

**Improving sustainable livelihoods through organic
produce marketing opportunities: Evaluation of the
Ezemvelo Farmers Organisation.**

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ABSTRACT

For many poor rural South African communities, involvement in agriculture remains one of their most secure livelihood strategies. For the majority of these people, indigenous knowledge and the use of local materials, resources and skills is often the only asset they possess. The Ezemvelo Farmers Organisation (EFO) from the community of Embo in KwaZulu-Natal is one such group of rural people befitting this description. In the absence of financial resources to purchase relatively expensive agricultural inputs, accompanied by a lack of infrastructural development in their community, EFO farmers have become organic farmers by default. EFO members produce mainly traditional organic crops. However, little has been documented about the potential value of trade in these products. The purpose of this study was to explore potential marketing opportunities for traditional organic products through the mobilisation of indigenous knowledge, skills, and natural resources to improve the livelihoods of EFO members.

A research team of three postgraduate students, each involved in his/her own independent study, worked in collaboration to collect relevant research information. Five data collection tools were used to collect this information. These were a household survey, a sustainable livelihoods analysis, a forcefield analysis, a stakeholder analysis, and a workshop. Research results showed that there are five stakeholders involved in EFO activities, each with his/her own personal interests. EFO members mainly produce amadumbe, sweet potatoes, and potatoes, which they market to a packhouse, the local community, and to hawkers. Other crop varieties are produced for household consumption and small quantities are sold to the local community and hawker markets. Farmers obtained a slightly higher price for crops sold to the packhouse as compared to the other two markets.

The packhouse was the farmers' largest market for the 2002 season. However, the packhouse market was unsustainable for farmers because of problems due to the delays in payments for produce, the high quantities of crops that are rejected because they did not meet the quality control standards of the packhouse, and problems due to the unreliability of transport from Embo to the packhouse. The majority of EFO members' farms were

also found to be unprofitable due to the high costs of inputs and losses to production. Constraints such as a shortage of kraal manure for soil conditioning, unfenced properties, a lack of water for irrigation, and the unavailability of a tractor for ploughing were found to be contributing factors to the unprofitability of member farms. Recommendations for improving marketing and profitability were that projects involving farmers should be regularly evaluated, EFO members seek business management skills, direct contracting agreements with their suppliers, explore value added products, and for Government to play a role for rural enterprise development to take place.

DEDICATION

This research is dedicated to my son Langalibalele James Ndokweni who had to endure long periods without his mother's love and care; to my mother Bajabulile Winnifred Ndokweni for her constant support and understanding; my supervisor and guru Dr Sheryl L Hendriks for her interest, valuable advice, insight into the work that I do, and for the many opportunities she has afforded me during my academic career; and to Julie Smith, for sharing a passion for development work and for tirelessly trying to make a difference in people's lives.

DECLARATION

I hereby declare that the research in this thesis is of my own investigation. Where use was made of the work of others, this has been duly acknowledged in the text.

The financial assistance of the National Research Foundation (NRF) towards this research is also hereby acknowledged. Opinions expressed and conclusions arrived at, are those of the author and are not necessarily to be attributed to the NRF.

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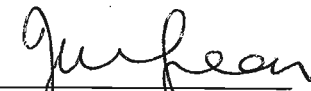
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CHAPTER 1

THE PROBLEM AND ITS SETTING

1.1 Importance of the study

Many poor South Africans are faced with the challenge of rapid unemployment and the struggle to fight food insecurity and eradicate poverty. The problem is aggravated in rural areas (especially amongst the unemployed African population) that have been denied many opportunities to sustain their livelihoods by apartheid's unjust policies. Various livelihood strategies that the rural poor employ to alleviate food insecurity and ensure sustainable livelihoods have been documented (World Bank Development Reports 1998; 1999; 2000), but little is documented about the potential value of trade in traditional organic products.

Livelihood insecurity is a core dimension of most poverty, and in order to make an effective contribution to poverty eradication, people must have greater control in addressing their livelihood opportunities (DfID 2002). If the poor have better access to resources and assets then they can respond more effectively to livelihood insecurity and vulnerabilities. South Africa's rural populations employ various innovative local skills through indigenous knowledge systems in order to meet household food security needs and to generate income. Many of these traditional practices have enormous untapped potential in the rapidly growing demand for organic produce. However, these have not been widely documented.

The Department for International Development (DfID) framework for Sustainable Livelihoods is a model for participatory development, developed as a tool that helps to understand factors and issues that affect people's livelihoods, as well as a tool for use in planning and management (refer to figure 1.1). This model is one of the tools used for conducting a sustainable livelihoods analysis with the Ezemvelo Farmers Organisation (EFO) from the community of Embo in KwaZulu-Natal. EFO is a group of organic farmers who are investigating various ways of expanding market access for their traditional organic produce in order to increase their incomes. The potential of traditional produce in organic markets has previously not been investigated. This

study is therefore important for EFO members but also for wider rural economic development in South Africa, as it will contribute to knowledge about traditional enterprises and sustainable livelihoods. Participatory action research will be conducted to evaluate the sustainability of farming livelihoods of EFO members through exploration of the marketability and profitability of their organic produce. Research will be undertaken to investigate whether EFO members can identify sustainable urban and peri-urban market opportunities for their produce. An investigation will also be conducted into the profitability of EFO members’ farms in order to assess whether the profitability of production could be improved through the activities of EFO.

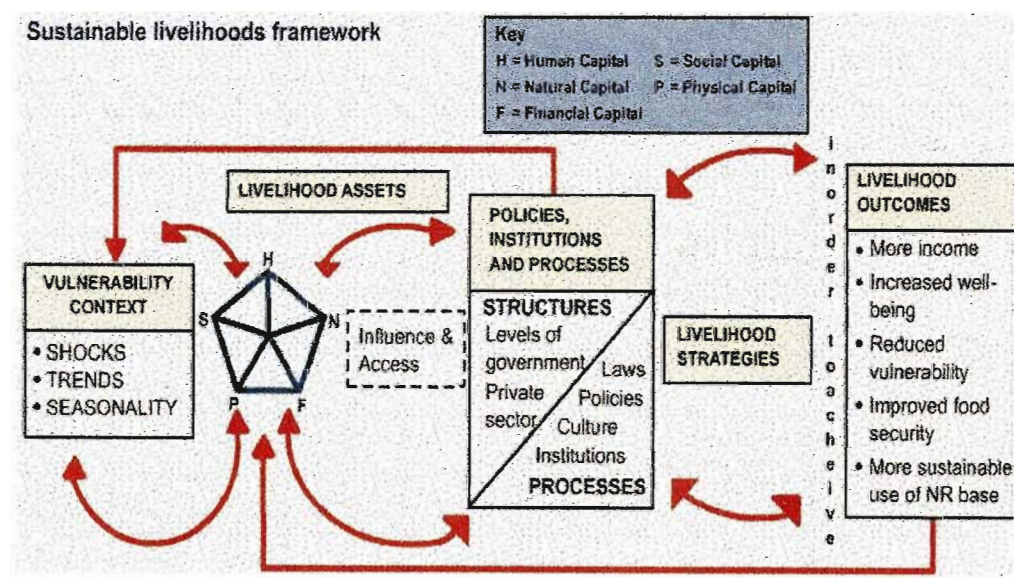


Figure 1.1 Sustainable livelihoods framework (DfID 2002).

Results of this research will be fed back to EFO members and used as input for discussions with interested community members regarding enterprise opportunities in an endeavour to help them identify constraints that negatively impact on the success of their economic activities and how to overcome these.

1.2 Statement of the problem

To explore potential marketing opportunities for organic products through the mobilisation of indigenous knowledge, skills, and natural resources in order to improve the livelihoods of EFO members.

1.3 Sub-problems

Sub-problem one: How can the marketability of EFO's traditional organic produce be improved in order to sustain the livelihoods of EFO members?

Sub-problem two: Can the profitability of production be improved for farms of the EFO?

1.4 Hypothesis

EFO members' marketing of organically grown traditional produce is sustainable and profitable.

1.5 Study limitations

This research was limited to EFO members and the results thereof cannot be generalised to other organisations and / or community groups. Participatory action research undertaken in this project aimed at helping EFO members to improve marketability and profitability for their traditional organic produce. However, investigating the possibility of penetrating these market opportunities was not covered in the study. For complete, iterative and cyclical participatory action research, this stage will have been important to assess for this project's intervention to have been more effective.

A further limitation of this study was that the agroclimatic conditions of the area, and the soil quality of EFO members' plots are not investigated by this study. The quality of EFO members' organic produce is also not known.

1.6 Definition of terms

Indigenous knowledge: This term refers to local knowledge that is unique to every culture or society and is the basis for local-level decision-making in various community activities and also provides problem-solving strategies for communities.

Participatory Action Research: The collaboration between researchers and participants for a better understanding of a problem and the successful elimination of the problem, resulting in raised awareness in people of their own abilities and resources to mobilise for social action (Terre Blanche & Durrheim 1999).

Sustainable livelihoods: A livelihood is sustainable when it is capable of continuously maintaining or enhancing the current standard of living without undermining the natural resource base. For this to happen it should be able to overcome and recover from stresses and shocks (e.g. natural disasters or economic upsets).

Sustainable livelihoods analysis: This is an analysis of livelihoods using the core principles of livelihood analysis which can be summarised as focusing on people, being responsive and participatory, working at various levels, working with partners, being dynamic, as well as taking a wide view of sustainability.

1.7 Abbreviations

ATTRA	Appropriate Technology Transfer for Rural Areas
CCOF	California Certified Organic Farmers
DACST	Department of Arts, Culture, Science and Technology
DEDT	Department of Economic Development and Tourism
DfID	Department for International Development
DoA	Department of Agriculture
EFO	Ezemvelo Farmers Organisation
EMCDO	Embo Masakhane Community Development Organisation
FAO	Food and Agriculture Organisation
GE	Genetic Engineering
GMO	Genetically Modified Organisms
IFAD	International Fund for Agricultural Development
IFOAM	International Federation of Organic Agriculture Movements

IK	Indigenous Knowledge
ITDG	Intermediate Technology Development Group
KZN	KwaZulu-Natal
NFU	National Farmers Union
NGO	Non Governmental Organisation
PPA	Participatory Poverty Assessment
SANPAD	South Africa Netherlands Project on Alternative Development
SLA	Sustainable Livelihoods Analysis
TWN	Third World Network
UNCED	United Nations Conference on Environment and Development

1.8 Assumptions

It was assumed that EFO members would have reliable data sources that are necessary for an evaluation of the profitability of their farms to be properly investigated. It was further assumed that the data obtained from members was reliable and true, and that members would not withhold any vital information that might affect the results of this research.

1.9 Organisation of thesis

The EFO from the community of Embo, KwaZulu-Natal, is an example of innovative rural enterprise development through mobilisation of traditional farming knowledge to enter the organic market in South Africa. The potential for this initiative to improve rural livelihoods is explored through investigation of the marketability and profitability of EFO's organic traditional produce. The next chapter presents the review of relevant literature while chapter three presents the characteristics of the farmers' organisation. The methodology used is presented in chapter four and the findings thereof are presented in chapter five. Chapter six and chapter seven address each of the two subproblems. Finally, the conclusions and recommendations are presented in chapter eight.

CHAPTER 2

REVIEW OF RELATED LITERATURE

2.1 INTRODUCTION

More people are living in abject poverty than ever before (Third World Network (TWN) 2002). It is estimated that about 1.2 billion of the world's poorest people living on less than one dollar a day live in rural areas (DfID 2002). Millions of poor people living in rural areas remain trapped in poverty owing to disadvantages stemming from remoteness, lack of education, and insecure and unproductive jobs (among other reasons). To this end, the United Nations' Millenium Development Goal for ending world poverty is to halve the number of people living in poverty by the year 2015 (UNDP 2002). To rural people, agriculture is often their main source of income. One of the ways of meeting the Millenium Development Goal lies in the potential for growth in agricultural production in rural areas. For Africa in particular, this potential rests in the hands of the largely untapped potential of rural communities. The predominant farming practices employed by rural farmers are indigenous knowledge systems encompassing traditional wisdom and knowledge, which is under explored and untapped by commercialisation.

2.2 Sustainable agriculture

The advent of the Green Revolution in the developing world in the 1970s introduced new seeds, agrochemicals and genetically modified crops through biotechnology (Rosset *et al*, 2002). The argument was that these produced higher yields, and increasing yields meant more income for poor farmers, thereby ending poverty. Irrigation and petrochemical fertilisers (which allow for a much more efficient conversion of industrial inputs into food) replaced the traditional farming practices of farmers in the developing world (Rosset *et al*, 2002). However, the Green Revolution did not address the underlying social causes of poverty such as access to technology's benefits nor poverty. This system relied upon external experts for dissemination of agricultural technologies and ignored local talents, skills and indigenous knowledge. This high external input agriculture has therefore become synonymous with conventional, commercial agriculture.

Whilst biotechnology achieves effective productivity at larger scales through the use of technological means, concerns of over-reliance on chemical pesticides, herbicides and fertilisers, reduced biodiversity, deterioration of soil quality, increased risk of crop disease, chemical residues in food and health risks to farm workers, have been raised over this agricultural model (PSRAST 2002; Ching 2002; TWN 2002). High input, energy intensive, corporate-style agriculture is not only non-profitable to small farmers, but further erodes the fragile ecosystem's natural resources and aggravates rural poverty (Viresh 2002). The change from planting a variety of food crops to large mono-cultural fields causes the nutrients in the soil to be exhausted and large tracts of land become barren. Farmers are forced to purchase pesticides and herbicides annually from biotechnologically patented agricultural companies, creating a dependency situation. Furthermore, the high technology land-races that are introduced to farmers are more dependent than the original land-races that farmers used. When farmers realise this and wish to return to the old land-races, they no longer have the seed. This narrow focus of production ultimately defeats itself as it destroys the very resource base on which agriculture depends and is therefore unsustainable.

Organic agriculture is one of several approaches to sustainable agriculture. It stems from a philosophy this particular way of farming is better for the soil, the crops and livestock, the environment in which it operates, the people who work in it, the products and the people who consume these products (Food and Agriculture Organisation (FAO) 2002; The United Kingdom Parliament 2002). Organic agriculture includes all systems that promote environmentally, socially and economically sound production of food. Based on the idea that a farming system should be looked at as a whole, this holistic philosophy recognises that all the ecological components interact and should be allowed to do so. The natural capacity of plants, animals and the landscape are respected and quality in all aspects of agriculture and the environment is optimised (Walaga 2002, cited by Soel 2002).

Organic agriculture is unlike the dominant model of commercial agriculture that is based on intensive mono-culture, high chemical inputs and GE crops that could pose new risks to human health and the environment (see table 2.1). Improving

production, while simultaneously reducing environmental impacts, organic farmers can produce yields for a variety of crops in a wide range of locations that are competitive and even superior to products produced by industrial methods. This diversity in production in turn increases income-generating opportunities whereby farmers can generate net cash returns from both crop and animal production that are often superior to commercial farmers. The principles of organic agriculture are discussed in the following section.

Table 2.1 Key differences between commercial agriculture and sustainable agriculture (ATTRA; FAO; Institute of Organic Farming 2002)

Commercial agriculture	Sustainable agriculture
Replaces traditional farming practices of farmers	Relies on the knowledge and skills of farmers
Increased risk of crop disease; erodes crop diversity	A variety of food crops are planted
Introduces new seeds and GMOs through biotechnology	Preserves a wide range of traditional seeds free of GE
Biotechnology achieves productivity at large scale through the use of technological means	People-centred rather than technology-centred
Over-reliance on chemical pesticides, herbicides and fertilisers	Based on a holistic scientific approach; minimises non-renewable inputs
Reduced / loss of bio-diversity exhausts soil nutrients and causes land to become barren	Conservation of non-renewable resources
Accumulation of agricultural chemicals in natural ecosystems pollutes rivers and endangers aquatic species of animals	Environmental, economic and social sustainability
Erodes fragile ecosystems	Maintains and enhances the productive and regenerative capacity of the natural resource base
Corporate-style agriculture is non-remunerative to small farmers, aggravating rural poverty	Provides employment and rural development that builds the capacity of rural communities
Health risks to farm workers	Promotes and protects social capital
High input and energy intensive system	Reduces vulnerability and strengthen self-reliance

2.3 Principles of organic agriculture

There are several compelling principles that characterise organic farming and most operations will reflect these to a greater or lesser degree (Appropriate Technology Transfer for Rural Areas (ATTRA) 2002). There is wide variation in these principles since each farm is a distinct entity. However, the most common principles of organic farming include biodiversity, integration, sustainability, natural plant nutrition, and natural pest management. The merits and problems pertaining to each principle are discussed, each in turn.

2.3.1 Conservation of biodiversity

This principle of organic farming rejects the idea that the object of agricultural science is the production of a few selected crops in restricted spaces. Instead, the diversity of crops, animals and farming systems is promoted by the organic farming philosophy (ATTRA 2002). Biodiversity in the ecosystem such as the use of crop residues to feed animals, crop rotations and soil fertility building, intercropping, composting, and animal manure, links food, ecology and livelihood. This shift ensures that land units are not exhausted by crop production, and holds the nutrients in the soil whilst having fewer external inputs for sustainable agriculture (Auerbach 2002). Diversity in production also increases income-generating opportunities and spreads the risks of failure over a wider range of crops. Crop rotations encourage a diversity of food crops, fodder and under-utilised plants that add to improving overall farm production and fertility, and may assist in the on-farm conservation of plant genetic resources. Production systems such as mono-cropping reduce biodiversity or rely on a small range of exotic biodiversity (ATTRA 2002). Research on ecological (organic) agriculture now shows that mixed farms provide more equitable and sustainable livelihoods (Mazhar *et al* 2002).

The protection and enhancement of local biodiversity sustains livelihoods for farmers. By encouraging better agricultural practices such as biodiversity, poor people's lives and health are significantly improved, and natural ecosystems are protected. However, the diversification of crops typically found on organic farms, with their different planting and harvesting schedules may be labour demanding and time-consuming, and requires significantly greater labour inputs than commercial farms

(FAO 2002). However, proponents of organic farming argue that the labour demand, if distributed more evenly, could help stabilise employment (Auerbach 2002).

2.3.2 Integration of enterprises

This principle differentiates organic farming from commercial farming in that the land use system of organic farming consists mostly of closed cycles of nutrients, energy and materials, whereby environmental, social and economic effects are considered simultaneously at the micro and macro level (Institute of Organic Farming 2002). This system encourages and restores full biological activity to the ecosystem. For example, the growth of beneficial insect populations and fixing nitrogen from legumes is encouraged, thereby suppressing pests and promoting soil fertility (FAO 2002). Food quality, food safety and animal welfare are integrated. Integrating livestock into the system adds income through production of meat, eggs and dairy products, as well as providing draught animal power.

The principle of integration in organic farming recognises the importance of a systems approach, but is willing to simplify the system in order to gain greater control and achieve greater agricultural efficiency. However, organic producers believe that this efficiency is often sought at too high a cost to other important features. For example, where farmers have discarded their synthetic inputs and converted their operations to organic production, some loss in yields is typically experienced and sometimes it may take years to restore the ecosystem for organic production (FAO 2002).

2.3.3 Sustainability of production

The growing worldwide environmental movement has raised the awareness of the people in Africa to mobilise resources against environmental degradation (Soel 2002). Organic farming fights for environmental justice. The environmental benefits of organic farming have also caught the attention of numerous Non-Governmental Organisations (NGOs) and agricultural professionals, making this is one of the major advantages of this farming method. The re-cycling of organic matter, conservation of soil and water resources, and the use of appropriate and homemade technologies ensure bio-diversity. On the other hand, this natural resource use and conservation

makes organic farming environmentally protective and therefore sustainable in terms of the renewal and protection of resources.

