseries	Are solely for the propagation and selling of seedling and plants. The plants are sold on local demand expectations. For example seasonal field crops

Data from: London-Lane C. 2004. Livelihoods grow in gardens.

Nell *et al* (2000) suggest classifying gardens as food gardens and homestead farms. Food gardens are a piece of land behind a house that is used for the production of food (*figure 1*), these foods also include vegetable products.

Homestead farms are almost similar to the home gardens. These gardens are found in the homes; however they are not as small as those identified in Table 2.1 and Figure one. They are gardens usually surrounding the house and their sizes are larger than the home gardens. These gardens are termed the homestead farms. And for the purpose of this study these are the farms that would be referred to.

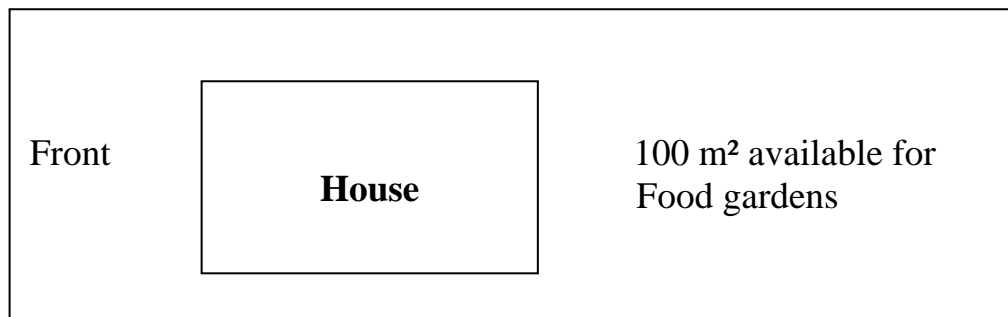


Figure 2.1: Layout of family residential plots

from Nell *et*

al 2000

The farms are involved in what is termed small-scale farming. This means that the farming is on a larger scale than the typical backyard gardens. However small-scale farming does not mean that the farmers are not involved in commercial farming, however their commercial farming is in a smaller scale than those large commercial farms (Kirsten, 1998 and Nell *et al*, 2000) In addition to home gardens and farms there are also community gardens.

2.1.2 Community gardens

Patel (1991) and Holland (2004) define community gardens as open spaces that are managed and operated by members of the local community. Furthermore community gardens can be divided into individual plots and planted with vegetables, and sometimes these plots are shared by families (Patel, 1991).

The South African National Department of Agriculture and Environmental Affairs (DEA) (1999) confirm and build on the idea of gardens being neighbourhood spaces. The DAE (199) states that community food gardens are a portion of land that is to be utilised by a group of people to produce fruits and vegetables, with a minimum number of five people

participating. The land itself can be controlled by either a tribal, a communal or state authority depending on the ownership of the land (DEA, 1999).

As noted by Walter (2003), community gardens are more than just a single piece of land, they are about both the collective and individual effort of participants. Community gardens may be comprised of a single shared piece of land, but within that shared land individuals may retain certain rights and prerogatives over a piece of land within the shared land.

Community gardens provide both collective and individual benefits; these may vary from social, to economical or a combination of both (Hall, 1994). Sherer (2004) identifies community gardens as green spaces that are communally cultivated and cared for. They are spaces that people utilise to grow their own food, mostly for consumption. The management of these spaces is the responsibility of the participants of the gardens (Patel, 1991). They may be divided into plots and planted with vegetables (Patel, 1991). Community gardens however have different aspects attached to them, more especially the social aspect which sets it aside from the normal food gardens.

An important characteristic about community gardens is that every community garden is different from the other and gardeners themselves decide on how to run the garden. In Table 2.2 Sullivan (1999) identifies six types of community garden models,

2.1.3 Summary

Two types of food gardening have been identified and briefly discussed: home gardens and community gardens. However within each type there are a variety of models. People use different garden models and they use them differently according to their needs and motivations. Gardens including home gardens and community gardens are used for a wide range of purpose including home food consumption, nutrition, income, training, social cohesion, and even preserving tradition. Thus it is evident that the apparently simple concept of gardens is complex.

Lund (2004) states gardening is no more about the production of vegetables, it has now become a complex system with various functions and uses. In addition, Friedrich (2004) confirms the complexity of community gardens and noted the lack of research that has been done on community gardens. She indicates that there is a need for further study into

the complexity of community gardens. Thus the next section will highlight these different uses of food gardens, whether it is home or community gardening.

Table 2.2: Different community garden models and their descriptions

Community garden model	Description
1. <i>Single community garden for educational and demonstration purposes with support provided to participants/farmers.</i>	These gardens were established for education and demonstration purposes. The communal garden site is where farmers gather and get knowledge and also technical training. The technical support for the farmers is also provided on the homestead/individual gardens.
2. <i>Community gardens tended collectively</i>	The community gardens are a single large plot and not into individual plots. The entire plot is looked after by the participants of the garden. This enhances collective effort and interaction amongst the farmers.
3. <i>Gardens used for training in garden skills</i>	These gardens are used to educate people on how to grow vegetables. The produce is usually sold to local market and the proceeds are used to fund the garden and to support other farmers.
4. <i>School gardens</i>	Gardening is built into the schools curriculum. This involves nutritionists who will teach pupils about food guide pyramid. The garden is tended by the students.
5. <i>One-on-One relationships</i>	This type of gardening takes experience farmers and groups them with unskilled but interested farmers. The inexperienced farmers gain technical knowledge from the experienced farmer. It also creates some bond or forces interaction amongst the farmers. This garden utilises the human capital that is already available in the community.
6. <i>Gardens affiliated with existing entity.</i>	The idea behind this garden is that it is established in an already existing entity (church, clinic, and etc). The people associated with that organisation are the ones that tend the garden. This was because it looked to create a sense of ownership by the people in the organisations.

Data from: Sullivan A. F: 1999. Community gardening in rural regions.

2.2 Uses of food gardens

It is argued that the primary reason for people to enter into gardening; is to produce food (Fernandez, 2003, Walter, 2003, DEA, 2004). Diverse people use gardens for various reasons. Shannon (1996) further expands the idea maintaining that the primary reason for any individual to enter into gardening is because they want to be active participants in the production of their own food. However, the previous sections have shown that the uses of gardens vary with individuals and groups, and that food gardens are used for a number of

reasons. Broadly speaking, food gardens address social, economic and environmental objectives.

2.2.1 Social objectives

Six social objectives were identified: Health, Social Networks, Beauty, Psychological, Education and Recreation. Each of these is discussed briefly.

Health: Food gardens improve people's health because it is an excellent form of outdoor exercise (Lackey, 1998). The exercises according to the Australian city farms and community gardens network (ACF-CGN) involve physical activity. This promotes physical health and also burns more calories per hour than doing aerobics (ACF-CGN, 2002 and Lackey, 1998).

Tylor *et al* (2001) further highlights that community garden initiatives may serve as a mechanism that will promote nutritional practices, thus complementing already existing practices. In addition to the uses of food gardens, literature further affirms that food are used to increase nutritional intake, to provide certain services, to improve the quality of life and also improve the environment (Fernandez, 2003).

Webb (2000) further states that in most instances food gardens are developed on nutritional grounds, and there is a link between food gardens and higher nutritional level. Fernandez (2003) further highlights that food gardens are used to increase food security; this is so, because people's diets change, their nutrition and health state improves (Patel, 1991). The production opportunities have allowed people to gain access to a variety of foods, thus in turn people have improved their household food security situations (Patel, 1991 and Vaughan, 1997) and they do not have to worry too much about the costs of the vegetables.

Fernandez (2003) further confirms this by stating that the presence of food gardens helps in increasing people's nutrition intake. They increase their consumption of vegetables and also save money in food purchases, this as a result of horticultural programs (Lackey, 1998). This is directly related to the increasing food security issue as the increase in nutritional intake involves consumption of a variety of foods and also a change in diet, from a diet with fewer vegetables to one with more vegetables. Food gardens therefore

not only produce healthy food near the home but it also creates a platform for building community among the neighbours (Linn, 2005).

Social networks: According to Glover (2004) community gardens are where social capital is produced, accessed and used by community networks. This is further emphasised by Smith *et al* (2005), because gardens are regarded as a place where people organise and build networks. These social and community networks are economic ideas that refer to the connections between individuals and entities that would be economically valuable. The connections include people who trust each other and could form a powerful community asset (Putman, 2000 and Glover, 2004). The mutual trust according to Sherer (2004) further builds community strength through social capital.

The social networks and connections serve multiple purposes within the community and community gardens. They include an exchange of labour and material, but most importantly the exchange of knowledge (Fernandez, 2003). By people interacting together, they learn to share their aspirations, information, challenges, threats and fears thus leading to growth within individuals and community (Delgado, 2000, Fernandez, 2003).

Aesthetics: In some instances food gardens are used for aesthetic reasons; they are used to beautify the surrounding, with all the green and colours (Westphal, 1999). This is not only in urban environment, even the poor have aesthetic needs, needs of enjoyment and also the basic needs (Nell, 2000) and these needs are realised in the food gardens. However food gardens are more than just about beauty; to a number of people food gardens mean moving away from a poverty stricken to a slightly better environment (Fernandez, 2003). She further emphasises this point in stating that this is because food gardening is more than just about producing food; it performs a number of activities.

Psychological: Herbach (1998) highlights other uses of food gardens, identified are the internal and non-economic aspects to gardening, these include the enhancement of a person's psychological, spiritual and physical sense of well-being. Gardening is about getting in touch with oneself.

Education: Food gardens further serves as an educational system because in some countries are used to teach biology to young students and also teaches them job and life skills (Herbach, 1998). They also help people to learn to be active participants in their development (Patel, 1991) they become more than just passive recipient. Hall (1999) puts

emphasise by saying people learn to be active participants in creating their own external environment, they become decision makers and workers in changing their own surroundings. This means that the people work their soils and make their surroundings to what they want them to be.

The FAO (2006) states that food gardens allow people to practice what is referred to “experiential learning”, where people learn by doing rather than being given something. Food gardens further teach people to be self-sufficient, and to be self-reliant (Gelsi, 1999). Gardens teach them to be able to produce enough for their family consumption and probably have something left over to sell without needing help from another person.

It also teaches them to be able to identify and mobilise redundant resources (Gelsi, 1999). Food gardens teach them the skill of independence, where they do not have to wait for someone to help them but be able to take to help themselves (Patel, 1991). Gardening therefore stimulates peoples’ own interests in improving their own livelihoods their own ways, thus making them sustainable (FAO, 2006).

Recreation: Recreational services are just another further addition to the benefits of food gardens identified by Fernandez (2003). Recreation is an opportunity that is provided by the food gardens and all that is needed for the people to be aware of the benefits food gardens bring to them (Nell *et al*, 2000). Gardening to some is a leisure activity encouraged by some form of interests, namely income generation and social interaction (in community gardens) (Gelsi, 1999).

Additionally Herbach (1998) highlights that food gardens are places for natural retreat. They are place where people can have fun and perform certain enjoyable family activities (Shannon, 2004). Furthermore they also create a sense of awareness of the beauty of nature, thus leading to appreciation of natural things (Herbach, 1998).

Patel (1991) concludes that food gardens improve the quality of life for its participants. This means that they provide nutrition to the people, help them enhance or change diets and most of all they improve people’s health, furthermore it allows the people to get themselves into economic activities, which improves their economic status as well (Patel, 1991). Therefore food gardens provide more than just social objectives, they also provide economical and environmental objectives (Fernandez, 2003).

2.2.2 Economic objectives

Three economic objectives were identified: Jobs, Savings and Income. Each of these is discussed briefly.

Jobs: Food gardens contributes towards the creation of farmer jobs, as farmers are “employed” in the gardens they utilize, although returns may vary based on the climate (Shannon, 1996). They are a way of creating informal employment at a low capital investment (Shannon, 1996). And Light *et al* (1996) refers to as community based employment; because people are then employed in their own backyards and also in the communal spaces that are provided for them.

According to Hall (1999) all this community based employment and the creation of farmer jobs adds to the communities’ and/or countries’ informal economy, as these gardens can help the homesteads and also the neighbouring homesteads by offering food assistance. The offerings are sometimes given to destitute members of society whom cannot afford food and are unable to work either (Hall, 1999).

Gardening has become more than just a way of producing vegetables; it has evolved into becoming a form of employment for the many that are unemployed (Lund, 2004). London-Lane (2004) further adds by stating that food gardens have a number of objectives depending on the household or community depending on the needs, these objectives will include the reduction of poverty, the diversification of income and rural employment, the improvement of the quality and quantity of household food supply and improving their nutrition. They also add on the improvement of the status of women, water and waste management at household and community levels and mostly to reduce pressure on the wild food resources (London-Lane, 2004).

Saving: Not only do food gardens add to the informal economy, but these gardens help the people to save money on food (Herbach, 1998), because the money they would have used to buy vegetables is invested either in other household basic need or the next planting season. Sotshongaye (2000) emphasise this in stating that people grow food in order to avoid buying expensive items from the shops. The creation of the farmer jobs creates a platform where farmers can now realise some form of economic return (Herbach, 1998), where there was little or none.

Income: The statement is further emphasised when it is stated that in some continents like Asia food gardens are the greatest source for household income (London-Lane, 2004). They are therefore more than just means of food production; they are a form of employment but which also turns ordinary people into engaged and skilled members of community who are able to help themselves (Lund, 2004). In the South African case however, farming contribute a small proportion in terms of income generation, even though farming is the major activity performed in household (Kirsten, 1998 and Brooks, 1991).

Patel (1991) further highlights that community gardens serve as a centre for an educational process for changing minds and actions of people so that they are able to help themselves in achieving their economic well being.

2.2.3 Environmental objectives

Fernandez (2003) identifies a few environmental services that are provided by the food gardens. These environmental services include the food gardens acting as a pollution sink and even improving the air quality. Hall (1999) further adds to this by stating that food gardens further add to ecological regeneration, as people utilise land for agricultural purposes. Three environmental objectives are discussed: Ecological regeneration, Environmental care and Permaculture.

Ecological regeneration: Hindle (2006) further states that ecological regeneration plays a very important part in human development, which means food gardening have a fundamental role in human development. This view of ecological regeneration incorporates human needs and values as an important part of the natural process (Hindle, 2006).

Environmental care: Food awareness creates some sense of awareness of the environmental care; this would include soil conservation and also reducing soil erosion. This type of attitude towards food gardening is said to lead to environmental management (World Resource Institute (WRI), 2005). In addition to environmental management food gardens also promote permaculture (Gelsi, 1999).

Permaculture: Permaculture as defined by Bill Mollison (1991) is a design system for creating sustainable human environments. It is more than just about plants, animals,

buildings and infrastructures (water, energy, communications), but about relationships created between them and they are placed in a landscape (Mollison, 1991). So permaculture is about the harmonious integration of the environment and the people. The integration is done in trying to provide food, shelter, energy and other material and non-material needs. It is therefore what Gelsi (1999, 5) refers to as “a holistic approach to sustainable food production.” Food gardens whether communal or homestead should be integrated into the policy for the betterment of poor peoples’ well-being.

2.2.4 Summary

With food gardens offering so much to the sustainable livelihoods of people, they should be included in the governments’ agendas and policies. This is especially true for the food gardens in the rural communities. Gardens offer their participants more than just food for sustenance, and household food security even though the initial establishment for them was to address these issues. Gardens should be viewed in a more holistic manner and what role they can play as strategy in the development of the rural poor (Herbach, 1998 and Ashley, 2001).

2.3 Food gardens in South Africa with specific reference to KwaZulu-Natal

As note earlier there has been significant investment in home and community gardens and homestead farms in rural communities in South Africa. They form a part of poverty alleviation and rural development programmes. They are seen as an important part of economic development in rural areas (MALA, 1998).

2.3.1 Agricultural policy in South Africa

MALA (1998), states that the past South African Government policy supported primarily commercial farmers in their agricultural initiatives. The support was in a form of subsidies, grants and aids for fencing, dams, houses, technical advice, special credit facilities and tax relief (MALA, 1998). This then led to the marginalisation of small-scale farmers, where small-scale farmers were considered to be involved in “non-productive and non-economically viable agriculture” (MALA, 1998). Contrary to the focus of past policy, the majority of rural South African engaged in variations of indigenous agriculture. It is a very labour intensive type of agriculture making human capital a vital element in the

intensification of agriculture in South Africa (Stone *et al*, 1990). Generally, human capital development among the majority of farmers was not part of past policy.

During the same period and since the early 1960's there has been a shift in agriculture among small-scale farmers. This was a shift from livestock farming to vegetable gardening based on the decrease of number of cattle. The decrease in the number of cattle meant that there was a decrease in milk supply, which then led to widespread malnutrition within the rural areas. The shift led to the emergence of vegetable gardens with self-help approaches being imposed on the participants (Brooks, 1991).

The shift also changed the way agricultural extension worked. According to Brooks (1991, x) "this impetus seems to accord with a major shift in departmental policy, which occurred at about the same time. In the late 1950s, the role of the agricultural officer became more clearly defined in terms of extension work- advising- rather than actual farming."

Since the democratic election in 1994, South Africa has significantly changed the focus of agricultural policy. Worth (undated) noted that changes have been made in land reform, e.g. finance and market access. However the focus of agricultural policy is more on poverty alleviation and inclusion of those previously excluded. The changes therefore require that there be a change in extension to where extension is focussed on human development instead of production.

2.3.2 Community gardens in KwaZulu-Natal

The farming community in KwaZulu-Natal is diverse and complex. It consists of a collection of groupings including household food security farmers, farmers producing in excess of household consumption, the developing commercial farmer and the agri-business industries (DAE, 2004).

KwaZulu-Natal had approximately 31 957 garden members and 1 049 community gardens by the end of 1991 (Brooks, 1991). Eight years later' by the end of 1999, the number of community gardens more than doubled with a similar increase in participants. There were 2 635 community gardens covering 2 055 ha with estimated 51 700 participants (FAO, 2000).

Small-scale agriculture is practiced by a large number of individuals in KwaZulu-Natal, even though it does not contribute much to the GDP of the country. People enter into it

because to many, it has become a safety net. Participants would include both the individual homestead gardens and the community gardens farmers (Brooks, 1991).

2.3.3 Brief history of community gardens in KwaZulu-Natal

The establishment of community gardens however is said to lie in the creation of the South African reserves (Brooks, 1991). The reserve system was brought about by the British colonists who invaded what was then referred to as Zululand in 1879 (Brooks, 1991).

According to history; community gardens in KwaZulu-Natal dates back to more than thirty years (Vaughan, 1997). The community gardens were brought about by a decrease in a number of cattle and thus the decline in milk. The decline led to malnutrition for a number of people in the rural areas (Brooks, 1991). The situation then shifted farming from livestock to vegetable farming to curb the situation. The establishment of community gardens however is said to lie in the creation of the South African reserves (Brooks, 1991).

2.3.4 Policy on community gardens in KwaZulu-Natal

According to the KwaZulu-Natal Department of Agriculture and Environmental affairs (KZNDAE) (1999) a community garden is a way to achieve household food security, to expose people to a business environment and resource management. In this sense the South African government supports community gardening.

The two strategies employed by the KZNDAE will be to (a) support the community garden in a once off basis for fencing (which includes the pole, the wire, the gate and the droppers). (b) Provide a maximum of R10 000 per hectore for services like irrigation, preparation (which include initial ploughing, soil sampling, liming and building soil fertility) and liming (KZNDAE, 1999).

The main objectives however of establishing community a garden is to improve people's household food security (KZNDAE, 1999). Additionally, the other objectives for the government to support community gardens are to allow the people to be able to produce their own fruits and vegetable and thus save money on buying these goods. Furthermore,

the support is to give the people the skills and knowledge for them to be able to produce and effectively sell their produce (KZNDAE, 1999).

Each community garden is to be registered as a project. So before it is to be considered a project and be supported, it needs to have more than five members and must formulate a constitution. The member of the community gardens must form a committee with office bearers and they must have a banking account (KZNDAE, 1999).

3. Conclusions

Rural communities in South Africa and within KwaZulu-Natal rely in part on food gardens for their well-being. These gardens may not be able to give the rural communities great income, but they invest a lot of time and labour on them. They are the major practice in most rural households because of the benefits that they bring.

Evidence clearly indicates that rural people rely on food gardens. Furthermore, there are high expectations placed on them in terms of poverty alleviation, etc. notwithstanding the apparent importance of food gardens, there is a lack of researched information about rural gardens.

CHAPTER THREE

SURVEY AREA, SAMPLE AND METHODOLOGY

This study was based on the three aspects of community gardens that were chosen by the researcher and they were social, economic and environmental. The socially orientated aspect is under the umbrella of “post-positivist tradition where reality can never be fully apprehended only approximated” (Quoted in Friedrich 2004; 27). The study required the usage of a variety of methods and tools in order to some extent appreciate or estimate the reality of farmers understanding of the benefits and constraints to community gardening.

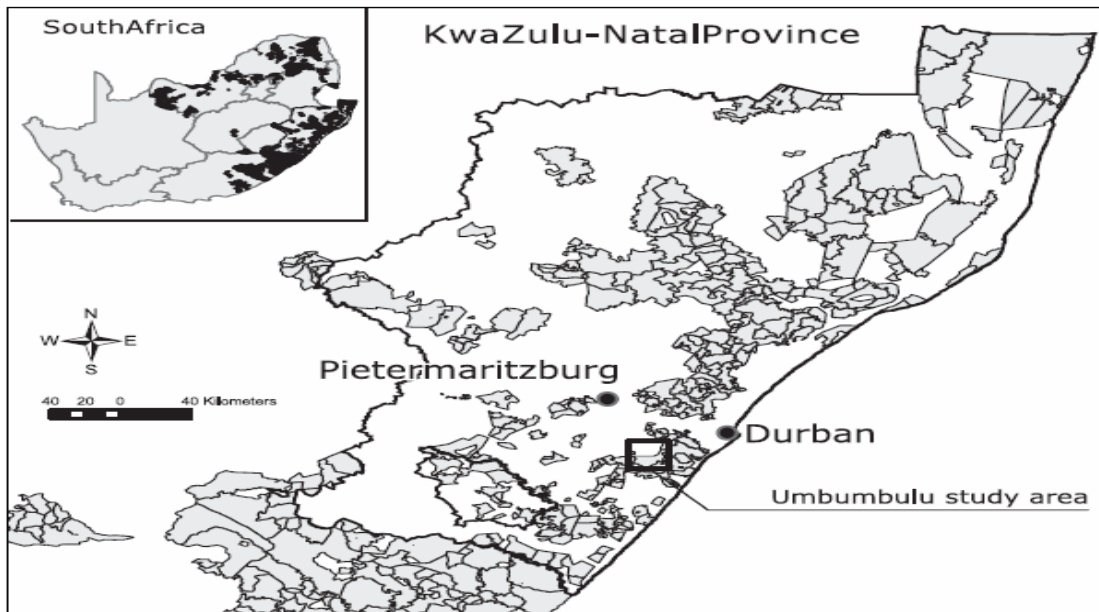
3.1 Characteristics of Survey Area

This section presents the characteristics of the survey area looking at three aspects: the study area, the economy of Ogagwini, culture and structures and characteristics of Ogagwini’s community gardens.

3.1.1 Study area

The study was conducted in Embo, in the Umbumbulu district in an area called Ogagwini, within the KwaZulu-Natal province in South Africa. The area is approximately 60 kilometres from the city of Pietermaritzburg (North-West off the coast of Durban). The Umbumbulu area lies in the periphery of the Durban Metropole (Agergaart *et al*; 2006).

Within the Umbumbulu area, the study was conducted in Ogagwini, which is on the boundary of the Mkhambhathini municipal area (figure 12) and it is accessed through a dirt road D1008. Ogagwini is under a tribal authority (which is a chief and the headmen). The process of allocating land (for various reasons) within the area is through tribal authority and the councillors.



