

Case Study:
**The Life of a Sustainable Subsistence Farmer in
An Informal Settlement**

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Abstract

Poverty is a significant barrier in promoting economic growth in South Africa. This report will examine ways in which individuals can take control of the food supply, through the maintenance of food gardens, and will examine whether this improves their food supply and thus food security. Recent models of a hypothetical global food supply grown organically indicate that organic agriculture could produce enough food on a global per capita basis (Earl, 2011: 8). The paper explores the endeavours of Nomonde Kweza, a 50 year old lady, who at the tender age of 16 took up agriculture as her career. Her interest in agriculture spurred up from her inspirational grandmother who was a horse and cattle farmer in the Eastern Cape. In 1997 she moved back to Cape Town, where she had previously fled from following the apartheid regime and attended the University of Western Cape in a bid to improve her scope of knowledge. Today, she manages twelve farms situated in various informal settlements around Cape Town. This paper will examine the effect of the communal vegetable gardens as a means of poverty alleviation and increasing food security, using Nomonde Kweza's vegetable gardens as the case study.

Introduction

Poverty in South Africa has crippled socio-economical development therefore giving rise to rural-urban migration. Data obtained in 2009 by the National Urban Development Framework Steering Committee, suggested that the underlying reason for this migration was and still is due to the fact that urban areas generate about 88% of the total national economic activities compared to 4% generated by the tribal authority regions. Furthermore, it was estimated in 2009 about 68.3% lived under the upper-bound poverty line of R577 per person per month (StatsSA, 2009: 5) and the poor spend 42.3% of income on food (StatsSA, 2009: 19). Particularly, the informal settlements have a 51% unemployment rates and a household income averaging R3000 per month where their main expense was food (StatsSA, 2009: 83).

Urban subsistence farming in South Africa takes two forms; that on small food gardens in households and that on relatively larger community plots. The need to explore for sustainable urban farming alternatives is important in order to ensure food security. Food security is defined as "...when food systems operate such that all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life (Brklacich et al, 2005: 2141)." This report will examine ways in which individuals can take control of the food supply, through the maintenance of urban food gardens, and will examine whether this improves their food supply and thus food security.

A Brief Outline on Poverty and Agriculture in the Western Cape

To guarantee household food security, food must be locally available, accessible and affordable. In South Africa, many people are unable to feed their families from a narrow production base. Most poor people are net consumers and rely on cash income to meet their food needs. Micronutrient deficiencies are best addressed by food based strategies like food gardens where fruit and vegetable

production, easily undertaken by unskilled people, can play an important part in poverty alleviation and food security initiatives.

Recent models of a hypothetical global food supply grown organically indicate that organic agriculture could produce enough food on a global per capita basis (Earl, 2011: 8). Such models suggest that organic agriculture has the potential to secure a global food supply with reduced environmental impacts. Food gardens form part of the local food movement and serve as a starting point to assess how these alternative systems might contribute to combating hunger.

In the last two decades, the Western Cape has experienced an influx of farmers notably from the Eastern Cape and Northern Cape provinces where the main production activities are subsistence farming. (Kok & Collinson, 2006: 14). Herman et al notes that the migration has undoubtedly increased the demand for undeveloped land for agricultural purposes. The local authorities have pulled their weight by ensuring that the policies included in the Urban Agriculture Policy of the City of Cape Town dated 2007 which formalises urban agriculture as a legitimate urban land use and prescribes to the government efforts in protecting, facilitating and assisting urban agricultural initiatives have been implemented. This policy document strives to promote household food security and economic development among the poorest communities in the city. Finally, it is important to mention that the Western Cape is the leading agricultural producing region contributing about 20.9% of the national output (StatsSA, 2012:13).

This paper will analyse a case study of an urban farmer in Gugulethu named Nomonde Kweza. She manages numerous vegetable gardens around Gugulethu that primarily support feeding schemes to school children. To complete a comprehensive analysis, this paper will evaluate both the social and economical effects on the community as a result of Nomonde's contribution through growing these vegetable gardens.

Nomonde's History

Nomonde was born in 1967 in Cape Town but due to the Apartheid laws, at a tender age, she moved to the Eastern Cape where she was raised by her grandparents on a small farm. At the age of 12, she was very keen on farming and she even managed to realise enough profit from farming such that she could pay her school fees throughout her high school years. She later enrolled at University of the Western Cape to be formally educated in agriculture. On moving back to Cape Town in 1997, she grew her own vegetable garden in a bid to change the mindset engrained by the township people that nothing could be grown in the sandy soil that is found throughout the Western Cape.