X As viable agriculture based on sound farming practices, organic farming creates integrated, humane, and environmentally sustainable agricultural production systems. The objective of sustainability lies at the heart of organic farming, where the aim is to optimise land, animal, and plant interactions, preserve natural nutrient and energy flows, and enhance biodiversity, all of which contribute to sustainable agriculture (ATTRA 2002). Many vulnerable soil and water protection and conservation techniques used to combat erosion, compaction, salinisation and other forms of degradation are adopted by organic farmers (FAO 2002). In Kenya for example, organic farming that is practised in small kitchen gardens involves the use of few selected farming technologies such as double digging, composting, use of farmyard manure, green manure, liquid manure and earthworm composting among others (Mukhwana 2002).

X The economic sustainability of this method is demonstrated by its affordability and manageability in that the costs of inputs are reduced through the use of composts, natural or botanical pesticides and other local inputs. Farmers need not spend many resources on external (and expensive) inputs, so it is a good agricultural method for poor people. Farmers use whatever water and naturally available nutrients available to them to grow enough food to support themselves and their households via this method. There are also business opportunities that are created by the various aspects of organic farming from production, processing, certification, and inspection to supermarkets and distribution system. These economic benefits of organic production in turn increase food security among small farmers and net cash returns can be generated from both crop and animal production.

2.3.4 Natural plant nutrition

This principle encompasses the principle that soil fertility is the basis for the health, yield capacity and quality of plants and animals and therefore also for human health (Institute of Organic Farming 2002). Soil nutrient management and environmental protection are paramount in the adoption of this principle. It is understood that plants

obtain minerals and other useful compounds through the external digestive processes of the soil system within reach of their roots. As is the norm with conventional agriculture, applying soluble fertiliser to a crop floods the plant with those nutrients, causing nutritional imbalances. This in turn leads to crop diseases, insect infestations, and reduced food quality. On the other hand, organic philosophy maintains that it is the organisms responsible for the soil digestive process that need to be properly cared for and nourished. Toxic chemicals and practices like excessive tillage that are harmful to soil organisms are therefore avoided and organic matter and natural rock minerals added (ATTRA 2002).

These agricultural practices of organic farming have positive impacts on the environment through soil nutrient management which sustains fertility, and in turn can increase the sustainability of agricultural operations of rural communities. Moreover, the use of crop rotations, organic manure and mulches improves soil structure and encourages the development of a vigorous population of soil micro-organisms. It is this approach to soil building and plant fertilisation that is the true basis for the belief that organic food and feed has superior nutritional value (ATTRA 2002).

2.3.5 Natural pest management

Pests, whether they are weeds or insects, are a concern to all farmers. In the organic philosophy, pests are considered to be a cause of agricultural ecosystem imbalances. This means that pests are indicators of the natural ecosystem and predominate when soils are too acidic or basic; when the soil structure is poor, conditions become anaerobic, or may be stimulated by excessive fertiliser or manure (ATTRA 2002). The belief is that insects are attracted to inferior or weak plants and are naturally repelled by vigorous well-nourished plants. Natural pesticides, fire, biological controls, plants with natural pest control properties are instead employed by organic farmers rather than using synthetic pesticides which, when misused, are known to kill beneficial organisms, cause pest resistance and often pollute water and soils. Indeed, toxic synthetic pesticides poison an estimated three million people each year, the reduction of which should lead to improved health of farm families (Soel 2002).

2.4 Mobilisation of skills, indigenous knowledge, and natural resources

MS The principles of organic agriculture discussed in the preceding section have been practiced by farmers in Africa for years and have been called 'poor man's farming' (Mukhwana 2002). Many farmers in Africa grow crops without chemicals and fertilisers because of the high costs of inputs, which are unaffordable to many small-scale rural farmers (Mukhwana 2002). Moreover, due to high illiteracy rates, rural farmers are not able to read and follow instructions on how to use many inorganic inputs. Poor infrastructure and inefficient input distribution systems mean that conventional, commercial-type agricultural methods are rarely employed by small-scale farmers (Walaga 2002, cited by Soel 2002). Organic agriculture depends on local resources, knowledge, skills and institutions and over time specific farming systems and methods have evolved (Mukhwana 2002). This is what has come to be known as indigenous knowledge.

There is no single definition for indigenous knowledge. Instead, several traits distinguish it broadly from other knowledge. Being unique to a particular culture and society, indigenous knowledge is the knowledge base for the poor and is developed around peoples' specific conditions (World Bank 2002). It is embedded in community practices, structures, institutions, relationships and rituals and is not systematically documented. It is the basis for local decision-making in agriculture, natural resource management and other activities (ATTRA 2002). Indigenous knowledge systems are dynamic and innovate from within, and new knowledge is continuously added (Nuffic 2002).

MS The typologies and features of indigenous knowledge at a community level in the category of agriculture can be in soil and land classification, cultivation, plant protection, and characteristics of crops. In managing natural resources better, new scientific tools need to be combined with knowledge about natural resource management in order to avoid increasing water shortages, loss of arable land, deforestation, loss of biodiversity, and depleted fisheries (Nuffic 2002). Indigenous knowledge should also be integrated with scientific knowledge in the interest of sustainable development (Soel 2002). Farmers, with their existing knowledge, need to integrate this with the new information in order to deal with emerging problems.

213 The use of organic farming technologies that use local materials, resources and skills attaches great value to the use of local indigenous knowledge, talents, institutions and language in order to catalyse community awakening and development (Mukhwana 2002).

213 Utilising indigenous knowledge helps to increase the sustainability of development efforts, because the indigenous knowledge integration process provides for mutual learning and adaptation of new methods, which in turn contributes to empowerment of local communities (Nuffic 2002). Empowerment, especially for the poor, is a core objective of most development efforts and therefore indigenous knowledge is a significant resource that could contribute to the increased efficiency, effectiveness and sustainability of the development process (Oettle 2001). This is achieved by helping communities to value their own knowledge and learn from it. It is for this reason that the promotion of organic agriculture in Africa becomes vital (Mukhwana 2002). In the past, indigenous knowledge about local varieties of crops, farming techniques, and other local technologies tested through the generations rarely made its way to scientists who could incorporate it in their work (Nuffic 2002).

However, in recent years, new approaches of understanding the livelihoods of poor people have incorporated indigenous knowledge by putting people first and valuing the contribution of indigenous knowledge to development efforts. The sustainable livelihoods approach is one such development tool. This so-called 'livelihoods approach' puts people first and enables them to meet their needs without compromising the ecosystems that support them and their communities (Sustainable Development Gateway 2002). In recent years there has been an emergence of ideas on rural development by a number of prominent agencies such as the Department for International Development (DfID 2002), the Overseas Development Institute (ODI 2002), the Intermediate Technology Development Group (ITDG 2002), to name a few. These approaches provide a fresh dimension to poverty analysis and working with people, enabling communities to build upon their own strengths and realise their potential, while at the same time acknowledging the effects of policies and institutions, external shocks and trends (Carney 1999). The following section

discusses the core principles and methodology of the most widely used DfID approach.

2.5 The sustainable livelihoods approach

The concept of livelihoods (when understood holistically) includes the social, economic, cultural, and spiritual needs of people met through varied ways of living that meet individual, household, and community needs. For a livelihood to be sustainable, it must be adaptive and able to withstand stress whilst safeguarding, rather than damaging the natural environment (SD Gateway 2002). Applicable to different contexts and situations, the contributions from the “top” (or experts) are merely in working together with the poor, sharing accounts of local initiatives that encourage new ways of approaching poverty and development. As such, sustainable livelihoods empower individuals to meet their basic needs by allowing them to make their own decisions about how to fulfil their needs and to redefine development according, not only to these needs, but also to people’s ambitions. Sustainable livelihoods are therefore in this regard both a goal, as well as an approach. The DfID sustainable livelihoods core principles are that it is people centred, responsive and participatory, multi-level, conducted in partnership, sustainable, and dynamic (DfID 2002). Based on these principles, the DfID sustainable livelihoods framework is a useful tool for putting the approach into action.

2.5.1 Sustainable livelihoods analysis (SLA)

Livelihood analyses are the key to assessing the sustainability of poor people’s livelihoods, as well as identifying the major problems faced by the people. In practice, the DfID framework used for conducting a SLA, helps in identifying important questions such as people’s livelihood priorities and how policies, institutions and processes affect them, describes typical relationships between these factors and issues, and the construction of livelihoods and how they change over time (DfID 2002). Furthermore, it gives an impression of how different factors relate to each other and in doing so, stimulates debate and reflection (refer to figure 1.1).

Poverty is a multi-dimensional phenomenon that requires a multi-sectoral approach that is based on the six core principles listed above. The interacting components that

need to be identified when conducting a SLA are: the vulnerability context; livelihoods sets; policy, institutions and processes; livelihood strategies; and livelihood outcomes (refer to figure 1.1). The vulnerability context identifies trends, shocks, and aspects of seasonality, which are external factors that make poor people vulnerable to insecure and unsustainable livelihoods. The areas of people's lives over which they have influence and / or control are identified in order to understand the impact of these factors, and how negative aspects can be minimised or the factors influenced. This is achieved while also recognising that different social and economic groups may be exposed to different vulnerability factors (DfID 2002). Therefore it is important to assess the effect of an issue that has been identified as important and whether people have developed ways of coping with it in order to minimise its impact.

Policy, institutions and processes relate to the services and environment created by governments which have an effect on all aspects of livelihoods and which people can, in principle and within limits, influence (DfID 2002). These factors operate at all levels and in all spheres and also influence inter-personal relations. Analysis should therefore cover all aspects that have a key influence on people's abilities to pursue different livelihood strategies. Livelihood assets in the framework are identified as five core categories *viz*, human capital, social capital, natural capital, physical capital, and financial capital. It is understood that the choice of livelihood depends upon which of these assets (and resources) are available. Whilst a combination of these assets and resources are required to achieve positive livelihood outcomes, they are not necessarily required in equal measures (DfID 2002).

Livelihood strategies are plans that people set out and follow in order to achieve their livelihood objectives. These plans need to be adjusted as and when they need to be, depending on priorities, preferences, and availability of resources. The livelihood assets mentioned previously come into play when deciding which ones to use effectively, in such a way that there is greater ability to withstand – or adapt to – shocks and stresses, or times of crisis (DfID 2002). Due to the diverse nature of livelihood strategies, it is important to identify and analyse the ones that maximise chances of achieving positive livelihood outcomes.

Livelihood outcomes, as the fifth component of the SLA, are identified as the goals and dreams that people wish to achieve by pursuing certain livelihood strategies. It is important that these outcomes are classified into sustainable and unsustainable outcomes in order to establish the life span of these goals. Whilst trade-offs can be made between outcomes, it is important to identify clearly those outcomes that are sustainable in order to focus attention on results and the progress that is made towards poverty elimination (DfID 2002).

The different elements considered in the Sustainable Livelihoods framework are important in the understanding of livelihoods and should be considered to represent a dynamic picture in which all factors affect each other. Important links should be identified between all framework components so that no issue is overlooked, and to put poverty reduction into action. Of importance in understanding the livelihood strategies of poor people who are involved in the enterprise of organic products is organic certification. Certification in organic agriculture can be a farmer's way to earning recognition for their farm, as well as making a commitment to the farmer's customers (California Certified Organic Farmers (CCOF) 2002). Although not usually a requirement for trade in rural informal markets, certification for organic produce is required for national and export markets discussed in section 2.7. Organic certification standards are briefly described in the following section.

2.6 Organic certification

National standards for countries around the world have been developed to facilitate uniform procedures among certifying bodies and there are set organic standards that have to be followed by farmers who intend selling any product as organic (Soel 2002). These standards cover all aspects from production to labelling of organic products in line with the European Union Regulation (EU) and International Federation of Organic Agriculture Movements (IFOAM) basic standards (ZMP 2000, cited by Soel 2002). Most certification programmes restrict the use of mineral fertilisers, which may be necessary to supplement organic manure produced on the farm. Certified production requires that the seed is not treated with pesticides, and if possible, be organically grown. This presents some difficulty because of the special requirements of ordering and the added effort of making a homemade mix such as

compost (Soel 2002). Moreover, organic versions of inputs are not always available. Transplants therefore must be purchased from a certified organic source or otherwise be grown using organic methods. Natural and organic fertilisers from outside the farm such as rock phosphate, potash, guano, slaughterhouse by-products, ground limestone, seaweed, wood-ash may also be used if they comply with organic requirements (FAO 2002). Since few developing countries have certification organisations of their own, certification is expensive because of the costs of hiring an organic certification agency to annually inspect and confirm that farms adhere to the standards. However these costs can be reduced if local inspectors can be contracted (Soel 2002).

2.7 The potential for organic products in developing countries in sustainable livelihoods

Organic agriculture is entering mainstream agriculture as most companies affirm their environmental commitment by implementing more ecologically focused programmes (Crucefix 1998). There is also growth and consumer support of organic agriculture due to the controversy surrounding genetically modified organisms (GMOs). Organic products are environmentally benign in that use is made of natural inputs in their production whereas GMOs are chemically engineered species that have been found to be detrimental to the state of the environment. Most retailers in South Africa now offer and promote organic, locally grown foods, natural foods and other products, and play a critical role in supporting the market demand for these products. Much of the impetus with the organic products market is tied to its growth as a niche market opportunity. The international market for organic products with premium prices is an opportunity for farmers to increase their incomes (ATTRA 2002).

There exists a potential for organic products enterprises in sustaining the livelihoods of the poor in most developing countries. However, the importance of conducting market research as a tool for gathering information for an enterprise cannot be overemphasised. This information helps entrepreneurs with decision-making as well as analysis of consumers and markets for products that the enterprise intends to sell (Walaga 2000, cited by Soel 2002). Sometimes called a feasibility study, this evaluation of the potential success of an enterprise involves asking a series of

questions about the existing and potential groups of customers (Walaga 2000, cited by Soel 2002). Certain groups or market segments are often targeted after all the options have been assessed and there are always fundamental questions that ought to be addressed (see table 2.2). Once this has been done, then the most promising options need to be identified, including considerations for transportation needs and distances to markets.

Table 2.2 Key questions relating to the marketing of an enterprise (ATTRA 2002; ITDG 2002)

Typical marketing questions for an enterprise
Where am I going to sell the products? Regional or international buyers?
Who is the customer? How often do they buy? In what quantities? How much do they pay?
Have I been in contact with my potential customers? Do I have strong indications / firm undertakings / commitment from them that they will purchase my products when these become available?
What is the size of the potential customer base?
Where do the customers live, and how will their location influence my selling to them?
What are the customers' needs and desires? Will it be people who are interested in healthy foods or with special dietary needs?
Am I going to sell directly to consumers from the farm, farmers' markets, selling directly to restaurants and hotels, cooperative marketing, selling wholesale to a distributor, or processor, etc?
Am I going to wholesale to the commodity market?
What are the seasonal price fluctuations I can expect?
What are the quality standards that I must meet?
How many hours will it take to research direct markets?
Are there legal or food safety considerations?

Sales of organic food products have increased rapidly in recent years (Crucefix 1998). The organic customer is educated and well aware of the health benefits of organic foods. The new trend of organics has increased the demand for a variety of organic foods all year round (FAO 2002). This has also created new export opportunities for many developing countries. Many countries have started to tap lucrative export markets for organically grown products for example, tropical fruit to the European baby food industry, Chinese tea to the Netherlands, and soybeans to Japan (FAO 2002). Organic products of all kinds from Africa are increasingly present on international markets (see table 2.3). Currently, organic produce imports account for

75 percent of total sales in the United Kingdom, making it more dependent than any other European country (National Farmers Union 2002).

Table 2.3 African organic agriculture products on the international markets
(Walaga 2000, cited by Soel 2002)

Products on international market	Country of Origin
Coffee	Uganda, Tanzania, Madagascar
Cotton	Uganda, Senegal, Egypt, Zimbabwe, Benin, Mozambique
Cocoa	Tanzania, Ivory Coast, Madagascar
Pineapples	Ghana, Uganda, Mauritius, Cameroon, Madagascar
Sweet bananas	Uganda, Cameroon
Sesame	Uganda, Burkina Faso, Benin, Malawi
Honey	Algeria, Madagascar, Malawi, Zambia
Dried Fruit	Uganda, Benin, Burkina Faso, Madagascar, Morocco
Vegetables	Cameroon, Madagascar, South Africa, Morocco, Tunisia
Vanilla	Madagascar, Comoro Islands
Herbs	Madagascar, Egypt, Tunisia, Morocco, South Africa, Zimbabwe
Avocados	South Africa, Uganda
Olive oil	Tunisia
Sugar	Mauritius, South Africa
Cashew nuts	Mozambique
Tea	Tanzania
Palm oil	Madagascar
Spices	Tanzania, Zimbabwe

The potential for organic production and export in Africa in particular is also high, especially in countries with liberalised economies (Walaga 2000, cited by Soel 2002). Although profitability of organic farming varies between farms of different scales of operation, organic exports are typically sold at impressive premiums, often at prices 20 percent higher than identical products produced on non-organic farms (FAO 2002). Market returns from organic agriculture can contribute to local food security by increasing family incomes. In South Africa, the marketing of organic products is growing, with products being sold in several specialised stores and supermarket chains. Large supermarket chains like Woolworths, Pick 'n Pay, Hyperama and Shoprite Checkers are planning to introduce an extensive organic product range (ZMP 2000, cited by Soel 2002). With an increasing awareness of the dangers of

conventional agriculture, organic markets are expected to be launched in several African countries, especially those with advanced conventional farming practices such as Kenya and Zimbabwe (Soel 2002).

However, only a few studies have assessed the ultimate profitability and long-term prospects of organic farming (FAO 2002). Whether the intent is to sell organic products domestically or abroad, reliable market information is almost always difficult to obtain. No projections for the market in the developing world have been made, nor have markets been systematically identified for developing country exports (FAO 2002). Research into enterprise opportunities in rural areas in developing countries, particularly Africa, has concluded that rural areas often provide few enterprise opportunities (Cutler 2002). The existing market environment in which rural small-scale farmers operate is usually not conducive to a successful business, given such factors as the remoteness of the areas, the lack of infrastructure, and a lack of agricultural extension officers to help bridge the information gap. The potential is however there if built on existing skills and the benefits of enterprise and business development programmes may lead to increased job opportunities, income generation/flow and help to improve living standards and reduce poverty.

2.8 Synopsis

The principles of organic agriculture have been discussed, as well as how indigenous knowledge is incorporated into this agricultural practice. The use of indigenous knowledge as an empowering tool for poor people is also adopted in the sustainable livelihoods approach and has been discussed in some detail. The contribution of indigenous knowledge to a better understanding of sustainable development has now been recognised as many development approaches now incorporate indigenous knowledge as a key element. This is important as a vision of global knowledge partnerships will be realised when the poor participate as both users and contributors of knowledge. More communities will shape their own agenda by actively participating in the development dialogue and enhancing good governance from below. The example provided by the potential of organic products in sustaining the livelihoods of the poor in developing countries is investigated further in the chapters that follow through active research with the Ezemvelo Farmers Organisation (EFO).

CHAPTER 3

SAMPLE CHARACTERISTICS

The Embo region in KwaZulu-Natal is situated south-east of Durban in Umbumbulu Magisterial district and covers the area from Umbumbulu settlement on the East Coast, near the Durban South Coast, inland towards Pietermaritzburg (HIVAN 2002) (See figure 3.1). Embo is one of five traditional authorities in the region. The research was conducted in two of these tribal authority wards (Ogagwini and Ezigeni), which fall under the community of Embo.



Figure 3.1: Map indicating location of Embo (Mapstudio, undated)

3.1 General information about Embo

Embo has a large rural population with no public services such as post offices and police stations, or infrastructure such as water and sanitation, refuse removal, electricity, and tarred roads. There are no formal shops, instead there are many spaza shops that sell basic foodstuffs such as milk, bread and soft drinks. The only mode of public transport available is minibus taxis. The Embo Health Clinic (officially opened by President Mandela in May 1998) provides primary health care for the community. People in the area rely on wood, paraffin, gas, and candles for fuel. For a very select few, solar panels are installed in their homesteads. Solar power provides electricity and telephone services.