From Agergaard *et al* (2006)

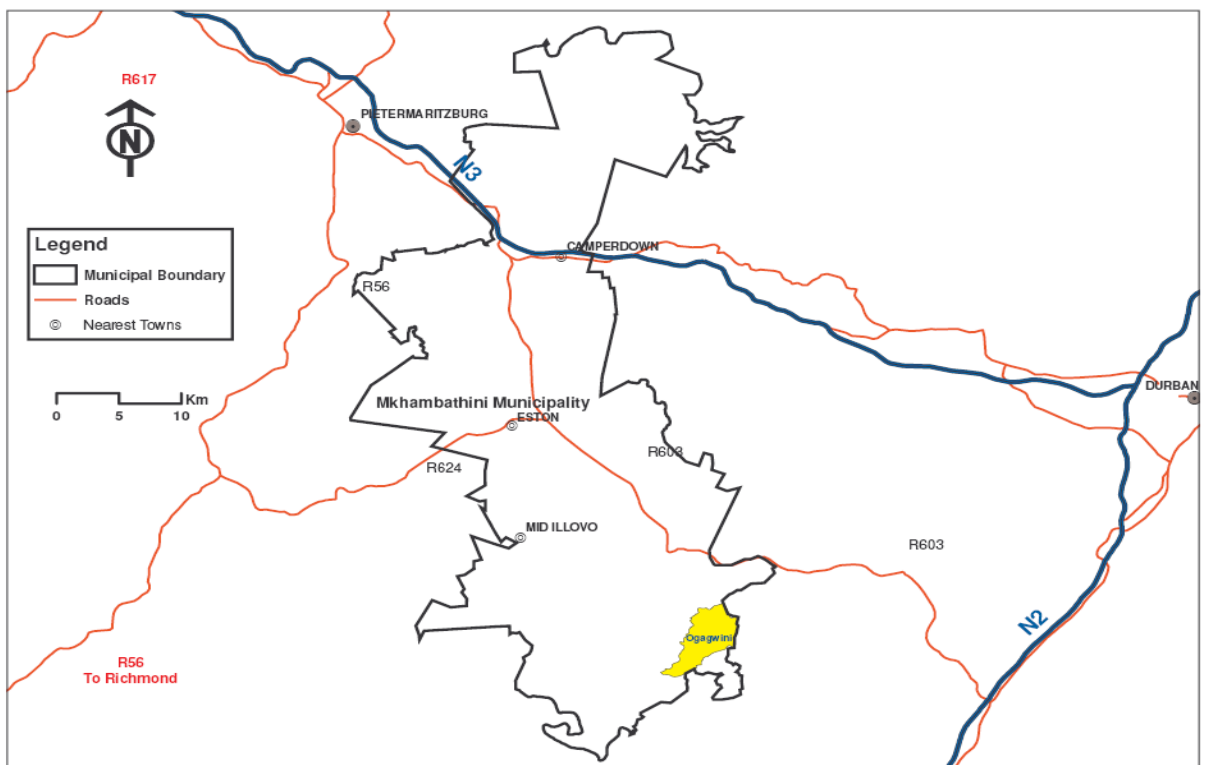


Figure 3.1: Map showing study area of (Ogagwini) within the Mkhambathini Municipality in KwaZulu-Natal, South Africa

3.1.2 Economy of Umbumbulu (Ogagwini)

According to local informants, most of the people living within Ogagwini area are employed by agriculture, meaning they earn their income through selling their agricultural

production, through sugar cane farming, amadumbes or selling other vegetables. In addition to this people earn income through salaries and wages in the urban environment. Through observation, the community further source their income through government grants (pension, child grants and rarely disability grants). Some of the people further increase their incomes through informal sector employment like taxi ownership and drivers.

3.1.3 Culture and structures

Most of the people in the area are Zulu speaking people and most of them follow the Zulu culture. The Ogagwini area has no hospital and police station. The area has a community hall and a primary school. The nearest town to Ogagwini is Isipingo, where people do their shopping and hawking.

3.1.4 Characteristics of Ogagwini's community gardens

Each of the gardens examined for this study was situated at the bottom of a valley (see picture 3.1 as an example). In each valley there is a permanent source of water it is either a river or a stream. The gardens are placed almost central to the neighbouring homesteads; usually these homesteads have members in the community garden. The land utilized for the community gardening is usually owned (PTO) by one of the members of the same community garden (Agergaart *et al*, 2006).

The community gardens produce are usually for home consumption, but when there is surplus farmers do sell vegetables to the neighbouring community. Igeja (hand hoe) is one of the primary implements used in the community gardens and homestead farms. The capital for this usually comes for the household income. Other input like fertilizers, fencing and seeds are usually from an external support.

The activities in the community gardens are both communal and individually driven, in that an individual has an individual plot within the bigger community garden and the plot is serviced by the individual only but there are regulations and rules on how the individual works within the communal space. There is no set rule that the community gardens have to be organically farmed, as there are some who utilize artificial manure and those that use kraal manure.



Picture 3.1: Siyazama community garden

3.2 Characteristics of the survey sample

The sampling used for this study was a purposive sampling (Leedy *et al*; 2006). The study was done through Ezemvelo Farmer Organisation (EFO) (refer to 3.4). The first stage of the study was the individual questionnaires. This gave the members of the EFO an opportunity to participate in the study, including members of the EFO that were outside of the Ogagwini area, through giving each individual a questionnaire. Some 100 questionnaires that were printed and handed out, but only 38 of those came back. From these five community gardens were identified from which key people were drawn from these groups to introduce the researcher to each community garden.

The reason for choosing the EFO group was because it represented farmers who were both homestead farmers and community garden group participants. It further represented farmers who were only homestead farmers. The questionnaire (*refer to 3.6*) was answered by thirty eight (38) members of the EFO. With the responses from this group (EFO) the researcher further identified five community gardens. These were the community gardens that the researcher was going to investigate.

3.2.1 History of the EFO project

The EFO was first established in February 2001 by 31 small-scale subsistence farmers from Ogagwini area. Currently the organisation has grown to approximately 165 members from Ezigeni, Ezimwini, Eziphambhathini, Hwayi, Nungwane and Ogagwini. The numbers of members vary from time to time, but there are 165 members at present. All these farmers utilize their own homestead farms. EFO is a small-scale farmer group. It consists of subsistence farmers attempting to improve their livelihood situation through generation of income. The project aimed at creating awareness of the importance of traditional crops as part of their poverty alleviation strategy. The EFO was the first ever subsistence farmer group in South Africa to be certified as suppliers of organic traditional vegetables.

The project helped the farmers to become more commercialised without transforming their traditional farming practices. Since the establishment the organisation has supplied Pick and Pay (2001 to 2003) and Woolworth (2003 till present) with their traditional crop: amadumbe (taro). It has also marketed sweet potatoes and traditional potato variety (Modi, 2004).

3.3 Methodology

The research methodology comprises of three parts. First is the data was collected, secondly there were survey tools used in collecting and interpreting data. Thirdly the data was analysed using Microsoft excel.

3.3.1 Data collection

The research was carried out with sampled respondents who would address the research question. The process incorporated both the qualitative and quantitative component of the research on the homestead and in the community food gardens. The data was collected in three stages:

1. Questionnaire was administered to individual farmers (2006)
2. Semi-structured focus group discussion with community garden members (2007)
3. Questionnaire administered to selected extension officers (2007)

(These are further elaborated upon in the section covering survey tools)

The initial study began with a questionnaire gave direction to the questions for the semi-structured focus group interviews and also included historical analysis. The whole process of data collection included the following methods a questionnaire, individual informal discussions, semi-structured interviews and participant observation.

3.4 Survey tools

Six survey tools were used to engage the EFO members as research participants in this study: two questionnaires, semi-structured focus groups, historical analysis, participant observation and individual informal discussions (Appendix BB). Each is discussed in the sections that follow.

3.4.1 Questionnaire for the EFO members

Questionnaires are a common method employed in surveys. They provide specific answers to specific questions and thus enable the researcher to be sure to obtain particular information that might otherwise be missed. Questionnaires can be very limiting as the researcher is often not afforded the opportunity to follow up on answers recorded in a questionnaire (Leedy, 2005). In this research, the questionnaire was the first of a series of methods used and the researcher was able to confirm and cross-check information obtained in the first questionnaire.

The survey host (Professor Modi) had undertaken the introductions and explained to the participants (EFO members) what the research was aiming to fulfil. An investigation into the relationships of homestead farms and community gardens with particular reference to social, economical and environmental impacts. This took place in the community hall in March 2006 at a regularly scheduled monthly meeting of the EFO (first Monday of every month). Picture 3.2 shows the EFO members in a monthly meeting. The members that are in the pictures show Ogagwini people. Some are from Hwayi, Ezigeni, Ezimwini, Eziphambhathini and Nongwane. The Ogagwini farmers were selected from this group.

The questionnaire was handed out to the selected participants by researchers and other members of the organisation. The participants (small-scale subsistence farmers) were asked to take the questionnaire home and fill them and return them later (Appendices A & B). The questionnaire had both open and close-ended questions and all the questions were in Zulu. Those people who were not able to read and write asked for their children to

help them. If they did not have any assistance, they would bring it back and were helped by some of the member in the organisation and researchers.



Picture 3.2 EFO members in the monthly meeting

The questionnaire itself had ten questions regarding community food gardens. It focused on the reasons why the small-scale farmers entered into community gardening. It (the questionnaire) further focused on the differences there were in community and homestead farms. It then explores the social, economic and environmental aspects of the two gardens. The questionnaire was also used to establish the number of community gardens within the Ogagwini area and to find out exactly where these gardens were.

3.4.2 Semi-structured focus group interviews

Semi-structured interviews are designed to engage respondents in open discussion. They foster conversation and two-way communication (Davis-Case, 1990) and may be used to either gain or give information. Semi-structured interviews unlike structured

questionnaires are characterised by general questions or topics. These general questions become the basis for more specific questions, which need not be prepared in advance. This allows for the researcher and respondent to be flexible to probe for details (Davis-Case, 1990; Leedy, 2005).

Semi-structured interviews are mostly used in the PRA exercises. There is no set of questionnaire that is compiled but the interview is systematic, it builds from central issue or context. The direction of the interview is guided by the interviewer to their desired direction in order to obtain relevant data (Mudhara *et al*, 2004).

The leading questions were written down so as to direct the interview into the desired direction and most of the questions were designed by the researcher. This is a qualitative tool that is most used by sociologists. The data collected is documented on paper or recorded through a tape recorder in group discussions with a group of people ranging from four to about ten members on a topic chosen by the researchers (Morgan, 1988).

The reason for using this type of tool (semi-structured focus group interviews) is so that the group can provide their own comments and they feel free to contribute to the conversation as the mood is relaxed. Such group of people is usually composed of relatively homogenous people with similar background. Participants discuss the problem or issue, its causes and also their perception on how the problem should be solved (Mudhara *et al*, 2004).

Semi-structured focus group interviews, intended to get qualitative data. It was designed to be openly discussed, and it also fostered conversations and debates amongst the farmers about the issues that affect them (Appendices C, X, Y, Z, and ZZ). Where the members of each community garden group were gathered, they sat together and engaged in discussion about their community gardens and also featured a few questions about their homestead farms.

The semi-structured focus group interviews were structured around the reasons people entered community gardens. This was also done through the introduction of the historical analysis. The historical analysis was used to complement the semi-structured focus group interviews.

3.4.3 Historical analysis

According to Davis-Case (1990), the historical analyses assist the target group or the community by documenting their history. Historical analysis establishes a timetable going as far back as people can remember. The timetable is directed to a defined topic or context. The tool stimulate discussion on how and why the condition took place, it further presents an insight into the reason behind failure (Davis-Case, 1990).

The intention in using this tool was to establish a timetable of the gardens and to discover their origins. It was designed to stimulate discussion around the reasons why and when a garden was established, and the process and events that followed. The tool was attempting to track the first garden experiences, attitudes and feelings of the people about their gardens. This was done in conjunction with the focus group and semi-structured interviews (Appendix E).

The farmers were asked to recall first experiences with the introduction of community gardens. It was to uncover the reasons why people actually started their gardens and to find out what actually happened. Within that discussion farmers would have been drawn to discuss issues on allocation of land, tenure of that land and any other issues related to that land they were utilising.

3.4.4 Participant observation

According to Gelsi (1999), participatory observation has an element of “descriptive observation”, which consists of “question-observation”. This means questioning the activities performed in the garden and the answer might as well lie in the way people do things. Should there be no answers in the researchers’ observation, then these are one of the questions that should be followed upon on the interviews, etc.

The process involved visiting some of the homestead farms and also visiting the community garden group members in their home and observing their cropping practices both at their homesteads and community gardens and also the way in which they do things that were related to agriculture. This was done through other researchers who had to go to the homesteads for the purpose of their own research. This involved observing the types of crops they had in their homestead farms and also in their community gardens. It also involved observing the layout of the entire farms (figure AA).

This involved investigating activities performed in the gardens expecting answers that might be in the way people do things. The participant observation tool was used in conjunction with the individual and also group discussion to enrich the data collected. It meant being observant of the activities farmers engaged in. It erased any part of formality in peoples eyes, thus the participants were free to share information that was vital for the research.

3.4.5 Individual informal discussions

Most of the farmers that were interviewed were participants of both the community and homestead farms. An informal discussion was carried out with the individual farmers from the community garden groups; this was usually done after the semi-structure focus group interviews (SSFGI), when people were walking out to their homes. The researcher usually picked an individual and questions were really based on the discussion in the SSFGI for confirmation. However these were not recorded in any formal way.

3.4.6 Questionnaire for the extension officers

With the data and information that was gathered through the questionnaire given to EFO members, the SSFGI, individual discussions and observation, the researcher compiled a questionnaire for extension officers. The extension officers were from a range of disciplines from two provinces of KwaZulu-Natal and Limpopo in the department of agriculture. The endeavour was to find out the perceptions of the extension officers and the departments about the community gardens. It was to further confirm some of the literature findings and also the focus group discussions.

The questionnaire was designed with thirteen open-ended questions (appendix F). The questionnaire was handed to the extension officers on the 15th of November at the workshop that was held in Pietermaritzburg by the Centre of Environment, Agriculture and Development, a department of the University of KwaZulu-Natal (Pietermaritzburg). The questionnaires were returned on the 16th of November.

3.5 Data Analysis

After each semi-structured focus group discussion and the qualitative data analysis, the farmers were approached again and given feedback on the interview and to test whether the data gather is the true reflection of what they had stated. The qualitative data was entered into a table and analyzed further. The same qualitative data was reduced into numbers and entered into Microsoft Excel® and graphs were made from that data.

In addition to engaging the farmers in clarifying and analyzing data, a data analysis spiral approach was employed as the general approach to analyzing data. This involves organizing data, perusal of data to gain an overall sense of the data, classification of data and synthesis (Leedy, 2005).

3.5.1 Analyzing qualitative data

And effort was made to quantify the qualitative data. This was done by grouping together the respondents with similar responses. From their input, frequencies were deduced and the numbers entered into Microsoft Excel®. These were then analysed for frequency and distribution which were represented in tables and graphs.

3.5.2 Spiral approach

The spiral approach is a process that involves breaking large or disparate data sets into smaller ones (Leedy, 2005). The raw data from the questionnaire was broken down into simple words and sentences. For example one of the participants stated:

“The community gardens are used for home consumption and the reduction of poverty”

This statement was therefore broken down and the key words like home consumption and poverty were put into categories. From these words and sentences patterns and categories emerged. Similar responses were group together and put into different categories. Then finally the tables were constructed.

CHAPTER FOUR

RESULTS

INTRODUCTION

The previous chapters established that community gardens are diverse and complex. They are more than just about the production of food. Attached to them are social, economic and environmental impacts. This chapter will share the results from the survey conducted among EFO members and extension officers in Umbumbulu, but more specifically in Ogagwini. There were 38 farmers that participated in the survey. As explained in Chapter 3, the survey was conducted in two stages. In the first stage 38 farmers were interviewed individually. This was followed by semi-structured interviews with groups comprising the membership of four of the community gardens. In addition eight Agricultural Extension officers were interviewed individually. The extension officers were from both KwaZulu-Natal and Limpopo. This chapter will start with the results from the initial survey of individuals, followed by the results from the semi-structured focus group discussions with members of the community gardens. It will further present the results of a survey conducted among extension officers.

In the first stages of the survey a total of 38 people interviewed individually. 10 were not members of any community garden. 28 were members of community gardens.

A total of 36 farmers were interviewed in their respective groups, including the 28 individually interviewed farmers plus additional farmers. To ensure the collective nature of the group interviews, no effort was made confirm the degree of overlap between farmers interviewed individually and again as members of a garden group. However, it was observed that the farmers interviewed individual comprised the majority of the groups interviewed.

Thus a total of 46 farmers participated in the study.

4.1 Views and perceptions of individual farmers at Embo about community gardens

The questionnaire was aimed to achieve two things. One was to identify the available community gardens and their location. Secondly it was to get the basic understanding of farmers' perception about their community gardens (Appendix J).

4.1.1 Use of community gardens

Table 4.1 and Figure 4.1 demonstrate how many respondents out of the sample were part of community gardens and how many were not. Twenty-eight (28) of the respondents (73.7%) said they were part of a community garden. The other 10 (26.3%) of the respondents were not part of any community garden.

Table 4.1: Number of respondents who use community gardens

	Yes	No	Total
Frequency	28	10	38
Percentages	73.7	26.3	100

N= 38

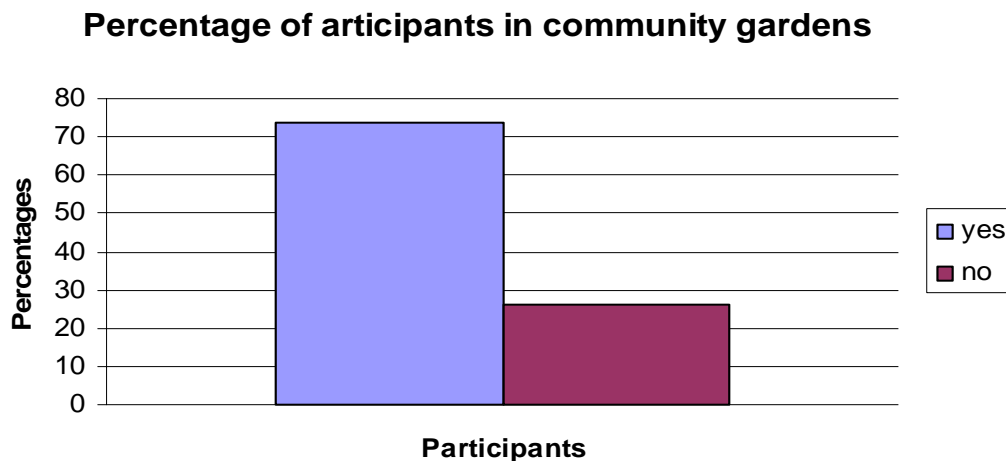


Figure 4.1: Percentage of people in community gardens

Out of the 10 respondents who did not participate in the community gardens, when asked why they did not participate they gave the following reasons:

- No extension
- Gardens are too far from homes
- The respondents were powerless
- They did not have time to attend to community gardens
- There is no land to place the community garden
- No reason
- Preferred homestead farms because they use kraal manure

Figure 4.2 is the graphical representation of the reasons why people did not enter community gardens. The graph shows 20% (2) the most common reason why people do not enter community gardens is that there is no community garden within or surrounding their area of residence. This is represented by a 20% response by the respondents. All the other reasons run on the same continuum and are represented by a 10% response.

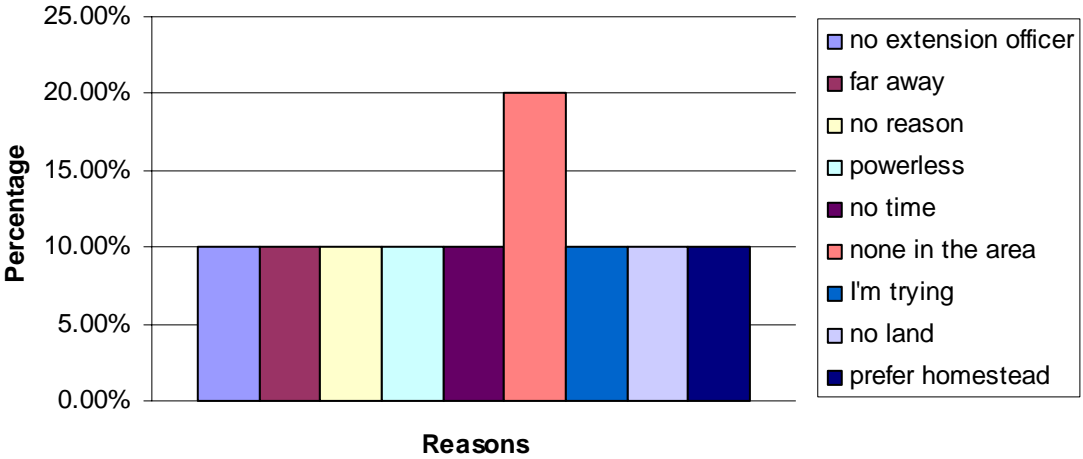


Figure 4.2: Reasons why people do not enter community gardens

4.1.2 Reasons for entering community gardens

As stated in the previous chapter, reasons behind people entering community gardens are very diverse. The following section is going to divulge the reasons why the respondents entered and would enter a community gardens.

Table 4.3 below presents the reasons given by respondents as to why entered or would enter community gardens. Respondents were free to use their own terminology. No effort was made to standardise terms. The two main reasons farmers entered or would enter a garden were related to hunger and income. Ten (10) respondents (26.6%) indicated that they entered community gardens because they wanted to reduce their vulnerability to hunger. Similarly, nine (9) respondents expressed that community gardens meant that they can generate income by selling their produce.

A further three (3) respondents (reflected that they entered community gardens because they wanted to help within the community. These respondents highlighted that they wanted to help those people who were unable to help themselves. Within the context of

community help, three (3) of the respondents stated that they entered community gardens so that they can uplift their community.

Table 4.3: Reasons people enter community gardens

	Frequency	Percentage
Hunger	10	26.3
Generate income and profits	9	23.7
Healthy food	7	18.4
Have food	7	18.4
Helping in the community	3	7.9
Uplift the community	3	7.9
Feed family	2	5.3
Interaction with other members	2	5.3
Share knowledge	2	5.3
Learn	2	5.3
We are not poor	2	5.3
Survive	1	2.6
Produce different food types	1	2.6

N= 38

Out of the thirty-eight members, seven (7) members (18.4%) stated that they entered community gardens because they wanted to produce and have access to healthy food. Relative to producing and having access to healthy food, a further seven (7) respondents (18.4%) also stated that they entered community gardens because they wanted to be able to produce and have access to food.

Whilst food is still a main concern at this stage, two (2) respondents (5.3%) stated that they entered community gardens because they wanted to be able to feed their families. Then one (1) of the respondents (2.6%) said that they entered community gardens because they wanted to produce different food types.

Only one (1) respondent (2.6%) said survival was the reason why they entered community garden. A further two (2) respondents (5,3%) stated that the community garden meant that they were not poor. An economic factor was attached to the garden; this was done by nine (9) respondents (23.7%) that expressed that community gardens meant that they can generate income by selling their produce. Off the nine (9) respondents, one (1) of the respondents was from that group of people who did not belong to a community garden (Table 4.3 (a)). Thus, in actual fact, only eight (8) of the respondents (21.1%) of community gardens entered community gardens for community gardens to generate income. It is proposed that the one (1) non-community garden group member would probably enter community garden to generate income or believes that the respondents of community gardens are in the gardens to generate income.

Table 4.3 (a): Reasons for entering community gardens for generation of income of the two groups (non-community and community gardens group)

	Non-community garden group	Community gardens	Total
Frequency	1	8	9
Percentage	11.1	88.9	100

N=9

Only two (2) out of the 38 respondents (5.3%) said that they entered community gardens for interaction with other. Another two (2) respondents (5.3%) alleged that the reason for entering community gardens was so they will be involved in the sharing of knowledge. A further two (2) respondents (5.3%) said they entered community gardens to be able to learn. Learning was three-fold; sharing knowledge, learning and producing different types of crops. (Table 4.3 (b)).

