# Contributions and Limitations of Food Gardening as a Sustainable Livelihood Strategy: Insights from a Case Study

# Victor Chikadzi (PhD)

Lecturer at the University of the Witwatersrand, Department of Social Work, Umthombo Building, P Bag 3, Wits, 2050, South Africa Email: Victor.Chikadzi@wits.ac.za

# Elvis Munatswa

MPhil student University of the Witwatersrand, Department of Social Work, Umthombo Building, P Bag 3, Wits, 2050, South Africa Email: elmunat@gmail.com

#### Doi:10.5901/mjss.2014.v5n4p597

#### Abstract

The sustainable livelihoods approach dominates the development discourse as a panacea for poverty reduction. It is an approach premised on the view that it leads to development interventions that capacitate the poor. This article examines the efficacy of food gardening as a sustainable livelihood strategy. The research took the form of a case study. While the insights gleaned, show that food gardening has the potential to lift people out of the poverty trap, the current implementation of food gardens as an anti-poverty strategy is beset with challenges such as, lack of capital; poor access to markets, and inadequate business skills.

Keywords: Poverty, sustainable livelihoods, poverty reduction, food gardening

### 1. Introduction

The concept of sustainable livelihoods has dominated development thinking in recent years as many practitioners strive to unlock approaches that will move poor people out of poverty. The dominance of welfare based approaches has largely failed to break the poverty trap for many people, and in recent times, some development practitioners have begun to move away from welfaristic approaches (Patel, 2005; Midgley, 1995) while embracing the sustainable livelihood approach. Several initiatives undertaken within the sustainable livelihoods framework are targeted at enabling selfreliance amongst the poor. Some of the popular strategies include initiating micro-enterprises initiatives such as bakeries, sewing clubs, toilet paper manufacturing and poultry faming amongst other strategies. Food gardening has also become one of the popular livelihood strategies adopted by both the urban and rural poor to lift themselves out of poverty. Despite the phenomena of food gardens being prevalent in both rural and urban areas, the efficacy of this approach remains largely under researched. Consequently, this article examines the efficacy of food gardening as a sustainable livelihood strategy targeted at poverty reduction amongst urban dwellers in the city of Johannesburg in South Africa. The research took the form of a qualitative exploratory case study in which participants of the Bambanani Food and Herb Garden project were interviewed to illicit their experiences as participants of the project. This article is dived into five sections. This first section has given a brief introduction to the study; the second section focuses on literature review relevant to the focus areas of this paper. The third section presents the methodology used in the study while the fourth section is a presentation and discussion of findings. Finally, the last section presents the conclusions reached by the authors in the study.

### 2. The Sustainable Livelihoods Approach

According to Krantz (2001), the concept of sustainable livelihoods has its roots in the work of the Brutland Commission that authored a report in 1987 which championed the need for nations to focus on sustainable development. With the Brutland Commission having managed to table the notion of sustainable development as a key global agenda item, many scholars began to give increasing attention to the concept of sustainable development. It is within this context that the

concept of sustainable livelihoods emerged and gained prominence. One of the early attempts to define the term sustainable livelihoods is mainly credited to Robert Chambers who made use of the term in 1992 in a discussion paper he co-authored with Gordon Conway. According to Chambers and Conway (1992: 7) "a livelihood comprises the capabilities, assets (stores, resources, claims and access) and activities required for a means of living; a livelihood is sustainable which can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation; and which contributes net benefits to other livelihoods at the local and global levels and in the short and long-term". Wider adoption and practice of what the concept of sustainable livelihoods entailed began to be adopted by development agencies mainly from the United Kingdom such as Department of International Development (DFID), Cooperative for Assistance and Relief Everywhere (CARE) and Oxford Committee for Famine Relief OXFAM. DFID later modified the definition given by Chambers and Conway (1992), they defined a sustainable livelihood as encompassing "...the capabilities, assets, (including both material and social resources) and activities required for a means of living and the sustainability of a livelihood is when it can cope with and recover from stresses and shocks and maintain or enhance capabilities and assets, now and in the future while not undermining the natural resource" (Krantz, 2001: 3).