There are only two boreholes for the community's water supply. Water is mainly sourced from streams and springs. The predominant housing structures are rondavels, with an average of four of these per homestead. Homesteads are interspersed without any apparent pattern that is commonly found in formal housing in urban areas. Embo has one primary school that teaches classes from grade R to grade seven, after which children from the community attend high school at Umbumbulu. Attending school at Umbumbulu is costly as a return trip to Umbumbulu costs R14,00 by minibus taxis. Many people commute to Isipingo and Durban for employment because these are coastal areas with employment prospects. However, there is an abundance of arable land at Embo and in the face of unemployment, income generation activities such as community vegetable gardens are prevalent. Generally, every homestead has a garden in which traditional crops are grown.

3.2 History of Ezemvelo Farmers Organisation (EFO)¹

Embo Masakhane Community Development Organisation (EMCDO), a non governmental organisation (NGO) was involved in a series of community projects in Embo when a researcher from the University of Natal approached them for the first time in March 2000. The researcher is a crop scientist who sought to engage a group of farmers in a Department of Arts, Culture, Science and Technology (DACST) project. The project aimed to alert small-scale / subsistence farmers to the importance of indigenous crops and to facilitate information sharing on indigenous knowledge between University researchers and farmers for mutual benefit (Modi 2002). Through a series of farmers' workshops the researcher explored what farmers needed in terms of researchable problems which could be investigated at the University of Natal. EMCDO then invited the researcher to a meeting with Embo farmers where he was introduced to the farmers and the purpose of his project was explained. A group of farmers volunteered to work with him on his project. The project was funded with a R20 000 grant from DACST.

The researcher introduced a private sector consultant to the Embo farmers in January 2001. The consultant's company is involved in the marketing of organic produce, in

¹ Note: Although roles are discussed here, the information regarding the stakeholder analysis is presented in chapter five.

expanding the production base, and in working with the provincial government on economic development and health matters. The consultant joined the researcher and the group of Embo farmers as part of a South Africa-Netherlands Project on Alternative Development (SANPAD) project after being introduced by a fellow scientist and SANPAD project director from the University of Natal's Centre for Rural Development Systems. The aims of the SANPAD project were to help farmers realise the economic value of their indigenous knowledge systems and practices; to explore cultivation of indigenous and traditional crops; to expand the practice of certified organic farming; and to address long-term infrastructure issues that will have economic, health, and social impact. In February 2001 the Ezemvelo Farmers Organisation was formed and developed a constitution (See appendix A). This was a necessary precondition to applying for organic certification to be able to market organic produce. The researcher is a founder member of EFO and a non-voting member of the executive committee.

The researcher's role in EFO at this stage became:

- A facilitator of interaction between EFO and sponsors;
- Contact with funders;
- A translator at meetings;
- A promoter for EFO; and
- EFO administrator assisting with telephonic communications, e-mails, faxes, and photocopying of relevant material.

At the same time the consultant's role in the project involved the marketing of EFO members' organic produce, organising funding assistance from government and logistics assistance, educating on some aspects of organic farming and marketing and infrastructure development for economic development. Through his company that owns a packhouse, the consultant bought produce from the EFO farmers and sold this to Pick 'n Pay. A summary of all the project stakeholder's roles is given in table 3.1.

The KwaZulu-Natal Department of Agriculture (KZN-DoA) had also been working with Embo farmers in their community garden projects under the EMCDO since 2000. Their project aimed to promote organic farming at the district level. This included the initiation of a catering group that deals with value added indigenous crop recipes such as pumpkin soup, imifino samoosas, and amadumbe cakes. The researcher then solicited KZN-DoA's help in 2001 in order to help EFO with the provision of transport of the members' produce from the community to the packhouse. The role of the KZN-DoA's representative involved in the EFO project also included translation between Zulu-English, and facilitator between EFO and the consultant / packhouse. Around the same time in 2001, the researcher also approached the KwaZulu-Natal Department of Economic Development and Tourism (KZN-DEDT) for help in the EFO.

The role of KZN-DEDT was to assist farmers enter the mainstream economy by twinning the farmers with the packhouse; experimenting with value added organic products and soliciting organic produce supply contracts from retailers, wholesalers, as well as fresh produce markets. KZN-DEDT also paid for EFO's certification costs in 2001. In 2002, KZN-DEDT committed R500 000 to the farmers' project with the aim to develop the farmers' organisation by training them in record keeping; training in the sorting of produce; registering EFO as a section 21 company; covering the costs of certification, and provision of infrastructure such as small-scale appropriate irrigation. The consultant tendered for this KZN-DEDT project contract and was awarded the contract in the latter part of 2002. His company is therefore responsible for achieving all these KZN-DEDT objectives. The relationships between stakeholders are depicted diagrammatically in figure 3.1.

On invitation from the consultant, the Head of Food Technology at Woolworths and their National Food Buyer visited Embo in September 2002. During their visit they met with EFO members to discuss the possibility of doing business with them. It was explained that Woolworths signs a contracting agreement with their producer farmers and they provide their own on-site packhouse for quality control inspection. If they became involved in the EFO project, their role would be to procure produce from the

farmers and package it on-farm before distributing this to their national chain stores. The possibility of EFO farmers signing a contract with Woolworths is still pending.

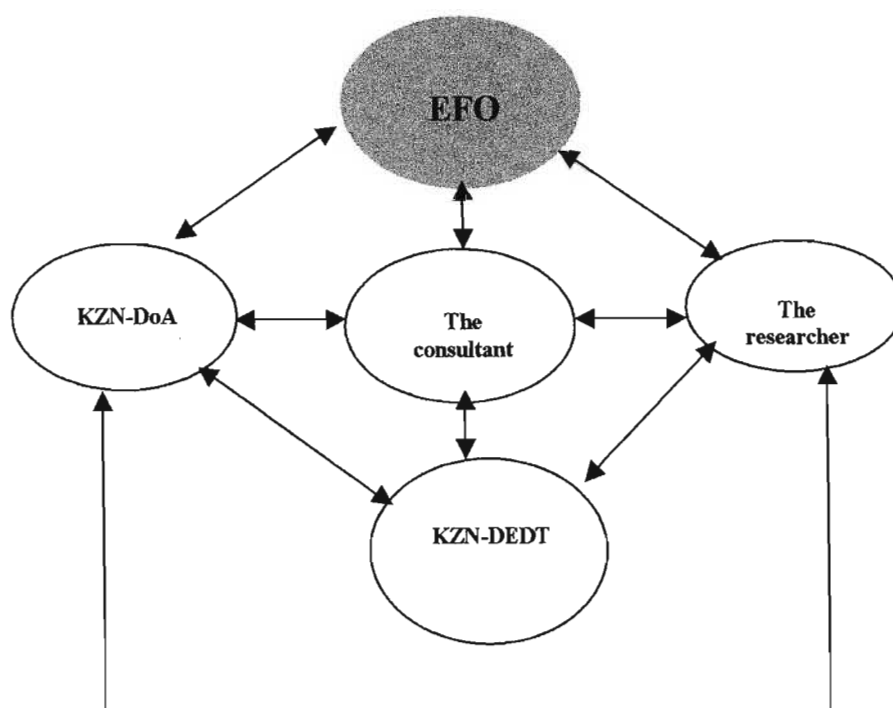


Figure 3.2 Stakeholders relationships and involvement in EFO, 2002

EFO members therefore formed the research sample that participated in the exploration of organic produce market opportunities in order to improve the sustainability of their livelihoods.

3.3 Demographic characteristics of EFO members

EFO is fairly diverse, composed of 18 men and 33 women of all ages ranging from 18 to 67, all of whom are of Zulu descent. At the time of the study, the organisation was made up of 51 members from 34 households. The membership of the organisation is still growing, with new members joining almost every week. The average household size is eight and the majority of the farmers are old, with an average age of 48 years. Only one man in the organisation (the treasurer) owns a tractor, and members hire this service for ploughing during the planting season. However, not all of the members use this service and it is not exclusive to the organisation's members.

Table 3.1 EFO project stakeholder roles

<p style="text-align: center;">EFO Members</p> <ul style="list-style-type: none"> • Farmers assisting with organic production of traditional crops; • Beneficiaries of DACST, SANPAD, KZN-DoA, & KZN-DEDT projects.
<p style="text-align: center;">The researcher</p> <ul style="list-style-type: none"> • Member of DACST & SANPAD projects & involved as a researcher in collaboration with the packhouse; • Assist with advice on technical issues related to agriculture; • Makes contact with funders & facilitates interaction between EFO and sponsors; • A translator at meetings; • A promoter for EFO; • An EFO administrator assisting with telephonic communications, e-mails, faxes, and photocopying of relevant material; and • Gatekeeper for EFO to protect exploitation.
<p style="text-align: center;">The consultant</p> <ul style="list-style-type: none"> • Owner of the packhouse involved in marketing of EFO and buying produce from members; • Working with provincial government on economic development and health issues; • Organising funding assistance from government and logistics assistance; • Member of SANPAD project; • KZN-DEDT project contractor; • Involved in exploring cultivation of indigenous and traditional crops; • Educating farmers on some aspects of organic farming and marketing and infrastructure development.
<p style="text-align: center;">KZN-DoA</p> <ul style="list-style-type: none"> • Assist with transport to packhouse for EFO members; • Facilitator between EFO & the packhouse; • Exploring with value added organic crops for farmers; • Assist with marketing of EFO.
<p style="text-align: center;">KZN-DEDT</p> <ul style="list-style-type: none"> • Assist with money for certification (2001); • R500 000 committed to the EFO farmers' project (2002); • Assist with establishing a section 21 company; • Training farmers in record keeping and sorting produce skills.

EFO members produce a variety of organic crops such as amadumbe, sweet potato, potatoes, maize, beans, groundnuts, pumpkin, and imifino on individual household

farms. No collective farming occurs. For some time, farmers had been selling their produce to the local market i.e. locally to neighbours and hawkers. To date, some measure of success has been achieved in terms of finding market access for EFO members outside of their local community. Aside from the farmers' local market, they now supply their organic produce through the packhouse to Pick 'n Pay wholesalers. The packhouse is located at Hillcrest (approximately 25 kilometres from Embo – refer to figure 3.1) and serves to check the quality of the crops against the agreed to standards as set out by Pick 'n Pay and package these before selling to the wholesaler.

One of the requirements for selling organic produce is that farmers and/or their farms be certified organic. EFO is the first group of farmers to be certified organic in South Africa (AFRISCO 2002). Certification of EFO member farms has to be done every year. KZN-DEDT provided money for this purpose in the first year of the project (2001). This year however, the farms are still awaiting certification while the KZN-DEDT reviews tenders of who will perform the task cost-efficiently. EFO has also appointed three of its young members to undergo training as internal inspectors and more young members are currently being recruited in this regard to ensure all EFO members comply with certification standards.

For their last two seasons, farmers have only sold amadumbe, sweet potatoes, and potatoes to their outside market, i.e. the packhouse. By arrangement, the DoA's sponsored transport collects the farmers' produce from the community at the chairman's house and delivers this to the packhouse. From here, after being sorted and subjected to quality inspection, it is sold to Pick 'n Pay wholesalers. At this stage EFO members do not sell as an organisation but on an individual household basis. However, collective money for the sale of their produce is deposited into the organisation's bank account for later subdivision among the contributing organisation members.

CHAPTER 4

METHODOLOGY

4.1 Research design

This chapter describes research that was carried out in the community of Embo, KwaZulu-Natal. The research sample were organic farmers, belonging to the Ezemvelo Farmers Organisation (EFO), and their families who are working towards successfully marketing their small-scale organic produce. The objective of the research study was to evaluate the sustainability of farming livelihoods of the EFO members through exploration of the marketability and profitability of their organic produce. This was explored through investigation of two sub-problems. Sub-problem one was to investigate how the marketability of EFO's traditional organic produce can be improved in order to sustain the livelihoods of EFO members. Sub-problem two was to investigate if the profitability of production can be improved for farms of the EFO.

A research team comprising three postgraduate students from the University of Natal – Pietermaritzburg conducted this investigation. The team was trained in a two-day workshop on how to conduct a sustainable livelihoods analysis, and was given a brief practical course on how to draw up research questionnaires, conduct interviews, and gather research information. This training also served the practical objective of building research skills and capabilities among the students who formed the research team, in respect of Sustainable Livelihoods tools and analysis.

The primary field research took place in Embo, over a 5-month period from July to November 2002. The research study aimed to address the two subproblems through application of five research tools. The first tool was a farmers' household survey, which was used to explore EFO members' current production, marketing strategy, and profitability of their organic produce. The second tool was a Sustainable Livelihoods Analysis, which was used to gain insight into EFO members' livelihoods assets, strategies, goals, threats, and livelihoods outcomes. The third tool was a forcefield analysis, which was used to identify and prioritise the driving and restraining forces

that influence EFO members' farming activity. The fourth tool was a stakeholder analysis, which aimed to evaluate the history of the farmers' organisation, as well as the roles, responsibilities, and interests of each stakeholder involved in the farmers' organisation and their quest to achieve sustainable farming livelihoods. The fifth and final tool was to hold a workshop to present the research results to the farmers and key stakeholders on how to improve the farmers' organisational capacity with respect to production and management of the organisation.

4.2 Population and sample selection

The research sample was purposefully selected as a community in a rural area of KwaZulu-Natal that is representative of the most prevalent groups of poor people and conditions in South Africa (Modi 2002). The Ezemvelo Farmers Organisation (EFO) from Embo who had already been involved in an organic produce marketing project made up the research sample. A list of the members of EFO was obtained from the vice secretary of the executive committee of the organisation at the first farmers' monthly meeting that was attended by the research team. The list revealed that although the current membership of the organisation is 51, some members were from the same household such that there were only 34 member households. An EFO member from each of the 34 member households participated in the farmers' survey, depending on which member was available for interviewing by one of the research team members upon visiting their household. The majority of EFO members participated in the research tools parts of the information gathering stages.

4.3 Survey materials and approaches

The research team introduced themselves to the farmers for the first time at one of the farmers' monthly meetings. At this meeting the key stakeholders as in table 3.1 were also present and their participation was also enlisted. A subsequent meeting was arranged with the farmers for the team to explain the purpose of their research, request farmers' participation in achieving the methodological objectives, as well as to answer any questions that the farmers had about the study. During this meeting, the methodological objectives were explained to the farmers who then gave their permission to be interviewed and participate in the research.

4.3.1 Household survey

A questionnaire was used to collect information relating to farmers' perceptions towards indigenous crops and information regarding the feasibility of an organic enterprise (See Appendix B). This questionnaire collected information on the respondent's personal details, farmers' perceptions of indigenous crops and information on the profitability and marketability of the farmers' organic produce. After the original questionnaire was drawn up, pilot testing was conducted with a few EFO members to test for clarity of the questions. Minor adjustments were made in terms of the wording of the questionnaire before the survey was conducted on all EFO-member households. This study discusses briefly the farmers' perception of indigenous crops, but focuses more on the marketability and profitability of EFO's traditional organic produce.

4.3.2 Sustainable Livelihoods Analysis

According to DfID (2002), livelihoods analyses aim to improve the design and implementation of poverty reduction efforts by finding out about livelihoods. Sustainable Livelihoods Analyses (SLAs) can therefore be used to assess the sustainability of peoples' livelihoods, look at the many factors that affect people's livelihoods, and to identify the major problems with which they are faced. Using the DfID Sustainable Livelihoods framework (see figure 2.1), the four related themes that were explored were:

- Farmers' livelihood strategies. These were outlined by EFO members as means to achieve livelihood outcomes;
- The resources that members possess / own, i.e. their livelihood assets. These are depicted in the framework in the form of a resource pentagon, differentiated into five categories of resources *viz*, human, physical natural, social and financial capital;
- Their livelihood outcomes were explained to farmers as being their dream / goal that they hope to achieve five years ahead;

- The vulnerability context, i.e. factors that affect their lives which they may / may not have the power to change, such as policies, institutions and processes but also, those things that they cannot change in terms of shocks, trends and seasonality.

Forty-two EFO members participated in the SLA which was conducted in a participatory manner using small group techniques. In exploring each of the four themes, there were three breakaway groups which were systematically selected by the research team. Each group engaged in discussion with a facilitator from the research team. After the discussions, there were report backs in the form of presentations made to the larger group. The participants appointed their own scribe and presenter who then used flipcharts for the presentations. (See Appendix C for pictures of SLA group participants and Appendix D for SLA proceedings).

4.3.3 Forcefield analysis

The same 42 farmers were also asked to participate in a forcefield analysis. This is a participatory tool that is used to analyse complex problems and helps to identify solutions (Skutsch 1997). After the analysis by the farmers of their major problems regarding farming during the SLA, farmers were then asked to prioritise constraints to increased profitability and marketing of their products and identify one key problem. The farmers also identified the desired goal when the problem was resolved. After completing this exercise, farmers were asked to outline a strategy on how to overcome their problem, and achieve their goal. This was done by the overall group on flipcharts by first constructing a force field diagram. The pros and cons of the desired goal were then listed before outlining a strategy to solve their problem. Certain tasks had to be performed in the strategy outline and these tasks were listed in a log frame (refer Appendix E). These tasks were then assigned to EFO members, whilst allocating a timeframe by which each task had to be achieved.

4.3.4 Stakeholder analysis

A stakeholder analysis aims to identify a project's key stakeholders and assess their interests and ways in which those interests affect project risk and viability (Manaaki Whenua Landcare Research 2002). The goals and roles of different groups are

identified. The analysis helps to formulate appropriate forms of engagement with these groups. A stakeholder analysis helps to build the relationships necessary for the success of a participatory project and assesses the social environment in which all operate. The key stakeholders involved in EFO activities were identified as representatives from the KZN-DoA and the KZN-DEDT, the consultant (owner of the packhouse), the researcher, and six key informants from the farmers' organisation. The six EFO key informants interviewed were four members in the executive committee and two founder members. Representatives from the two provincial government departments who are directly involved in EFO were interviewed. A questionnaire was used to interview the stakeholders (See Appendix F for stakeholder questionnaire). Where a stakeholder was unavailable for the interview in person, a telephonic interview was conducted. The questions were translated into Zulu for the farmers.

4.3.5 Feedback workshop

After the completion of the data collection and analysis of the results, a workshop was organised in order to give feedback from the research to EFO members, and key stakeholders. All stakeholders were invited however, the researcher and 35 EFO members were in attendance at this workshop. The workshop presented and discussed the results of the SLA, results of the farmers' organic project's profitability and marketability, and the results of the stakeholder analysis. These presentations were in the form of posters and flipcharts. Farmers and their project partners were then asked to identify synergies and / or opportunities of engagement with one another for the future. These results were also made available in the form of written documents. Implications for other communities were also presented.

4.4 Data treatment and analysis

The three students each analysed their own data for the specific purpose of their research. Data analysed specifically for this research are parts of the household survey, the results of the SLA, the forcefield analysis results, the stakeholder analysis results, and the results of the feedback workshop (refer Appendix G for code log and raw data).

Action research was carried out as more understanding of the context of EFO activities increased. As a family of research methodologies that pursue action (or change) and research (or understanding) at the same time, action research is a process that involves taking actions and fact-finding about the results of the action (Lewin 1947, cited by South Florida Center for Educational Leaders 2002). Action research was carried out leading to in-store investigation of the market opportunity for traditional organic produce. This was done in order to evaluate findings in literature about growth in demand for this food, as well as to support dialogue with Woolworths about the premium prices paid for organic produce.

The findings from the five data collection tools will be presented in the following chapter. Chapter six and chapter seven discuss the implications of these findings for each of the two subproblems respectively.