Table 4.3 (b): learning in community gardens

	Frequency	Percentage
Sharing knowledge	2	40
Learning	2	40
Producing different types of food	1	20
Total	5	100

N=5

A graphical representation of the reasons why people entered community gardens is reproduced in the figure 4.2. The graph shows that the just over a quarter of the respondents in the survey (26.3%) stated that they enter community gardens because they wanted to reduce their vulnerability to hunger. Only 7.9% said that the garden would allow them to help others in the community that are without food and in need and also to help uplift the community as a whole. A further 18.4% stated that the community gardens because it was going help them gain access to healthy foods and also so that they can have food. Of the 7 respondents that expressed that entering community gardens was for food, six (6) respondents (85.7%) were from the community garden group. This represents 15.8% of all 38 respondents. The remaining 14.3% were from the non-community garden group (Table 4.3 (c)).

Table 4.3 (c): Reasons for entering community gardens for producing and having access to food of the two groups (Non-community and community gardens groups)

	Non-community garden group	Community gardens group	Total
Frequency	1	6	7
Percentage	14.3	85.7	100

N= 7

Figure 4.3 further indicates that 5.3% of the respondents said that they entered community gardens so they can be able to feed their families, so they can interact with people from the community, so they can share knowledge and also to learn. Income generation and the realisation of profits were represented by 23.7%. The 23.7% was further divided where 11.1% (represents 2.6% of the 38 respondents) of the respondents were from the group who did not belong to any community garden. The rest, which was 88.9% (representing 21.1% of the 38 respondents) were from the community garden groups. Moreover respondents identify helping and uplifting the community (7.9%) as one of the reasons they would engage in community gardening. Learning and not being poor followed that represented by 5.3%. Lastly it was producing different types of food and surviving (2.6%).

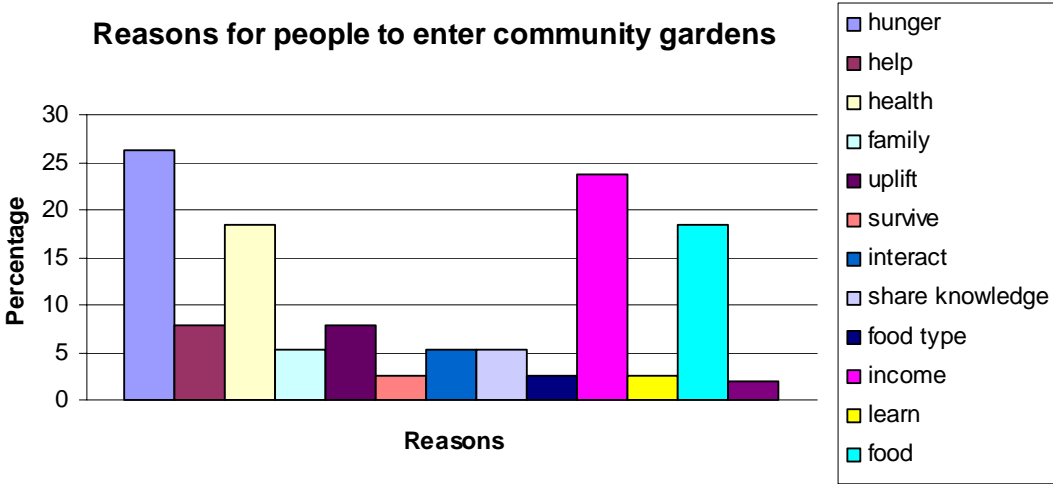


Figure 4.3: Bar graph showing the reasons why people entered community gardens

Table 4.3(d) reflects that out of the 38 people, 27 people (71%) mentioned food as the one of the reasons for entering community garden. The 71%, however, covers a range of aspects within the concept food itself. Therefore food has been broken up into five different categories. The most common aspect of food is that of hunger and is represented by 26.3%, which is followed by having access to food and having healthy

food, both represented by 18.4%. The least common aspects of food were the production of different crops, closely followed by feeding the family.

Table 4.3 (d): shows the different categories of food

	Frequency	Percentage
Hunger	10	26.3
Healthy food	7	18.4
Having food	7	18.4
Feeding family	2	5.3
Producing different food types	1	2.6
Total	27	71

N=27

4.1.3 Difference between community garden and homestead farms

Respondents were asked to identify the differences between community gardens and homestead farms. Some respondents gave an example for each such as:

Community garden: “Far from home”

Homestead farm: “Near to home”

Other respondents gave only one answer such as “We share knowledge in community gardens.” Table 4.4 (a) and 4.4 (b) present the responses as they were recorded by the farmers. Table 4.4 (a) presents responses about homestead farms. Table 4.4 (b) presents responses about community gardens.

Table 4.4 (a): Showing the responses for homestead farms

	Frequency	Percentages
For consumption	7	18.4
Nearer to homes	4	10.5
Don't know	4	10.5
Individual effort	3	7.9
No fertilizer	2	5.3
Sell produce	1	2.6
Does not need to be irrigated	1	2.6
Fresh food	1	2.6
Nutritious food	1	2.6
No extension officer	1	2.6
Crops are different	1	2.6
No constitution	1	2.6
No differences	1	2.6
For markets	0	0

N= 38

Homestead farms

Table 4.4 (a) shows that 18.4% of the respondents felt that homestead farms were used for consumption. This was the most common response. In contrast, Table 4.4 (b) shows that only 2.6% said that the community gardens were for consumption purposes. Another 13.2% of the respondents stated that community gardens are further used for selling of the produce, whereas only 2.6% reflected that for homestead farms. Furthermore, 5.3% of the participants stated that community garden produce is used to supply markets.

Moreover, 10.5% of the respondents said that homestead farms are nearer to homes than community gardens, because homestead farms are surrounding the home (Picture 4.2). Community gardens are perceived by 7.9% of the respondents as being far, thus homestead farms are a convenience.

Table 4.4 (b): Showing responses for community gardens

	Frequency	Percentage
Collective effort	6	15.9
Sell produce	5	13.2
Share knowledge	5	13.2
Learn (school)	5	13.2
Do not know	4	10.5
It is far from homes	3	7.9
For markets	2	5.3
Competition	2	5.3
Extension officer	2	5.3
For consumption	1	2.6
Irrigation	1	2.6
Fresh food	1	2.6
Nutritious food	1	2.6
Different crops	1	2.6
Constitution	1	2.6
Not different	1	2.6
Set time for everything	1	2.6
No fertilizer	0	0

N= 38

Some 15.9% said that community gardening is about collective effort, whereas homestead farming depends largely on the individual; this was reflected by 7.9% respondents. A further finding was that community gardens required irrigation, whereas homestead farms did not require one to actually water the garden, as this is done by the rain.

Community gardens further allow for participants to share knowledge amongst themselves this is reflected by 15.9%. Knowledge within homestead farms is only shared amongst the family members. Furthermore 13.2% of the respondents felt community gardens serve as “a school” to participants; because this is where they learn to grow food.

Comparison of responses

Table 4.4 (c) shows the difference of community gardens as drawn from Table 4.4 (a) and (b). These differences were put together for the purpose of clarification. As identified by the respondents these were the major differences between homestead farms and community gardens.

Table 4.4 (c): Differences between homestead farms and community gardens

Homestead food gardens	Community food gardens
1. They are located within the homestead and therefore easily accessible.	1. Far from homes and therefore accessibility is sometimes a problem.
2. Individual effort	2. Collective effort with other members of the community.
3. There is no one to share knowledge with from outside the household.	3. Knowledge is shared amongst the community garden members.
4. No extension officer, so there is no taught knowledge.	4. Taught knowledge by the extension officer.
5. Does not have a constitution that governs the farming.	5. Has a constitution that governs the way they use the community garden.
6. One works alone and therefore there is no competition.	6. Working together builds constructive competition, which in turn builds confidence.
7. Does not need irrigation	7. Needs irrigation



Picture 4.1: Showing a typical community garden



Picture 4.2: Showing a typical homestead farm

4.1.4 Community garden benefits

Benefits in this survey are deliberated upon in terms of social and economic benefits of community gardens to the respondents. Then the environmental impacts of the community gardens are considered.

(a) Social benefits

The respondents were asked: what are the social benefits of community gardens? Table 4.5 shows the social benefits as communicated by the respondents. The most commonly cited social benefit (34.4%) was sharing of knowledge amongst the farmers. From the 13 only one (1) of the respondents (7.7%) was from the group that was not participating in any community garden. This means only twelve (12) respondents (2.3%) (Table 4.5 (a)) of the community garden group viewed sharing of knowledge as part of social benefits.

Table 4.5: Social benefits of community gardens

	Frequency	Percentage
Sharing knowledge	13	34.4
Working together	8	21.1
Help each other	7	18.4
Healthy food	6	15.9
Producing different food types	4	10.5
Don't know	3	7.9
Counselling	2	5.3
Food	2	5.3
Government support	2	5.3
Feed family	1	2.6
Employment creation	1	2.6

N= 38

Secondly eight (8) of the farmers (21.1%) expressed that another desirable benefit of community gardens was that of working together. Out of that eight (8) (Table 4.5 (b)), three (3) of the respondents were from the group that did not participate in community gardens. Respondents further identified helping each other as also benefits in community gardens and this was agreed upon by seven of the respondents. Furthermore six (6) respondents acknowledged that having access to healthy foods was another social benefit that was realised from community gardens. From that six (6) only four (4), which was represented by 66.7% were from the group that participated in community gardens (Table 4.5 (c)).

Table 4.5 (a): The social benefit sharing knowledge in community gardens for the two groups (non-community garden and community gardens groups)

	Non-community garden group	Community garden group
Frequency	1	12
Percentage	7.7	92.3

N=13

Table 4.5 (b): The social benefit working together in community gardens for the two groups (non-community garden and community gardens groups)

	Non-community garden group	Community garden group
Frequency	3	5
Percentage	37.5	62.5

N=8

Table 4.5 (c): The social benefit of having access to healthy food in community for the two groups (non-community garden and community gardens groups)

	Non-community garden group	Community garden
Frequency	2	4
Percentage	33.3	66.7

N= 6

Table 4.5 (above) further shows that according to the respondents the least valued community garden benefits were that of feeding families and of creation of employment both had only one (1) person expressed them as benefits. The one (1) respondent that expressed employment creation by community gardens was in fact not part of any community garden.

These benefits were closely followed by counselling, food and government grants, all with two (2) respondents. Three (3) of the respondents declared that they did not of any social benefits from the community gardens and these were actually respondents that were not part of any community garden. Lastly four (4) of the respondents proclaimed that the production of different food types within the community garden has helped them realise a social benefit.

Figure 4.5 is the graphical representation of Table 4.5 (above). The figure shows that by far the greatest value to community garden is the sharing of knowledge as expressed by the respondents, which is shown by a 34.4%. However this does mean that out of the 34.4%, only 31.6% of the respondents talk from experience as 2.6% were not part of any community garden.

Sharing knowledge was then followed by working together represented by a 21.1%. But from this 21%, only 13.3% of the respondents represented community garden groups. The rest, which is 7.9% were from the group that did not participate in community gardens, but felt that community gardens would mean working together. This is closely followed by helping each other with an 18.4% representation.

Following that was having access to healthy food; this was represented by 15.9%. But of this 15.9%, only 10.5% were members of community gardens and the rest 5.3% were not part of any community garden. Respondents further identified producing different food types as another social benefit. This response was represented by a 10.5%.

Only 7.9% of the respondents said that they did not know of any social benefits to community gardens and understandably so, they were all from the group of respondents that did not make use of any community garden. On the same level was the counselling, having food and government grants were all represented by 5.3% each. Lastly respondents acknowledged feeding their families and creation of employment as social benefits of community gardens and these were represented by 2.6% each. Employment

creation was actually identified by a respondent who was not part of any community garden.

Social benefits to community gardens

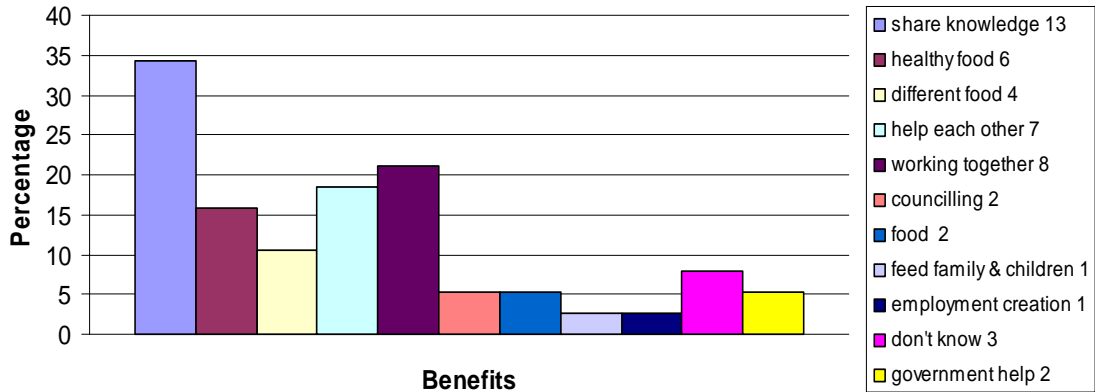


Figure 4.5 Social benefits of community gardens

(b) Economic benefits

Table 4.6 and figure 4.6 shows responses with respect to economic benefits of community gardens. The majority of the respondents, which were 71.1%, reflected that the greatest economic benefit by far they get from community gardens was selling their produce and thus gaining income. Of the 71.1%, 77.8% (Table 4.6 (a)) were from the community garden group and 22.2% were from the group that did not participate in community gardens. The (21) 77.8% represents 55.3% of the 38 respondents that participated in the survey. The other 22.2% represented 15.8% of the 38 respondents.

Table 4.6: Economic benefits of community gardens

	Frequency	Percentage
Selling	27	71.1
Food	5	13.2
Supply markets	3	7.9
Save money	3	7.9
Employment	2	5.3
School	2	5.3
Yields	2	5.3
Government grants	2	5.3
Do not know	1	2.6

N= 38

Table 4.6 (a): The economic benefit of selling food in community for the two groups (non-community garden and community gardens groups)

	Non-community garden group	Community garden group	Total
Frequency	6	21	27
Percentage	22.2	77.8	100

N=27

Selling of food is then followed by the production of food 13.2% of the respondents stated that producing food was part of community garden economic benefits.

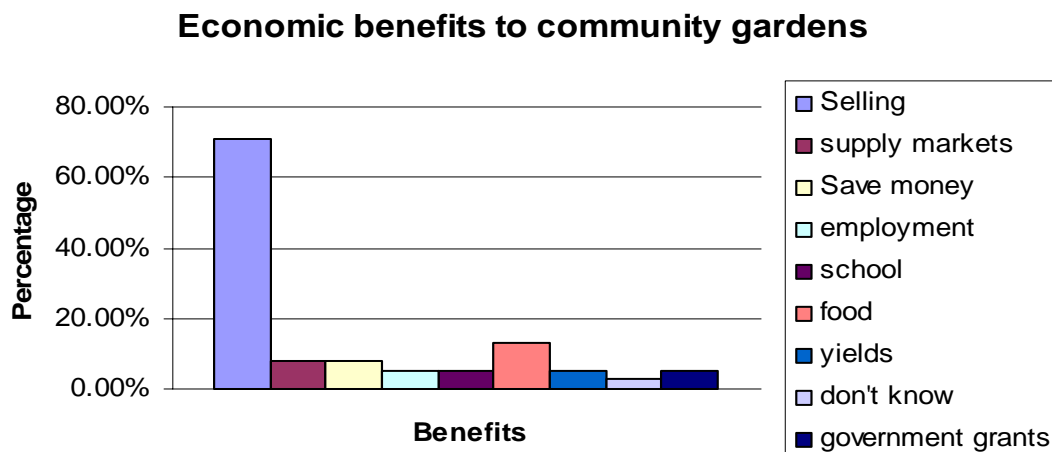


Figure 4.6: Economic benefits to community gardens

(c) Community gardens environmental impacts

The respondents for the survey only stated the following environmental impacts:

- Enriching the soil
- Take care of the soil (fertility)
- Learn to apply manure
- The use of traditional knowledge

4.2 Semi-structured-focus group interviews

This section of the findings will provide the results for the semi-structured group discussions that were held with the members of each of the four community gardens. The interviews were qualitative in nature. They generated an historical time line; they discussed farming practices and the benefits and challenges of community gardens.

Details of responses are recorded in Appendix J and are summarised below for each of the gardens.

4.2.1 Historical time line of the community gardens

Table 4.6 shows the community gardens that were visited in Ogagwini and the year in which the gardens were established. The activities of the community gardens will then be provided as per the community garden.

Table 4.6: Community gardens and the year in which it was established

Year	Community garden established
1993	Vukani community garden
1994	Masakhane community gardens
2000	Siyazama community gardens
2002	Uphungula indlala community garden

A) Vukani community garden group

The Vukani community garden was established in 1993 with the help of an extension officer for the Department of Agriculture. The extension officer approached a number of women and formed a group. With the group they began to have workshops and were taught about farming and growing vegetables. After which they were asked to find land that they can use to grow vegetables as a group. It was then the beginning of the first community garden in Ogagwini.

The garden began with 16 members and they were all females. The group got their land from a lady named Mrs Hlengwa and the land belonged to her family. She also became part of the community garden. She gave the community garden group the land that was near the river. The land was not particularly chosen but rather just allocated to them by Mrs Hlengwa.

The same year a fence was sponsored to the garden by the department of Agriculture, where the Extension officer was working. The group was also given seeds and plants to start planting. They continued to grow vegetables (cabbages, spinach, onions, green peppers and beetroot) for consumption and were taught how to grow these. They never knew how to grow these crops before and used to buy them from the markets.

In the year 2005 their extension officer past away and they continued growing vegetables. However they feel that it is not the same as when the extension officer was not present. They feel that they have complicated the way they use to do things when the extension officer was there.

In order to join the community garden a member must pay a minimum of R10-00 joining fee. This money is for buying of seeds and other necessities in the community garden. However a member may be required to pay an additional amount if need arises, this need might be for buying pesticides and seeds.

Farming practices

The farmers (community garden participants) believed and still believe that a community garden a school where they learn how to grow vegetables, especially vegetables like cabbages, onions, spinach and beetroot. People only knew how to grow traditional crops (maize, beans, amadumbes (taro), sweet potatoes, potatoes and pumpkins).

Asked how they managed with their two gardens (community gardens and homestead farms) at the same time? Farmers responded by saying they homestead farms (picture 4.5) do not need much attention in winter because there are no rains in winter and so they concentrate on community gardens since they are closer to the rivers and source of water. They grow in their community gardens between March and September, after this period they go back to their homestead farms. The group meets every Tuesday to discuss issues in their gardens. They then come regularly to water the vegetables and perform other activities on the other days; the other days however are up to the individual.



Picture 4.5: Showing a Homestead farm in winter

When asked if they grow the same crops at their homestead farms then they do in their community gardens. The farmers said they have tried growing the crops that are usually grown in their community gardens. The problem is that these community garden crops (cabbages, beetroot, onions, carrots, green peppers and spinach) require more water and so growing them at homestead farms is difficult because they do not have an irrigation system. Homestead farms also do not follow the same procedure as the community gardens when it come to farming practices.

Benefits of community gardens

One of the most important benefits and the reasons why people joined the community garden is the technical training. This they get from the extension officer, who was given to them by the Department of Agriculture. They teaches them how to grow crops and any other technical knowledge they need in growing and protecting their vegetables. Secondly the farmers identified sharing knowledge as one of the benefits of working in the community gardens.

The knowledge sharing is amongst the farmers themselves as they come with different information and knowledge. Thirdly farmers identified selling of vegetable important and as a benefit. Lastly the group identified producing different crops as one of the benefits of working in the community gardens. Farmers used to buy other crops (cabbages, beetroot, onions, carrots, green peppers and spinach) from the market, but they can be able to produce them by themselves.

Challenges

The identified challenges by the farmers were the reeds (imhlanga). These reeds discouraged a number of farmers as they had to always weed and the reeds would come back in not so much time. Another challenge identified was that since the extension officer past away, they have been neglected and do not know what more to do. They do have an older member of the group who was there when the community garden started and she tries teaching them but her knowledge is only limited and some of practices needed she cannot perform.

B) Masakhane community garden group

When the community garden first started in 1994 it was named Masakhane community garden group (literally meaning *let us build each other*) and it only had 15 members (farmers), which were all unemployed. That same community garden has a total of 22 members participating. In their membership they have three male participants and 19 female participants. The farmers had started the community garden for two reasons, which were to produce food and make some money.

Before the establishment of the Masakhane community garden group the participants had homestead gardens they used to produce food, these gardens produced only five crops, namely maize, potatoes, amadumbe, peanuts and pumpkins. Peanuts and pumpkins were natural crops and grew by themselves.

Farming practices:

The participants said that these crops were produced in a traditional manner, as they used crawl manure, instead of artificial fertilizers. It is however unclear what other techniques they used in their homestead gardens.

Even in these community gardens the farmers still produced using traditional ways, as they did not use insecticides, artificial fertilisers; but continued using crawl manure. For pesticides the community garden members brew their own "muthi". Mr. Maphumulo is regarded as the expert in this field, because he is the one who teaches the other participants to brew and use these pesticides in their community and homestead gardens. He acquires the ingredients for the muthi from the fields, bushes around the area.



Picture 4.3: An example of Mr. Maphumulos' pesticide

Even though the other participants have never made the “muthis” themselves they are happy that they know how to make them and that Mr. Maphumulo still makes for them in the community gardens. With a smile on their faces the participants said the reason they have not made the muthi was because they were “too lazy” to go to the bushes to collect the ingredients.

Participants indicated that the muthi is also used in their homestead gardens. They take what is left over in the community garden and use it in their homestead gardens. Asked if he thinks people are taking advantage by taking his muthi to their households. Mr. Maphumulo replied by saying that he made the muthi to be used in the community garden, but if people feel they need it in their gardens, they are welcome to do so, because it is also belongs to them.

With the establishment of the community garden the participants approached the department of agriculture in Umbumbulu and the department responded by providing them with an extension officer. It was then that the farmers for the first time in their lives started producing what they refer to as “amavegi” (“veggies”); these veggies include spinach, cabbage, onions, green peppers and tomatoes.

Benefits of working in a community garden

According to the participants they used to buy these types of crops from a market in Isipingo, but now they are to grow them by themselves. This has resulted in them saving money on buying these crops; they now can afford to buy some meat and other necessities with the money they would have used for buying these vegetables.

In addition to saving on buying the vegetables, farmers also produce so that they have surplus left to sell. The surplus produced from the community gardens was sold on pension days and also within the community at large. The community garden members had not sourced any other markets to sell their produce.

A very interesting comment made by Mr. Maphumulo during the interviews was that he referred to the community garden as a “school” where they learnt how to utilise their gardens. These skills have also gone to their homestead gardens, as they state they have borrowed the techniques they use in community gardens and used them in their homestead farms. The example that was given was that they sometimes plant cabbages in their homestead farms.

Challenges

The community garden group think that water is the major problem as they have to fetch the water from a stream which is about 100m away and they do not have an easier way to fetch water. Farmers have mentioned that they are old and carrying buckets of water around is not their ideal way of irrigating their gardens (picture 4.3).



Picture 4.4: A child fetching water using a bucket

Secondly they have been lacking the services of the extension officer. Farmers mentioned that the extension officer has not seen them in a while and this has a negative impact on their gardening experience. They are not sure whether they are being avoided.

C) Siyazama community garden group

The community garden began in the year 2000, when Mrs Nzimande (a lady in the community) who organised the group. The group was previously (1995) sewing group but had no one to help them. The group decided this was not a good venture and organised themselves to form the Siyazama (*we are trying*) community garden group and at the beginning there were only six members.