The central idea that underpins the notion of sustainable livelihoods is importance of 'coping'. There is a realisation that many initiatives to help the poor by helping them to initiate livelihoods is not always helpful given that internal and external shocks and stressors usually result in the eroding of these livelihoods. Thus, for a livelihood to be considered sustainable according to the definitions given above, it must survive or recover from both external and internal stressors and shocks exerted on it (Chambers & Conway, 1992; Conway, 1987; Institute for Development Studies (IDS), 1989). Such livelihoods are more beneficial to the poor because they help to eliminate vulnerability and poor people helped via such means can work their way out of poverty on a permanent basis. The lack of sustainability or coping in livelihoods strategies results in a 'seesaw' scenario in which the poor continue to plunge into and out of poverty. To this end, the sustainable livelihoods approach is seen as a central to all the meaningful efforts to eradicate poverty around the globe.

There are two critical dimensions of sustainability of livelihoods which are environmental and social sustainability. Environmental sustainability concerns itself with looking at the how livelihoods adopted externally impact on other livelihoods. The notion of environmental sustainability is operationalised at two levels the local and the global. Sustainability of livelihoods at a local level looks at how livelihoods impact on natural resources at a local level. A negative impact of livelihoods at a local level would entail aspects such deforestation, desertification, lowering water tables and social erosion among other things. On the other hand, the positive impact of livelihoods at local level would entail aspects such as increased tree planting, improved air quality, decreasing levels of deforestation and pollution inter alia. The second dimension of the global level looks at how livelihoods impact on the long term sustainability of other livelihoods beyond the local context. For development initiatives to be considered as being sustainability refers to whether a human unit (individual, household or family) can not only gain but maintain an adequate and decent livelihood. This has two dimensions, one negative and one positive. The negative dimension is reactive, coping with stress and shocks; and the positive dimension is proactive, enhancing and exercising capabilities in adapting to, exploiting and creating change, and in assuring continuity" (Chambers & Conway, 1991: 10).

The popularisation and wide scale adoption of the sustainable livelihoods approach came from a growing realisation that widespread efforts to tackle deprivation and marginalisation often resulted in temporal reprieve for the poor owing to the lack of 'coping' of most livelihoods. Initiatives such as relief and welfare while being helpful fail to offer a lasting panacea to the problem of deprivation. More importantly such approaches deal mainly with the symptoms of deprivation and marginalisation rather than tackling the root causes. A failure to address the root causes of marginalisation and deprivation amongst the poor means that, the vicious cycle of poverty would continue unabated. Thus, the sustainable livelihoods approach is seen as the best way to confront the problem of poverty by most development agencies as well governments across the global. Krantz (2001: 1) observes that "the concept of Sustainable Livelihoods is an attempt to go beyond the conventional definitions and approaches to poverty reduction. These had been found to be too narrow because they focused only on certain aspects or manifestations of poverty, such as low income, or did not consider other virtual aspects of poverty such as vulnerability and social exclusion". Under the sustainable livelihoods framework, people are not just given hand-outs rather the livelihoods framework seeks to promote a hand-up approach where people can be capacitated to sustain themselves. Consequently, advocates of the sustainable livelihoods approach argue that people need to be empowered and capacitated to become self-sustaining. The sustainable livelihoods approach seeks to promote self-reliance through building the capacity of individuals to survive independent of help from the state or welfare agencies. The word sustainable livelihoods connote a form of help that enables people to survive on their own regardless of social and economic shocks (Shenck, Nel & Louw, 2010; Chambers & Conway, 1991).