CHAPTER 5

FINDINGS FROM THE FOUR DATA COLLECTION TOOLS

The objective of this study was to evaluate the sustainability of farming livelihoods of the Ezemvelo Farmers Organisation (EFO) members through exploration of the marketability and profitability of their organic produce. EFO members were the research sample. This was explored through investigation of two sub-problems. Sub-problem one was to investigate how the marketability of EFO's traditional organic produce can be improved in order to sustain the livelihoods of EFO members. Sub-problem two was to investigate if the profitability of production can be improved for farms of the EFO. This chapter discusses findings obtained through the utilisation of five data collection techniques namely:

- A Household Survey, which was used to explore EFO members' current production, marketing strategy, and profitability of their organic produce;
- A Sustainable Livelihoods Analysis (SLA), which was used to gain insight into EFO members' livelihoods assets, strategies, goals, threats, and livelihoods outcomes;
- A Forcefield Analysis, which was used to identify and prioritise the driving and restraining forces that influence EFO members' farming activity;
- A Stakeholder Analysis, which aimed to evaluate the history of the farmers' organisation, as well as the roles, responsibilities, and interests of each stakeholder involved in the farmers' organisation and their quest to achieve sustainable farming livelihoods; and
- A feedback workshop which aimed to help farmers reflect on their traditional organic crop market and profitability of production.

The discussion and integration of the findings is presented in chapters six and seven where each of the two sub-problems are addressed in detail.

5.1 Household survey results

The household survey aimed to evaluate farmers’ perceptions about their crops, and explore their understanding of organic marketing and production (see appendix B for household survey questionnaire). Crops produced by EFO members are presented in Table 5.1. The survey of farmers’ perceptions showed that EFO members are organic farmers by default. All farmers practise organic farming because of a belief that this is the only way that these crops can be produced. Farmers understand these crops to be those their forefathers produced and therefore traditional crops, although they are not necessarily indigenous. Indeed, evaluation of their indigenous farming practices corresponded with organic farming practices (Bhengu 2002).

Table 5.1 Organic crops produced by EFO members and percentage of sample who sell, n = 34, 2002

Crop type	Percentage of sample who sell (%)
Amadumbe	87.8
Sweet potatoes	68.8
Potatoes	62
Beans	29.6
Groundnuts	27.9
Maize	22.2
Pumpkin	16.7
Blackjack	8.3
Amaranthus	0

Organic farming has been the predominant farming method practised in rural communities using the skills and available resources of their local communities to devise strategies to deal with challenges, otherwise referred to as indigenous knowledge (Bloch 1996). Commercial produce such as cabbage and carrots are perceived as non-traditional and therefore needing non-organic agricultural inputs in their production. Indeed, inspection of the Embo

community garden projects (which some EFO members still participate in under EMCDO) revealed that the commercial produce that is grown there is supported by agricultural inputs such as pesticides and fertilisers, although EFO members grow strictly organic crops on their own farms.

Moreover, since most of the community garden projects are in parts of the community that are close to water sources, this added input is also perceived to be a necessity

only for so-called non-traditional crops. Farmers perceive this to be less demanding of extra agricultural inputs including water, hence therefore, also perceive root crops their predominance in farmers’ household gardens.

EFO members produce a range of organic crops on their household farms (refer Table 5.1). However, most crop varieties such as beans, groundnuts, blackjack, amaranthus, maize, and pumpkin are produced mainly for household consumption. Root and tuber crops that are produced largely for marketing are amadumbe, sweet potatoes, and potatoes (refer to figure 5.1).

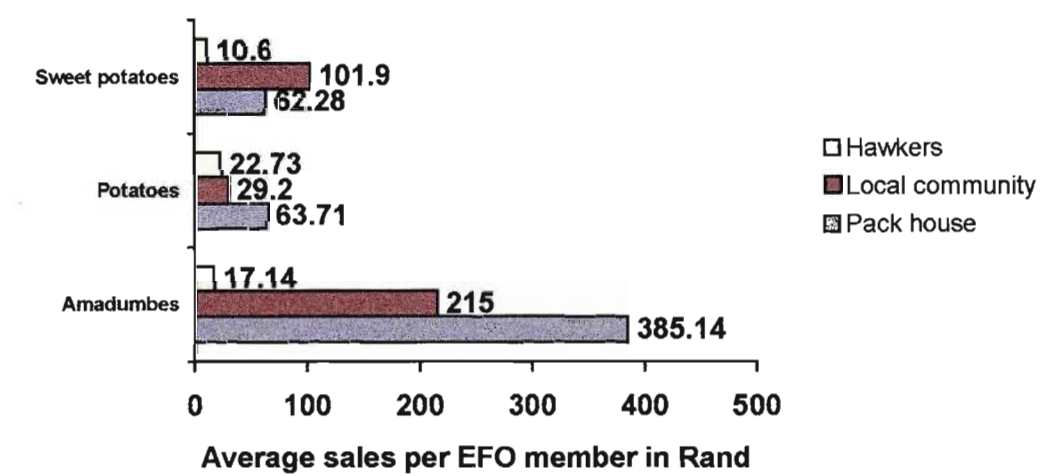


Figure 5.1 Comparison of EFO root crop sales (Rands) for 2002 season, n = 34

Farmers currently market amadumbe, sweet potatoes and potatoes to the packhouse (which sells to Pick 'n Pay), hawkers (who buy these from the farmers for later sale elsewhere), and locally (to neighbours and the community). Since amadumbe is the most prevalently sold crop, the following analyses will focus on this root crop. Survey results showed the percentage of amadumbe sales to each of these three markets as depicted in figure 5.2. The largest market for amadumbe currently used by EFO members is the packhouse (51 percent), followed by local sales (43 percent) and finally, sales to hawkers (six percent).

Survey results also showed that there are no other organisations in the community that produce organic crops for marketing, although individual farmers sell their organic produce to the local community and hawkers. Farmers set their prices for crops according to a standard seasonal rate that all sellers in the community agree to charge their customers. There is no price differentiation between organic and conventional crops at the local market level. However, root crop sales to the packhouse enjoy a slightly higher rate than local sales. EFO members estimate that they obtain R30.00 / paraffin tin of amadumbe at the packhouse, compared to R25.00 / paraffin tin of amadumbe when sold locally. This is because members' organic produce is procured by the packhouse for sale to Pick 'n Pay wholesalers as organic food. The local price, when converted to kilograms, translates to R1.79 per kilogram. Paraffin tins are used as the measuring standard for sales at the local level and the weight of each tin is approximately 14kg of amadumbe. The packhouse also sets its prices seasonally and in 2002, EFO demanded an increased price.

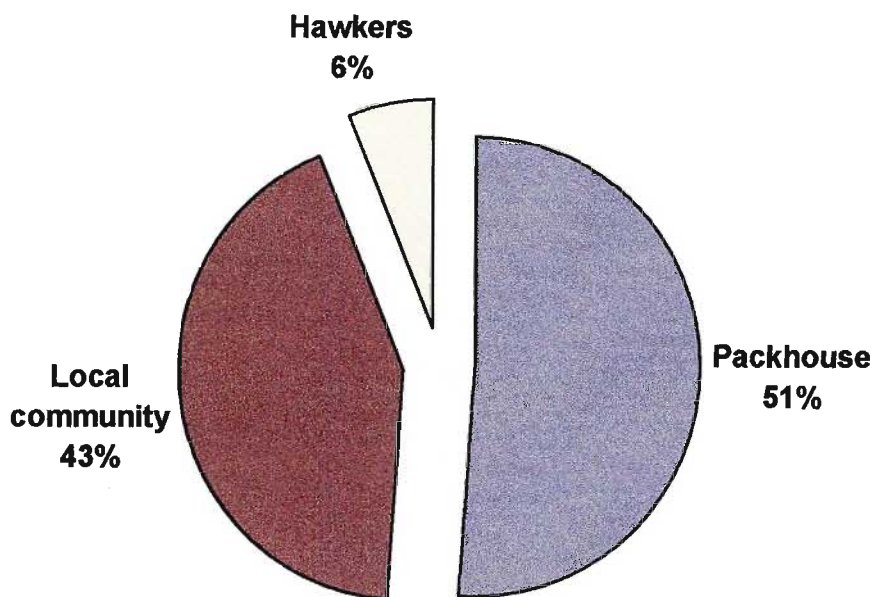


Figure 5.2 Amadumbe sales for different EFO markets, n = 34, 2002

The packhouse further exerts a price differentiation according to the size of the farmers' produce. EFO members obtain R2.50 for a kilogram of larger amadumbe,

and R1.25 for smaller amadumbe from the packhouse². Table 5.2 shows sales per amadumbe for the three markets currently used by EFO members. The packhouse claims 62.39 percent for EFO members' amadumbe sales, while the local and hawker markets claim 34.83 percent and 2.78 percent respectively. Clearly then, EFO members' largest market for amadumbe is the packhouse. The type of produce that the packhouse will accept must be of a certain quality and size, otherwise the produce is rejected and returned to the farmers. Rejected produce is often returned two to three weeks later, and usually in a state that is no longer fit for consumption or sale to the local community (who may not be as particular about the quality and size of produce as is the packhouse).

Table 5.2 Amadumbe sales at each of the three markets used by EFO members, n=34, 2002

Market	N	Minimum (R)	Maximum (R)	Mean (R)	Std. Deviation
Packhouse	28	0	4000	385	479.088
Local community	31	0	2500	215	470.455
Hawkers	28	0	250	17	57.469

Farmers estimate the loss due to rejected produce by the packhouse to be high, resulting in high losses for the farmers. This is partly as a result of the present system of production and supply. Farmers supply their produce on an individual household basis in bags that are marked with the farmers' names but sell as an organisation to the packhouse. The collective produce is stacked at the EFO chairman's house and taken to the packhouse by the transport provided by the KZN-DoA. At the packhouse, the produce from individual farmers' bags is mixed, sorted and washed. EFO is paid by the packhouse for produce accepted and the rejected produce is sent back to the farmers. This results in a loss of revenue for the farmers. Moreover, when farmers are paid for their collective produce, the money goes into the

² The packhouse pays R2.50 per kg for large amadumbe and R1.25 for smaller produce. When converted to approximately per kg price, the R30 per tin perceived by farmers equates to R2.14, slightly lower than the actual price.

organisations' bank account and is subdivided later by the farmers at their monthly meetings. It therefore becomes difficult to distinguish whose produce was of an acceptable standard and therefore, much time is spent debating this issue at each monthly meeting, resulting in confusion and dissent over the present system.

The household survey also evaluated the profitability of the farmers' total production. In order to calculate profit, the inputs and losses incurred during production were subtracted from the turnover using the equation:

$$\text{Profit} = \text{turnover} - (\text{inputs} + \text{losses}) \quad (5.1)$$

The turnover aggregated root crop sales to all three of the farmers' markets namely, the packhouse, hawkers and sales in the local community. Production costs included labour (the farmers' own and hired labour)³, money for seeds, hiring a tractor for ploughing were inputs. Losses to production were those costs incurred by rejected produce from the packhouse, and losses due to pests, diseases, theft and animals. Table 5.3 shows the average root crop sales, inputs and losses for EFO members.

All but three farmers currently do not make a profit from their crop sales (see figure 5.2). The results showed that on average, sales generated R1882 per person for the 2002 season, while inputs and losses were R3165 and R290 respectively (see table 5.3). On average, farmers made production losses of R1578. This means that the majority of the farmers are currently working at a loss. Results also revealed that the packhouse was the farmers largest market, resulting in an average income of R479.65 for the 2002 season, followed by the local market with an average of R392.75 for each farmer. The hawker market generated the lowest income of R56.72 per farmer for the 2002 season. The average total value of the farmers' crops was R2500 per farmer.

³ Labour was costed at the community price of R25 per day.

Table 5.3 Average crop sales, inputs and losses for EFO members

		N	Min	Max.	Mean	Std. Deviation
Sales	Local amadumbe	31	0	2500	215.00	470.455
	Hawkers amadumbe	28	0	250	17.14	57.469
	Packhouse amadumbe	28	0	4000	385.14	749.088
	Local potatoes	25	0	200	29.20	61.639
	Hawkers potatoes	22	0	500	22.73	106.600
	Packhouse potatoes	21	0	800	63.71	183.503
	Local sweet potatoes	25	0	750	101.90	200.134
	Hawkers sweet potatoes	25	0	250	10.60	49.965
	Packhouse sweet potatoes	23	0	370	62.28	104.574
	Local beans	16	0	480	30.00	120.000
	Local groundnuts	9	0	200	42.89	85.177
	Local pumpkin	9	0	250	30.56	82.706
	Local maize	21	0	300	36.95	74.783
Inputs	Bought	30	0	1000	218.90	249.963
	From home	24	0	2000	230.42	406.680
	Hired labour	30	0	7410	1587.20	1902.661
	Own labour	31	0	10800	1128.77	1921.916
Losses	Amadumbe	20	0	3000	231.20	662.550
	Potatoes	18	0	300	29.86	72.164
	Sweet potatoes	17	0	300	102.85	89.709
	Amaranthus	1	100	100	100.00	
	Beans	12	0	450	99.17	127.668
	Groundnuts	5	0	31	8.20	13.461
	Pumpkin	4	10	70	35.00	30.000
	Maize	13	0	360	65.38	97.734
*Total Income	Local	30	0	2500	392.75	561.428
	Hawkers	29	0	1000	56.72	198.370
	Packhouse	30	0	4670	479.65	869.602

* As a mean for sample, not an arithmetic sum of averages

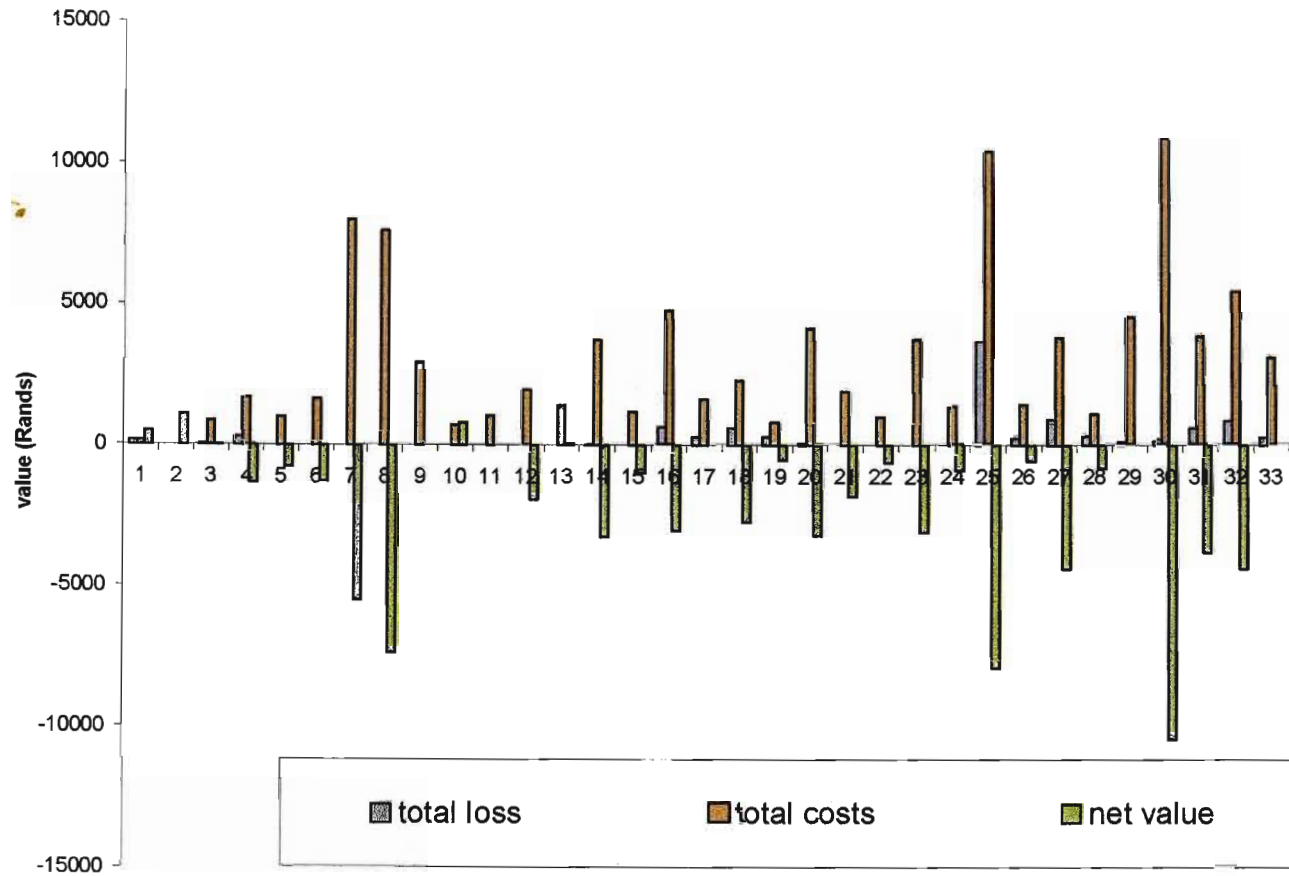


Figure 5.3 Profit calculation from farmers' crop sales for 2002 season, n = 34

Further calculation showed that for those farmers who supplied their produce for sale to the packhouse, input costs consumed 25 percent of their incomes. The proportion of inputs to income was lower for the local and hawker markets, where inputs equated to 20 percent and 3 percent of income respectively. Referring to equation 5.1, this indicates that farmers' inputs (especially to the packhouse and hawker markets) and losses to production are higher than their total sales for all but three farmers. In order for farmers to increase their profit, their turnover would have to increase and ways to reduce inputs and losses would have to be found. One way for this to happen would be for farmers' sales to each of their three different markets to increase, which implies increased production. Alternatively, there should be fewer losses because of inferior size and inferior quality.

5.2 SLA results

From the SLA exercise, it emerged that the main goal of EFO members was to become successful farmers with advanced farming knowledge and experience, and have more market access for their organic produce. Farmers have many opportunities to achieve this because the livelihood assets they possess have a direct link to this goal. Almost every homestead in Embo has a piece of land on which to grow food. Other assets such as livestock, strong social networks and time are some of the resources that farmers identified and can utilise. However, there are threats that prevent them from achieving this goal (refer to figure 5.3). Analysis of their vulnerability context showed the major constraints that farmers face are: a lack of water for crop irrigation, shortage of organic manure (typically kraal manure), and the shortage of farming implements (namely a tractor that all farmers can use during the planting season).

Water at Embo is only available from boreholes, streams and waterfalls. Most members' fields are situated far from these water sources. Their water requirements are quite substantial. Members felt that they could not afford to carry water to their fields as this would be a time consuming and strenuous exercise, if not near impossible.