Mrs Nzimande then approached the extension officer in one of the already existing community garden in Ogagwini. At that same time the extension officer was working with the Masakhane community garden group. This is the closest extension officer the group could find.

The group got their land from Mr Hlengwa, he had land available and since his wife was interested he saw fit to give the land to the group (at present he is also part of the community garden group). They then received training from the extension officer and they decided to meet every Wednesday. In that same year (2000) they started to plant but they did not have any fencing. The fence only came the following year (2001) and it was supplied by the Department of Agriculture through the help of the extension officer.

The reason for entering and establishing the community garden was to “*Xoshindlala*” (*literally translated to be “chase away hunger”*). However the farmers further explained in the stomach as such, but are driven by a sense of needing more; secondly they wanted to complement what they produced homestead farms and thirdly the possibility of selling excess food produced. Lastly people believed they would share knowledge with one another within the community garden.

Farming practices

Figure 5.4 demonstrates the way in which the extension officer taught farmers how to grow their vegetables. Their vegetables were all in straight rows (A), so that the first few rows would be one crop and the next couple of rows would be something else. All this was in a uniform manner across the field, for every individual plot (represented by

columns in figure 5.4). However the situation has changed with the absence of the extension officer¹, which is demonstrated by figure 5.4 (B), where individual plots are still noticeable but the uniformity of crops across the field has changed.

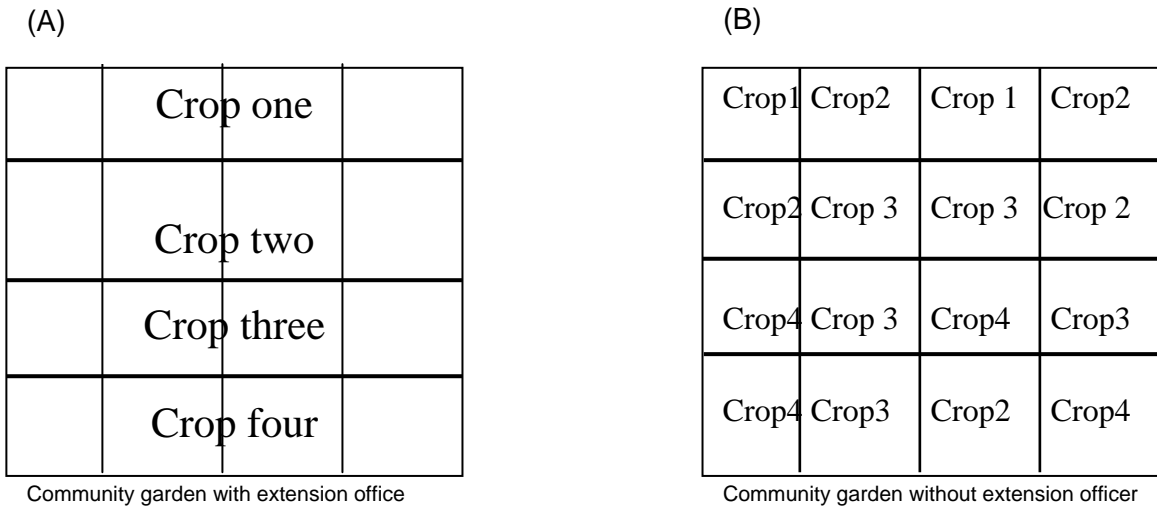


Figure 5.4: Showing how the farming practices have changed with and after the extension officer.

One of the patterns that has remained is that cabbages are usually planted near the water source because according to the farmers, cabbages require more water than the other crops they grow in community gardens. The other crops they grow in community garden are spinach, beetroot, green peppers, carrots and onions, whereas they grow traditional crops in their homestead farms.

The crops grown in homestead farms are potatoes, maize, pumpkins (which produce wild imifino), amadumbe and sweet potatoes. Community gardens are used in March to August and the homestead gardens are used from September to February. Community gardens are only tended to in winter and during the rainy season they tend to concentrate their effort in their homestead farms because they do not have the time and labour to do both gardens. There are currently 17 members of the Siyazama community garden group.

Benefits of community gardens

The benefits of community gardens as identified by the farmers are that they gain a variety of vegetables. These vegetables are used for home consumption, in addition the farmers no longer have to buy these vegetables from the market as they used to before

¹ Their extension officer passed away in 2005 and has not been replaced.

the community gardens. These vegetables are readily available to them and as one of the farmers put it: “you can now go over to the garden and pick something even if you have come back late from wherever. We can even sell the extra vegetable to the community, but this does not happen too often as we do not produce enough to sell.”

Challenges of working in the community garden

The challenges that the group identified were the need for help. They felt that they had no one to help them with any of the production and technical challenges they were facing with particular reference to planting and pest control. Secondly they see other people getting help (lime) but they are not getting any and furthermore even if they did get the lime, they would not know how to use it in their community gardens and for what reason.

In the community garden, farmers are using a fertilizer and they do not know what the fertilizer is called and how to apply it. They were just told by the store that that was the fertilizer they need for the type of crops they were growing. They also have times when they cannot afford fertilizer that is the time where they use crawl manure.

D) Uphungula indlala (valley garden)

The garden began in 2002, where there were 7 members; however, this garden did not last very long only about a year (2002-2005) because the owner moved. By the end of the following year (2005) people moved again to another piece of land that was given to them by the Makhanya family but the group then grew to 12 members.

It was then discovered that the second community garden, which they also used for just over two years (2004-2006) was small for all these members and they were obstructed by reeds and could not expand the community garden. The garden then moved to a much flatter slope where both the Makhanya and Mkhize family donated land, this was in the half of 2006 to 2007. The number has grown to 24 members, with two males and 22 females. Within this 24 membership at least 11 of them are EFO members.

Two women from other community garden groups (Mrs Mkhize (the same lady that allowed them to use the land) and Mrs Ngcobo) motivated the people to come together and join a community garden group so they can share the knowledge that they have gained in the other community gardens. These ladies had been taught how to grow

cabbage and tomatoes by the extension officer in the garden they were in. Member from other community garden groups also joined in this community garden.

The group did not ask for an extension officer until they started working, after which the chairperson requested the extension officer to come and visit them. The extension officer was to help them technical knowledge, problem solving (within the farming context), how to grow different crops properly and lastly to help them to locate markets.

The support from the extension officer came in a form of implements supplied: 2 water cans, 2 spades, seeds and two rakes. These implements were given to the group this year (2007). The garden member already had their own implements, which they had bought for themselves and for their home use

The reasons for starting the community garden was so they (farmers) can grow their own food, so they do not have to buy the food from the markets (in this case Isipingo). Farmers mentioned that since they started with the community garden they have not gone to Isipingo to buy the vegetables. The farmers further stated that they entered community gardens because they wanted to reduce their vulnerability to hunger; they referred to this as "Xoshindlala". The farmers state they have maize and flour and the gardens supplies relish. Therefore they do not have to buy the vegetables anymore.

To become a member of the garden each member has to pay a R20 joining fees per year. This is to secure your place in the community garden, but also this money is put aside for the purchase of seeds and the rest is saved for future use. A member, however, might be requested to pay an extra amount should the purchase of seeds be over budget.

In June (2007) members the community garden went for an agricultural workshop. The workshop hosted by Kwasaki agricultural college, the group got new of the workshop through the councillor. They felt that they needed the knowledge before they could get the fencing. The department of agriculture had come (May 2007) to see the place. They measured the area and had told them that by the completion of the workshop they would get their fencing.

Farmers had stated that the knowledge that they gained from the workshop has helped them in a substantial manner. They were taught how to grow different crops. They learned how to measure seed for sewing seeds (e.g. to/m²). In addition to that they were also

taught what types of fertilizers to use for what crop and also about the differences between kraal manure and fertilizer

Farming practices

The community gardens are planted in winter, when there is less rainfall. In the rainy season people grow crops in their homestead farms and these crops include amadumbe, potatoes, sweet-potatoes and pumpkins. This group however said they do grow the same crops as they do in community gardens. Farmers felt that the cabbage actually grew better in their homestead farms and therefore they think that there must be something wrong with the soil in the community gardens.

Farmers have used fertilizer in their community garden; the fertilizer was supplied by the department of agriculture. However this was a once off occurrence and they were did not know what kind of fertilizer was used. The farmers usually use kraal manure in the community garden, but this is especially true in their homestead farms.

Challenges

The community garden identified technical problems as their challenges. These challenges were pest namely, cutworm, aphids and red ants. The only way that as discussed to help them to deal with these pests was buying of pesticides. In addition to pesticide fencing was identified as a challenge to them as livestock comes in and eats their food. Lastly it is carrying of water from the water source (rivulet) to the gardens themselves.

Summary of perspectives from the community garden groups

History

The first ever community garden in Ogagwini was established in the year 1993, it was the Vukani community garden. The following year another community garden was established. For five years there were no community gardens established until the year 2000. The next garden was to come in the year 2002.

Farming practices

Attention is afforded to community gardens in winter seasons because there is lack of rain water. During the rainy seasons community gardens are somewhat neglected because much of the attention is given to homestead farms. Community gardens grow cabbages, beetroot, carrots, onions and spinach, whereas homestead farms grow maize, potatoes, sweet potatoes, beans, pumpkins and peanuts. Homestead farms usually do not use the artificial fertilizer and mostly use kraal manure.

Benefits

The benefits identified by respondents were that community gardens give them food. Moreover community gardens give them healthy food and the food complements what is grown in the homestead gardens. It is further stated that community gardens were a way in which the respondents are able to save money on buying vegetables. Furthermore community gardens act as “school”, they are where farmers learn to grow different vegetables and learn technical knowledge.

Challenges

Assistance was identified as one of the challenges in community gardens. Respondents feel that they need help in their community gardens. The help comes in a form of technical knowledge about pest control and also farming practices. Secondly fencing seems to be the challenge for most of the gardens because they have said that without fencing livestock comes in and eat their food.

4.3 Perceptions of selected extension practitioners in the Limpopo and KwaZulu-Natal Departments of Agriculture

The following section of the survey investigated the perceptions of the extension officers about community gardens. The questionnaire aimed at confirming literature and also the responses from the community garden participants (Appendix K).

4.3.1. Is it part of your job to work with community gardens?

Figure 4.8 shows that fifty percent of the participants were from KwaZulu-Natal and the other 50% were from Limpopo. All of the respondents (100%) stated that it was part of their job to work with community gardens and one of the respondents actually stated that 30% of their work involved community gardens. However the two provinces show no major differences so they will both be treated as one.

4.3.2 Meaning of community gardens

The majority, which was 50% of the respondents, stated that community gardens are in the community. Furthermore community gardens are used by the community (37.5%) to produce vegetables (37.5%).

Table 4.8: Responses to the question of what community gardens mean

	Frequency	Percentages
In the community	4	50
Production of vegetables	3	37.5
Used by community	3	37.5
Income generation	1	12.5
For consumption	1	12.5

N= 8

4.3.3 What are the initial goals and purpose of community gardens?

Table 4.9 and Figure 4.9 demonstrate that most of the respondents (75%) stated that community gardens goals are food security and more especially household food. There after comes income generation, which is signified by a 50% response, which is then followed by production of fresh and healthy vegetables, presented by 37.5% and 12.5% percent respectively. Community garden priorities then range as illustrated in Figure 4.9.

Table 4.9: Goals and purpose of community gardens

	Frequency	Percentage
Food security	6	75
Income generation	4	50
Producing fresh vegetables	3	37.5
Producing healthy vegetables	1	12.5

N= 8

4.3.4 Expectations by participants

The reasons and expectation of community garden members as per the responses show that community garden participants enter gardens so that they can produce more food for the family (please refer to Table and figure 4.10). Moreover, 37.5% of the participants have surplus food that they sell and gain income. Further, community gardens are perceived by 25% of the respondents to be about creation of employment. These responses show that community gardens are not perceived much in terms of alleviation of poverty or entering community gardens because farmers want to gain access to government or NGOs support.

Table 4.10: Expectations of the participants of community gardens

	Frequency	Percentage
Produce more	4	50
Income generation	3	37.5
Employment	2	25
Support	1	12.5
Alleviate hunger	1	12.5

N= 8

4.3.5 Department expectation of community gardens

According to the responses given by the respondents (refer to Table 4.11) in the questionnaire, the main concerns or rather expectation of the department about community gardens are food security within a household. They are also meant to alleviate poverty amongst the community. Furthermore the department expects these community gardens to be sustainable. Respondents were free to use their own terms in the questionnaire. No attempt was made to define the terms.

Table 4.11: Department's expectations about community gardens

	Frequency	Percentage
Food security	3	37.5
Poverty alleviation	3	37.5
Sustainability	3	37.5

N=8

4.3.6 Duties of extension officer in community gardens

The duties of the departments' representatives with regards to community gardens are indicated in Table 4.12. The representatives have to provide training for the farmers about

vegetable production and financial management. They also assist farmers with planning, production management and linkage with input suppliers and also help them find markets. In addition to the training the representatives have to provide technical support to the community gardens participants (farmers). They also act as facilitators to the community garden participants. Furthermore they are the ones responsible for the monitoring and evaluation of the project to see if it is still within the set path and it is achieving what it needs to achieve.

Table 4.12: Duties of extension officer in community gardens

	Frequency	Percentage
Training	5	62.5
Technical support	2	25
Monitoring	2	25
Facilitator	1	12.5
Evaluation	1	12.5

N= 8

4.3.7 Economic benefits of community garden to the agricultural economy

The responses to the question varied for each of the respondents. The responses were tabulated in Table 4.13.

Table 4.13: Economic benefits of community gardens

<i>Question: What are the economic benefits of community gardens to the agricultural economy? How is the benefit realised?</i>	
Responses	<ul style="list-style-type: none"> • Have food • Do not have to buy food • Very little, if not none • Increase production • income generation • Local economy improved • Selling produce • Able financially • Contribute to agricultural economy indirectly • Good quality and quantity of products

4.3.8 Economic benefits to household from community gardens

From this question, only five responses came from the respondents and none of these were significantly represented as they were all represented by 12.5% (2 respondents) (please refer to Appendix L). The respondents reflected that community gardens

economic benefits for households are that they save money they would have bought food with; secondly they generate income when they sell their produce. Furthermore the community garden participants produce food, but moreover they produce fresh and healthy vegetables.

4.3.9 Social benefits of community gardens?

Table 4.14 presents the social benefits of community gardens as articulated by the departments' representatives. The most apparent of these reasons is that of team work and unity amongst participants, represented by 50%. This is stated to promote mutual understanding and also encouraging support among the group members. The community garden further builds relationships amongst the community members, especially those participating in a same community gardens. The relationships are built through common understanding and following similar goals.

Table 4.14: The social benefits to community gardens

	Frequency	Percentage
Team work/unity	4	50
Relationships	3	37.5
Distance to food is shortened	1	12.5
People are healthier	1	12.5
Training	1	12.5

N= 8

4.3.10 Environmental benefits of community gardens

The clearest benefit of community gardening as identified by the respondents was that of greening of the environment. It was then followed by conservation of the environment, which was closely linked to soil erosion, as the plants prevented soil erosion in the community gardens (Table 4.15). Others though important in environmental were not significantly indicated by the respondents.

Table 4.15: Environmental benefits of community gardens

	Frequency	Percentage
Greening	3	37.5
Conservation	2	25
Ozone	1	12.5
Maintain the ecosystem	1	12.5
Soil erosion	1	12.5
Efficient land use	1	12.5

N= 8

4.3.11 Support provided by the department to community gardens

Table 4.16 shows the support that is provided by the department of Agriculture to the community gardens. 62.5% percent of the respondents stated that the department provides infrastructural support for the community gardens. The infrastructural support comes in a form of fencing and irrigation systems.

Table 4.16: Support provided by the department to community gardens

	Frequency	Percentage
Infrastructural support	5	62.5
Training	4	50
Production input support	2	25
Monitoring and evaluation	2	25
Funding	1	12.5

N= 8

In addition 50% of the respondents stated that the department supports community gardens with training, this comes in a form of technical advice and also training in a variety of skills including financial management. Furthermore the community gardens are supported with production inputs, these include fertilizers, seeds and etc, and this was represented by 25%. Another 25% of the respondents said that the department also offers monitoring and evaluation services to the community gardens to check if the projects (community garden) are still on the right track towards set goals or if they are achieving the set objectives.

4.3.12 Process followed in delivering support to community gardens

With this question there was no significant similarities from the respondents (see appendix K). However what did surface from this was that, in delivering the support the departmental policies have to be followed in each and every step. One of the basic principles behind the community gardens support is that there must be beneficiaries (those would be the community garden participants). Then planning takes place, which would include situational and needs analysis. This is where it is decided if the project (community garden) will be funded or not. There is the allocation of the budget and then the implementation of the plans. Thereafter there is the evaluation of the project.

4.3.13 Other support that is available to community gardens.

Table 4.17 shows the different kinds of support from different institutions. This table shows that most of the support for the community gardens is from the local municipalities. The least supporters of community gardens were from the traditional leaders, the other sector department and the NGOs. These are just quantified results than qualitative sort of results.

Table 4.17: The different kinds of support and the departments that supply them to community gardens

Departments	Types of support
Local municipalities (local economic development)	Production inputs Marketing Financial Training Water Funding
Department of labour	Financial Training and soft skills Technical
Eskom	Financial Technical
Social development	Financial Technical
Traditional leaders	Land
Other sector department	Funding
NGOs	Training and soft skills

4.4 Summary and initial conclusions

In this study, food was identified as a primary reason people enter community gardens; it is both a social and an economic benefit derived from the community garden. Food was identified as a way of reducing vulnerability to hunger, but also as a way to achieve food security. Community gardens were identified as a place to work in the winter season since the homestead farms were not used in the season. Both the community gardens and homestead farms produced different types of crops. In the homestead farms respondent produced their traditional crop (amadumbe, maize, potatoes, sweet potatoes, pumpkins and peanuts) and community gardens produced what the respondents “Veggies” (cabbages, carrots, onions, spinach, green peppers, beetroot).

CHAPTER FIVE

DISCUSSION

The chapter presents the discussions of the results of the survey. The discussion will firstly provide discussions on the results of the individual questionnaire, followed by the discussion of the semi-structured interviews with particular reference to farming practices, benefits and challenges identified. It will further discuss the responses from the questionnaire for the governments' representatives. Lastly it will briefly discuss the homestead farms with respect to farming practices, benefits and also challenges.

The following section will be focused on the three stages of the research and thus trying to answer the question that were in the three sections. This therefore might lead to some repetition.

Questionnaire responses:

5.1. Differences between community and homestead food gardens.

5.1.1 Homestead farms

Most of the farmers expressed that they use the homestead farms for personal consumption and also sell the rest to the markets if there is any left. It must however be understood that for the members of the EFO (Ezemvelo Farmers Organisation), this is entirely different. The EFO has an established market (Woolworths) for amadumbes, this resulted in amadumbes being the main crop for the homestead farms as it has economic value.

Homestead farms rely primarily on rainfall and do not require substantial supplemental irrigation. This means that the homestead farms are at their most productive state in the rainy seasons of the year. One of the greatest elements to come with homestead farms is that it is a walk away from the household. Therefore it is of convenience as a member of the family can just go out and pick whatever is needed anytime of the day. Moreover attending to it is easy because it is just a short walking distance away.

Homestead farms however are often large and require a substantial amount of time to tend. This to people is the biggest challenge to the farmers (usually women), but they are

able to cope with this situation as they have assistance from their family members (children and male figures within the family).

5.1.2 Community gardens

5.1.2.1 Commercial purpose

Farmers believe that the community garden is different because they use the community garden products for economic benefits. This is because the farmers state that they sell the vegetables they get from the community gardens. Here it must be understood that not all the farmers mentioned that they sell the produce from the community garden. The only community garden group that said they actually go out and sell the produce was the Masakhane community garden group. This group is able to supply a market. The markets identified were the community at large, the local stores and also Isipingo (where they go as hawkers) Even though the rest of the community gardens do sell, it is usually in small quantities and within the community.

5.1.2.2 Learning

Furthermore farmers perceive community gardens as giving them the platform where they learn to garden. The training is important because it enhances their knowledge as farmers and as individuals. They learn the different techniques that are involved when it comes to farming or gardening.

5.1.2.3 Distance

One of the drawbacks about these community gardens is that they are not easily accessible. What this means is that community gardens are usually some distance away from the homesteads. So community gardens unlike the homestead farms are an inconvenience as one has to travel to get to them. However for the point of clarity community gardens are not quite that far, because the distance from home to the community garden does not even exceed a kilometre. As previously mentioned these gardens are “neighbourhood gardens” as the households involved in these gardens are in close proximity.

5.1.2.4 Irrigation

Moreover community gardens have viewed as needing attention with regards to irrigation, unlike homestead farms that rain fed. Community gardens require that there be constant irrigation and therefore t depend on individuals' ability to irrigate. This however is not a difficulty as all of the community gardens are usually placed near a permanent source of water.

5.1.2.5 Collective effort

Farmers learn from each other in the community gardens. Because every individual has a unique skills and knowledge, these are shared amongst the members of the community. For example Mr. Maphumulo (Masakhane community garden group) has skills and technology that member of the community garden do not have and these skills and technology he shares with the community garden group. It is in instance like these that farmers share knowledge amongst themselves and thus assisting each other, whereas had they not been in community garden these technologies and skill would not have been learnt.

With community garden one does not work in isolation, one works with other members of the surrounding community. Therefore this allows for help to be given when and if it is needed. Within this context (community garden) it is easier to ask for help because the farmers that one is working with are within the same boundaries and follow the same set rules. The boundary and the rules therefore forge another form and type of community.

5.1.2.6 Extension officer

An extension officer is one of the most important elements of community gardens, because the extension officer fulfils the needs and desires of the farmers in community gardens. What this means is that farmers enter community gardens to learn how to grow vegetables and within that context the extension officer is the one offering the training. And according to the policy the extension officer is employed by the department to do more than just training farmers in growing vegetables. Homestead farms suffer a loss in this concern because extension officers do not attend to individual homestead gardens; therefore community gardens play a major role in trying to bridge this gap.

5.1.2.7 Competition

An interesting factor that came out in the survey was that of competition. According to one of the farmers, competition was important to keep the garden going but most importantly to keep the farmers motivated. It was explained that seeing one member succeed makes another wonder how he can better himself and his production. Therefore healthy competition is quite important for community gardens to succeed.

Further competitive cropping necessitates confidence building within the community garden. Another person feels like they have to do more work in order to conform to everybody. An example used was that another person becomes motivated when they look at their neighbours fields and therefore strive for theirs to look more or less the same.

5.1.3 Individual and collective effort

The downside to homestead food gardens as identified by the farmers was “working alone), whereas in community food gardens people work done as a group or as they put it as a collective effort and this somehow creates a window of opportunity for “competitive cropping/production” (see following section).

In community gardens people work with others and one finds that they learn different techniques and methods they would not have learnt in their homestead food gardens. These different methods and techniques learnt in the community food gardens are in turn utilized in the homestead food gardens. Community gardens are therefore an asset in that sense because people gain valuable information that they can use in to improve their farming in the homestead gardens.

5.1.4 Size and the different crops

Farmers believe that homestead farms have bigger plots than the average community food garden; therefore the farmers believe that homestead farms produces more than the community gardens. One interesting discovery in these differences was that the crops that are produced in the community gardens are not the same as the one that are produced in the community food gardens.

Crops that are produced in the homestead farms are firstly considered as traditional crops and these traditional crops were potatoes, maize, sweet potatoes, peanuts, pumpkins and

amadumbes. Whereas community gardens produced cabbages, carrots, green peppers, spinach and beetroot.

Table 5.1: Differences between community and homestead food gardens as stated by the farmers.

Homestead food garden	Community food garden
1. Located within the homestead and therefore easily accessible.	1. Far from homes and therefore accessibility is sometimes a problem.
2. Individual effort	2. Collective effort with other members of the community.
5. There is no one to share knowledge with from outside the household.	5. Knowledge is shared amongst the community garden members.
4. No extension officer, so there is no taught knowledge.	4. Taught knowledge by the extension officer.
5. No constitution that governs the farming.	5. A constitution that governs the way they use the community garden.
6. One works alone, therefore there is no competition.	6. Working together builds constructive competition, which in turn builds confidence.