Over the next 20 years, through her determination and consistency, she had 12 vegetable gardens in the different townships of Gugulethu, Phillippo, Nyanga and Imphileni. Nomonde says that the project belongs to the community; she's just a coordinator that manages them.

Land

The particular farm in Gugulethu that will be focused on is about 30 by 60 meters. The soil is primarily sandy in nature. Nomonde states that the advantages of sandy soils include:

- The land dries off quickly and warms up earlier in spring; therefore maintaining a higher temperature than fine-textured or heavy soils
- Operations may begin earlier in the spring and continue later in autumn
- Tillage is less expensive
- Cultivation may begin sooner after rains
- Rainfall or irrigation water is quickly absorbed
- The root vegetables are better formed and have fewer fibrous roots

However, such soil requires frequent additions of organic matter and liberal, wisely regulated fertilization. Expenditures on manure, fertilizer, and perhaps irrigation are relatively high.

Funding

Nomonde receives funding from the Department of Agriculture and the City of Cape Town in the form of seeds, and free water supply to 8 out of the 12 gardens. She emphasizes on how important good quality seed is a good harvest. Good seed is characterized by high vitality, good breeding, freedom from disease, suitability for the conditions, and freedom from foreign matter, such as weed seeds, stems or dirt. They must have the vitality to germinate with vigor, to assure good stands of thrifty, quick-starting plants under the varying harsh conditions. Since the seeds, water and compost are free, the main garden costs are usually wages paid to the labourers as a function of their produce.

Nomonde has a small polytunnel that was donated by a German NGO. The crops grown in this polytunnel are those that are fragile in nature, notably spinach. This tunnel greatly helps in regulating heat, moisture, and ventilation.

Planting methods

Nomonde uses the systems of mixed cropping and crop rotation. Mixed cropping farming system is a type of farming system in which farmers plant more than two kinds of plant species at the same time. Normally indigenous farmers mix a number of crops in order to ensure food security as well as promote genetic diversity on the farm. Usually the mixed cropping system is followed during the rainy season, acting as an insurance against losses due to changing climatic conditions.

Crop rotation is defined as 'the growing of a more or less definite and regularly repeated sequence of crops on the same area (Watts & Searle, 1944:53)'. The principal purposes are to utilize most efficiently the resources of the soil and to control insects and diseases. In vegetable growing, numerous examples of decline in yields and quality are due primarily to failure to rotate as plants

differ greatly in their nutrient requirements. Nomonde avoids planting crops which have the same nutrient requirements consecutively.

Pest Control and Fertilizer Systems

Nomonde uses homemade fertilizer, free from processed chemicals. She prepares it by cooking garlic in water and leaving it overnight till a certain taste and consistency is achieved and it is then when the fertilizer is ready for use. She makes the garlic pesticide in 20 litre drums then stores them in 5 litre jericans. Garlic is specifically used because it is very economical and serves as a remarkable pest control. She points out that lavender is also a viable alternative but it attracts bees and this could provide hostile environments when it comes to periods of prepping the land and the harvesting season.

Nomonde's earthworm farming is a significant contributor to the fertilization process of these vegetable gardens. The movement of the worms in and out of the soil aerates it as well as keeps it moist. Furthermore, earthworms feed on organic matter, such as dead leaves, as they move underground. This helps produce manure, or worm castings, also referred to as humus. The manure is rich in potassium, nitrogen and phosphorus.

Produce

The produce the farm yields is about 40 boxes. A box usually comprises of 2 bunches of spinach and 2 handfuls of beetroot as these crops are always in season. Usually, broccoli flower, cauliflower and onions are always in season around the same time so would be constituents of the same box. The produce of the farms support s about 15 households. Furthermore, she delivers produce to 3 primary school staff teaches, 2 clinic staff members, as well as to the staff of the social development offices in the SASA offices. In addition to this, she supports about 230 residents of the Ekuphumleni resting home and this is through sponsorship from the Department of Agriculture and the City of Cape Town. The cost of the box is R35 for a small one and R45 for a larger one.

Primary production risks

The main problem is funding the sources of labour. NGOs' donations are seasonal and therefore not entirely reliable. The attitude of the farm labourers is also a problem as they rather wait for money from the government at the end of the month in order to go buy produce in the huge retail stores instead of working on the farms or opt to buy produce off the farm gardens. It is also difficult to attract the younger unemployed as farm labour is seen to be 'low class' and it is thus far more common to find older pensioners working in these gardens.