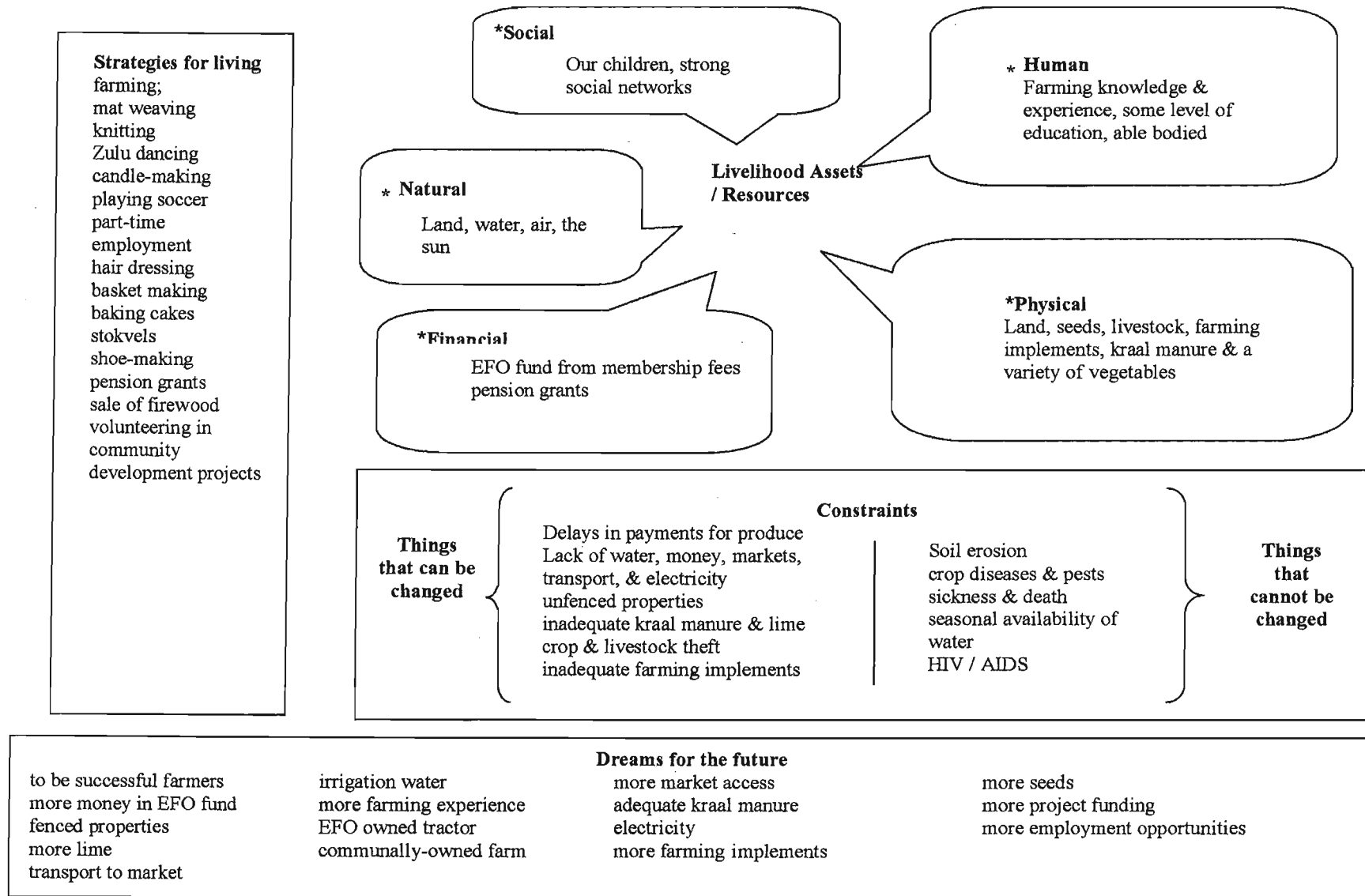


Figure 5.4 EFO livelihoods analysis summary results

This was because streams are in valleys and on hills away from homesteads and farmers lack the appropriate means to convey water from source to their fields. Farmers therefore depend on rainfall for irrigation of their crops and are only confined to September to April to grow their crops. This is one of the critical factors limiting farmers' production and prevents them from realising the full potential of their farming as an income generation source. A second limitation is the shortage of kraal manure that farmers use for soil conditioning. Due to a lack of livestock, some farmers depend on their neighbours for kraal manure. The limited supply of this resource restricts farmers' production capacity, and therefore limits their yields. Finally, only one man in the community (a member of EFO) owns a tractor that is used by all farmers in the community. There is great demand for this service during the planting season and not all farmers are able to access it. Inaccessibility to a tractor for some farmers is also due to the high cost of hiring this service that typically costs R500 per season.

During the SLA, farmers were also asked to identify policies, institutions or processes that affect aspects of their livelihoods. These are classified into aspects that EFO members could change or have influence over, and those that they cannot change or influence. This was done in order to help farmers realise their vulnerabilities. Among the unchangeables, which farmers felt that they have little or no influence over, were soil erosion, crop diseases and pests, sickness and death, and the seasonal availability of water. Although farmers realised that they can mitigate their effects, farmers also realised that their acts would always be in reaction to these factors, which are otherwise out of their control. Most of the factors that farmers cited as being changeables have been mentioned above as also being major constraints to their successful farming enterprises.

Farmers identified and discussed factors that affect their livelihoods that they can change. These included all the major constraints that are referred to in the SLA figure, as well as transport to the market and delays in payment for produce from the packhouse. Farmers complained that payment from the packhouse sometimes takes up to three months to reach them. This delay caused some farmers to channel their distribution to the local market. Farmers felt that they needed to have a clear

understanding of how long it would take before they received payment for produce, and how much (the exact figure) this money would be at the time of delivery to the packhouse. However, it emerged during the discussions that not all the farmers were clear about the channels of distribution of their organic products. Many were unclear whether in fact they were selling to the packhouse or directly to the market (Pick 'n Pay).

Farmers also feel that they need to have their own transport to the market which would be available whenever they need it, instead of relying on sponsored transport from the KZN-DoA, which has been unreliable for the past two seasons. The transport provided by KZN-DoA is unreliable because of two reasons. Firstly, the transport does not always arrive on time on the agreed date after farmers have collected their crops to be taken to the packhouse. Secondly, some farmers expressed concern about crop weight discrepancies. Their perception is that the amount (in weight) of the crops that they send to the packhouse is sometimes less than what the crops weighed when they left their community.

The SLA aimed to help farmers look at their present situation and assess the sustainability (or lack thereof) of their livelihoods. As a tool that is used to assess and develop a picture of poor peoples' livelihoods, SLA's can also be used to identify the major problems that people are faced with (DfID 2002). EFO members were shown how they could utilise their capabilities and their different assets to carry out a range of activities through which they could improve their farming enterprise. Farmers identified as a potential solution to the problem of having inadequate kraal manure, the possibility of using chicken manure to supplement this. The problem of pests that they could not deal with using chemicals was to be dealt with using a device that makes a noise which then scares one of these pests (moles) away. Other problems such as the unavailability of a tractor and the lack of irrigation water, were perceived by farmers to require a long-term solution. Indeed, because of the costs that accompany such resources, it will take some time before farmers attain them. These resources would help farmers increase their production and would help contribute towards the sustainability of their livelihoods. Farmers noted that development assistance that is specifically targeted for such cases would have to be sought.

Through employing the sustainable livelihoods framework, farmers were able to look to the future and dream about where they wanted to see themselves in years to come.

5.3 Forcefield analysis results

The SLA helped to highlight all the major constraints that EFO farmers are faced with. The force field analysis however, aimed to prioritise these constraints in order of importance and single out what farmers perceived to be their main problem. This type of analysis is done in order to identify the main constraining forces, assess their influence and design a strategy to minimise the constraining forces (Skutsch 1997). The results of this exercise are summarised in the forcefield log, table 5.4.

Farmers identified the unavailability of a tractor as their main constraint and expressed a desire to have a tractor owned by EFO to help solve this problem. The constraining forces were listed, as were the driving forces for the acquisition of a tractor. Actions that could reduce or eliminate these forces were then listed, followed by steps that could be taken towards solving the problem. The resources available to the farmers were also identified as contributing to the achievement of the objective. Finally, a strategy was devised with implementation steps that were put into sequence. These are to be periodically revised.

Although farmers have to date been aware of all the constraints that they face, this exercise helped them prioritise these in terms of the main problem. Farmers identified the major hurdle to farming productively and improving their farming enterprise as the lack of a tractor which all farmers would have access to during the planting season. However they conceded that this will cost a large sum of money and will not be easily obtainable. Farmers considered and discussed the responsibilities of owning a tractor and the maintenance that would be required. They finally decided to start a separate savings fund towards buying a tractor while at the same time seeking assistance from development organisations for funding. Farmers acknowledged that this task might take long to accomplish but agreed on the steps to follow.

5.4 Stakeholder analysis results

The purpose of a stakeholder analysis is to create a better understanding of stakeholder participation and can help with understanding and focusing upon the needs and expectations of individuals, internal and external to a project (Snel and Ali, 1999). The Ezemvelo Farmers Organisation (EFO) was formed by a group of farmers who produce traditional organic produce with the objective of finding sustained market access for their organic produce. Four EFO executive committee members and two founder members were interviewed as part of the stakeholder analysis. These people were identified by EFO members as being the pillars of their organisation because of their involvement in the organisation. The stakeholder analysis identified other key stakeholders involved in EFO as the researcher, the consultant (owner of the packhouse), a representative from KZN-DoA, and a representative from KZN-DEDT. EFO members that were interviewed all agreed on their role, which is to produce organic produce. All the stakeholders were in agreement on the primary objective of their involvement in EFO, which is to help improve farmers' access to markets.

Stakeholder participation in EFO is at different levels, with the researcher and the consultant being the most prominent role players and involved with other stakeholders. As one of the founder members of EFO, the researcher is the gatekeeper for the farmers. He promotes the organisation, makes contact with sponsors, and facilitates interaction between sponsors and EFO members. The researcher is also present at all the farmers' monthly meetings and often assists the consultant at these meetings with translation and performs follow-up administration tasks.

The consultant's involvement in EFO is multipurpose. He is involved in his capacity as a member of the SANPAD project, a business man involved in the marketing of EFO's organic produce, and as a KZN-DEDT consultant. There is uncertainty with some stakeholders regarding the real objectives of the consultant's involvement in EFO, whether this is to advance the objectives of the SANDPAD project or objectives of his packhouse business, or to achieve the KZN-DEDT project objectives. Some stakeholders expressed concern over the way in which farmers are kept away from their daily activities while they attend frequent meetings with the consultant. There is

therefore a need for the consultant to clearly define his role, responsibility and, areas of accountability in EFO, the role of his packhouse business, his role as SANPAD project member, and as KZN-DEDT consultant.

Table 5.4 Forcefield analysis for Ezemvelo Farmers Organisation (EFO), 2002

1 The Problem The unavailability of a tractor		
2a Present Situation Only one tractor to serve the whole community		2b Desired Situation An EFO-owned tractor
3 Constraining Forces Greater demand, not enough supply Who will use it first? Where to keep it?		5 Driving Forces Will give preference to EFO members; Can generate income for EFO fund if leased to general community
4 Actions to Reduce or Eliminate Will rotate the use of tractor Will be kept at EFO Chairman's house		6 Actions to Increase Will be leased to members at a lower rate than general community
7a Steps towards influencing the forces Need to raise money needed to buy a tractor; Find capable tractor operator / driver and negotiate pay		
7b Resources required Tractor operator / driver Money to pay for petrol, buy spares and remunerate the operator / driver		
8 Steps Find out who to request for funding purchase tractor; Appoint someone to operate / drive tractor	How Request student research team for help in writing proposal for funding; Verify if person has tractor-driving knowledge and experience	When At the end of the research data collection phase, before the end of 2002; Upon acquiring tractor

KZN-DEDT can be defined as external stakeholders even though they are not directly involved in EFO but may nevertheless have a stake in the farmers' organisation. KZN-DEDT paid towards the costs of certification for EFO in 2001. In 2002 the department funded a project to the value of R500 000 in order to improve EFO members' access to markets. This will include establishment of a section 21

company, the costs of future certification, training farmers in record keeping, and training in sorting of produce. The consultant manages this project and KZN-DEDT's role in EFO is therefore in the person of the consultant.

The KZN-DoA may be described as a secondary stakeholder because their role in EFO is intermediary, although it has an important effect on the outcome of EFO's objectives. Their involvement in EFO is to help farmers explore the possibility of adding value to their organic produce, expand their marketing opportunities beyond their community, as well as to provide transport to take farmers' produce to the packhouse. However, the farmers perceive their provision of transport as the only role that is played by the department in their organisation. Moreover, farmers were generally unhappy about the unreliability of this transport. In addition, farmers expressed a wish to send a representative from EFO along with their produce each time it is taken to the packhouse. Farmers thought that this would help explain the discrepancies in the weight of their produce from when it leaves the community and when it arrives at the packhouse. Farmers also thought that it would help to send someone along with their produce so that they could witness how this is sorted at the packhouse. Finally, farmers expressed concern that sometimes transport arrives very late to collect produce which contributes to the resultant delays in payment for produce from the packhouse and possible deterioration in the produce.

There was consensus among all stakeholders of the important role that is played by the researcher in EFO. He facilitates information sharing among all stakeholders. However, not all stakeholders were happy about the progress that has been made so far in the development of EFO or the manner in which some aspects of the project are confronted. When asked to offer ways in which things could be improved, one suggestion was for a business plan for EFO to be developed, while another was for farmers to obtain training in sorting crops that would be of the standard that is acceptable by the packhouse.

There was consensus among all stakeholders that EFO members are the people who will be affected by the proposed activities and their development (both personal and organisational) was the main objective. However there was also a perceived necessity

for a large investment to achieve what the farmers want. Farmers' business management skills (e.g. book / record keeping), certification costs, transport costs after the KZN-DoA no longer sponsors the farmers, tractor costs which would promote higher production yields, and irrigation costs so that farmers have water and are able to produce crops throughout the year. These were some of the resources that were cited by stakeholders as a necessity for realising project objectives. Finally, there was consensus among all stakeholders that EFO members need to have strong support from existing stakeholders.

5.5 Findings as a result of the feedback workshop

Results of the research which aimed to help farmers reflect on their indigenous organic crop market and profitability of production were presented to 35 EFO members who were in attendance at this feedback workshop after the data collection and analysis. The purpose of this was to foster the combined knowledge generation with learning for positive personal, organisational and social change among the farmers and the research team. Although the findings of this workshop are presented here, the workshop was used to verify and clarify the findings of the analysis presented in the following two chapters. The results were also presented to the farmers for their own evaluation and assessment of the current market opportunities that exist for them, and whether these can be further explored or not. Farmers were drawn back to the things that they cited as changeables during the SLA in order to decide what they could do to make their farming more profitable. Farmers engaged in discussion with the research team who took turns in presenting results using flip charts and a chalkboard to illustrate their point.

Firstly, the results of the market investigation that was conducted were presented to the farmers. The customer demands were also explained using posters showing the range of products sold at the farmers current largest market – Pick 'n Pay (Hayfields), Pietermaritzburg. Farmers then discussed ways in which they could possibly diversify their current crop production and therefore capture a wider market. Farmers were confident that they could do this if they were not faced by the current constraints. EFO members reiterated most of these constraints, expressed during the SLA and forcefield analyses, as the unavailability of a tractor, the lack of water,

adequate kraal manure for soil conditioning, and having unfenced properties. The availability of water throughout the year, a tractor that was accessible to all members as well as adequate kraal manure would help increase farmers' production; whereas having fenced properties would help eliminate vulnerabilities to farmers' livelihoods such as animals and theft.

Secondly, clarity was given on farmers' present distribution channels for their produce and the Woolworths-type⁴ contract was also explored in terms of its merits. It emerged that EFO members are not aware of the premium prices being paid for organic crops. There was consensus in terms of the need for farmers' to get business management skills such as book / record keeping and marketing skills. Possession of these skills would help farmers monitor market growth and the demand for organic crops. This will help farmers keep pace with increases in supply and help farmers exert their influence on price premiums that are available to them. However, as the organisation is the first to be certified in South Africa and since they are emerging farmers, attention was drawn to the fact that there would be some challenges on their road to being successful commercial farmers.

Having been sensitised to issues involving how to run a successful business, EFO members understand that, as with most other businesses that are just starting up, there are always some teething problems that result in no or low net profit initially. However, with the incentive to branch out and capture urban markets, it is the hope of EFO members that farming will have its rewards in the near future. Hence for many farmers involvement in the project was both a way to gain exposure to outside issues, and an investment in their future and that of their children. Having been willing to convert fully into organic farming, EFO members are determined to progress past the initial stages of starting a new business. The workshop left farmers with a positive attitude and a clearer picture of the dynamics of their organisation as well as their capabilities.

⁴ Woolworths establishes a contracting agreement with their producer farmers and they provide their own on-site packhouse for quality control inspection.

The results of the feedback workshop have been presented in this chapter to allow for consistency in the presentation of the data collection tools used. The evaluation of the two sub-problems in chapters six and seven happened before this feedback workshop and the results thereof were presented to the farmers. Indeed, reference will be made to this feedback workshop in the following two chapters.

CHAPTER 6

HOW SUSTAINABLE IS EFO's MARKETING OF TRADITIONAL ORGANIC PRODUCE?

Chapter 5 presented the findings from using four data collection tools with the objective to evaluate the sustainability of farming livelihoods of the Ezemvelo Farmers Organisation (EFO) members. This chapter integrates the findings from using the tools in the discussion of the first sub-problem. The second sub-problem is discussed in chapter seven.

The assessment of market opportunities involves looking at a company's resources and how these may be used to seek out viable market opportunities that are able to sustain the level of investment needed to serve the market. If there is no market for one's goods or services, no amount of resources or strategy will help the company grow or even survive (Strategic Assets 2002). Sustainability, as an ideal against which to weigh proposed actions, plans, expenditures, and decisions, is important in the assessment of market opportunities. The case of the Ezemvelo Farmers Organisation has been presented in the previous chapters. In order to assess the sustainability of market opportunities for traditional organic produce, three market situations will be addressed. These are the farmers' current market, new markets, and the farmers' potential future markets.

6.1 The current markets

The main goal of EFO is to sustain their farming livelihoods by increasing market access for their traditional organic produce. EFO's current markets have been established as the packhouse (which sells to Pick 'n Pay), hawkers (who buy produce from the farmers for later sale elsewhere), and their local community (neighbours). Analysis of the percentage sales of the farmers' produce to each of these markets showed that the largest market currently used by the farmers is the packhouse (51 percent of sales), followed by sales to the local community (43 percent), and sales to hawkers (six percent). A marketing strategy for EFO would be to seek to sell more of their current produce to their existing markets.

Market penetration of supermarkets was assessed since it had been established that the packhouse sells EFO's organic produce to one of these types of markets, i.e. Pick 'n Pay wholesalers. Pick 'n Pay stores supply their produce mainly to urban areas where the bulk of consumers with preferences for organic foods shops. Market research of the demographics of consumers at South African supermarkets revealed that this is currently skewed towards white, English speaking, female consumers (Woolworths 2002). Consumers with preference for organic produce are predominantly single, young, working people with no children and two joint incomes, and older people whose children have left home. They are of above-average education, above-average income, more likely to live in urban areas, and concerned about health and food quality issues (Woolworths 2002). The most commonly sold organic crops at supermarkets in Pietermaritzburg and Durban were found to be salad-type products such as carrots, lettuce, green beans, and spinach and fewer traditional crops such as amadumbe and sweet potatoes (refer figure 6.1).



Figure 6.1 Common organic produce sold at most supermarkets, November, 2002

EFO farmers mainly produce amadumbe that would appeal to African consumers, and therefore do not appeal to the majority of consumers who seek organic products. However, an in-store investigation of the organic produce section at one of the Pick 'n Pay outlets revealed that the traditional produce that they do sell (such as sweet potatoes), is not particularly of the highest standard in terms of the quality (appearance) and size, in comparison to the standards that are set by the packhouse at Embo. Indeed, because organic crops are naturally produced without the use of agricultural inputs, crops may lack the aesthetically pleasing appearance of conventionally produced crops. Moreover, access to this market is problematic for farmers in terms of transport (which is currently sponsored by the KZN-DoA), as well as the quantity of produce that is rejected by the packhouse.

The penetration of the local and hawker markets was also assessed. Whereas urban consumers of organic food are people who are involved in the mainstream economy, the situation is different in the rural setting where most people live in poverty. Most rural people are unemployed and there is little cash in circulation in rural areas of South Africa (Phillip 2002). For rural communities, farming is the major economic activity and the commodities produced by it are fundamental to survival (Poston 1994). As a result, the local and hawker markets become saturated with farmers selling the same kind of crops. In addition, these markets have tremendous supply and demand fluctuations (Phillip 2002), making them unsustainable markets for EFO members yet the most likely market for sub-standard / size produce if they continue to sell to the packhouse. However, because of the problems faced by farmers due to the delay of payment from the packhouse, some farmers find these markets more sustainable. Some farmers have opted to channel most of their produce to these markets because produce from the packhouse is returned after a period of two to three weeks, resulting in substantial crop and income losses.