5.2. Reasons why people enter into community gardens

The following sections summarise the reasons given by farmers as to why people enter into community gardens. There is a strong similarity between these responses in the previous section where respondents describe community gardens and homestead farms.

5.2.1 Savings on buying vegetables

The farmers entered into community gardens so that they can sustain/feed themselves, participants would now be able to put something on the table without necessarily having to buy them. The respondents/participants highlighted that with growing their own crops they are able to go to their gardens and gather a few fresh vegetable that would be cooked and eaten as meal.

5.2.2 Fresh and healthy food

Secondly they identified growing their own “fresh, healthy and nutritious vegetable”. This helped them with their achieving food security; they state that being able to produce for their own food helped them reduce their vulnerability to hunger. What is more appealing

was that the farmers believe that they were not poor because they are able to produce food for themselves.

5.2.3 Income generation

Community food gardens have allowed people to generate some sort of capital. Farmers have identified these gardens as a way for generating income; they do this by selling their produce to nearby informal markets or even within the community. A community food garden played an integral part in the generation of income for its members. This would be explained further in the next section of economic benefits to community food gardens.

5.2.4 Interacting with other

Farmers further identified the ability to interact with members of other community food gardens, whom may also be part of the community as another reason for entering community food gardens. This then means some types of affiliations are formed within the community members, so this is not only in the community garden context but also in a community as a whole. These affiliations are then good for developing social capital and also social networks within the community.

Most of these members have common goals even though they come from different backgrounds. They have come to develop a sense of consideration for one another despite their individual differences and as result they all became like companions. As individuals farmers entered community gardens because they felt it helped them to become self-reliant; they have become the masters of their own fate.

5.2.5 Survival

An interesting statement made by the farmers was that community gardens have helped them regain their “survival” from the soil. This meant that the soil had been realised as the primary source of their livelihoods. They have further identified uplifting the community as one important aspect to community food gardening, this was done through community greening and also donating food to those who are in need.

5.2.6 Government support

Surprisingly enough some farmers mentioned that they entered into community gardens because of the incentives that are provided by the government departments. People have this belief that “the government helps those who are united” and that is basically the reason why some would have joined together to form community food gardens.

5.2.7 Different times for different gardens

The survey showed that the participants grew different crops at different times. For example community gardens were said to be used in winter and homestead farms used in the rainy seasons. The survey further shows that the two types of gardens grew crops during these different seasons. Community gardens grew cabbages, onion, spinach, carrots, green peppers and beetroot during the winter seasons, whereas homestead farms grew traditional crops (amadumbe, sweet potatoes, potatoes, and maize) in the rainy season.

Summary

Undoubtedly the reasons people enter into community gardens are deeper and more complex than just the production of food. In these gardens there are social, economic and also environmental objectives that are attached. Therefore entering community gardens or any other garden for that matter is usually motivated by different needs.

5.3 Social benefits of community food gardens

This data was taken from the questionnaire, which identified the five different community gardens and merged to come up with one report of what people perceive to be the benefits of community gardens.

In the analysis of the five community food gardens within the Ogagwini region of Umbumbulu area, it was found that the most major reason for the people entering into community food gardens with regards to social benefits were that of sharing knowledge, food, co-existence, counselling, and solidarity. In the analysis the participants (community

food gardens) chose sharing knowledge as the most significant factor when it comes to social benefit of community gardens.

5.3.1 Sharing knowledge

Participants share knowledge amongst themselves within the community garden, but more than that, community garden members do share some knowledge amongst other community gardens. Picture 5.1 shows sharing of knowledge amongst farmers of different community gardens. However, it was found that some of the gardens have not made contact with other gardens and this has not helped them because knowledge is only limited to the group that they are involved in.



Picture 5.1: knowledge sharing amongst farmers of community gardens

Farmers mentioned that there are details which some members might not be familiar with; then community gardens would become a platform for participants to engage in what is termed as “action teaching/learning” exercise. This is where the most knowledgeable of the participants/farmers (of the community garden) would help others in bridging any information gap they might have concerning farming methods and practices.

5.3.2 Producing food

Secondly the participants chose the production of food as the second most significant part of community gardens. Most farmers disclosed that they entered community gardens to produce food. Food production, however, is not only just a social benefit for the community garden farmers; it is also mentioned as an economic benefit. Food production would therefore be categorized as *socio-economic* factor.

5.3.3 Healthy food

In the community gardens people produce vegetables and a variety of vegetables. The introduction of community gardens also meant the production of a range of vegetables that people did not grow. So to them, this means they have gained healthy foods, however this does not mean that their traditional crop was not healthy. This whole notion comes because they are able to supplement and complement what they had in their homestead farms.

5.3.4 Working together

In the community gardens farmers work with one another, this is a benefit because a farmer has someone to converse with. In addition to that they get knowledge from each other. So this benefit of community is closely linked to sharing knowledge. But moreover this benefit is as a result of the need of being co-exist. This serves as a motivation to the farmers so they do not doubt themselves and their potential, and as Sherer (2004) states isolation breeds cynicism.

5.3.5 Co-existence

The farmers also identified co-existence one of the most important aspect to community gardens. Co-existence was explained as having relationships with people amongst the community and also forming some sort bonds with each other. This therefore according to the community garden members strengthen the links between the members of the community and those in the community gardens. Thus, community garden experiences

form relationships amongst the neighbouring households, but also with some of the community gardens and their members.

5.4 The economic benefits of community gardens

One would think economic benefits to gardening would be making profit. As true as this may be, community food gardens are than just profits. Many of the community food gardening participants identified a number of economic benefits. This section of the paper is therefore going to focus on the economic benefits of community food gardens.

In the analysis done participants (farmers) were asked to name the economic benefits that are gained from community food gardens. They came up with about five economic benefits to community food gardens and these were selling and gaining profits, saving on food, they are an employment opportunity, they supply markets and lastly they are platforms where people can get government grants.

5.4.1 Income generation

Most participants said that the most important economic benefit to community food gardens was that of selling their produce. The farmers have mentioned that the produce they get from the community gardens is for selling to the market. They admit that community gardens produce more and therefore are able to sell these crops in the nearby markets and by that they are able to earn profits. They have identified selling their produce as the single most important factor to the benefits of the community gardens.

5.4.2 Save on buying food

Buying vegetables from the markets was a normal thing for the farmers before they entered the community garden. They have now come to realise that the community gardens have been of good help to them, as they now produce their own vegetable and the money they would have used to purchase vegetables is now saved and used on other necessities in the household.

5.4.3 Supply markets

The third most important economic benefit to community garden has been supplying the market. The farmers are able to supply different markets now that they have joined community gardens. They have identified informal markets (hawking and selling on pension days) and local stores as the primary customers for their produce.

5.4.4 Government grants

Farmers have also identified government grants as one of the important economic benefits to come out of the community gardens. The grants from the government have come as support and this support was in a form implements. The implements include fencing, gardening tools and etc. farmers further acknowledge that the government support people that are working as a group and working in the community garden creates that group environment, where government can be able to assist them.

5.4.5 Employment creation

Lastly the farmers identified employment opportunity as another important economic benefit. Farmers mention that being in the community gardens have allowed them to feel as if they are employed. They have also identified that there are opportunities to employ other community members in their gardens. This helps those in need and also without employment.

5.5 Socio-economic benefits of community gardens.

Farmers have identified a number of social and economic benefits, but they have also indirectly identified four socio-economic benefits. The socio-economic factors identified were food, yields, education and feeding the family.

5.5.1 Food

Food was the most important socio-economic benefit the farmers have identified. This is an economic and as well as a social benefit because people grow food together and this

exercise has allowed them to interact with each other, thus forming bonds and relationships. Furthermore food that is produced may be sold to markets and thus making it an economic commodity. They have mentioned that the first particular reason they entered community gardens was so that they can be able to produce food. This has been made possible by them entering into the community gardens.

5.5.2 Yields

Secondly they identified yields as another economic benefit. According to them the community gardens produce more, which also helps them with having excess to sell. This would then also be aligned with the first section that dealt with food. Because this meant that people produced more food than they need for sustenance. The rest is therefore sold and profits are gained.

5.5.3 Education

Another socio-economic benefit that was identified was that of education. Education is meant in a sense that they learn how to grow their own food. Farmers are in a hands experience and so they learn by doing. Furthermore they are taught and trained new knowledge and techniques by the extension officers in the community gardens, this then would align education to social benefit.

Education does not only end there, but people also believe that they use the income they get from the gardens to send their children to schools where they will get educated for a number of things. The community gardens also play a role in educating the children how to grow their own food. This is done indirectly as the parents would send children to the fields to do things and in that sense they learn about growing food.

5.6 Environmental benefits of community gardens

The survey only identified a few community garden benefits and these came only from the Masakhane and Uphungula indlala community gardens. The other community gardens did not reveal knowledge of any environmental impacts or benefits. The identified benefits were that they learnt were all about enriching the soil. Because the groups and individuals alike only talk about learning to apply manure and taking care of soil fertility. This then

poses a question of whether people are aware of any other environmental benefits or impacts they have on community gardens and the environment.

Summary

Different people value community gardens or just gardens differently from others. It is however very apparent that they all the farmers agree that the production of food is the single most important factor into gardening. Food is therefore the primary reason people entered into community gardens. However, It is more than just about food production though. It is also about feeding their families and also decreases their vulnerability to poverty and a whole range of characteristics.

There are however more pressing matters that are apparent in people entering community gardens. For example they all agree that working together is a benefit of its own as they can share knowledge and also educate one another. They also consider themselves employed by the gardens they service.

Semi-structure interviews

The Questionnaire and the semi-structured interviews were aligned however there were some issues that cropped up in the semi-structured interview. One of those issues was that community gardens participants do not communicate with each other. What this means is that each community garden works in isolation.

5.7 Questionnaire for extension officers

5.7.1 Goals and purpose of community gardens

As shown in the results the community goals are mostly about food security. This then means community gardens deal with an array of characteristics with regards to food security. The basic goal however as mentioned in other reasons for community gardens is that of producing and making sure that individual households have access to enough food and a variety of healthy vegetables. Furthermore the participants are able to gain income from their gardens this further add to the income of the family and might also add into the household food security.

5.7.2 Community garden meaning

It is widely agreed that community gardens are primarily about the production of food. That it the basic and simplest way of viewing community gardens, however community are about producing food for household consumption, but it has been further expended to becoming a way of generating income. But the generation of incomes comes after people have “eaten” because income is not their main goal. In addition community are gardens are worked by the community (that is the immediate community), this then means that the community garden is in the community.

In the previous chapters Sullivan (1999) gave six (6) models of community gardens (Table 6.1). So in addition to these community gardens should be the community gardens from the survey. Because these gardens include a range of these models, and in some cases the characteristics are missing. The community gardens in this survey can be classified as (i) *a single community gardens for educational purposes with support provided to farmers*. As the reasons people enter into these community gardens is so that they can get technical support and also knowledge. They can further be classified as (ii) *gardens used for training* as they were gardens where farmers were taught how to grow different food types. (iii) These gardens can be classified as *One on One relationships gardens*, because in some of these garden it was found that some of the participants had been there long enough that they are able to teach other newcomers into the gardens.

These community gardens therefore are more than just one kind of classification; they are a mixture of a number of the identified community gardens models.

5.7.3 Expectations

Expectations of the community gardens by the different stakeholders are different, however, even though not clearly articulated, stakeholders do agree that community gardens expectation are primarily about access to food. Poverty and hunger alleviation were the main reason why there are people enter and those that support community gardens. Secondary to access to food is the generation of income. This is also tied in with the whole concept of food security within a household.

Table 6.1: Showing the different community garden models and their descriptions

Community garden model	Description
1. <i>Single community garden for educational and demonstration purposes with support provided to participants/farmers.</i>	These gardens were established for education and demonstration purposes. The communal garden site is where farmers gather and get knowledge and also technical training. The technical support for the farmers is also provided on the homestead/individual gardens.
2. <i>Community gardens tended collectively</i>	The community gardens are a single large plot and not into individual plots. The entire plot is looked after by the participants of the garden. This enhances collective effort and interaction amongst the farmers.
3. <i>Gardens used for training in garden skills</i>	These gardens are used to educate people on how to grow vegetables. The produce is usually sold to local market and the proceeds are used to fund the garden and to support other farmers.
4. <i>School gardens</i>	Gardening is built into the schools curriculum. This involves nutritionists who will teach pupils about food guide pyramid. The garden is tended by the students.
5. <i>One-on-One relationships</i>	This type of gardening takes experience farmers and groups them with unskilled but interested farmers. The inexperienced farmers gain technical knowledge from the experienced farmer. It also creates some bond or forces interaction amongst the farmers. This garden utilises the human capital that is already available in the community.
6. <i>Gardens affiliated with existing entity.</i>	The idea behind this garden is that it is established in an already existing entity (church, clinic, and etc). The people associated with that organisation are the ones that tend the garden. This was because it looked to create a sense of ownership by the people in the organisations.

Data from: Sullivan A. F: 1999. Community gardening in rural regions.

5.7.4. Duties of extension officer

Duties of the extension officer are mostly concerned with the training of members of the community garden. The training is usually the technical knowledge on how to grow vegetables. There is other support that is offered by the extension officers and that is training in skill like finance management and other skills like finding markets.

5.7.5. Economic benefits

This section further confirms what the farmers feel are the economic benefits to community gardens. One of the major benefits that were found was that people were saving money on food. They did not have to buy vegetables as they were producing them in their gardens. With these vegetables people were able to generate income by selling them to the markets. This in turn promotes the local market and economy, even though it is not that substantial but the contribution is there. The farmers are then financially able, because they can afford other things with the money that they have gained from selling their produce.

5.7.6 Social benefits

Working together has been identified as the most important social benefit to community gardens and this is just according to the departments' representatives. They further identify the creation and maintenance of relationships within the community gardens and the community as important social benefits.

5.7.7 Environmental impacts

Environmental greening has been identified as the major benefit or impact by the community gardens. This is an aesthetic benefit of community gardens, which was identified by the departments' representatives. Secondly conservation has been identified as a benefit to the environment. Other benefits insinuated in the responses were that of efficient land use, soil erosion and maintenance of the ecosystem are important aspects environmental impacts but are not overly recognised and revealed.

5.7.8 Processes followed

The simplest of needs by the department is that for support to be granted there needs to be "beneficiaries" and those would be the community garden participants. When the beneficiaries are identified the technical part of the process begins; which firstly instigate with planning. After planning then comes the situational analysis of the community garden and its member. This further requires a needs assessment on the part of the department

for the beneficiaries, since the project is about the people. The decision for supporting or not then made after the entire assessment process. If successful then the implementation phase begins.

5.7.9 Other support

The support ranges from department to department. The municipality with reference to results is the major role player in the provision of support (quantifiable support), as it is involved in an array of supporting structures within the community garden, from funding the projects to the basic technical training of the farmers. However the most important contribution to community gardens comes from the traditional leaders in the form of land, as this is important to the establishment and also the success of the community garden. Farmers will have a place where they meet and perform agricultural activities and the other activities that they may perform in that piece of land.

5.8. Homestead Farms

This section will provide discussion about homestead farms. The section will be categorised into four subsections, which will begin by providing the homestead farming practices, followed by the crop types, the economic benefits and the environmental impacts.

5.8.1 Farming practices

One of the aspects that came up in this section was that people depended heavily on rain water for the success of their farms and their crops. This is because they did not have a readily available source of water. So therefore the rainy season is the actual time where they peak their agricultural activities at the homestead farms.

Most of the farmers in Ogagwini are part of the EFO. As mentioned in the previous chapters, the EFO is an organically producing co-operative. What this means then is that the farmers produce their food organically for a market (Woolworths). These small-scale farmers used what they referred to as “tradition way of growing crops”. In her thesis Maragelo (2007) states that farmers consider the way they grow crops traditional because it has been done from generation to generation. In addition the traditional way of performing agricultural activities is inexpensive and it is what people know and have been

using. It is inexpensive because the inputs used are usually natural, e.g. the kraal manure as fertilizer, the grass for mulching (see Picture 5.2 and 5.3 respectively).



Picture 5.2: Farmers using kraal manure



Picture 5.3: Showing farmer using grass for mulching

Furthermore homestead farms are usually attended to by family members; this also may include extended family. So sharing of knowledge and the work is done within the family. The decisions about farming however are taken by the wives because it is the general notion that the male figures are not interested in farming.

The reasons the farmers use the farms are because they want to reduce their vulnerability to hunger. The small-scale farmers believe that these farms make them achieve food

security. They further believe that they can never go hungry so long as they have their farms. In addition to their health people feel farming is way of excising. Furthermore the farmers believe that homestead farming is their way of life and that “without farming we have nothing”.

5.8.2 Crop types

In the study (Maragelo, 2007) done it was found that the homestead farms produced the traditional crops, which are maize, amadumbe, sweet potatoes, beans, pumpkins, peanuts, sugarcane and traditional greens (imbuya, intanga). These are almost the same crops as identified by community gardens members for homestead farms.

5.8.3 Economic benefits of homestead farms

The small-scale farmers had stated that they use the crops identified above for consumption, however some of these crops are also used for commercial purposes, meaning they sell some of these crops. The crops that were sold to the markets were amadumbe, maize, sweet potatoes, beans and pumpkins. This income carries affords household needs.

5.8.4 Environmental impacts

Homestead had identified a number of ways in which they treat the soils; these included crop rotation for a season. This is done every season because the soil eventually gets tired, so technique allows for the soil to have nutrients from other plants like beans.

Further crop intercropping was identified as one of the activities that they perform in their homestead farms. Farmers performed intercropping because it was driven by market needs. Furthermore the area they use for growing crops is also dependent on market needs, because the larger the area planted for that market the greater the return.

Summary

With homestead farming everything happens at and around the home. The farms are surrounding the home and members of the family have exclusive rights to the farm. The interactions and sharing of knowledge therefore are within family members.

CHAPTER SIX CONCLUSIONS

Homestead farming has long been practiced among the EFO farmers in the Umbumbulu area. Many of them have been engaged in community gardens since 1993 when the first community garden was established with the support of the provincial DAEEA. Such gardens are consistent with the strategies adopted by national and provincial government to alleviate poverty and address food security. Since 2001, the EFO farmers have also been engaged in a project for the commercialization of their homestead farms. This research attempted to find out how community gardening affected their homestead farms. Specifically the study sought to investigate the following issues:

1. Were there any preferences between community gardens and homestead farming?
2. Why are people in Umbumbulu engaged homestead farming and community gardening and the purpose and nature of that engagement?
3. What are the social benefits derived from community gardens and homestead farming?
4. What are the economic benefits derived community gardens and homestead farming?
5. What are the perceptions of the environmental/ecological issues surrounding community gardens and homestead farming?

The study interviewed 46 farmers from the EFO at Umbumbulu. Questionnaires were used to establish initial data. This was verified and clarified using semi-structured focus group discussions, participant observation and an historical analysis.

6.1 Community Gardening

Community gardens have long played a role in development strategies world-wide and particularly in South Africa. Governments see them as useful means of training resource-poor farmers to be more self-sufficient in food production. They are particularly promoted among the very poor.

Around the world people participate in community gardens largely for economic and social reasons. The range of reasons for participating is fairly broad. Gardens are thought to create jobs and generate income. They are often a forum for networking, education and training as well as deriving 'softer' benefits such self-esteem, community building and a sense of belonging. Gardens are often also seen as a part of social responsibility in that surpluses are shared with the less fortunate rather than sold for income.

According to literature, gardens are intended to contribute to the natural environment. They are meant to foster ecological regeneration and promote environmental care. They are often associated with sustainable small-scale farming practices such as permaculture. However, most of the literature published about community gardens relates to urban communities. There is very little published about rural community gardens.

6.2 Engaging with homestead farming and community gardens

The first two questions of this study are interlinked. They seek to identify reasons for engaging with each farming system. They speak of the possibility of preferences of one system over the other.

6.2.1 Preferences

By design the study did not expressly ask participants to state the preferences between homestead farms and community gardens. This would have forced the issue and, while resulting in an easily quantifiable answer, would have prejudiced the qualitative approach to the study. If there was a preference it would emerge unasked or would present itself in the data. The results showed no evidence indicating that there were any preferences between community gardens and homestead farms. The EFO farmers engage with both for different but sometimes overlapping reasons. The study showed that what is produced in them is very different. For example, community gardens generally produce cabbages, carrots, beetroot, spinach, green peppers and onions. The homesteads are used to produce maize, amadumbe, potatoes, sweet potatoes, pumpkins and peanuts. Produce from both farming systems is used for home consumption with the surplus being sold.

However, the study did find that homestead farming appears to contribute more economically than the community gardens. Homestead farming generated greater and more sustainable income than the community gardens as they had a more secure market. Community gardens also generated income but it is not as secure as the income from the

homestead farms. The markets for the produce from the community gardens are all local markets, including shops and community at large. But the farmers however indicated that these markets are insufficient for them to generate substantial income.

This situation may be unique to Umbumbulu because of the amadumbe project which is highly supported and generates substantial income through its contracts with Woolworths. This situation therefore cannot be generalised to the rest of KwaZulu-Natal or South Africa.

6.2.2 Managing farm systems opportunities

The study showed that community gardens are mostly used during the winter seasons because of water being available. Homestead farms on the other hand are mostly used during the rainy season as the crops they grow are rain-fed crops. Thus farmers alternate between these two systems in the different seasons utilising and benefiting from the advantages of both.

If an individual is involved in both systems, he/she will work only one at a time (per season). No participant was found to work in both types of systems in the same season. The key reasons given were insufficient labour and irrigation, i.e. the lack of irrigation water at home and the availability of irrigation water at the community garden. The study did not explore which system people would choose should water be available to both systems.

6.2.3 Reasons for joining community gardens

The main reasons people joined community gardens were about food. Food, however, is differentiated into hunger, feeding the family, having access to food (and healthy food) and producing different types of crops. Furthermore, helping and uplifting the community was part of the reasons. This then ties in with community building because as people help each other they build relationships, they build networks, which then assists in strengthening of bonds between community members.

Other reasons for entering community gardens were about technical training in production practices. Farmers were keen on the training from the extension officers and hoped that the training would help them in their homestead farms. However, the research could not find any evidence of skills learned at the community garden being used at home. This

may be because they do not grow the same crops at home as they do in the community garden. This was largely due to the lack of irrigation at homestead gardens. This indicates a 'flaw' or shortcoming in the training methodologies used. Good training (according to theory and to government AET policy) should result in the transportability of learning and skills from one area to another. It would appear that the training is overly commodity driven, so few if any general farming skills are being taught or learned.

6.2.3.1 It is not about “hunger in the stomach”

One of the interesting findings to come out of the survey was that people said they grew in community gardens because of hunger. However they said this was “not hunger in the stomach” per se, but it is about supplementing food from their homestead gardens. People produced different crops in their community gardens so that they can have a variety of foods.

It appears that sentiment is grounded in people's rights – the right of 'poor' to have more than merely enough to eat. They have the right to think beyond just not being hungry. Most poverty alleviation programmes lead to a no-growth/survival scenario (keep the poor poor); meaning that people should be content with just being able to survive and they do not look beyond 'just surviving'.

This has led to a change in perception about the poor – hunger is not only about going to bed without food. It is not always about hunger in the stomach; but a hunger for something more than just not being hungry in the stomach. This can therefore also be attached to human dignity.

6.2.3.2 Education

Education is an important aspect to community gardening especially for the participants of the community gardens. Community gardens mean that they can be supported by the government with the technical knowledge and also other forms of support, because they are now in groups and organised. Farmers were very much interested in the technical knowledge that they would acquire from the extension officer. But more importantly they would also share knowledge amongst themselves.