Production Capacity

Nomonde produces over and above the demand from the community and can thus sell the surplus in production in stores. The dilemma is getting these vegetables into stores. She believes her gardens do not have enough exposure. Marketing and distribution is usually the largest obstacle small scale farmer's face. She would like sponsorship from major retailers such as Woolworths, Pick n Pay and Shoprite just to name a few. First and foremost, she would like to see how she can get a section on the grocery section in these stores where her produce can be sold, keeping 80% of the proceeds. Moreover, she would like to establish on a medium scale at first, her earthworm farming. She hopes to do this through the retailer stores and she reckons that if these earthworms are marketed well, they can greatly increase the quality of vegetables grown.

Workers and/or community members

Labourers on the gardens are mainly the elderly women who are looking for a means of income or simply food security. The agricultural activity provides a bonding ground as well as exercise perks therefore promoting healthy living. Furthermore, these community members labouring in the farms have first hand access to the farms produce when it is ready therefore lack of food is never an issue.

Challenges of farmers

The farmers are not equipped with specific skills. Nomonde noted that most farmers can do the basic farming and weeding, but they lack basic knowledge on methods efficient for specific types of crops. Therefore when they are faced with challenges when growing certain crops, they seldom know how to go about it and this leads to crop failure or wasted resources. Nomonde notes that the disparity gap is a major hindrance to development and growth of the agricultural industry. She emphasizes on important practical learning is for the less skilled majority. However, FET Colleges that have a combination of both practical and theoretical work, accept only a limited few. Nomonde notes that skills and education are by far the biggest hindrance to growth in the agricultural sector.

Furthermore, there is a 5 day practical held on a piece of land which the City of Cape Town has partitioned for that use. On the other hand, the individuals who cannot afford such facilities end up looking for farm land in private institutions, clinics, schools and old age homes. In addition to this, contact with the Ministry of Agriculture has proved futile as there is too much bureaucracy and when less privileged farmers face problems farming, they have no other avenues to go to.

Nonetheless, the scarcity of water problem has been addressed as there have been boreholes drilled by the local government. Water is generally not a problem as most of Nomonde's farming methods are indigenous methods based on low consumptions of water in comparison to modern machinery intensive methods. This means that irrigation systems used in the indigenous farming systems are far less expensive than those used in the modern farming systems, making them more sustainable. However, more efficient transfer of water to the farms from the boreholes would be in order.

Main risks for farmers' income

Farmers do not earn an income from their farming endeavors, however, they occasionally receive R984 from the government's Independence Development Trust (IDT) for about 3 to 6 months. The IDT supports this initiative from funds donated by NGO's and NPO's.

The main challenge is that the young farmers seldom co-operate. They will farm as long as they are getting their stream of income from the IDT and as soon as the months elapse, they opt out. This poses a challenge because it is the grandparents of the young generation parents who have to take to the farm and work in order to support their households. Therefore, the average age in the garden is about 35-40yrs.

It is notable to realize that the grandparents get R1300 from the government and this solely is not sufficient to support a household so they work on the farm and any produce they receive goes to reduce the food budget in the household.

Contributions by City of Cape Town

Once a proposal has been written to the City of Cape Town agricultural sector on the willingness or initiative to pursue a farming career, they usually deliver compost, seeds, two rakes, 2 drums and a wheelbarrow as a kick start to your career. This is very positive as farmers are supplied with the mere basic farm implements they require.

Other Projects Nomonde is involved in

Nomonde recently started a new project in primary schools called the Swap Shop. It involves recycling old items whereby learners bring their old items such as clothing, reading books and toys and swap amongst each other. She further incentivizes these learners by giving them stationery if they bring their recycled items to school.

Nomonde passionately speaks of her desire to advance the talent of little children who can draw on fabric or using a paint brush. This however, will only remain a pipe dream unless she receives sponsorship. She also has the talent of making woven baskets and would like a forum/workshop setting where she can train the grandparents who work on her farm how to weave these baskets as it is more sustainable and economical than the use of cartons which they currently use to store and sell produce.

Conclusion

This report has discussed the situation of food security in South Africa and has shown clearly that household food security does not exist for the majority of the population and that there is not clear policy on food security in South Africa. The costs of household food insecurity are high and this paper has argued why communal vegetable gardening is an efficient way in improving food security.

Vegetable gardens are cost-effective, environmentally friendly and sustainable. It is evident from the research results that there are a number of policy interventions that need to take place in order to fully reap the benefit of food gardens, some being implemented by NGOs and others by government. Moreover, gardeners enhanced community participation in their projects and improved social ties, networks and relations through interaction which improves unity in the community.

Furthermore, this specific case study highlights the important role that women play in domestic and socio-economic life. According to the International Fund for Agricultural Development, across Africa women produce more than 70% of the continent's food at a subsistence level (Doss, 2011: 2). Considering therefore the importance of women in agriculture, it is not possible to achieve national development without developing this important and substantial segment in the country's economy.

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