A sustainable market opportunity for EFO members' traditional organic produce therefore would be one that has a growing demand, easy market access, swift delivery, a market with purchasing power, a smooth and consistent supply and consumers who realise the value of the organic crops. All these factors have to be assessed in relation to the resources that EFO members have available to them (see

SLA results). Resources (such as water for irrigation, manure for soil conditioning, and a tractor for ploughing) will be important in realising EFO members' dreams and objectives to their farming enterprise. If farmers cannot have access to these resources, no amount of strategising will assist in achieving their goals.

6.2 New markets

EFO farmers have sold only amadumbe, sweet potatoes, and potatoes to the packhouse (indirectly Pick 'n Pay). The next stage of development for EFO may be for members to produce a wider variety of organic products, otherwise known as diversification. This is the next most common form of marketing strategy and EFO members could benefit from pursuing such a strategy. The number of supermarkets offering organic products in South Africa is on the increase and most of the larger supermarket chains now have a separate section for organic products to cater for the demand. An informal survey of Pick 'n Pay and Woolworths stores at Durban (Pavilion) and Pietermaritzburg (Hayfields) showed that the most commonly sold organic products are lettuce, green beans, swiss chard, and potatoes (refer figure 6.1).

Woolworths is another potential market opportunity that EFO members could benefit from. Woolworths establishes contract agreements with farmers of organic produce. Furthermore, this company provides their own packhouse where the food is packaged prior to national distribution (Stockley 2002). This way, EFO members would be contracting directly with their supplier and would avoid direct costs of acquiring and establishing expensive infrastructure systems such as their own packhouse storage and transport. Establishing a contracting agreement with Woolworths would also have positive prospects in terms of taking advantage of the premium prices paid for organic produce (see table 6.1).

With the development of organic markets, the market turnover for organic products is experiencing an increase worldwide (Eyhorn 2002). This is as a result of consumer awareness for environmental and health issues, resulting in the demand for organic products. Consumers are prepared to pay a premium for organic produce in addition to conventional price. Likewise, in South Africa there is an increase in the demand for these products. An investigation of the price differences at Woolworths

supermarkets between organic and conventional crops revealed that there is an average premium of 20 percent being charged for organic crops, depending on the product and the price of conventional lines (Conradie 2002) (See table 6.1). This would also be of great advantage to the farmers, given the problems that they currently face from their dealings with the packhouse, as well as the fact that they are resource poor. The advantage of dealing directly with a supplier that has an on-farm packhouse is that farmers would be able to directly observe quality control of their produce. Moreover, any produce that is rejected could be channelled immediately to the local and hawker markets who are indifferent to crop sizes and appearances. Transport to take farmers' produce to the market will no longer be needed, and this would relieve farmers of their current anxieties of produce discrepancies and losses due to delays, allowing for premium prices. Furthermore, as the duration of their current transport sponsorship is not guaranteed, this would reduce the threats in farmers' vulnerability contexts.

Table 6.1 Price differentiation between organic and conventional produce in supermarkets, November, 2002 (Conradie 2002)

Crop type	Unit	Conventional Price (R)	Organic Price (R)
Carrots	500g	4.99	5.99
Onions	1kg	7.99	9.29
Leeks	300g	5.99	6.99
Sweetcorn	(4-cobs)	8.99	9.49
Oyster mushrooms	200g	9.99	11.99

Other direct vertical contracting arrangements that could be pursued by EFO members to establish sustained market opportunity could be supplying to fruit and vegetable franchises, guesthouses, hotels, and game lodges directly.

6.3 Future markets

Beyond market penetration and diversification, EFO members could pursue other market opportunities as new export opportunities have been created for the

developing world by the demand for organic products. Although still only a small industry, organic agriculture is of growing importance in the agriculture sectors of many countries. The international market for organic products has created a demand for a variety of organic foods all year round. Many developing countries have started to tap lucrative export markets for organically grown products and organic products of all kinds from Africa are increasingly present on the international market (see table 2.6 for examples of these).

Opportunities also exist for EFO members to explore export markets for high value food products and 'niche' markets which may include traditional (ethnic) and modern foods that lie outside mainstream trade (Hendriks, 2002 p. 86). EFO members can tap into urban and other export markets where there is this growing support for organic markets. The identification, production, packaging, marketing, and active promotion of crops with comparative advantage and competitiveness in order to increase sales and reduce seasonality in demand and supply would be of great benefit (Ngqangweni *et al*, 1999; Bathrick, 1998; Ngqangweni *et al*, 1998; Delgado *et al*, 1999; Taylor and Cairns, 2001).

Access to export markets however is still a problem due to the absence of sources of agricultural market information and national, regional and commodity organisation that promote agricultural marketing (Lockerete 1982). However, the ability to anticipate future markets and consumer needs is perhaps the entrepreneurs' most valuable skill and one which may be considered a strategic asset (Prahalad and Hamel, 1990). Creating products that customers need, but have not yet even imagined, is one of the critical tasks for management. In anticipation of future trends, it would be necessary for EFO members to build a portfolio of resources and capabilities to match these emerging trends. A steady investment in the development of resources such as management and marketing skills among EFO members, and the ability to identify market opportunities would be of great benefit.

6.4 Synopsis

Agriculture serves as a source of food and employment for poor households and farmers depend directly on farming. Many more are involved indirectly in agriculture

as this remains the foundation of most rural people's livelihoods. In pursuit of other markets and in order to meet market demand, and increase their incomes, there must be a combination of producer and consumer interests. However, farmers need not be controlled by the markets. First and foremost, their food security needs and those of their community need to be provided for. Furthermore, the indigenous knowledge which EFO members already possess needs to be mobilized, respected, and protected so that their intellectual and natural creativity is not undermined by producing according to market demand. The promotion of marketing agreements between commercial and communal farmers (such as the potential Woolworths market) and other forms of collective action could also lower the transaction costs faced by small-scale farmers and the private sector. EFO members currently produce on an individual household basis. However, options exist for the farmers in terms of producing as a collective, in order to influence market forces.

Moreover, substantial public investment in physical infrastructure is needed to lower high transaction costs experienced by many rural communities due to their geographical isolation (Hendriks, 2002 p. 88). Infrastructure like all-weather roads, telecommunications and postal services, electricity, education and treated water would greatly benefit impoverished communities such as the one that EFO members come from in order to facilitate the development of rural agglomerations of non-farm enterprises. This would enable farmers to transport products swiftly to markets, increase exposure to market opportunities and improve access to information, technology, credit and both input and product markets (Rosegrant *et al*, Ruhiiga, 2000; Fan *et al*, 1999). In this the government should play a greater role to help in reducing and/or bear some of the costs. For example, Government could initiate producer-marketing cooperatives, indigenous franchises, traders' associations, corporatives, community-based equity share enterprises, partnerships with financial donor agencies, and community-private-public partnerships (Delgado *et al*, 2001; Markets and Structural Studies Division, 2002; Aliber, 2001; Cousins, 2001; Choy and Goh, 1997; Henriques and Nelson, 1997; FAO, 2001; de Beer *et al*, 1998; Kepe *et al*, 2001). This is but one area where the need is greatest for the government to actively support new investments in agriculture and rural development.

CHAPTER 7

CAN THE PROFITABILITY OF EFO FARMS BE IMPROVED?

Chapter five presented the findings from using four data collection tools in the evaluation of the sustainability of farming livelihoods of the Ezemvelo Farmers Organisation (EFO) members. This evaluation was divided into two sub-problems. Chapter six dealt with the discussion of the findings relating to the first sub-problem, which was to investigate how the marketability of EFO's traditional organic produce can be improved in order to sustain the livelihoods of EFO members. This chapter addresses the second of these sub-problems, which aimed to evaluate whether the profitability of EFO farms could be improved. The discussion in this chapter is supported by the findings in chapter five.

This section focuses on issues that will determine the future for EFO farms and suggests adjustments the farmers may need to make to become profitable in the organic market arena. In doing this, the profitability of the current production environment will be evaluated, while considering the wide range of factors that define the profitability of the organic produce market. The factors affecting / influencing profitability will also be evaluated.

7.1 Current profitability of EFO farms

Survey results indicated that all but three EFO members currently do not make a profit from their crop sales. Comparisons of incomes from each of their three markets showed that farmers obtain a slightly better price for sales to the packhouse than to the local community and hawkers markets (refer figure 7.1). The average income per farmer for the 2002 season (April to September) was R309.70. This income was calculated for crop sales to all three of the farmers' markets.

The price for which farmers sell their crops to the local and hawker markets is the same. However, this price differs for the same kind of crops that are sold to the packhouse. The standard of measurement that is used by farmers for their local and hawker sales is tins, and a tin is equivalent to 14kg. A tin of amadumbe sells for R30.00 at the packhouse whereas this fetches R25.00 at the local community and

hawker markets. Using tins as the standard of measurement for comparison therefore, this translates to R2.14 / kg for amadumbe sold to the packhouse and R1.79 for sales to the local and hawker market. Clearly then, farmers obtain a better price for their crops from the packhouse than they do from their local markets.

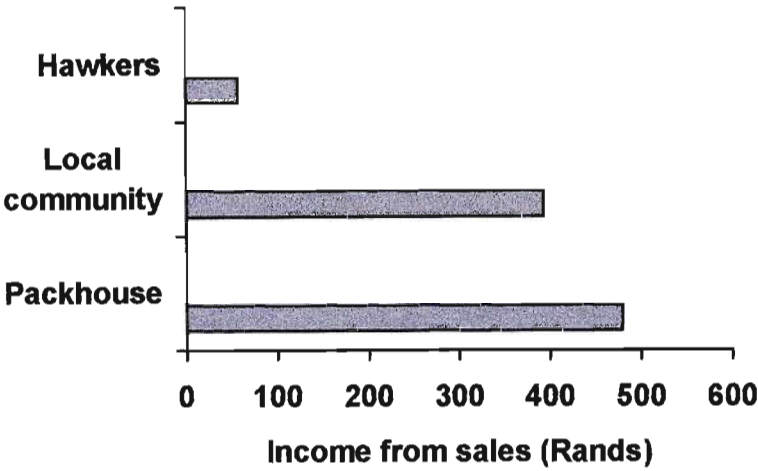
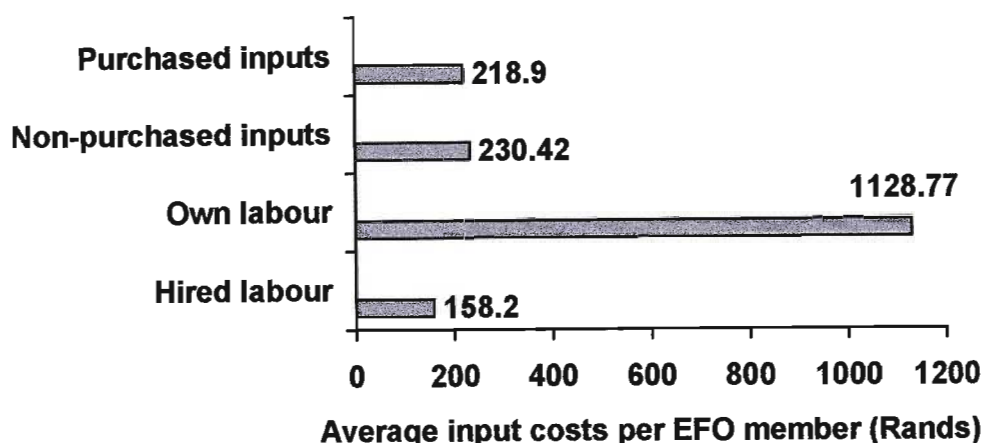


Figure 7.1 EFO members’ incomes from markets for 2002 season, n = 34

There are also costs involved in the production of these crops. The inputs and losses to farmers’ production affects the yield and incomes of farmers, and therefore their profits. The inputs that are involved in the production of their organic crops were listed as labour (farmers’ own and hired), non-purchased inputs, as well as purchased inputs such as hired labour, and hiring the services of a tractor for ploughing. Figure 7.2 shows the relative input costs incurred by EFO members on their farms. Calculation of the total input costs was found to be R3165.29, with the exclusion of equipment because this represents fixed input costs.

Analysis of the relative percentage costs of inputs showed that the largest proportion of farmers’ input costs is attributed to hired labour (50 percent of the input costs), followed by farmers’ own labour (36 percent). Input costs from home and those bought accounted for seven percent and six percent respectively. Further calculation showed that 25 percent of the value of the crop is consumed by input costs.



**Figure 7.2 Average organic production input costs per EFO member, 2002,
n = 34**

Losses to production were also calculated in order to evaluate the profitability of EFO farms. These were listed by farmers as those losses incurred due to produce being rejected at the packhouse, food that rots, and losses due to pests, diseases, animals, and theft. Average total losses have been found to account for R290 of the farmers' production costs during their last production season (refer table 5.3 for losses).

Correlation tests were conducted between farmers' total incomes (each from packhouse, local and hawker markets), their total sales, and total costs of production (inputs bought, inputs from home, hired labour, and own labour). Pearson's bivariate correlations found three statistically significant relationships (see table 7.1). Significant correlations between hired labour and total income from the packhouse and total sales indicated that farmers who used the services of a tractor and those farmers who employed people to work on their farms produced more crops and therefore sold more to the packhouse. Literature supports this (section 2.4). The labour intensiveness and time consuming nature of small-scale organic production is well documented (Thomas 1991). Due to processes such as the application of bulk compost and the hand removal of weeds and pests, organic production experts estimate that small scale organic cultivation can use up to 20 percent more labour than conventional methods (Van Zyl 2000).

The significant correlations between own labour and non-purchased inputs suggested that farmers who did not employ labour, did not incur high input costs. For smaller farms, a significant portion of labour input is provided by family members. This confirms findings cited in literature regarding the cost effectiveness of ecological farms such as those operated by EFO members (see section 2.2). Farmers who practise sustainable organic agriculture operate contained units where most resources are sourced on-farm. High costs of inputs such as those experienced by conventional farmers are excluded from farmers' production costs. Such farms are not only sustainable for resource-poor farmers in rural areas but are also environmentally benign. Such farms also promote the use of the farmers' indigenous knowledge and do not introduce the use of foreign inputs that might eventually lock farmers onto a dependent system of production. The widespread fears that are propagated by the use of technology in producing genetically engineered foods are dispelled by this system of organic production. Where technology is used, the same organic principles are complied with and all inputs to the system are natural. Eliminating these high input costs will also eventually result in an increase in the production profits of many resource-poor farmers.

Table 7.1 Production costs correlations for EFO members, 2002

CORRELATION	VALUES		
	Pearson's r	Sig. (2-tailed)	N
Hired labour vs total income from packhouse	0.535*	0.004	27
Hired labour vs total sales	0.572*	0.002	27
Own labour vs non-purchased inputs	0.885*	0.000	23

*Correlation is significant at the 0.01 level (2-tailed)

Closer analysis of the characteristics of the farmers who are currently making a profit showed that one was the tractor owner while the other two had larger farms on which to plant their crops. These were factors affecting the profitability of their farms. This resulted in a larger area being used for crop production and hence higher total sales and net value of the crops. However, with the majority of farmers the high production

costs translated to a lower profit margin. The total value of EFO members' produce for the 2002 season was on average R2500 per farm. This was only for those farmers who supplied their produce to the packhouse for sale. Using equation 5.1 and substituting values for turnover (R1882), inputs (R3165), and losses (R290), profit calculation results showed that the majority of EFO farms are not profitable (minus R1578).

7.2 Ways of improving the profitability of farms

The factors determining profitability of EFO farms are turnover, inputs, and losses. In order for farmers to increase their profit, their turnover has to increase and their inputs and losses decrease. Farmers need to expand their outputs and produce all year round and this would increase sales to each of their three different markets. By producing directly for the market, EFO members could improve the profitability of their production, and take advantage of premium prices for organic produce. Members could seek to form alliances based on establishing a commercial relationship with their major markets. Woolworths is one such market that can be sought. Their contract with organic farmers who supply their stores includes an on-site quality control inspection. This would minimise the costs to the packhouse as well as exclude transport costs to the packhouse. Furthermore, this will create critical links in the supply chain between farmers, packers of fresh produce and retailers. Other benefits of having an on-farm packhouse would be reducing confusion about expected quality standards that EFO members currently experience from supplying their current packhouse. Rejected crops from the packhouse resulted in lost revenue for EFO members as crops are returned in a form that is no longer fit for consumption. Farmers could greatly improve profits from their production if losses such as these are kept to a minimum. In addition, EFO members could greatly benefit from co-operative style ventures such as producer-marketing cooperatives, corporatives, and marketing cooperatives. Public investment in infrastructure will be needed to lower these transaction costs.

Small-scale farmers (such as EFO members) need to increase or intensify production to become established farmers. Currently 60 percent of the world is fed by production from small-scale farmers operating on indigenous knowledge and without external

inputs. However, the economic benefits of feeding such a large proportion of the world's population do not seem to trickle down to small producers. The majority of these farmers rely on indigenous knowledge to produce this food. Surely then, these farmers make a large contribution to the food security of the world population and ways in which they can be supported need to be investigated further, giving both the advantages and the disadvantages of this method of farming. An investigation of what the best market would be for the farmers and what the farmers would have to do to capture this market is one way of tackling this issue. In order to stimulate agriculture-led growth and mobilise under-utilised rural resources, the government has an essential and lead role to play (Hendriks, 2002 p. 85). EFO members could pursue public-private partnerships whilst an investment into the business skills development of members would also be of great advantage. This will help in lowering production costs, increasing market opportunities and enhancing the incomes of farmers. The creation of a culture of entrepreneurship and enhancing human capital will also broaden the diversity of farm enterprises and strengthen the linkages between farm and non-farm sectors whilst offering greater rural income and employment opportunities.

7.3 Synopsis

There is a great need for resources to be invested in EFO farms and farmers in order for production to increase and for farmers to acquire sustainable livelihoods. Resources such as a tractor, water for irrigation, fencing, and kraal manure are but a few resources that are desperately needed by EFO members. These resources will give the farmers an added advantage of producing more crops for the market, and will ensure that farming productivity is not restricted by rainfall. In addition, personal resources such as business management and record-keeping skills are also needed by EFO members if they are to become a success story. Indeed, during the household survey when farmers were asked to make estimates of their household consumption, losses and inputs to crop production, it was difficult for many to quantify these. The lack of education of EFO members made estimates of the costs of organic farming somewhat problematic. The low literacy and numeracy skills of this group are also consistent with findings of other studies conducted among many rural communities (Newman 2002; UNESCO Institute for Education 2002). Focusing on the

development of these skills therefore can also have a positive effect on the profitability of their farms.

It has been repeatedly suggested that in order to increase the profitability of EFO (and other such small-scale) farms, farmers need to increase or intensify production. However, this notion is based on an economic theory that the way to increase profitability in farming is to increase productivity (Penno, James and Rogers 2002). Whilst this may have been proven to be a possible means for EFO farms (based on their analysis of markets, inputs, and total sales), productivity does not ensure profitability for various reasons. The market opportunity for EFO members analysed in chapter six shows that this factor is very important to consider before production even begins. If there is no market for EFO members' organic products, no amount of resources or strategy will help the farmers become established, grow, or even survive.

The profitability of organic farms as presented by case of EFO members still needs to improve substantially if it is to contribute positively to members' sustainable livelihoods. The following chapter draws some conclusions from the research findings. The recommendations as a result of these conclusions are also made as recommendations to be followed by EFO members and Government.

CHAPTER 8

CONCLUSIONS AND RECOMMENDATIONS

The Ezemvelo Farmers Organisation (EFO) from the community of Embo, KwaZulu-Natal, was used as a case study to evaluate the sustainability of farming livelihoods of the organisation's members through exploration of the marketability and profitability of their traditional organic produce. This objective was divided into two sub-problems. The first subproblem was to investigate how the marketability of EFO's traditional organic produce can be improved in order to sustain the livelihoods of EFO members. Sub-problem two was to investigate if the profitability of production can be improved for farms of the EFO. A research team of three postgraduate students worked in collaboration to collect research data and exchange information. Data collection tools that were used included a household survey of EFO members, a sustainable livelihoods analysis, a forcefield analysis, and a stakeholder analysis, and a feedback workshop. The discussion and integration of the findings from using these tools are presented in chapter five. Results from an informal marketing survey and the profitability of EFO members' farms are presented in chapters six and seven where each is addressed in detail.