Education further manifested itself into formal and informal education for the children. This aspect of community gardening should be exploited further as it has potential for the future of agriculture but further for the future of the younger generation, who may become drawn into agriculture through experiential learning and through the formal education that would be provided by agriculture.

6.2.3.3 Knowledge sharing

Sharing of knowledge has been significantly been represented, meaning that this is one of the important factors in community gardening and to the members of the community garden. However, there appears to be little or no sharing of information, knowledge, skills and technology between the community gardens in the same extended community. This was unexpected it was assumed, given the social structure of the community, that community gardens within the same area would get together to share knowledge. The potential from such information sharing on a larger scale encompasses (i) motivating each other within the community gardens, (ii) building relationships and (iii) community building on a larger scale. However, this was not evident in and the reasons for this were beyond the scope of the study.

6.3 Social and economic benefits of community gardens

While there a significant overlap, the reasons given for joining a community garden were not always the same as the identified benefits derived from having joined a community garden. Income generation, food production and savings were identified as the main economic benefits derived from the community gardens. Sharing knowledge, working together and helping each other were identified as the main social benefits derived from the community gardens.

The study showed that 26.3% of the respondents joined the community garden because of hunger issues – defined as widening the choice of foods. A similar percentage (23.%) identified food related benefits as the main social benefit derived from the community gardens. This is consistent.

The study showed that 23.7% joined the community garden to generate income. However, 71.1% identified selling of produce as the main economic benefit derived from

the community garden. This implies that many more people benefited financially from the community garden than had anticipated to benefit financially.

Only 5.3% of the farmers identified sharing knowledge as a reason for joining the community garden. However, 34.4% of the farmers identified sharing knowledge as one of the main benefits derived from the community garden. That seems to imply that a community garden can have a larger social and educative impact than envisaged by the members who join them.

6.4 Environmental perceptions

The study found that the respondents did not understand or did not fully appreciate environmental factors relevant to the community gardens. A few of the respondents associated the following environmental aspects with their gardening:

- Enriching the soil
- Taking care of the soil (fertility)
- Learn to apply manure
- The use of traditional knowledge

The first three of these environmental factors are directly related to soil. The absence of any other environmental association suggests that either soil features prominently in the minds of the respondents or that soil, specifically soil enrichment, is the only context for their training in the environment. Awareness of a garden's relationship with and its potential impact on the environment is important to the success and sustainability of gardening. Therefore investment in knowledge about the environment could be beneficial to community gardens.

The lack of any significant mention of environmental factors by the respondents also raises a concern about the *de facto* intention of community gardens. Sustainable development should embrace environmental sustainability, and yet, this does not appear to be the case with the members of the gardens included in this study. The danger, of course, is that without entrenching environmental sustainability, community gardens will tend to focus on the economic and social benefits – which is borne out in this study – and emphasise the short-term benefits making it more difficult to ensure long-term sustainability.

Moreover, as these projects are developed using State resources, including funds and human resources, a message is sent that the State values short-term benefits over sustainable benefits. This could serve to reinforce this sentiment on the home front. While the study showed no evidence of skills learned on community gardens being applied at homestead farms, it did show that the main benefit from homestead farming is about food for home consumption, followed by income generation. Without any nurturing of awareness of environmental sustainability in their participation in community gardens, it is doubtful that that such awareness would exist or the practices applied to homestead farming.

6.5 General observations

In addition to the findings of this study in terms of the research questions, a number of other observations were made. They touch on some broader aspects in relation to community gardens including their purpose, their sustainability, their name, issues of dependency.

6.5.3 Community gardens: more than just food production

As Herbach (1998) stated, community gardens are more than just about the production of food. They should be viewed in all aspects of their being. The findings of this study are consistent with Herbach's findings. Among the EFO farmers, community gardens mean a range of things.

For the farmers, community gardens were attached to a range factors. First of all it means the production of food and income generation. Gardens also give other benefits, like training and sharing of knowledge within the community gardens for its members. The DAEA shares this range of factors, but also has an environmental agenda. Gardens are about greening and conservation. As discussed earlier, environmental factors do not feature very strongly with the farmers.

6.5.4 The sense of community in a 'community garden'

As discussed earlier there was little or no sharing of information amongst the community gardens included in this study. The idea that these were community gardens implies that

there would be some sense of community among the members in relation to their own and the other gardens. But this was not the case. One reason for this might be that the gardens were more ‘neighbourhood gardens’ because they drew their membership from a fairly small geographic area. This could create a level of insular thinking. Given that the gardens benefit from their small geographic base, rather than changing the base it would be valuable for efforts to be made to break through the apparently inherent barriers to encourage information sharing so that more of the community can benefit.

6.5.5 Categorising community gardens

A garden may be established for any of a number of purposes. For example, a garden may be set up for training purposes, for educational purposes, or .as a farmer-to-farmer extension programme. The literature reviewed for this study implied that each community garden is established for a single purpose. Each can be categorised as a model around that purpose.

However, the gardens in this study had multiple functions and purposes. They were a combination of a number of the models identified in literature. Figure 6.1. depicts the nature of these gardens as a combination of models operating as a broader system. It shows how the studied gardens fit into theory.

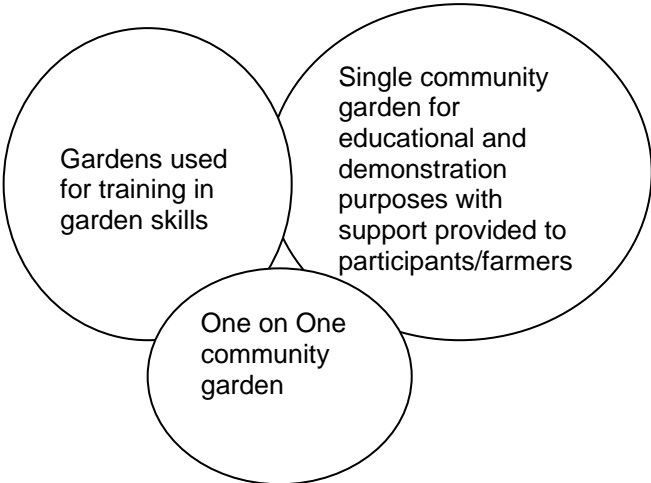


Figure 6.1: Showing the model combination in the survey community gardens

6.5.6 Creating dependency: the role of the extension officer

Creating dependency on external support is a frequent problem in development. It is accepted that the garden members might need external support for continued training to improve their gardens. However it was observed that some of the gardens would not continue functioning at all in the absence of the extension officer. It was further, observed that the community gardens that were started by the community members by themselves with the hope of getting support from the Department of Agriculture were more successful than the ones that were started by the Department or other outside help. What this implies is that the people who start their own community gardens have motivation to see what they have started to be a success, whereas those who were made to start the garden might just have the perception that they must impress the initiator and without the initiator there is no motivation. A further reason for low performance might be because those established by external agents were not based in their establishment on issues relevant to the community. People did not entirely control the establishment and so they are dependent on the external Departments for the success of their community gardens. This observation is consistent with the findings of Kretzman and McKnight (1993) who established that communities that build from within are more sustainable and that projects initiated from within community are more likely to be successful.

The role of the extension officer should be to help to foster initiative from within the community. He should not bring projects to the community to be imposed. Even if he has good ideas and projects from his Department, he should try to introduce them in such a way that they are genuinely initiated by the community itself. Otherwise the project is unlikely to be sustainable.

6.6 Recommendations

The Department of Agriculture should carefully address sustainability issues when planning and implementing community gardens. This would include being able to carry on in the absence of an agricultural extension officer. Because as stated in the policy, community gardens are treated as projects and one of the “rules” of projects is that *projects must end*. Furthermore Department of Agriculture (or others involved in training) should review their training programmes to ensure that learning is transferable and not overly commodity or technology specific.

The Department should encourage and promote environmental awareness. This would include people being of other environmental impacts, not only those that affect the soil directly. So community garden participants should not only be concerned with extracting benefits from the soil. They should also be aware of ways to feed back to the environment.

6.7 Future research

This study has highlighted a number of potentially valuable issues for further research. This are briefly listed below.

- Investigate the influence and impact of specialist gardening projects on choices between homestead and community gardens.
- Investigate the sustainability of the amadumbe project and its dependency on external support
- Investigate what would happen to community gardens had there been the introduction of irrigation in the homestead farms.
- Investigate information sharing amongst the community gardens within the larger community and what impacts that would have on social networks and community building.

6.8 Weakness in the study

Overlap

During the semi-structured focus group discussions it was not identified how many of the members in the discussions were also part of the initial survey (questionnaire for the EFO). Clarifying this would have made it possible for more detailed and specific crosschecking of responses given private versus those given as a group. It would have allowed for deeper interrogation of responses.

Environmental issues

More investigation could have been undertaken with the farmer participants regarding their perceptions of environmental factors in relation to their gardens. The findings of the study imply that the people have no real views on environmental issues. This is probably not a true reflection of the respondents. Deeper investigation might have uncovered greater understanding of and appreciation for environmental issues.

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APPENDICES

Appendix A: Initial questionnaire for the survey in Zulu

Imibuzo

Igama:

Isibongo:

1. Ngabe uyazisebenzisa izivande (izingadi zomphakathi)?
 Yebo Cha
2. Uma uzisebenzisa. Ngabe izizathu zalokhu yiziphi?
 - o Yini igama lengadi oyisebenzisayo?
 - o Ikuphi nendawo ingadi?
3. Uma ungayisebenzisi ingadi yomphakathi. Ngabe izizathu zalokhu iziphi?
4. Ngabe kukhona yini omunye emndenini wakho osebenzisa lezi zingadi?
5. Zihlukene ngani izingadi zasemakhaya kulezi zingadi zomphakathi?
6. Bukuphi ubuhle bokwesebenzisana ezingadini zomphakathi?
7. Ngabe iziphi izinzuzo ezehambisana nezomnotho kulezi zingadi zomphakathi?
8. Kungabe iyiphi inzuzo elethwa yizingadi kwezemvelo?
9. Ungathanda yini ukuba yingxenye yezingadi zomphakathi?
 Yebo Cha
Yingani ungathanda ukuba ingxenye yengadi yomphakathi?
10. Yingani ungathandi ukuba inxenye yengadi yomphakathi?

Appendix B: Initial questionnaire for the survey in English

Name:

Surname

1. Do you use community gardens?

Yes No

2. If you use them, why?

- What is the name of the community gardens?
- Where is it?

3. If you do not use a community gardens, why?

4. Is there anyone else in your family using community gardens?

5. What are the difference between homestead farms and community gardens?

6. What are the social benefits of working in a community garden?

7. What are the economic benefits of working in a community garden?

8. What are the environmental benefits of community gardens

9. Would you like to be part of a community garden?

Yes No

- Why?

10. If no why

Appendix C: Responses from community garden groups

Grdns/ Place Responses	1.Masakhane community garden group (Ogagwini)	2.Vukani community gardens group (Ogagwini)	3. Obumhlophe community gardens group (Ogagwini)	Siyazama community garden group (Ogagwini)
Reasons for entering community gardens	<ul style="list-style-type: none"> • To interact with people • Knowledge transfer • Sharing of Knowledge • Feed their families • Nutritious food/healthy food • Eating different food types • To have food • Help others in need • Selling/profits • Learning • Fresh vegetables 	<ul style="list-style-type: none"> • Self-help • Growing healthy/nutritious food • Learn to uplift our community • Learn to survive • Education 	<ul style="list-style-type: none"> • Reduce hunger • Reduces poverty impact (“you are not poor”) • Have food • Sell and get money • Healthy food 	<ul style="list-style-type: none"> • Access to healthy and nutritious food • Complement what they grew in homestead farms • Reduce hunger • Sell food produced in excess • Share knowledge
2. Diff. Between homestead gardens & comm. Grdns	<p><u>Homestead gardens:</u></p> <ul style="list-style-type: none"> • For consumption • Easier access to food • Needs attention • Different crops from community gardens (Amadumbe, potatoes, sweet potatoes, pumpkins, peanuts) • Work alone • Learning to survive <p><u>Community gardens:</u></p> <ul style="list-style-type: none"> • They sell the produce • Learning from each other 	<p><u>Homestead gardens:</u></p> <ul style="list-style-type: none"> • For personal consumption • Can sell and gain some money • Do not need too much water • Produce Amadumbe, sweet potatoes, potatoes, maize and peanuts <p><u>Community gardens:</u></p> <ul style="list-style-type: none"> • We sell the produce • Supply markets • Need to be irrigated 	<p><u>Homestead gardens:</u></p> <ul style="list-style-type: none"> • For personal consumption • Homestead gardens are nearer to home • Accessibility is easier • Produce different crops from homestead (amadumbe, potatoes, sweet potatoes, pumpkins, maize, peanuts) <p><u>Community gardens:</u></p> <ul style="list-style-type: none"> • Learn how to garden 	<p><u>Homestead gardens:</u></p> <ul style="list-style-type: none"> • For personal consumption. • Sell food in excess • Amadumbe, potatoes, sweet potatoes, pumpkins, peanuts <p><u>Community gardens:</u></p> <ul style="list-style-type: none"> • The produce from

	<ul style="list-style-type: none"> • Collective effort • There is an extension officer • Shared knowledge • Form a market place • Build confidence: Competition • Learn different techniques • Work with people 	<p>more often</p> <ul style="list-style-type: none"> • Grow different crops 	<p>at home gardens</p> <ul style="list-style-type: none"> • They are not easily accessible as they are far from the home place 	<p>the community gardens are sold.</p> <ul style="list-style-type: none"> • Grow different crops
3. Community garden social benefits	<ul style="list-style-type: none"> • Interaction amongst participants • Learn gardening skills and times • Get input from other members to breach the knowledge gap • Learning to be able to feed oneself • Education (teach each other) • Share ideas • Counselling, help each other • Get different types of vegetables • Earn some money • Grow as individuals • There is a sense of freedom • Motivate other participants • Getting food 	<ul style="list-style-type: none"> • Community interaction • Collective effort • Community assistance • Helping each other • Education (children) 	<ul style="list-style-type: none"> • Interact with people • Sharing knowledge • Give each other advise 	<ul style="list-style-type: none"> • Working with people • Sharing of knowledge
4. Economic Benefits	<ul style="list-style-type: none"> • Selling and earning profit • Supply markets and stores • High yields • Saving • Do not buy vegetables • Employment opportunity • High quality food 	<ul style="list-style-type: none"> • Selling the produce • Gaining profit • The money helps in other places in the household • Money helps to bridge the gaps in other needs • Feed children 	<ul style="list-style-type: none"> • We sell for profits • We try to provide for markets 	<ul style="list-style-type: none"> • Selling of food • Saving on food

		<ul style="list-style-type: none"> • Teaches children economics of vegetable (selling food) 		
5. Environmental benefits	<ul style="list-style-type: none"> • Taking care of the soil (fertility) • Enriching the soil • Traditional knowledge • Nutritious food • Rich vegetables • Learn to apply the manure 			
6. Why enter the community garden	<ul style="list-style-type: none"> • Working with people • Gaining knowledge • Learning • Improve living standards • It is helpful • Sharing • Helping each other • Breaching knowledge gap • Collective effort 	<ul style="list-style-type: none"> • Help other needy people within the community • Can get help from other members of the community 		

Appendix D: historical time line for Masakhane

Year Events

1991 The Masakhane community garden was established, it was located in an area called Ogagwini oluphansi. The initiative was brought about by Mr Wanda, who felt that they should start a community garden in their area. Mr Wanda donated his land to the group (the land was 100*100 m²), after which the group went to report to the chief that Mr. Wanda had given them the land, so as it him know what has happened to the land. The land was divided into plot for the individual.

The group then approached the Department of Agriculture (DOA) in Umbumbulu district. The DOA provided them with the fencing, water pipes and the extension officer, and a few implements. The Extension officer (Duncan) taught them how to grow “veggies” (cabbages, onions, spinach and tomatoes). They grew these vegetables and sold the access to the community and also pension days.

1992 They planted in May and in September they entered agricultural show where they displayed their production in Umbumbulu farmers’ hall and actually won first price for their crops. The Masakhane group displayed their cabbages, spinach, onions and green peppers.

1999 There was an introduction of a Mr. Tom Mkhize (from Mahleka) who came by and formed Embo Masakhane committee. The community was looking to uplift the community of Embo. Encouraged them to seek more land so as to grow more crops. Mr. Wanda again donated a 100*100 m² land (people regard this land to be bigger than the one given to them before because this one is rectangular whereas the other one is irregular).

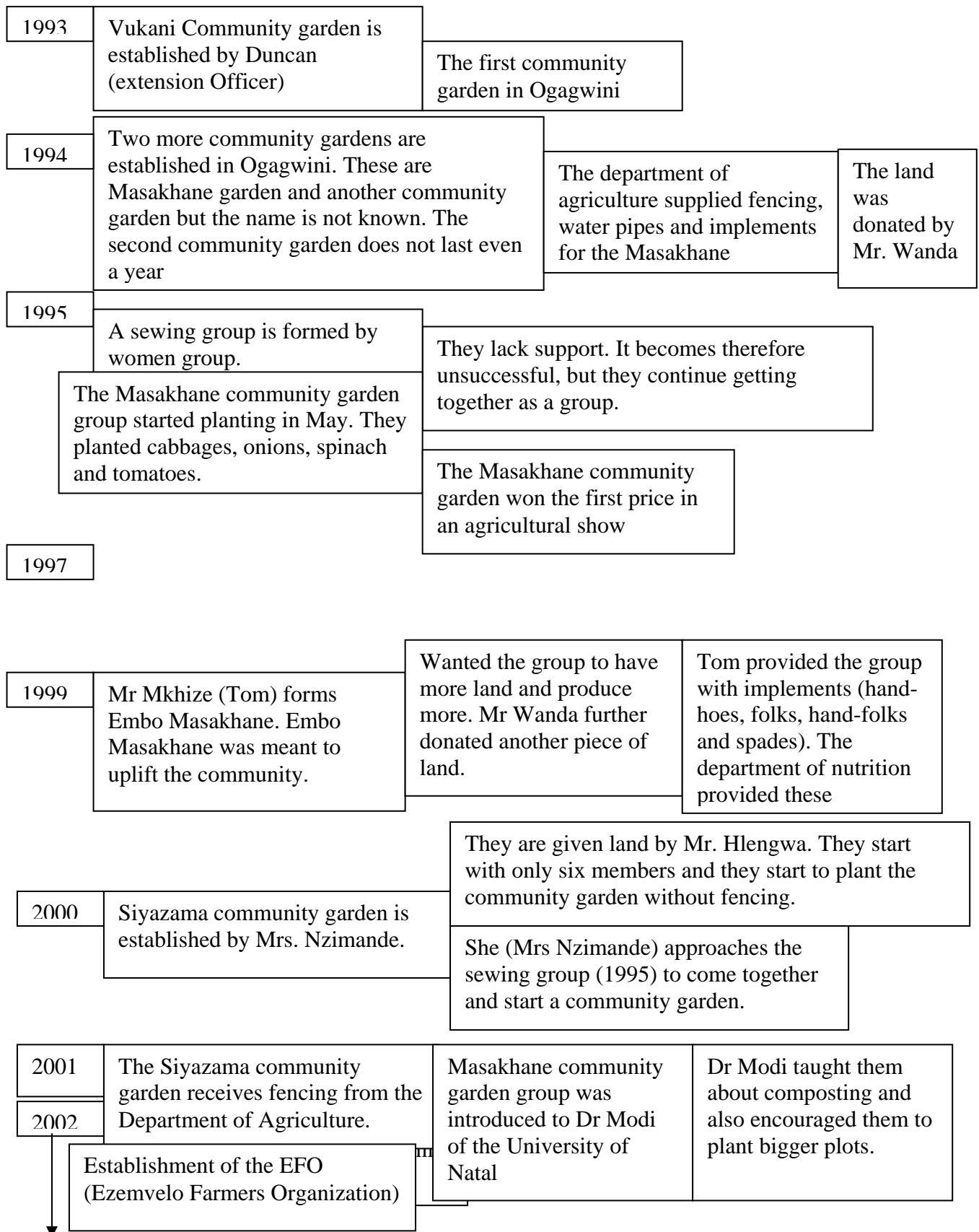
People also regard this as being bigger because they work the land together and they do not divide it into plots. They initially used a tractor to plough the land the first time and ever since then they either used a tractor or bulls to open lines. Mr. Tom Mkhize then supplied these farmers with implements (spades; forks; hand hoes, hand folks).Department of nutrition provided these but they were not sure whether Tom applied for the funds or not.

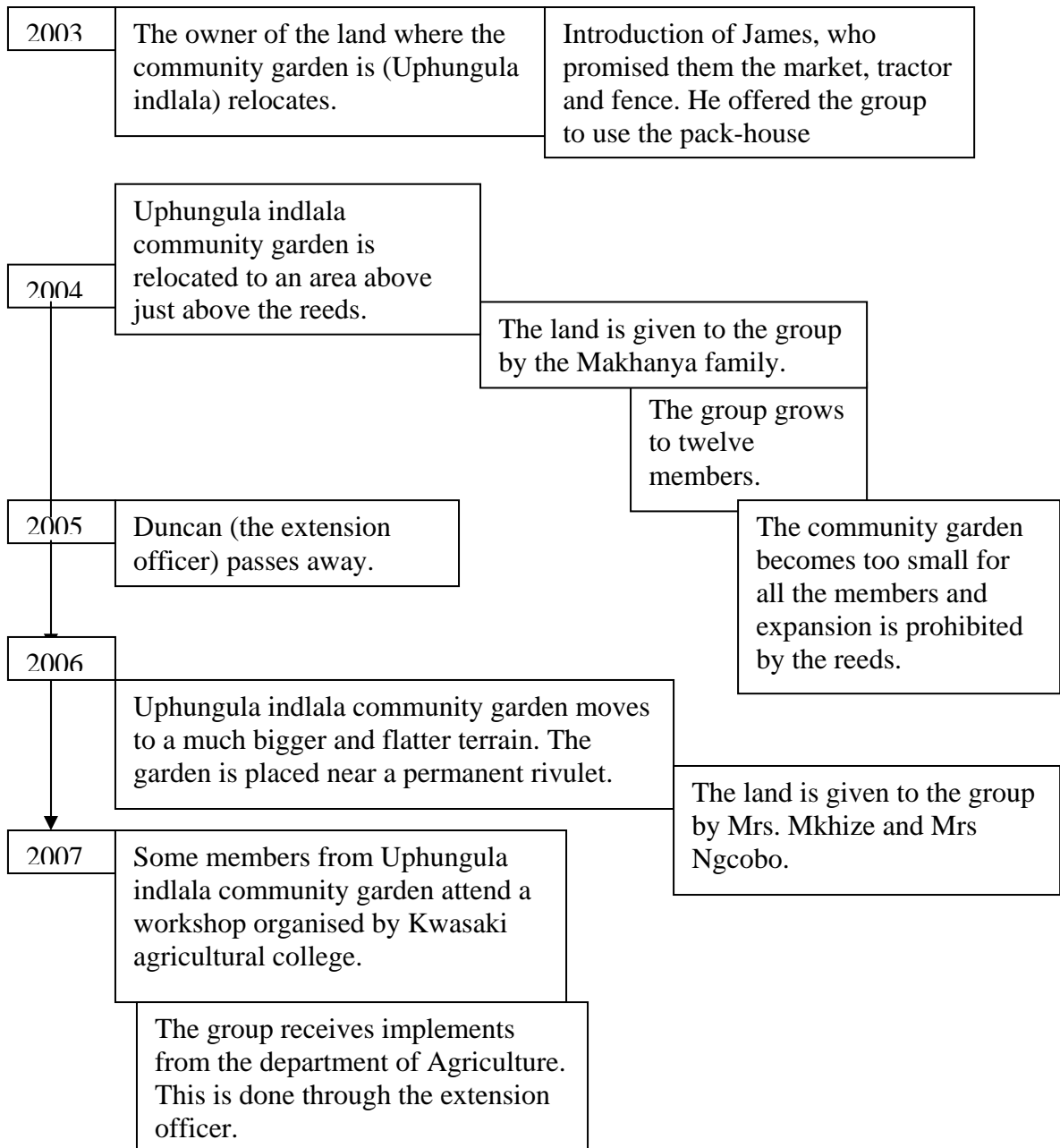
The community garden without the differentiated plots people worked as a group and grew what they refer to as “veggies”. They practiced intercropping which they were taught by the extension officer. The crops in this field were grown collectively and then they were divided amongst the farmers and then they were sold by individuals. The individual would then decide on how to spend the money they got from the sale of produce.