### 2.1 Food gardens as a livelihood strategy

Food gardening has since time immemorial been used as a common strategy to enhance livelihood by the poor. In areas where poverty and vulnerability are most pronounced, it is uncommon to find high levels of adoption of food gardening as a vital means for survival by the poor. Goodman (2000) notes that, food gardening was largely adopted within the 20<sup>th</sup> century and increased activities in food gardening were common during the first and second world war as people sought to curtail the wave of food shortages that characterised these times. The value of food gardens in contributing to improving the living conditions especially among the poor is beyond guestion. Similarly, the Trust for public land (2001) also note that food gardening has a multiplicity of key functions within communities. Ever since food gardening was adopted till recent times food gardens have been seen as vital source of food, improvement of neighbourhoods, and a way through which some people express their cultural traditions. Similar thinking is advanced by Drescher (2001) who argues that food gardens have been used in the past in Europe as an official response to the problem of marginalisation and deprivation amongst poor people. Drescher (2001: 1) notes that "conditions of hunger and poverty were widespread in Germany and other European countries nearly 200 years ago when the first "gardens for the poor" emerged. Rapid industrialisation, accompanied by urbanisation and migration, forced large numbers of people into dismal living conditions. Urban gardens were one official response". In the same vein, Wilkins (2000) observes that food gardens allow opportunities for community members to interact with one another, to celebrate, decide, creatively think and solve problems together. To this end, food gardens become an important source of social capital which has far reaching implications in improving the life prospects amongst the poor.

# 3. Methods

# 3.1 Research approach and design

In investigating the efficacy of food gardens as a sustainable livelihood strategy, a qualitative research approach adopted and an exploratory case study design was used. The Unit of analysis was the Bambanani Food and Herb Garden. Qualitative studies allow us to understand phenomenon in its naturalistic setting. Through qualitative studies researchers gain holistic and detailed accounts and interpretations that participants attach to their life situations (Creswell, 2012; Neuman, 2000). A case study research design adopted for this study is defined by Creswell (2012: 237) as "a form of qualitative research which involves the intensive analysis and description of a single unit or system bounded by space and time."

# 3.2 Participants

Purposive sampling, a type of non-probability sampling was used to select nine participants that participated in the research. Purposive sampling refers to a deliberate strategy of selecting participants who have experience, knowledge and qualities sought for by the researcher (Neuman, 2000). Thus the researcher relies on their own mature judgment of the best cases to select for study (Babbie & Mouton, 2001). Data was collected using face to face in-depth interviews. A semi-structured interview schedule which had open ended questions was used to guide the interviews. The advantage of interviews is that they allow the research to gather detailed data about an event or life situation and the use of a semi-structured schedule guides the interview flow ensuring that all aspects pertinent to the research are covered during the interview. The use of a semi-structured interview schedule also allowed for flexibility, given that the researcher does not have to stick to the set of preset questions (Creswell, 2012). A pre-test of the interview schedule was done using one participant from the Bambanani Food and Herb Garden project who was not included in the actual research sample. The pre-test helped the researchers to fine tune the questions before the actual data collection for the study commenced (Bryman, 2004).

# 3.3 Data analysis

Data were analysed using thematic content analysis. Babbie and Mouton (2001) define thematic content analysis as a

process where emerging themes from the data coding process are categorised and the discussion of key research findings is guided by the themes or common patterns that emerged from the data. The first step in analysing the data was to transcribe the interviews after which the transcribed data was read thoroughly several times until a holistic feel of the data was acquired. Data was then coded into several categories that corresponded to the objectives of the study. After the coding process was completed emergent themes were drawn out and used to guide the write up of the findings.

# 4. Findings and Discussion

The results of the study show that food gardening can potentially be adopted as a sustainable livelihood strategy. Key benefits such as acquisition of social capital, access to cheaper food and better nutrition were evident in the responses given by participants in the study. These benefits are discussed below.