EFO members currently produce a variety of traditional crops and market these to a commercial packhouse, the local community, and to hawkers. All three markets set their prices seasonally. Farmers only market three of these crops to the packhouse namely, amadumbe, sweet potatoes, and potatoes. These crops are also marketed to the local community and to hawkers, with other crop varieties such as beans, groundnuts, maize, pumpkin, and blackjack, which are mainly produced for household consumption and small quantities sold to local and hawker markets.

Major research findings were that there are five key stakeholders involved in EFO activities with varying objectives. First, EFO members' objective is to increase market access for their organic produce to improve their livelihoods. Second, the researcher (a founder member of EFO) who helps promote and market the farmers' organisation. Third, the consultant helps EFO market their organic produce through his packhouse, and is also a member of various projects that have EFO members as

their beneficiaries. Fourth, the KZN-DoA in the interim sponsors transport for the farmers' produce to the packhouse. Finally, the KZN-DEDT has helped with certification costs and has now awarded a grant to the consultant for a project to develop the farmers' organisation.

The packhouse is the farmers' largest market, contributing 51 percent of their total sales, followed by the local community and hawker markets, with 43 percent and six percent of income shares respectively. Farmers obtain slightly higher prices for produce sold to the packhouse, but are unaware of the premium prices paid for organic produce by supermarkets like Woolworths. Sales to local and hawker markets are not differentiated according to price between organic and conventionally grown produce. Supplying produce to the packhouse is problematic for EFO members due to the unreliability of the Department of Agriculture transport, the high quantity of crops that are rejected by the packhouse, as well as delays in payment for produce.

The researcher and the consultant are the two most prominent stakeholders. However, farmers and some stakeholders are unaware of the different research projects that are being undertaken by the consultant who seemingly uses EFO members as study objects and beneficiaries. Farmers' primary concern is that they find sustainable market access for their traditional organic produce.

8.1 Conclusions

The study hypothesised that EFO members' marketing of organically grown traditional produce is sustainable and profitable. Analysis of the first subproblem identified the farmers current markets as the packhouse, the local community and hawkers. All three markets set their prices seasonally. The packhouse is the farmers' largest market for amadumbe, sweet potatoes, and potatoes, and pays slightly higher prices than the other two markets. This market is however unsustainable for farmers due to problems with transport to the packhouse, delays in payments for produce, and produce that is rejected in high quantities because it does not meet the quality control standards set by the packhouse. The local community and hawker markets are price

inelastic, saturated, and experience seasonal demand and supply fluctuations. The three markets were therefore found to be unsustainable for farmers.

Other potential markets that farmers could penetrate were investigated with the farmers. Woolworths was identified as a potentially sustainable market for EFO members. Woolworths signs a contracting agreement with their producer farmers and assumes responsibility for produce from the field to the consumer through a national distribution strategy. This would be a direct arrangement between farmers and their market and would minimise the problems currently experienced by EFO members. Farmers would be able to observe quality control standards and channel substandard produce to other markets. This would decrease losses of rejected produce and enhance farmers' profits. Other direct contracting agreements that EFO members could pursue were identified as guesthouses, game lodges, and restaurants.

Analysis of the second subproblem found that the profitability of EFO farms could be improved. Research found that EFO members' farms were unprofitable due to the high costs of inputs and production losses. Increased costs of hired labour resulted in an increase in their sales and therefore increased turnover but not profit, as increased / high labour demands of organic produce are a drain to potential profit. Farmers' inputs and losses could be decreased and production increased. This was likely to happen if farmers could overcome the constraints and problems that they are currently faced with. Farmers identified major constraints as a lack of irrigation water, unfenced properties, a shortage of kraal manure for soil conditioning, and a tractor for ploughing. The hypothesis for this study is therefore rejected.

8.2 Recommendations as a result of the conclusions

Following the conclusions made as a result of the evaluation of EFO members' marketability and profitability of traditional organic produce, some recommendations for improvement can be made.

8.2.1 Monitoring and evaluation of projects

The consultant has been identified as a key stakeholder whose involvement in EFO activities is multipurpose. He is a member / manager of several different projects. A

recommendation to remedy the apparent confusion in roles is for the consultant to clarify his position to EFO and all other stakeholders that are involved in EFO activities. His interventions should be measured in terms of the development of EFO in order to monitor delivery of all his project objectives, such as improvement of farmers' access to markets, their profitability of production, and business skills development. Added to this, if farmers cannot secure a direct contracting arrangement with their suppliers and are to continue dealing with the consultant's packhouse, the best marketing options for EFO members' produce should also be investigated. This therefore makes it necessary for all projects undertaken in the interests of improving the sustainability of farming livelihoods of EFO members to be periodically monitored and evaluated by an independent, external evaluator.

Linked to the monitoring and evaluation of projects, all stakeholders need to come together and allow EFO members to assess their roles and projects and decide on communication channels and goals. Meeting times need to be reduced so that farmers can spend more time doing what they do best – farming.

8.2.2 Diversification of production

As is commonly the case in rural local economies in South Africa, and likewise with EFO members and farmers at Embo in general, there is a lack of diversity resulting in the net effect where there is a very limited range of economic activity taking place. There exists an opportunity for EFO members to change their product mix and explore more value-added processing activities for their agricultural produce. Value added products are of a higher value and could potentially improve farmers' turnovers and enhance their profits. Several stakeholders interviewed in the study stated that one of their project objectives was to explore with value-added products with EFO members, but this had not yet happened. Stakeholders could collaborate efforts in this regard to achieve maximum output and to cut down on the costs, monetary and otherwise.

A practical recommendation for the development of the farmers' organisation would be for members to be trained in diversified production and food processing in order to meet all their existing and potential market needs. This diversification can be in two

ways. Firstly members could experiment with producing the 'salad' type vegetables that the organic market demands in order to increase their sales. Secondly, members could explore with value-added products where they do not just sell their traditional organic produce in its raw, unprocessed form. The Department of Agriculture is already experimenting with these high value products in the form of imifino samoosas, amadumbe cakes, and pumpkin soup. However, the department does this work as part of its collaboration with the Embo Masakhane Community Development Organisation. EFO members could benefit from pursuing this venture and acquiring the necessary skills in order to boost their incomes. The importance of improving communication channels between all stakeholders becomes very crucial in this regard.

8.2.3 Markets

It is not only the social issues that will improve the farming livelihoods of EFO members but access to markets must also be considered. Expanding market access is key to the farmers' economic development. If people produce they must have markets, and they must have fair competition. This is especially true for the rural impoverished masses of South Africa as evidenced by the case of EFO members. Organic food is currently a rapidly growing market. However, ongoing research and a detailed investigation of organic food consumption and markets are needed. Farmer groups can collaborate efforts with researchers to put science-based, market driven results into action.

The current growth in the organic produce sector on the international market has increased the demand for organic products and there exists a potential for African countries to produce for the export market. EFO members could also benefit from exploring this avenue. Market research will be necessary to identify the different markets, determine the demand for traditional and other organic products in the market to establish how to best access each particular market. The farmers are already organised into a certified group, which is a requirement for trading in the national and international organic produce markets. However, organic produce market opportunities alone are not enough if poor people's capacity is not built to participate in them. EFO members are lacking in their business management skills,

and these skills will have to be developed for members to effectively sustain their organic produce enterprises.

EFO members need to use their collective bargaining power when dealing with their markets. The farmers are the producers of this food and they should be able to negotiate a price that is suitable to both themselves and their suppliers. The present system where farmers remain subsistence farmers and there has been no improvement in their incomes and livelihoods even after two seasons of expanding their markets outside of their local community is not sustainable. EFO members have mobilised themselves into a legally recognised group and obtained certification in order to engage in the sale of organic produce. This enterprise activity is one of their securest and best livelihood strategies. The returns from their efforts however have yet to trickle down to the farmers so that they reap the fruits of their labour.

8.2.4 EFO members' business management skills development

Support is needed for building the capacity of rural communities. EFO members represent a case study of unsuccessful organic growers. However, due to members' low levels of education, farmers were unable to perform basic business management tasks such as budgeting, record keeping, and accessing markets and information in order for their businesses to operate efficiently. These skills were found to be lacking among EFO members. Indeed, EFO members do not cost time spent on working on their farms each day, how often they buy inputs and in what quantities, or how much they make from their production of each crop that they produce. The majority of EFO members are illiterate and innumerate and do not keep a record of their incomes and expenditures. This made the task of establishing production costs difficult and estimates were used to calculate these figures. Amadumbe sales to each of the farmers' three markets were the only traditional crop for which comparative figures could be obtained. This was because amadumbe was their largest selling crop for the 2002 season and a record of the farmers' sales to the packhouse could be gleaned from their payments in their organisation's bank books that are kept by the secretary of EFO.

Practical recommendations in this aspect of EFO activities would be that farmers appoint a member of the organisation to be trained in record keeping and business management skills in order to keep an accurate and updated account of all the farmers' incomes from their sales. A generic log frame with the number of hours spent on the field in any one day, the amount of labour used (farmer's own and hired), inputs used, their yields at harvest time and finally, sales and income from these could be developed for each farmer household by this trained member. Individual EFO members could then keep their own (albeit basic) records of farming inputs, losses, and can therefore calculate their turnover and monitor profits.

8.2.5 Improving EFO farm profitability

Only three out of 34 EFO farms were making a profit. To improve profitability in all farms, members would have to intensify production and minimise inputs and losses. Suggested ways of improving this were for farmers to diversify their current production to include a variety of organic crops in order to capture the bulk of organic consumers at their current largest markets. However, constraints that farmers currently face such as a lack of water for irrigation, the unavailability of a tractor for ploughing, having unfenced properties, and inadequate kraal manure for soil conditioning, prevented farmers from improving on their current production levels.

It is recommended that farmers seek direct contracting agreements with their suppliers such that this would eliminate the necessity of transporting produce to the packhouse first. Farmers' profits would be improved by securing a Woolworths-type contract where the packhouse is on-farm and farmers could be able to observe quality control standards. This would further allow for farmers to channel any sub-standard produce that is rejected by the on-farm packhouse to the local community and hawker markets. This would also help solve the problem with produce that is rejected. With regards to the delays in the payment of accepted produce from the packhouse, farmers could refuse to part with their produce unless paid on site or they could sign a formal business contract with the packhouse and attach a penalty clause for packhouse delays. Other direct contracting arrangements that can be sought are supplying organic produce to guesthouses, restaurants, hotels, and game lodges.

8.2.6 Government to play a role for rural enterprise development to take place

In order for rural agricultural enterprises to compete successfully and sustain their farming livelihoods, government should play a unique role in providing public services necessary for development. The majority of the sample from the study cited a lack of infrastructure as the major problem, preventing them from achieving maximum production capacity. Irrigation infrastructure at Embo and other rural communities in South Africa is minimal and individual plots are small so it falls outside the remit of government irrigation departments. If government (and the private sector) can provide the much needed infrastructural development assistance in this area, as well as review the legal and regulatory environment facing small rural enterprise people, their access to markets, access to technology, it is hoped that the livelihoods of rural farmers would be sustained somewhat. The lack of influence by farmers over the policies, processes, and institutions that affect them could be addressed by facilitating access of disempowered groups to power, authority, and resources, raising consciousness about inequity, and strengthening the ability of marginalized people to transform existing structures (SD Gateway 2002). This could also be addressed by policy guidelines from the Ministry of Agriculture favouring organic agriculture, the setting up of accessible local organic certification, and the development of local organic markets and consumer education. Farmers should also be encouraged to participate in quality assurance and certification schemes.

8.3 Recommendations for improvement of the study

EFO members do not cost time and labour and estimates were used to calculate this and obtaining qualitative and quantitative information on the productivity and constraints to farming livelihoods was not easy due to the low levels of education of the farmers. The data used to calculate the profitability of members' farms were estimates, as farmers do not keep a record of their sales to the local and hawker markets. A record of farmers' sales to the packhouse could be obtained from tracking their bank statements, which are kept by the EFO's vice-treasurer. However, this system was also fraught with miscalculations as farmers did not get paid for rejected produce and there was no way of accounting for the value of this. The study could have presented more meaningful results had farmers kept a record of sales to each of their markets but this was a problem since farmers had on average poor education

their markets but this was a problem since farmers had on average poor education levels. An improvement to the study would be to evaluate the value and profitability of the other traditional organic crops that EFO members produce and assess the marketability thereof.

8.4 Implications for further research

For the majority of rural communities, education levels are poor and assessing the contribution of farming to sustainable livelihoods is difficult in the absence of records. Detailed farm budget studies need to be conducted to evaluate the cost effectiveness of farming.

Evaluating whether access to a perennial water source, a tractor, and adequate kraal manure will facilitate production on a more commercial basis, generating a cash income and thereby leading to improved profitability for EFO members' farms.

Evaluating whether training and acquiring business management skills will develop EFO members' organic produce marketability and profitability of farms.

An evaluation of whether mobilising farmers to form collective schemes such as cooperatives will improve their economies of scale and lower transaction costs, at the same time improving market access and therefore profit.

Evaluating whether diversification of current production to crops such as the most commonly sold in supermarkets, and exploring with value added crops would capture other larger markets for EFO members, thereby resulting in increased incomes for farmers.

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APPENDIX A

EFO constitution

CONSTITUTION OF EZEMVELO FARMERS ORGANISATION

Name of organisation: Ezemvelo Farmers Organisation (EFO)

Established: 04 February 2001

Physical address: Ogagwini location at Embo Traditional Authority

Postal address: P.O. Box 35198, Umbumbulu 4105, and KZN, SOUTH AFRICA

A. Objectives:

1. To co-operate with the South African Department of Agriculture, at all levels, and any other institution or person in sustainable, productive, stable and equitable agriculture.
2. To practise organic farming as understood to be: A production system that sustains agricultural production by avoiding or largely excluding synthetic fertilisers and pesticides. Whenever possible, external resources, are replaced by internal (solar or wind energy, biological disease and pest control, biologically fixed nitrogen and other nutrients released from organic matter or soil reserves) resources found on or near the farm.
3. To commercialise our produce in a manner that improves our economic development without compromising our cultural integrity.

B. The General Membership (Annexe1)

1. Opened to all adult residents of the greater Embothimuni location who accept to abide by the objectives of EFO.
2. Shall be obtained by applying in writing (Annexe 2) through an Internal Approval Committee (see D below) and R10 membership fee is payable at the time of application. The application fee is refundable on non-acceptance, but not refundable on withdrawal after acceptance has been confirmed.
3. An ordinary member shall vote once.
4. Membership shall be renewed every year.

C. The Executive Committee and its duties

1. Shall be democratically elected once a year by the general membership from among them.
2. Shall convene general meetings once in two months. The Executive committee will also convene executive committee, internal committee and other meetings that may be necessary before the general meeting.
3. The Chairman of the executive committee shall convene and chair all meetings. S/he will vote twice in a case of even votes.
4. The Vice-Chairman shall act as a Chairman in the absence of Chairman and on request from the Chairman where necessary.
5. The Secretary shall record the minutes of all meetings and write letters on behalf of EFO.
6. The Vice-Secretary shall act as the Secretary in the absence of the Secretary and on request from the Chairman where necessary.

Annexe 1: Members of Ezemvelo Farmers Organisation
Isandiso 1: Amalungu e- Ezemvelo Farmers Organisation

	Igama
1	Mrs B Dlamini
2	Mrs C Phewa
3	Mrs ZJ Hlengwa
4	Mrs B Maphumulo
5	Mrs M Nzimande
6	Mrs Z Maphumulo
7	Mr Z Nyanisa
8	*Mr T Mabhida (Chairman/ Usihlalo)
9	Mrs TB Nxele
10	Mrs B Nxele
11	* Ms SA Nzimande (Secretary/Unobhala)
12	Mr M Wanda
13	*Mr N Maphumulo (Vice- Chairman/ Usekela-Sihlalo)
14	Mrs MF Mkhize
15	Mrs Benzalani Mbili
16	Mrs B. Mbili
17	Mrs B. Ngcobo
18	Mrs Z Sithole
19	Mrs B Mthembu
20	Mrs T Makhanya
21	Mrs T Msomi
22	*Mr D Mbili (Treasurer/Umgcini-mafa)
23	Mrs I Nzimande
24	Ms T Maphumulo
25	Mrs E Msomi
26	Mrs Teresa Mkhize
27	Ms Annaclea Ndalu
28	Mr K Nyanisa
29	Mrs E Ndlovu
30	* Mr Siboniso Mkhize (Vice Secretary/ Usekela-Nobhala)
31	Mrs N Mabhida

*** = Executive Committee; = internal inspector**

Members of the Internal Approval Committee

1. All members of the Executive Committee
2. Ms Winnie Ngcobo (Internal inspector)
3. District head or vice- head (Department of Agriculture)
4. Mr Albert Modi (Quality Control Officer)

7. The treasurer shall keep a record of and report on financial statements. The Chairman shall act as a Treasurer in the absence of the Treasurer, except where the Treasurer's signature is compulsory. The EFO bank account shall be opened in the name of the Chairman, the Secretary and the Treasurer.
8. All members of the Executive committee shall be present when decisions are taken. Any member of the executive who is absent from two consecutive meetings shall lose their executive position. Two-thirds of the voting members shall constitute a majority in any decision taken by EFO.
9. The executive committee is obliged to uphold the EFO constitution and to act as a conduit between EFO and traditional leaders as well as other institutions.
10. The headman of Ogagwini location shall be an *ex-officio* member of the executive committee and act as a conciliator.

D. The Internal Approval Committee and its duties

1. Shall be comprised of all the members of the Executive committee, all the internal inspectors approved by the general membership and trained appropriately at a recognised institution, the quality control officer, and the district head or deputy head for the Department of Agriculture (*ex-officio*).
2. Shall review membership applications and decide on the sanction process in case of constitutional infringements.
3. The Internal Approval Committee shall record infringements.
4. A member who does not renew their membership shall automatically lose it.
5. A member who does not conform to the organic farming rules shall be dealt with in accordance with the stipulation of the organic farming certifying body, which include expulsion.
6. A member who arrives half an hour late at a meeting or who does not send an apology for not attending a meeting shall be fined R10.

E. Constitutional amendment

1. The constitution shall be amended in accordance with the requirements of the majority (two-thirds) of voting EFO members.

APPENDIX B

Household survey questionnaire

University of Natal Research Survey

Embo Farmer's Organisation: Household Survey

Introduction: Thank you for participating in this survey to explore the potential for sustainable market for your organic products. You have been randomly selected from the list of all members of the Embo Farmer's Organisation. As part of the study we need to ask you to assist us in documenting the activities you conduct in farming organic products and your opinions about marketing these products.

Please can you assist us by answering the following questions as fully and truthfully as you can. Your answers will not be disclosed to anyone else. All the answers of the approximately 20 other households to be interviewed will be summarised and the summary report will be presented to the Organisation.

1. General information

Survey Date:	Interviewer:
Member number:	
Respondent/Organisation member's name:	Respondent's age:
Household size (excluding migrants):	Respondent Male/Female?
Number of seasons which household has provided organic produce to the packhouse?	