2001 There was the introduction of Dr. Modi (a crop and seed scientist) from the University of Natal (now known as the University of KwaZulu Natal). According to the farmers Tom approached Dr. Modi to come and assist the people in the community. Dr. Modi taught the farmers about composting and encouraged them to grow bigger fields (these were homestead fields). The farmers only had the community and pension days as their market.

The farmers were able to get the market and they were now producing for Pick n’ Pay. They were producing Zulu potatoes, sweet potatoes, and madumbes (but all these were grown in the homestead gardens and the community garden continued to grow veggies. The E.F.O (Ezemvelo Farmers Organisation) was established.

Appendix E: Historical timeline of Ogagwini





Appendix F: Questionnaire for extension officers

Community gardens questionnaire

Please answer the following questions from the point of view of an Extension Officer

Your Job Title: _____

Province: _____

1. Is it currently part of your job to work with community gardens? Are you currently involved in any community gardens?

2. What does the term community gardening mean?

3. What are the initial goals and purposes of community gardens?

4. What are the expectations that “the community” or members of the garden usually has about community gardens? Why do they want a garden or start a garden?

5. What are the expectations that “your Department” usually has about community gardens?

6. What are the duties of the extension officer regarding the community gardens?

7. What are economic benefits of community gardens to the agricultural economy?
How is this benefit realized?

8. What are the economic benefits to household from community gardens? How is this benefit realized?

9. What are the social benefits of community gardens? How are they realized?

10. What are the environmental benefits of community gardens? How are realized?

11. What kind of support is provided by your Department to community gardens?

12. What are the process (es) followed by your Department when providing support to the community gardens?

13. In addition to the support your Department gives, what other support is generally available to community gardens and from whom?

Appendix G: Table showing responses for initial questionnaire: question 1

Question 1: Do you use community gardens?

	Yes	No
Respondent 1	1	0
respondent 2	1	0
respondent 3	1	0
respondent 4	1	0
respondent 5	1	0
respondent 6	1	0
respondent 7	1	0
respondent 8	1	0
respondent 9	1	0
respondent 10	1	0
respondent 11	1	0
respondent 12	1	0
respondent 13	1	0
respondent 14	1	0
respondent 15	1	0
respondent 16	1	0
respondent 17	1	0
respondent 18	1	0
respondent 19	1	0
respondent 20	1	0
respondent 21	1	0
respondent 22	1	0
respondent 23	1	0
respondent 24	1	0
respondent 25	0	1
respondent 26	1	0
respondent 27	1	0
respondent 28	1	0
respondent	1	0

29		
respondent 30	0	1
respondent 31	0	1
respondent 32	0	1
respondent 33	0	1
respondent 34	0	1
respondent 35	0	1
respondent 36	0	1
respondent 37	0	1
respondent 38	0	1
	28	10

A number 1 reflects that the respondent said yes whereas 0 means no (or did not respond)

Appendix H: Reasons for entering community gardens

	hunger	help community	healthy food	feed family	uplift community	survive	interact	share knowledge	different food type	income/profits	learn	have food	not poor
Respondent 1	1	1	1	0	0	0	0	0	0	0	0	0	0
Respondent 2	0	0	1	0	0	0	0	0	0	0	0	0	0
Respondent 3	0	0	0	1	0	0	0	0	0	0	0	0	0
Respondent 4	0	0	1	0	1	0	0	0	0	0	0	0	0
Respondent 5	0	0	0	0	1	0	0	0	0	0	0	0	0
Respondent 6	0	0	0	0	1	1	0	0	0	0	0	0	0
Respondent 7	0	0	1	0	0	0	0	0	0	0	0	0	0
Respondent 8	0	0	0	0	0	0	1	1	0	0	0	0	0
Respondent 9	1	0	0	0	0	0	0	0	0	0	0	0	0
Respondent 10	0	0	1	1	0	0	0	0	0	0	0	0	0
Respondent 11	0	0	0	0	0	0	0	0	1	0	0	0	0
Respondent 12	1	0	0	0	0	0	0	0	0	0	0	0	0
Respondent 13	1	1	0	0	0	0	0	0	0	1	0	0	0
Respondent 14	1	0	0	0	0	0	0	0	0	0	0	0	0
Respondent 15	0	0	0	0	0	0	0	0	0	1	1	1	0
Respondent 16	0	0	1	0	0	0	0	0	0	0	0	0	0
Respondent 17	0	0	0	0	0	0	0	1	0	0	1	0	0
Respondent 18	0	0	0	0	0	0	1	0	0	0	0	0	0
Respondent 19	1	0	0	0	0	0	0	0	0	1	0	0	0

36													
Respondent 37	0	0	0	0	0	0	0	0	0	1	0	1	0
Respondent 38	0	0	0	0	0	0	0	0	0	1	0	1	0
Total	10	3	7	2	3	1	2	2	1	9	2	7	2

10	1	0	0	0	0	1	0	0	0	0	0	0
11	0	0	1	0	0	0	0	0	0	0	0	0
12	1	0	0	0	0	0	0	0	0	0	0	0
13	0	0	1	0	0	0	0	0	0	0	0	0
14	1	0	0	0	0	1	0	0	0	0	0	0
15	0	0	0	1	0	0	0	0	0	0	0	0
16	0	1	0	0	1	0	0	0	0	0	0	0
17	0	0	0	0	0	0	1	0	0	0	0	0
18	0	0	0	0	0	0	0	1	0	0	0	0
19	1	0	0	1	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	1	0	0	0	0	0
21	1	0	0	1	1	0	0	0	0	0	0	0
22	1	0	0	0	0	0	0	0	0	0	0	0
23	1	0	0	1	0	0	0	0	0	0	0	0
24	1	0	0	1	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	1	0	0
26	0	0	0	0	0	0	0	0	0	0	1	0
27	0	0	0	0	0	0	0	0	0	0	1	0
28	0	0	0	0	1	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	1	0
30	0	1	0	0	0	0	0	0	0	0	0	0
31	1	0	0	0	1	0	0	0	0	0	0	0
32	0	1	0	0	0	0	0	0	0	0	0	0
33	1	0	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	1	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	1
36	0	0	0	0	0	0	0	0	0	0	0	1
37	0	1	0	0	0	0	0	0	0	0	0	0
38	0	1	0	0	0	0	0	0	0	0	0	0
Total	13	6	4	7	8	2	2	1	1	3	2	

28	1	0	0	0	0	0	0	0	0	0
29	1	0	0	0	0	0	0	0	0	0
30	1	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	1	0	0	0	0	0
33	1	0	0	0	0	0	0	0	0	0
34	1	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	1
36	0	0	0	0	0	0	0	0	0	1
37	1	0	0	0	0	0	0	0	0	0
38	1	0	0	0	0	0	0	0	0	0
Total	27	3	3	2	2	5	2	1		2

Appendix M: Questionnaire for extension officers

Question one: Does your job involve working with community gardens?

	Yes	No
Respondent		
1	1	0
2	1	0
3	1	0
4	1	0
5	1	0
6	1	0
7	1	0
8	1	0
Total	8	0

Appendix N: Question two: What does community garden mean?

	Producing vegetables	income generation	for consumption	used by community	in the community
Respondent					
1	0	0	0	1	0
2	0	0	0	0	1
3	0	0	0	1	0
4	0	0	0	1	0
5	1	0	0	0	0
6	1	1	1	0	1
7	1	0	0	0	1
8	0	0	0	0	1
Total	3	1	1	3	4

Appendix O:

Question three: What are the initial goals and purposes of community gardens?

	food security	income generation	fresh vegetables	healthy vegetables
Respondent				
1	1	1	0	0
2	1	1	0	0
3	1	0	1	0
4	1	0	0	0
5	1	1	1	0
6	0	1	0	1
7	0	0	1	0
8	1	0	0	0
	6	4	3	1

Appendix P:*Question four: what are the expectations of community gardens?*

	Produce more	employment	support	income	alleviate hunger
Respondent 1	1	0	0	0	0
2	0	1	0	0	0
3	0	0	1	1	0
4		0	0	1	0
5	1	0	0	0	0
6	0	1	0	1	0
7	1	0	0	0	0
8	1	0	0	0	1
Total	4	2	1	3	1

Appendix Q:*Question five: What are the expectations of the community gardens by your departments?*

	food security	poverty alleviation	sustainability
Respondent 1	1	0	0
2	1	0	0
3	1	0	1
4	0	1	0
5	0	1	0
6	0	0	1
7	0	0	1
8	0	1	0
Total	3	3	3

Appendix R:*Question six: What are the duties of the extension officer?*

	Training	technical support	Facilitation	Monitoring	Evaluation
1	1	0	0	0	0
2	0	1	0	0	0
3	0	0	0	0	0
4	0	1	0	0	0
5	1	0	0	0	0
6	1	0	1	1	1
7	1	0	0	1	0
8	1	0	0	0	0
Total	5	2	1	2	1

Appendix S:*Question seven: What are the economic benefits to the household?*

	saving	fresh vegetables	more money for other needs	income	food
Respondent 1	0	1	0	0	0
2	1	0	1	0	0
3	1	0	0	0	0
4	0	0	1	0	0
5	0	1	0	0	1
6	0	0	0	1	0
7	0	0	0	0	1
8	0	0	0	1	0
	2	2	2	2	2

Appendix T:*Question nine: What are the social benefits to community gardens?*

Respondent	distance reduced	health	teamwork/unite	relations	training
1	0	0	0	0	0
2	1	0	0	0	0
3	0	1	1	0	0
4	0	0	1	1	0
5	0	0	1	1	0
6	0	0	0	1	0
7	0	0	0	0	1
8	0	0	1	0	0
Total	1	1	4	3	1

Appendix U:*Question ten: What are the environmental impacts of community gardens?*

	ozone	greening	maintain ecosystem	conservation	soil erosion	efficient land use
1	1	0	0	0	0	0
2	0	1	0	0	0	0
3	0	0	1	0	0	0
4	0	0	0	1	0	0
5	0	0	0	1	1	0
6	0	0	0	0	0	1
7	0	1	0	0	0	0
8	0	1	0	0	0	0
	1	3	1	2	1	1

Appendix V:

Question 11: What kind of support is provided by your department to the community garden?

	fencing	irrigation equipment	training	production inputs (Fertilizer, seeds etc)	M&E	funding
1	1	1	0	0	0	0
2	1	1	1	1	0	0
3	0	0	1	1	0	0
4	1	0	0	0	0	0
5	0	0	1	0	0	0
6	0	0	0	0	1	1
7	0	0	0	0	1	0
8	0	0	1	0	0	0
	3	2	4	2	2	1

Appendix W:

Question 12: Processes followed by your department when providing support to community gardens

	Po lic y	assig n E.O	Needs assessm ent	Fund if possibl e	sit analy sis	need beneficia ries	pla nni ng	budget allocatio n	progr amme s	implem entatio n	eval uatio n
1	1	0	0	0	0	0	0	0	0	0	0
2		1	1	1	0	0	0	0	0	0	0
3	1	0	0	0	1	0	0	0	0	0	0
4	0	0	0	1		1	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	1
8	0	0	0	0	0	0	1	1	1	1	1
T otal	2	1	1	2	1	1	1	1	1	1	2

APPENDIX X: UPHUNGULA INDLALA COMMUNITY GARDEN

Timeline:

- 2004:** Mandy (10:00) Monday Aug 12. 1st open on the above river. Owner left.
- 2004-2006:** Moved to Above Banks. 12 memb.
- 2006:** Makhaya donated. Owners weren't using land. 24 members.
- 2006-2007:** Moved because owner said they might have to leave. 12 memb.
- 2007:** Makhaya. Small area slope. 12 people owners.

24 members:

- land near river
- owners don't use it
- not perceived as fertile or not
- water source

They didn't expect:

- Ext. Officer
- Knowledge
- problem-solving
- how to grow things
- local MKTs.

Reasons:

- wanted to grow on food so they didn't have to buy at Isipingo
- end of that year they started to buy. Since started they haven't purchased fruit
- Isipingo - garden provides.

What has ext-officer taught:

- Home/Gardens
- Makhaya
- Mbika (Maize)
- Sweet potato.
- Pumpkin

Member:

- Joining fee 20/ year.
- seeds
- savings
- tools - buy for themselves.
- Meet at Makhaya
- when they are working here the other family members are taking care of home garden (grow) like some things at home. At home the cabbage grows better. ∴ they think there is something wrong with the soil. - use fruit produce at home here (they use fertilizer manure). (Bought only once - name unknown)

Assistance from Officer:

- water cans x 2
- 2 spades
- seeds
- rakes x 2

Other notes:

- dep of Agr. & Counsellors board
- originally intended for Makhaya garden
- Left person
- Chair person - part of another CG.
- ext-officer taught her to gas cabot. Tax. - Lett
- Harvest Knowledge to H/Stat
- Thandosile (Necko) + Mrs. Mkhize both motivated. The people to join + how show their knowledge.
- Other members from the other garden have joined here.
- Plant c/6 in winter.
- Plant at home
- Summer amandula at home.
- ↳ MKTs. - EFO
- Isipingo (street nearby)
- Some cans to be taken. Some from MKT.
- MKTs:** Vegies too. Sell everything. They often sell by the way.

Challenges

- Pests
- MSWami (cutworm)
 - Red Ants (ntutwani above, unani above)
 - Aphids (ntwala) - use something but don't know name - spray - brought Uthman.
 - Fencing (cows)
 - carrying water
 - They use methods for pest control that EFO - dry ant

- Workshop -> some members went June 2007.

What time they decided about the aphids attacking? Garden now? - 40% to 50% outside to Uthman.

- > @ Kasaka Agric. College.
- > Counsellor told them.
- > (They needed to get knowledge before they could opt fencing)
- > Dept of Agric. came to see the land (May) - measured & promised to grow on completion of training.
- Knowledge helped. - measured to grow
- fertilizer given for sowing seeds. es. ton / m²
- + Kusal Mawu vs. Fertilizer.

Knowledge should not be Mawu.

They have assistance of Mpono - some last week. (don't know any other to try or not.)

eggs (from East) - Uthman's

Mumukhi, Miki, Estadani

only members from only appo appawini makolweni

Most helpful is they get help on site.

Radio/TV

They have heard of them - They do lists - tell them they can plant cabb 3 x 4 ft and they are two types - but don't know.

24 Members - at least 11 are EFO

♂ 2 mu

♂ 22.

"Xoshirada" Reasons

- Thosa Indlaska
- > they have weaver + flour
 - > but the garden supply weaver.
 - > ∴ they don't have to buy.
 - > They still collect wild ingredients because they prefer it & it gives variety.

**APPENDIX Y: SIYAZAMA COMMUNITY GARDEN
GROUP**

SIYAZAMA.

1st Visit. 21 Aug. 2007.

LAND
Mr. Hlangwa
[land available wife inherits but he is now part of it.]

Met on Wednesday
+ 09400-09230.

1995

Sewing groups
No one to help
Good weather.

Siyezama.

2000 ± 6 members.

Mr Nsimand

- got group organised
- approached ext. officer (got the one from Masikhane.)
Duncan closest ext. officer.

Planted but no fence.

Reasons for starting.

"Xoshindla la"

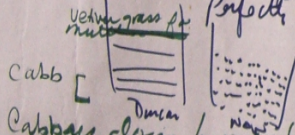
- help complement homebased gardens
- possibility of selling excess.

some of members were
→ Home based but not of the stomach

- They do have knowledge.

Planting Practice.

- Duncan
- lines (over time Duncan wanted one crop one line - easy/more Perfectly straight in line)



- Cabb
- Cabbages closer to water because it is a lot more. always planted in same place. No change in quality of soil but the pests started last year. Get together & decide as a group.
- fence during summer rains because they don't have time to cultivate both.

2001

Fencing (Agric)
w Duncan
Help

2004

Duncan Died.

2005

Benefits

- Variety of vegetables
- used for home consumption
- sometimes seed - not often.

Faculty 17 members
Mr. Madimela
Total 1000 about 8
Mphahlele... 16
Not 5 Members

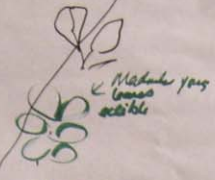
Challenges

- No one to help when planting
- extension officer only come 1x this year.
- pests inbaza (- like under leaf cabbage.)
Ants - red.
- don't get line (see other getting.) (Angry @ Pines)
- No knowledge of how or when to use line but sees others getting it.
- use fertilizer, but not sure what is it - Spilling Stone Keeper told them what to use.
- also use local manure.

Fenced

1 Aug. - SIYAZAMA
1st Visit 2 Aug 07

Potato
onion ^{6 plants per row}
spinach & beets
cabbage
Plants have white pink dented on them.
carrots



Mashed yang
bisa
sekitar

Homestead [Spring season]

Plant Madenbi, Maize, bonfire,
Pumpkin (Matanga)
(Potatoes would be eaten by cows in homestead
garden if planted in winter)

Chy Gadu cabs, spin, beet root, onions,
[Mau → day] potatoes.

Permanent water
(Mau)

Potatoes
Plant
↓
Smo.
Harvest
eat
↓
Go Plant
↓
Smo
Harvest.

Smo. to Matang.
Spring (Sept)
↓
Smo.
Harvest
Feb / Mau.

I.M.
Zulu Potatoes
- pink when peeled.
- yellow

Small ones planted all year
round anytime
No diff Mau

Homestead Gardens

- use local manure
- larger than individual plots of Chy Gadu.
- plough to cattle
(open lines)
- follow cattle to seeds.

Mr. Maphu Kule suggested
that they make one bigger + fill
a barrel at gate. to make water
to run possible.

Members.
Present - 90

Wanda → land.
Induna to
tell him that they
are using their land.

Mr. M. - refers to the garden
as the "school" where they
learn how to tend their gardens.
- Before - they bought cabbage & potatoes
from 'sipi' 190

* ∴ Now it costs less and able to buy
meat and other things.

No expectⁿ from Wanda
↳ Wanda wanted to get
the garden going but if he
had a city garden he could also
get the ext officer to come.
(Induna, just to know
what belongs to
whom)

- What members get is food & income.
They can farm each other.
∴ They do still need ext. officer.
↳ there are support & technical advice.

↳ implements } - No one to communicate
↳ manure } to the DoF about
↳ seeds (piki) } needs.

Probe? Why did they need a City Garden to attract the Ext officer?
Ext. officers don't go to home holds to give advice
They needed to have the structure
only Social workers go to "Kias"
& dept of health social workers } enc. gardens at homes

Note: DoF don't
Perceive Hsthd
as Farm Unit

Role/Perceptⁿ of DoF

- The belief or what they see approach so Induna
1. don't know where the ext officers boundaries
are.
 2. To get attention they look it upon themselves
as a "group" to approach DoF for support.
 3. → in homestead no routine but will grow
the Ext-officer can come on "mondays" as
the day he knows what will all be done.
The women care for both gardens or get help from him
Also = Plant city garden in winter but harvested in summer only.
Hsthd. gardens are being harvested

Old way

- used cattle
- lines deeper
 - lines longer
 - lines wider
- Seed usage hasn't changed.

show new
new technology

Never watered.

- waited for rain.
- now (green leaf) requires water.

Shukeyana.

- Xadolo
- Kobolo
- reishagiyani (shukeyana)
- Mbuya - all the same folks.

They still collect but not as often
but do so because they prefer the taste -

Mbati (stinging nettle).

- Homestead garden gives more yield because city garden plots (individual) are smaller.
- Basic was a few city gardens
- teaches methods.
- extension officer comes.
- Resource for Govt.

Command garden - City is shared.
what you grow is for yourself
in this garden individual plots.

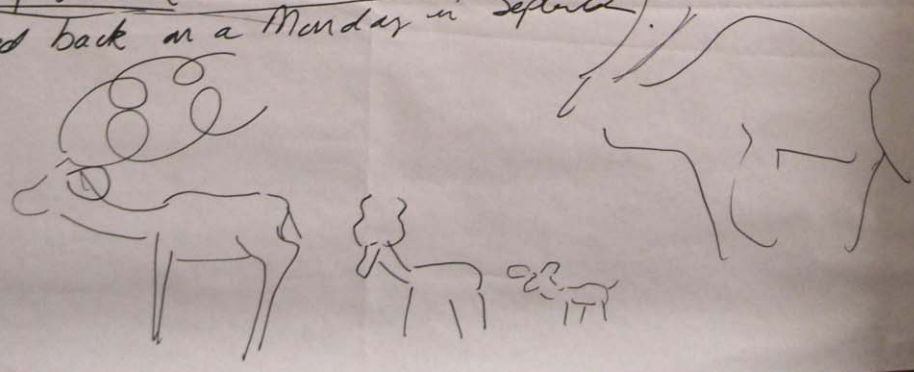
(black jack.)

Constitution:

- doesn't restrict them in any way.
- ? Purpose of Constitution
 - regulates.
 - gives clarity of doing things.
 - indaba - allows adjustment of Constitution
 - ~~Xoxisana~~ Xoxisana (to discuss)
 - Production not affected by the constitution
 - Meetings are held (Monday discuss issues)

- all plant together at the same time.
- eg: unplanted areas - are they going to plant or can it be allocated so someone else -

Feed back on a Monday in September.



Bejae Duncan.

homestead - Never grew vegies.
only potatoes. melon etc.

- to Now ^{filled} grow spinach, cabbage,
tomatoes onions.

Challenges

- implements
 - never enough
 - hand hoes
 - for ks.
 - slasher
 - cycles
 - slashing
 - cycles

great waste of time!

[no one in community can make implements]

- they used to use pipes for
- built dam on stream + then cut from stream w/ buckets.

Fertility of soil / choice.

- Not chose because of looking at soil type
 - just use because available.
- ? is it diff from H/Std.

ibumba (clayey soil) Everywhere the soil is diff - but Kivala manure works in all soils.

ugedlana (Sandy)

idadusi (flam/loam)

Members part. - 10 / 22

15
only 3 members not EPO members. → 22

♂ 2019.

♀ 2-3

- Any age can join.

- 19-35. - only case it can be asked to work.

(36-55

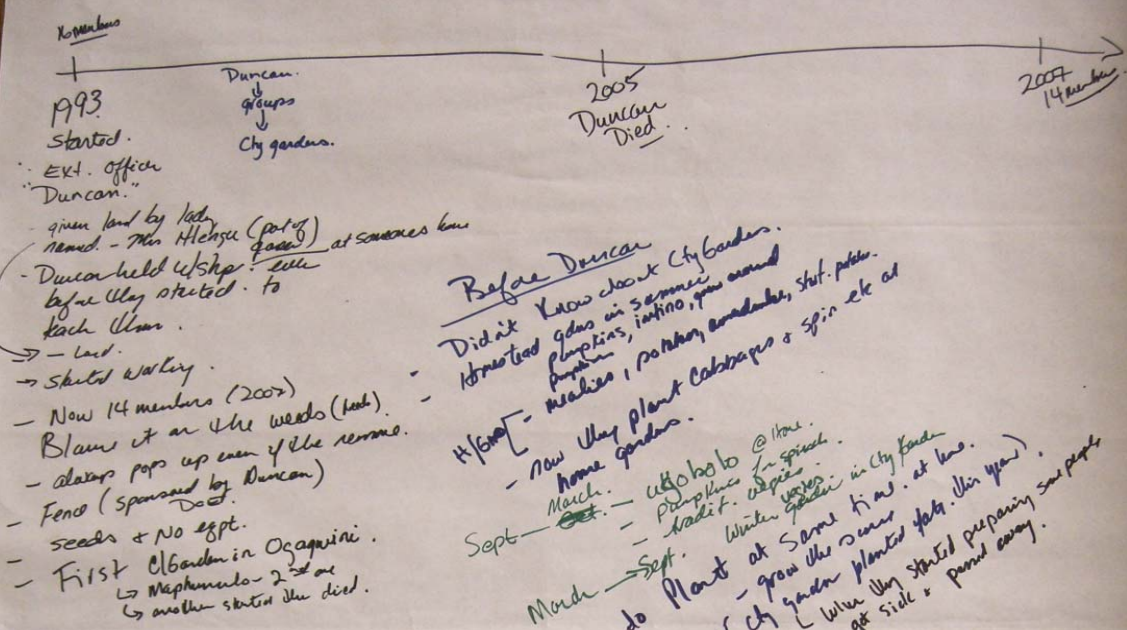
- They to get their family members to care + weed + water but children can damage the plants.