# 4.1 Access to a social capital base

The results from the case study show that the food gardens are a critical source of social capital for participants. Via participation in food gardening participants managed to link with people that they would ordinarily never have known. The food gardening activities offer spaces for socialisation that enabled participants to develop useful social networks. Such social networks are very important in a number of ways. Firstly, participants get to benefit from each other as they share life experiences. Participants also get to share skills and knowledge gained over their course of life. On the other hand, during times of adversity such social networks become useful as participants can count on one another for support via tangible and other intangible ways. It was clear in the findings generated by the study that participants have managed over time to develop personal relationships within the food gardening context and these relationships have far reaching effects and impact beyond the food garden context. Participants reported having received food supplies from their colleagues in the food gardening project during times of need. In some cases participants helped each other to work on difficult tasks that needed more physical power beyond the capability of one individual. Such help was given without having to incur any expenses on the beneficiary's part. Participants also reported that the food gardening environment provided them with a social support system and when facing personal problems one could debrief amongst other participants. In this way, participants would find ways to support one another emotionally as well as providing material help whenever possible. One participant noted that "working in this food garden has been a good thing for me. I have managed to establish good relationships with these people, some have become close friends that help in times of need... for instance, Maria helped me put my grandson into school".

Ameen and Sulaiman (2006: 6) define social capital as, "the social associations, networks, norms and values that facilitate interaction between individuals and groups and enhance their socioeconomic welfare". It is evident from findings of the study that participation in food gardening provided beneficiaries with a critical social capital base which proved vital for their welfare. Importantly, human beings have an inherent need to belong and involvement in food gardening can also been seen as fulfilling participants' need for belonging. This is very critical in building one sense of worth and self esteem; these are key ingredients for holistic development.

# 4.2 Access to food and better nutrition, and surplus income

Food gardening is also a vital source of food for participants. In the Bambanani Food and Herb Garden project which was the unit of analysis for the study, participants grew multiple varieties of crops which essentially comprised of the bulk of food needs of their households. As a result participants did not have to use their paltry earnings to buy food. This is very significant given the fact that food accounts for the greater part of expenses in poor households. More importantly, food gardening contributed to the nutritional needs of households of participants, it is highly unlikely that participants would have afforded such produce if they were to buy from the shops. To this end, food gardening becomes a vital source of livelihood which allows for the households of participants to enjoy a balanced diet. On the other hand, participants were able to earn money from their food gardening activities. Such earnings were crucial in improving the well-being of participants as it allowed them to afford other expense which they would not have afforded given the fact that participants had no other visible means of earning an income. One participant when asked why they got involved in food gardening asserted that, "I got involved in gardening [because]. I would always get something to feed my family with. I might not make a lot of money but the vegetables could as well provide me with something to give my children." Similarly another participant noted that "the thought that we could do gardening throughout the year was good enough to tell me that if we

#### do it correctly then we might not have to lack food in the house."

It is apparent from the participants accounts above that food gardening is seen as a vital means of food supply and as well as a means of supplementing house hold income albeit in a small way. There are many spinoffs that accrue as a result of having adequate and balanced food supply. Good nutrition contributes to better health for the households and this is very critical in improving one's life expectancy. On the other hand, children who grow in households with sufficient nutritional requirements tend to develop to become physically and intellectually competent than malnourished children. To this end, food gardening becomes a key strategy in potentially contributing to breaking the cycle of deprivation and marginalisation that characterise poor households.

### 5. Challenges Faced in the Bambanani Food and Herb Garden Project

Despite, the significant role that food gardening can play as a means of livelihood for the poor, current implementation of this initiative shows that it cannot pass the test of being a sustainable livelihood. Implementation of food gardening within the Bambanani Food and Herb Garden project was best with challenges such as lack of capital, poor access to markets and inadequate business skills amongst participants. These issues are discussed in detail below.

#### 5.1 Lack of financial capital

One of the major impediments that participants of the Bambanani Food and Herb Garden project faced was lack of financial capital to buy the necessary inputs and materials that would improve on their operations. Financing is of is a critical factor in any business undertaking and food gardening is no exception. Most businesses that have managed to thrive have benefited from a healthy capital injection. An overwhelming majority of members of the Bambanani Food and Herb Garden can be categorised poor and struggle to meet the daily necessities of their households. Thus, they are not in a position to contribute a meaningful amount of capital that would enhance their food gardening operations. Participants reported having to re use seeds from previous yields owing to failure to buy better quality seeds from wholesalers due to lack of affordability. Participants also reported not having enough money to buy advanced equipment that would make their work to be less gruelling. In some cases farming such implements such as fertilisers and pest sides were in short supply and this adversely affected the quality of crops harvested. This in turn had a negative knock-on effect on the prices of the yields.

Referring to the challenges they faced in the food gardening project, one participant mentioned that "one major obstacle in our quest to engage in progressive gardening is the lack of capital to start meaningful projects. We only have money to get by, which becomes a stumbling block in our endeavour to make gardening sustainable. We would hope things get better but it's always the same year in year out."

Similarly another noted that "...we augment the buying of seeds with the money from our own pockets. It's really never enough. We cannot fully prepare for the planting season, since we lack capital to purchase seeds, hire external labour or acquire modern tools... ours is a struggle in this garden with manual labour"

One of the participants showed frustration on their inability to acquire financial capital through loans or bonds saying "it seems that being poor isn't enough punishment. The banks can't give us loans, and everybody alike, they ask about how much we earn, what assets we have, income projections from the food garden. All we ask for is just a starting point to sustain our lives".

It is clear from the participants' accounts above that lack of financing can have adverse effects in the running of food gardening projects. Use of seeds from previous harvest is known to reduce the quality of the yields and this affects pricing. On the other hand, an over reliance on manual labour overburdens participants' health especially given that a majority of participants were advanced in age. Access to modern equipment would no doubt lesson the burden on participants while at the same time enabling them to speed up operations. Given the paltry earnings by members of the food garden it becomes important for them to diversify into other activities related to gardening to argument earnings, however, in the absence of financial capital this becomes impossible. Lack of capital for micro-enterprise initiatives for the poor is not uncommon, Vargas (2000) notes that in many countries there is a common tendency to focus on macro-level financing policies, with very little attention being given on how micro-initiatives should be supported financially. This severely prejudices the prospects of poor people to work their way out of poverty via micro-level initiatives. More importantly, such livelihoods lack the ability to withstand shocks and stressors and cannot be classified as being sustainable. Chikadzi (2009: 73) underscores the importance of accessing enough start-up capital if micro-initiatives such as food gardens are to become a success. He observes that, "projects hardly recover from the bad start they had due to

lack of sufficient capital and without meaningful capital injection the project may forever struggle not because the people cannot manage the project properly, but because resources are the major limitation. Similarly, Mitchell & Handstand (2004) observe that, the success of livelihood strategies is largely affected by the sufficiency of financial capital invested at the start of the project and in many cases there is need for additional funding. To this end, access to capital is crucial if participants are to realise meaningful benefits for their food gardening activities.

#### 5.2 Poor access to markets

One of the major hurdles that confronted the Bambanani Food and Herb Garden project was their inability to penetrate the market. Poor market access characterised most of their harvest seasons. In most cases participants noted that uncertainty about how and to whom their produce would be sold tended to characterise their operations. At certain times participants managed to sell their produce to established business that could buy in bulk. However they could not maintain continued relationships with such buyers mainly due to the fact that they could not keep up with the supply volumes required. As a result they tended to lose such buyers given the erratic nature of their supply chain owing to the fact that they could only produce in small quantities and seasonally rather than throughout the season as is done by large scale farmers. In some cases, participants reported having to throw away their produce when they failed to find buyers on time. This comes as a huge blow for the members given that they would be pinning their hope on the little yields they produce only to see these yields rotting due to poor market access.