- They appreciate it would be good to have the child. Care and.

- Year because they were on looking they

children.

Seeds.



Challenges

- cabbages
- pests.
- fence burnt by the fire.
- Duncan arranged pipe - need a tank to (They have a pipe).
- Pipe to carry water from house.
- Tank promised but he died before delivery.

Plots at home for gabbage are smaller than here.

told Paul about their plans and she said that she would take it to the dept.

Reasons for Choosing Land.

- Not chosen but not given because it was near the river.
- How Do they Manage the two gardens?
 - not a lot of work in winter ∴ they come here on tuesday to work and then regularly to water (every day)
 - ∴ work in home garden + other things.

City Grower Consumption.

- Why don't they just extend home gardens?
 - they meet together.
 - school
 - it still is a place to learn but (mean) although is the only original member + she helps to teach.
 - Most have passed away or moved/left.
 - members leave + their children.

- Can what they do here be done at home? - not really the same but they are able to grow ∴ don't need to buy. - & you can always pick one if you are late coming home.
- will sell if someone wants.
- when they grow potatoes + potatoes they sold them in Tsipings (1993-9) Now grow potatoes in winter only.

Vukani

- one of the reasons they don't plant potatoes is that someone needs to source seed. - he is not here to do that any more.

- joining fee R10.

- seeds

- pesticides \leq ^{mulesol} ~~pest~~ autumn bait.

- sometimes they add on the R10 if they need - otherwise they just use "ash."

- Don't know about Mr. Maph. Mute.

- Know what they know - we will go and ask Mr. M.

-> - But the ladies here have challenged Thole + Mrs. Nzimade saying if you know why haven't you told us. -

A Big discussion insued.

- Mr. M. - used to come here - but has disappeared he asked them to open a tunnel but after that disappeared

- Mr. M. is not being paid therefore the owners is on them. Last time they saw Mph. was last month. / she doesn't care.

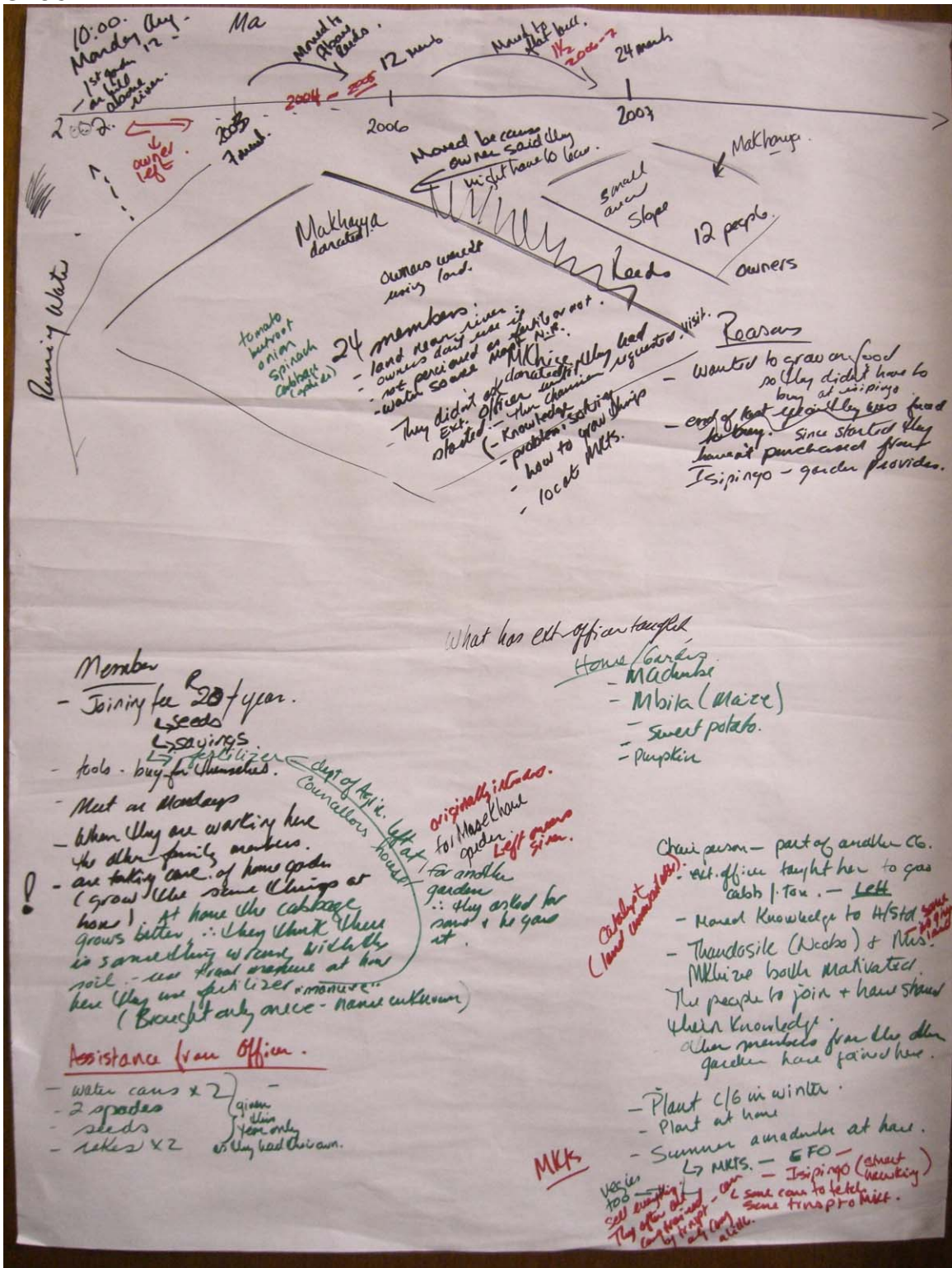
"Nsiki." - Homocara
- Cook food. lessons.
- comes to groups.
- sewing
→ also vanished.

When they heard about the fertilizer - they it was fixed.
- No relationship to counsellor

- Mr. Nzimande - the counsellor's wife is a member of ~~the~~ ^{the} ~~obumhlophe~~ ^{obumhlophe}
∴ they got fertilizer.

VUKANI

APPENDIX X: UPHUNGULA INDLALA COMMUNITY GARDEN GROUP



- Members
- Joining fee R20/year.
 - seeds
 - savings
 - tools - buy for themselves.
 - Meet at Mondays
 - When they are working here the other family members are taking care of home garden (grow the same things at home) at home the cabbage grows better. ∴ they think there is something in the soil. ∴ use that produce at home here they use that fertilizer. (Brought only once - name unknown)

- Assistance from Officer.
- water cans x 2
 - 2 spades
 - seeds
 - rakes x 2
- given them year only when they had their own.

- What has ext-officer taught
- Home Gardening
- Makhamba
 - Mbita (Maize)
 - Sweet potato.
 - Pumpkin

originally intended for Makhamba garden. Left some for another garden ∴ they asked for some to be given it.

Chair person - part of another CG. ext-officer taught her to grow cabb. 1. Ton. - Lett

- Moved knowledge to H/Star
- Thandozile (Noboko) & Mrs. Mkhize both motivated. The people to join + have shared their knowledge. other members from the other garden have joined here.

MKS

Plant C/G in winter.
Plant at home
Summer amaranth at home.
↳ MKS. - EFO - Isipingo (about necessity) some cans to letch some transp. mkt.

Challenges

- Pests
- MSWami (cutworm)
 - Red Ants (ntutwani above)
 - Aphids (ntwala) ^{use something but don't know name}
 - Fencing (cows)
 - carrying water
- They use methods for pest control that EFO - dry ant

They have assistance of Mpono - ^{can't test water} ^{eggs (from Ent.)} ^{don't know very often to try an ant.}

- Workshop → some members went June 2007.
- @ Kasaka Agric. College.
- Council told them.
- (They needed to get knowledge before they could opt fencing)
- Dept of Agric. came to see the land (May) - measured & promised to grow on completion of fencing.

What time they decided about the aphids attacking the garden now? ^{discussed} ^{40% to try outside} ^{to limit them}

- Knowledge helped.
- measured seeds for sowing seeds.
- fertilizer for wheat plants.
- + Royal Manu vs. Fertilizer.

↳ Knowledge shared at members.

Members: Mphila, Ekobeni, only members from only op opawini, Makolweni

Most helpful is they get help on site.

Radio/TV

They have heard of them - They do lists - tell them they can plant cabb 3x4 and they are two types - but don't know.

24 Members - at least 11 and EFO
 ♂ 2 Men
 ♂ 22.

"Xoshirada" Reasons

- Xosha indlaska
- ↳ they have meat & flour
 - ↳ but the garden supply roots.
 - ↳ ∴ they don't have to buy.
 - ↳ They still collect ^{wild ingredients} - because they prefer it & it gives variety.

SIYAZAMA.

1st Visit 21 Aug. 2007.

LAND
Mr. Hengwa
[land available wife ill -> but he is now part of it.]

Met on Wednesday
+ 09400-07620.

1995

Sewing groups
No one to help
...not good harvest.

Siyezama.
2000 ± 6 members.

Mrs Nsi mand
- got group organised
- approached ext. officer (got the one from Marikwane.) Duncan closest ext. officer.

Planted but no fence.

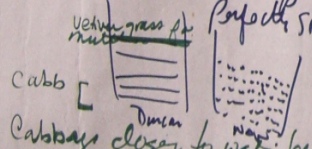
Reasons for starting.
"Xoshindala la"
→ Hunger but not of the stomach.

- help complement home produce
- possibility of selling excess.

- They do have knowledge.

Planting Practice.

- Duncan lines (over time Duncan wanted one crop one line - over time Perfectly straight in a line)



- Cabbages closer to water because it rains more. No change in quality of soil but the pests started last year. Get together & decide as a group.

- Leave during summer rains because they don't have time to cultivate both.

2001
Fencing (Agric.)
w Duncan help

2004
Duncan Died.

2005

Recruits
Mr. Mzimba 17 members
told them about ♂ 1
Mphahlele ♀ 16
Not 150 Members.

Benefits

- Variety of vegetables
- used for home consumption.
- sometimes sell - not often.

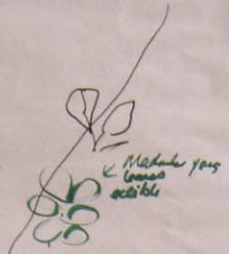
Challenges

- No one to help when planting
- extension officer only come 1x this year.
- posts inbuzu (-114 under bag cabbage.)
- can't get line (as others getting.) (Angry @ Pema)
- No knowledge of how or when to use lime but sees others getting it.
- use fertilizer, but not sure what it is - isipitso Stone keeper told them what to use, also use local manure.

Fenced:

1 Aug. - SIYAZAMA
1st Visit 2 Aug. 107

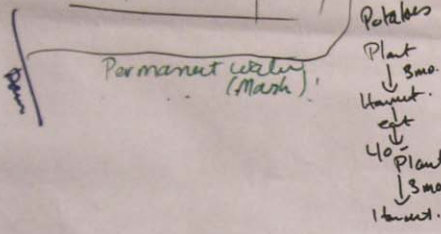
Potato
onion - 6 plants per row
spinach & beets
cabbage Plants have white part, started smaller.
carrots



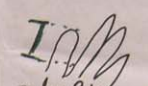
Homestead [Spring/Summer]

Plant Madenki, Maize, bonfire,
Pumpkin (Matanga)
(Potatoes would be eaten by cows in homestead
garden if planted in winter.)

Chy Gadu cabb, spin, beet root, onions,
potatoes.
[Mad → Aug]



3mo. to mature.
spring (Sept)
3mo.
Harvest
Feb / March



Zulu Potatoes
- pink when peeled.
- yellow

SMED ones planted all year
round anytime.
No diff names

Homestead Gardens

- use local manure
- larger than individual plots of Chy Gadu.
- plough w/ cattle
(open lines)
- follow cattle w/ seeds.

Mr. Maphumule suggested
that they make one bigger & fill
a barrel at gate. to make water
to man accessible.

Members.

Present - 90

Wanda → land.

Induna to
"tell" him that they
are using their land.

Mr. M. - refers to the garden
as the "school" where they
learn how to tend their gardens.
- Refuge - they bought cabbage & tomatoes
from 'sipi' no!!!

* ∴ Now it costs less and able to buy
meat and other things.

No expectⁿ from Wanda / Induna.
(Just to know
what belongs to
whom).

↳ Wanda wanted to get
the garden going but if he
had a city garden he could also
get the ext officer to come.

- What members get is Food & income.
They can farm each other.
∴ They do still need ext. officer.

↳ there are support & technical advice.

- ↳ implements
- ↳ manure
- ↳ seeds (plants).

- No one to communicate
to the DoF about
needs.

Probe?

- Why did they need a City Garden to attract the Ext. officer?

Ext. officers don't go to house holds to give advice
They needed to have the structure

Notes:
DoA don't
Perceive as Histead
as Fosen
Kiva Dam

only Social workers go to "Kias."
↳ dept of health social workers. } enc. gardens at houses

Role/Percepⁿ of DoF.

- The belief is what they first approach as individual
1. don't know where the ext officers boundaries
are.

2. To get attention they took it upon themselves
as a "group" to approach DoF for support.

3. → in homestead no routine but will grow
the ext-officer can come on "mondays" as
the day he knows they will all be there.

The women care for both gardens or get help from him
Also = Plant city garden in winter but harvested in summer only.
Hstd. gardens are being harvested

Old way
 used cattle
 - lines deeper
 - lines longer
 - lines wider
 Seed usage hasn't changed.

Never watered.
 - waited for rain.
 - now (green leaf) regains water.
 (bontpis) - only crop winter in the past
 used to eat pumpkin in the past

Shukeyana

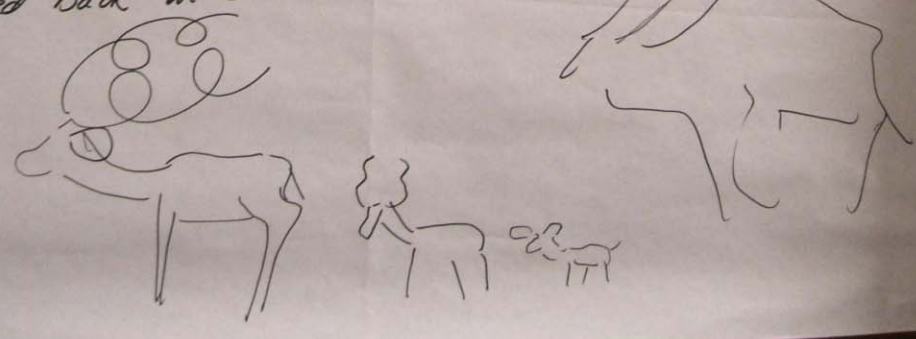
Mbati (shing'ya)
 Kadolo
 Kobolo
 reishagiyani (shukeyana)
 Mbuiya - all the same folk.
 - They still called but not as often
 but do so because they prefer the taste -
 - Mbati garden - City is shared.
 - what you grow is for yourself in the garden individual plots.
 (black jack.)

- Mbati (shing'ya)
 - Homestead garden gives more yield because City garden plots (individual) are smaller.
 - Basic use as for City Gardens
 - teaches methods.
 - extension officer comes.
 - Resource for Govt.

Constitution:

- doesn't restrict them in anyway.
 - ? Purpose of Constitution
 - regulates.
 - gives strategy of doing things.
 - indaba - allows adjustment of Constitution
 - XoxiSana (to discuss)
 - Production not affected by the constitution
 - Meetings are held (Monday discuss issues)
 - all plant together at the same time
 - eg: unplanted areas - are they going to plant or can it be allocated to someone else.

* Feed back on a Monday in September.



Bejae Duncan.

homestead - Never grew vegies.
only potatoes, masher etc.

- to Now grow spinach, cabbage,
tomatoes onions.

Challenges

- implements
 - never enough
 - hand hoes
 - forks
 - watering cans
 - slasher cycles

great waste of time!

[no one in community can make implements]

- they used to use pipes for
- built dam on stream + then cart from stream w/ buckets

Fertility of soil / choice.

- Not chose because of fertility or soil type
 - just use because available.
- ? is it diff from H/Std.

ibumba (clayey soil) Everywhen the soil is diff - but Kwaal Meme works in all soils.

ugedlana (Sandy)

idadusi (flam/loam)

Members part. - 10 / 22

15
Only 3 members NOT EPO members. → 22

♂ 2019.

♀ 203

- Any age can join.
- 19-35. - only some if can be asked to water.

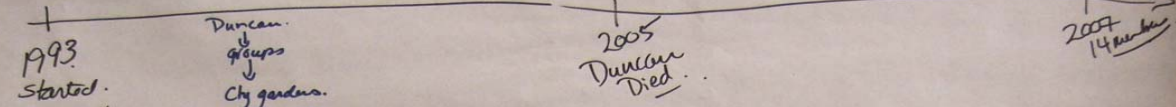
(36) - 55

- They do get their family members to come + weed + water but children can damage the plants.

- They appear least it would be good to have the diff. case and. you because they are not looking any better.

Seeds.

November



- EXT. office "Duncan"
- given land by lady named - Mrs Hlchuse (part of group) at sources how
- Duncan held W/ship before they started to teach them.
- led.
- started working.
- Now 14 members (2007)
- Blame it on the weeds (had).
- cheap pops up even if the remove.
- Fence (sponsored by Duncan)
- seeds & no egypt.
- First Cb garden in Ogaqini.
 - ↳ Maphumulo - 2nd one
 - ↳ another station she died.

Before Duncan

- Didn't know about City Gardens.
- home food gardens in summer pumpkins, intino, yam around
- H/land - meashes, potatoes, amadake, stuf. potato.
- Now they plant Cabbages & spin etc at home gardens.
- March - utto holo @ home.
- Sept - Pumpkins in spring.
- March - had it. winter garden in City garden.
- Sept - at same time. at home.
- do plant - grow the same.
- (City garden planted yam this year).
- when they started preparing some people got sick & passed away.

Challenges

- cabbages
- pests.
- fence burnt by the fire.
- Duncan arranged pipe - need a tank to (They have a pipe.)
- Pipe to carry water from line
- Tank promised but he died before delivery.

Plots at home for sabbay are smaller than here.

told Pura about their plans and she said that she would take it to the dept.

Reasons for Choosing Land:

- Not chosen but just given because it was near the river.
- How Do they Manage the two gardens?
 - not a lot of work in winter ∴ they come here on tuesday to work and then regularly to water (every day)
 - ∴ work in home garden on other days.

City

- Grow for Consumption.
- Why don't they just extend home gardens?
 - they want together.
 - school
 - it still is a place to be but (magan) is the only original member & she helps to lead.
 - Most have passed away or moved/left.
 - members leave & their children.....

- Can what they do here be done at home? - not really the same but they are able to grow ∴ don't need to buy. - & you can always pick one if you are late coming home.
- will sell if someone wants.
- when they grew potatoes & potatoes they sold them in Tsipingo (1993-?) Now grow potatoes in winter only.

Vukani

- one of the reasons they don't plant potatoes is that someone needs to have some seed. - he is not here to do that by now.

- joining fee R10.

- seeds

- pesticides \leq ^{malecal} ~~pest~~ ^{antwombit} ~~antwombit~~ ^{blue tooth}

- sometimes they add on the R10 if they need - ^{otherwise they just use "ash"}

- Don't know about Mr. Maph. Mute.

- Know what they know - we will go and ask Mr. M.

- But the ladies here have challenged Thole + Mrs. Nzimade saying if you know why haven't you told us. -

A Big discussion ensued.

- Mr. M. - used to come here - but has disappeared he asked them to open a tunnel but after that disappeared

- Mr. M. is not being paid therefore the owners in on them. Last time they saw Mph. was last month. / she doesn't care.

"Nsiki." - Homestead

- Cook Food. lessons.

- comes to groups.

- sewing

- also vanished.

When they heard about the fertilizer - they it was finished. - No relationship to counsellor

- Mrs. Nzimade - the counsellor's wife is a member of ~~the~~ ^{the} ~~group~~ ^{obumthlophes} ~~obumthlophes~~
 \therefore they got fertilizer.

VUKANI

APPENDIX Y: SIYAZAMA COMMUNITY GARDEN GROUP

Met on Wednesday
+ 09400-09630.

SIYAZAMA
1st Visit. 21 Aug. 2007.

LAND
Mr. # Hengwa
[land available wife interested but he is now part of it.]

1995
Sewing groups
No one to help... not good results.

2000
Siyazama
+ 6 members.
Mrs Nsi mand
- got group organised
- Approached ext. officer (got the one from Marikhamu.) Duncan closest ext. officer.
Planted but no fruit.
Reason for stunted: "Koshindala" → Hemicyst but do it of the stomach.
- help complement home based gardens
- possibility of selling excess.
- They do share knowledge.

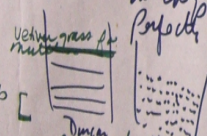
2001
Fencing (Topic) w Duncan
Help

2004
Duncan Died.

2005
Recruits 17 members
Mr. Maramba told them about ♂ 1
Mphahlele ♀ 16
Not 15 FO Members.

Benefits
- Variety of vegetables
- used for home consumption.
- Sometimes sell - not often.

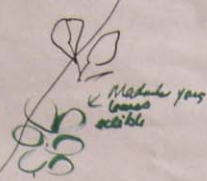
Challenges
- No one to help when planting
- extension officer only come 1x this year.
- pests inbara (- like under leaf cabbage) Ants - red.
- don't get line (see other getting) (Ampy @ Pomo)
- No knowledge of how or when to use lines but sees others getting it.
- use fertilizer, but not sure what it is - isipipya Stone keeper told them what to use.
- also use local manure.

Planting Practice
- Duncan lines (over time Duncan wanted one crop one line - easy to see Perfectly straight & line)
Cabb []
- Cabbages closer to water because it rains more, always planted in same place. No change in quality of cabbages but the pests started last year.
Get together + decide as a group.
- Leave during summer rains because they don't have time to cultivate both.

Fenced:

1 Aug. - SIYAZAMA
1st visit 2/aug/07

Potato
onion: "to plant per row"
spinach + beets
Cabbage
Plants near white post checked smaller.
carrots



Madunzi young
leaves
edible

Homestead [Spring season]

Plant Madunzi, Maize, bonfire,
Pumpkin (Matanga)
(Potatoes would be eaten by cows in homestead
garden if planted in winter)

City Garden cabs, spin, beet root, onions,
[March → Aug] potatoes.

Permanent water
(Marsh)

Potatoes

Plant
↓ 3mo.
Harvest.
eat
↓
40 Plant
↓ 3mo.
Harvest.

Small to Medium
Spring (Sept)
↓ 3mo.
Harvest.
Feb / March!

I.M.

Zulu Potatoes
- pink when peeled.
- yellow

Small ones planted all year
round any time

No diff names

Homestead Gardens

- use local manure
- larger than individual plots of City Garden.
- plough w/ cattle
(oxen/lines)
- follow cattle w/ seeds!

Mr. Maphumule suggests
that they make one bigger + A //
a bank at gate. to make water
to run accessible,