One participant asserted that "because of seasonality in our cropping, we lose customers to established suppliers that run throughout the year, even at times when we don't have anything. Because of such inconsistence some people only find out that we have vegetables when they are almost going out of season."

Another participant mentioned that "when we started out, our produce wasn't for sale and therefore we didn't make provisions for marketing. In the same year we had a bumper harvest and so we had to sell our produce in bulk and we encountered market problems. We couldn't get a huge customer then, other than the supermarket (Spar) that bought from us. Since then we have had problems with getting a ready market. We struggle every year..."

Market access is of critical importance given that it allows members to get extra money to argument the household income. However, in the case of the Bambanani Food and Herb Garden project members had difficult in selling their produce, this means having to make huge losses when yields fail to sell. This is a major blow given that the small scale nature of their operations does not afford them the luxury to make such losses if they are to breakeven. Scholars such as, Albu & Scott (2001) note that market access is one of key determinants of success for livelihood strategies adopted to support the marginalised segments of the population, yet it is also one of the major hurdles that many small-scale initiatives face. In the same vein, the International Fund for Agriculture Development (IFAD) (2001) notes that markets are an essential and core anchor in livelihoods of both the poor and the rich. No business can succeed without selling and poor market access becomes a major concern in promoting sustainable livelihoods. The inability to access markets seemed to be a result to two major factors one indirect and one direct. Macro-level inequalities are the major direct dimension that leads to poor market access for small- scale producers in terms of pricing and in some cases quality of produce. The direct casual factor of poor market access relates to the very low levels of education and in turn business skills of participants. This leads to poor access to information and ability to craft creative strategies that led to the claiming of a niche market for yields by members of the food garden.

### 5.3 Inadequate business skills

Following from the above discussion on poor market access, inadequate business skills seems to be one of the major impediments that led to the failure to turn food gardening into a sustainable livelihood strategy. It was apparent from the study that participants had very low levels of formal education and had not be adequately equipped with the knowhow of running a micro-initiative such as a food garden. Participants failed to aggressively market their products and passively waited for customers to come to them. This no doubt is a recipe for failure in any business; however this cannot be blamed on participants, rather, it is a fault the organisations that support the poor to initiate such activities. Help should go beyond giving of land and inputs to include active on-going mentoring in all aspects of the business such as budgeting, marketing and the managing crop cycles among other things. In the absence of such support it is unlikely that micro-initiatives such as the Bambanani Food and Herb Garden project will become sustainable.

### 6. Conclusions

Food gardening has the potential to become a viable sustainable livelihood strategy. The past successful experiences of using food gardens as an official response in helping the deprived and marginalised segments of the population in countries such as Germany many years ago (Drescher, 2001) offer hope that the same strategy can become a success in South Africa. The current case study demonstrates that food gardening is a vital source of food for the poor which in turn leads to better nutrition and health amongst other positive spinoffs. Food gardening has also been shown to help participants to build a strong social capital base which is critical for their own belonging, survival and welfare which extends beyond participants to benefit household members. Despite the many benefits which are evident, the case study of the Bambanani Food and Herb Garden project which is characteristic of many other food gardening initiatives in South Africa show that the current implementation of food gardens as a livelihood strategy is beset with challenges. Participants struggle to access capital from both the social sector and the private sector institutions such as banks owing to their being branded as risky borrowers. It was also evident that participants had very low levels of formal education, this coupled with lack of business management training in running small-scale initiatives worked against them. Market barriers are also a major concern given the cutthroat competition that small-business initiatives face from big business. To this end, there is a compelling need for official government and civil society intervention to ensure that adequate protective and enabling policies are put in place to support micro-initiatives by the poor such as food gardening. Given that the prevailing conditions of Bambanani Food and Herb Garden project are representative of the many food gardening initiatives around the city of Johannesburg, we therefore conclude that at present food gardening may not pass the test of being a sustainable livelihood.

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