2. Indigenous crop definitions and production

2.1 Please can you define in your own words what an <i>indigenous crop</i> is?	
--	--

<p>2.2 Please name the indigenous crops you produced in the last season.</p> <p>Probe for other crops listed here.</p> <ul style="list-style-type: none"> Do you produce and/or sell any of these crops? Do you consider them organic? 	Crop	<p>Grew in last season ✓ for yes and identified organic</p> <p>* for if you probed and they identify crop as organic</p> <p>▲ If grown but not classified by farmer as organic</p>	<p>Sold in last season</p> <p>X = No sales</p> <p>L = locally</p> <p>H = hawkers</p> <p>PH = pack house</p> <p>Other, specify</p>	<p>Income from sale (establish gross income) (R)</p>	<p>Value of crop consumed by household (or quantity)</p>	<p>Value of crop losses, record reason for loss.</p>
	Amadumbe					
	Zulu potatoes					
	Sweet potatoes					
	Black jack					
	Amaranthus					

3 Seasonal time line of activities and costs

Please can you describe the activities you carry out at each stage of the production and marketing processes involved in farming organic products.

Agric stage Record approximate dates	Activity	Information source¹	Purchased inputs and cost	Non-purchased inputs and cost	Equipment needed and cost	Skills needed	Hired labour (No of days and cost)	Own labour hours/days and/or cost
Soil preparation								
Soil conditioning (eg fertilising or composting)								
Planting								

Agric stage Record approximate dates	Activity	Information source ¹	Purchased inputs and cost	Non-purchased inputs and cost	Equipment needed and cost	Skills needed	Hired labour (No of days and cost)	Own labour hours/days and/or cost
¹	Weeding							
	Pest management							²
	Watering/ mulching							

1

1 OH= oral tradition

Ex = D of Agric

AM = Dr Modi

C = certification

T = training (find out who)

O = others (find out who)

Agric stage Record approximate dates	Activity	Information source¹	Purchased inputs and cost	Non-purchased inputs and cost	Equipment needed and cost	Skills needed	Hired labour (No of days and cost)	Own labour hours/days and/or cost
Harvesting								
Storage								
Transport to market								
Post harvest packing and/or processing								

Agric stage Record approximate dates	Activity	Information source¹	Purchased inputs and cost	Non-purchased inputs and cost	Equipment needed and cost	Skills needed	Hired labour (No of days and cost)	Own labour hours/days and/or cost
Communicati on services eg phone calls etc								
Organisation membership	Meetings and business							
Organic certification								

How does inorganic farming differ from what you have described above?

Why do you produce organic crops?

Do other organisations in surrounding areas market organic crops?

Who do they market to?

Does the price of organic crops differ from inorganic crops?

How do you determine the price for organic crops sold to other markets other than selling to the packhouse?

Are customers in these markets other than the packhouse prepared to pay the prices you set?

Why?

Thank you VERY much.

We will summarise all farmer's responses and present the summary to the organisation as part of the total study of the profitability of organic farming for the Embo Farmer's Organisation.

APPENDIX C

SLA participants



Photo 1 of 2

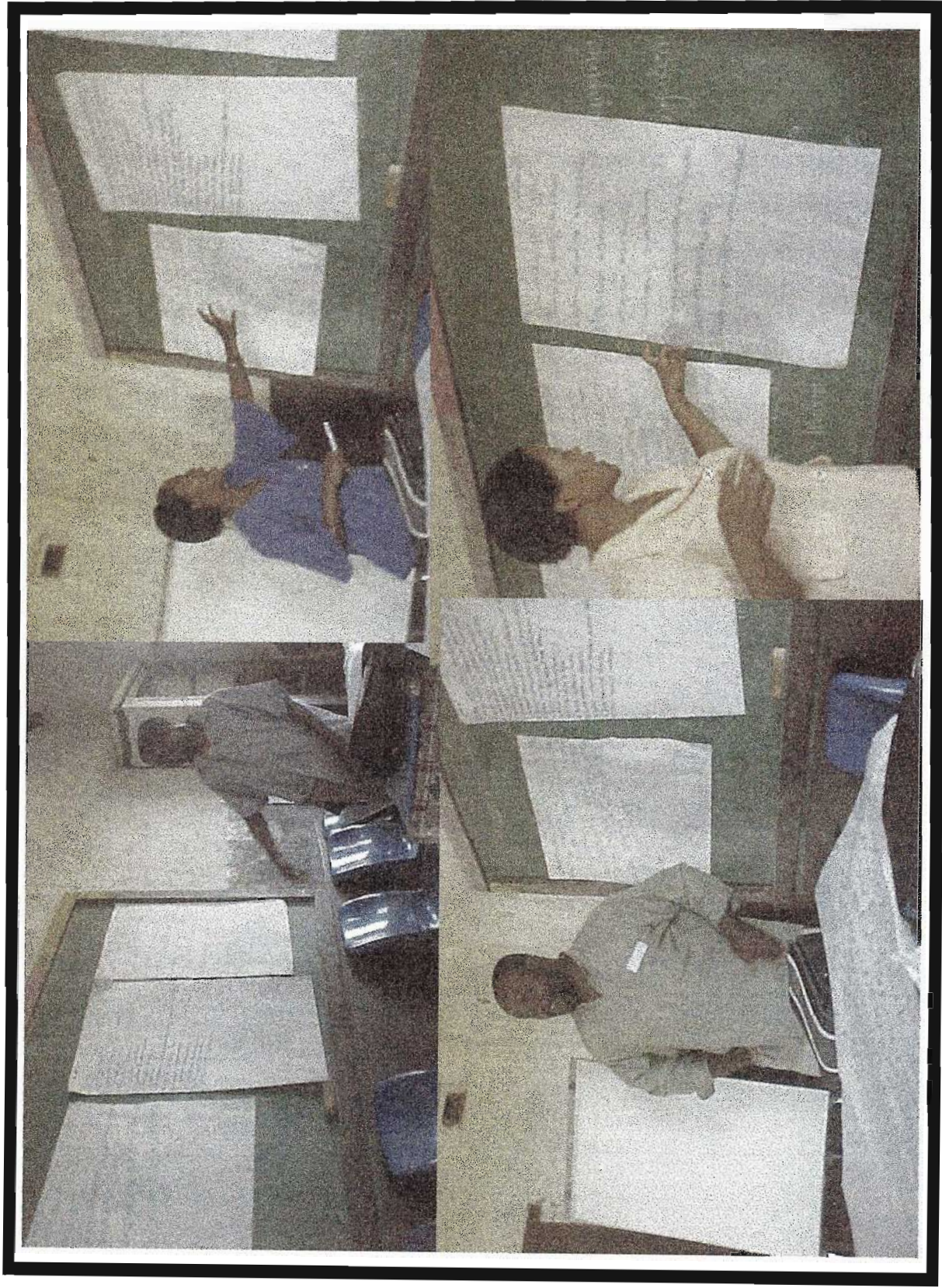
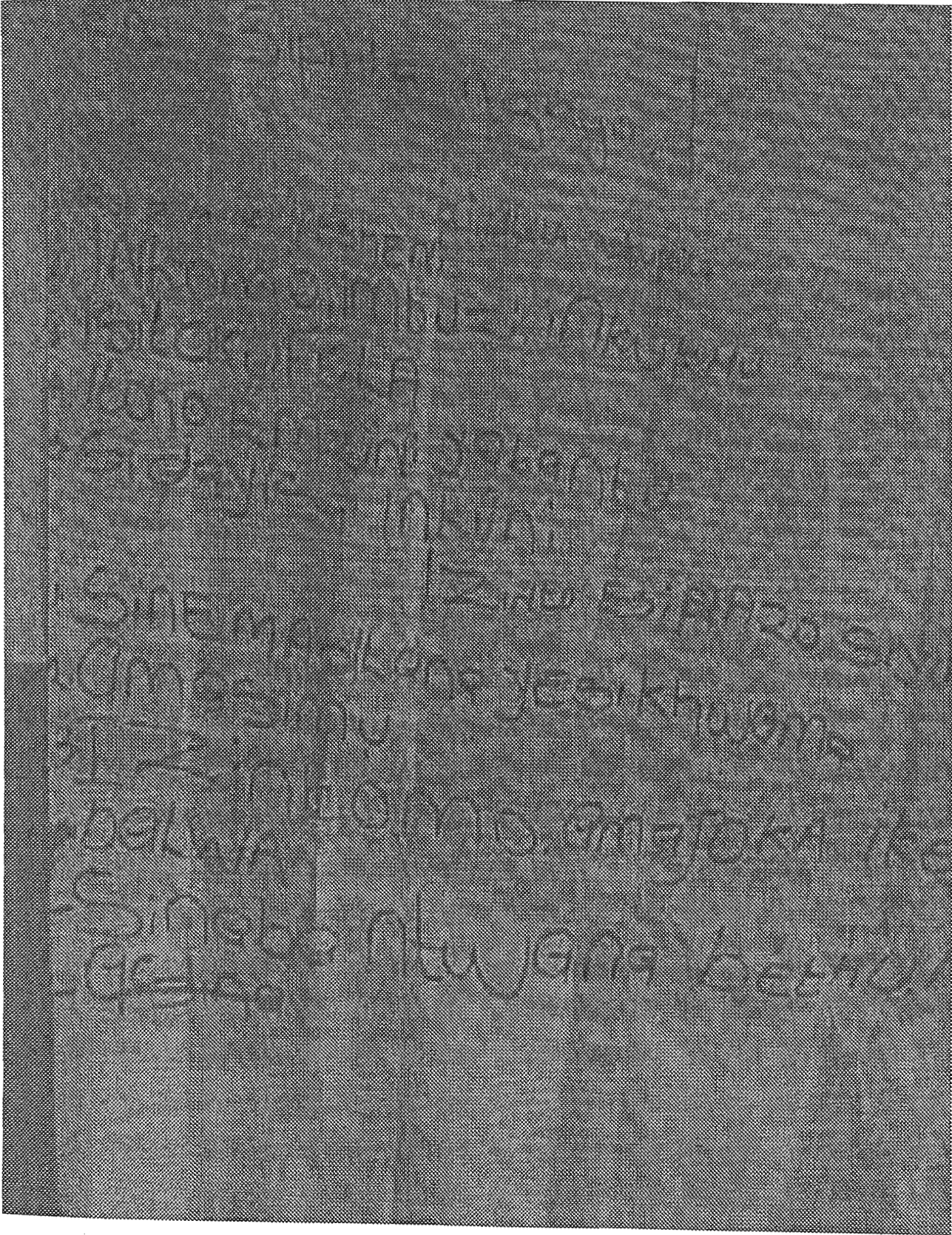


Photo 2 of 2

APPENDIX D

SLA proceedings



12 INTO EINTHO SIIMFANENO

1. SIIMFANENO WEKULIMA.
2. SIIMFANENO BUMBENI.
3. SIIMFANENO IKHATHI SOKUSEBENI.
4. IZIKOMO ZOKULIMA NOMA ZINENE.
5. IZIKOMO SIIMFANENO.
6. SIIMFANENO ULWAZI LOKULIMA KODWA AN.
7. SIIMFANENO AMALAZI KODWA AKENELE.
8. SIIMFANENO IZISEBENI KODWA AZIKHHELE.
9. AMATHIWEZI OKULIMA SIIMFANENO KODWA.
10. UMOLWA AKENELE.
11. AMALAZI, OKUSEBENI SIIMFANENO KODWA.
12. OKULIMA SIIMFANENO KODWA SIIMFANENO.
13. IZIKOMO SIIMFANENO KODWA AKENELE.
14. SIIMFANENO KODWA UMOLWA AKENELE.

1. OIF 50 ZENHLAND EMIN
E2AYO

1: Sufsa Enigulien
Sibe Sasilhathu

a) Uubhenga
b) Amenzi

c) Ugesi
d) Ogandaganda

e) Unshini wobogayo

f) Sibe nezimaveke
Esizifabelayo

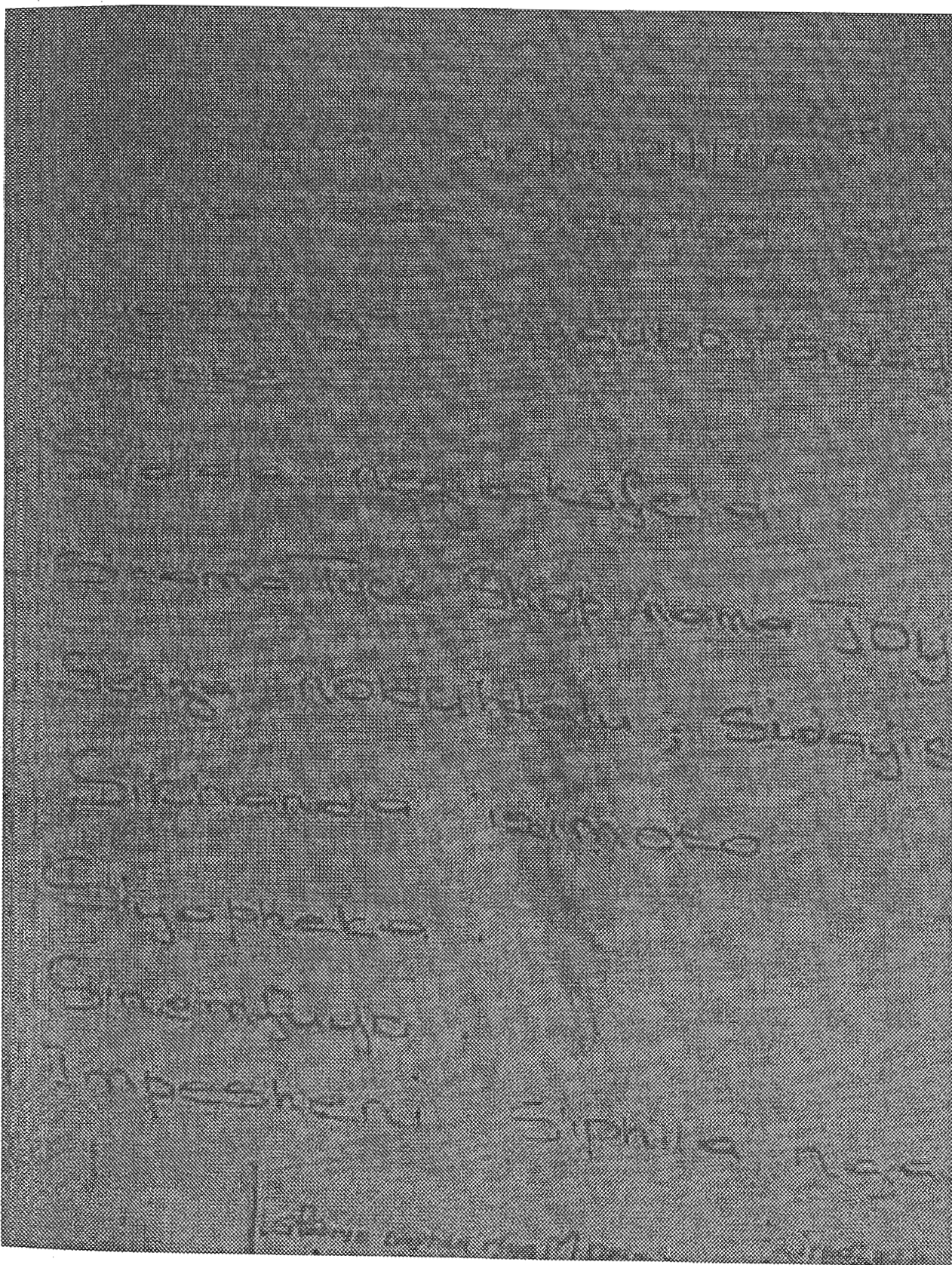
18-05-2020

1. IZINDLELA ZOKUPHILA

1. UKULIMA 12/11/2020 ZONKE ZOKULA
2. UKUHLA AMACATSI
3. UKUSINA INGOMA
4. UKUNITHA AMATSHI
5. UKUHLA AMANDELELA
6. UKUSHLA IBHOLA
7. AMATSHI
8. UKUBAMBA IQHATA EKUTHUTHUKISENI UMPHAKATI
9. UKUFU YA IZINKU KHU
10. UKWENZA AMANHLOBO
11. UKUHLA OBHAKIWO
12. UKUBHAKA AMANHLOBO
13. UKUDLALA IZITHAKA
14. UKUTHUNGA IZITHAKA

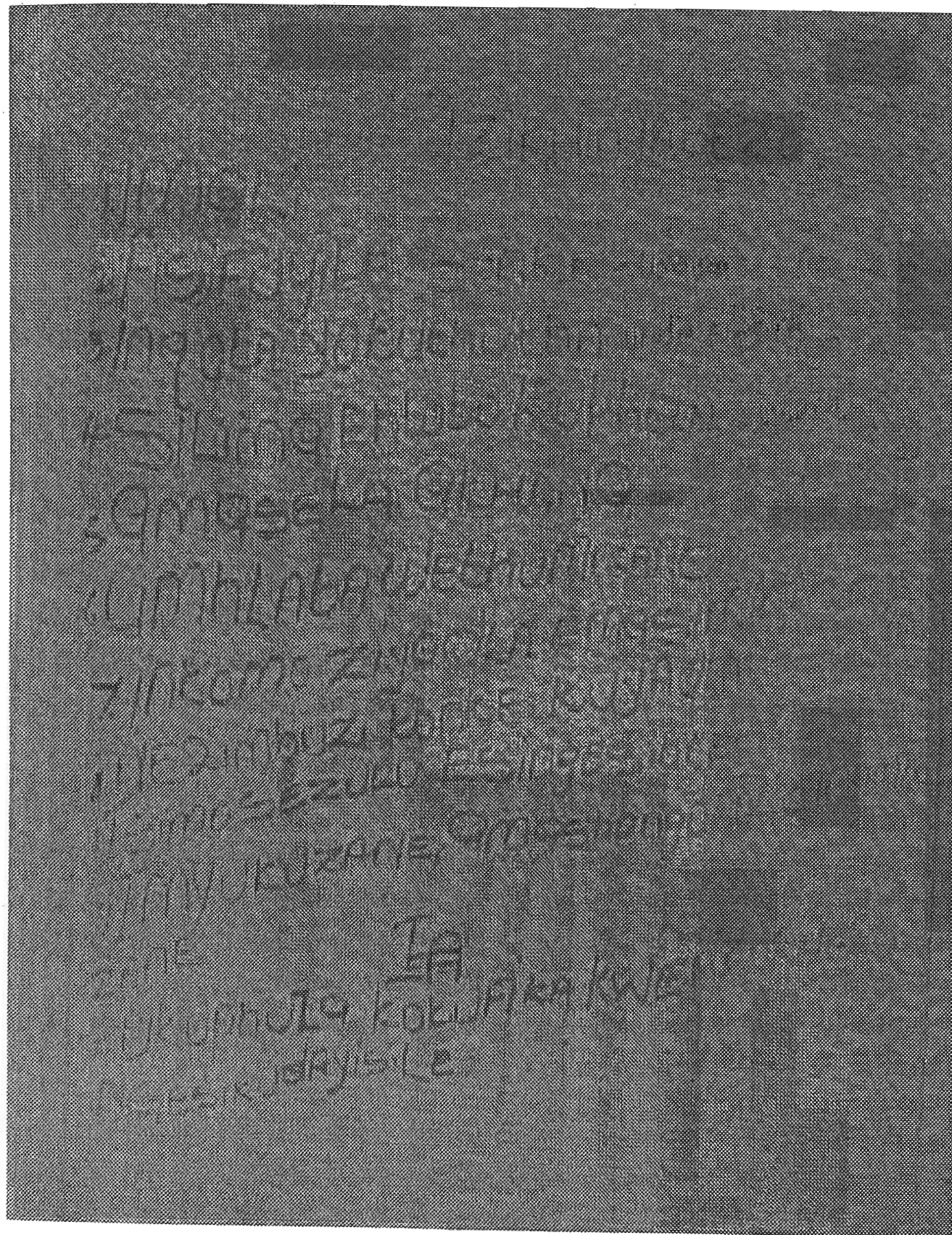
IZIKHUYABEZO/INGQINGAMBA.

- 1. UGANDASANYO
- 2. AMANZI
- 3. IMANI
- 4. IMKHEKE
- 5. IMOTO
- 6. UMQUBA
- 7. IMBEWU
- 8. I-LIME
- 9. UGQOLOKUBIYA
- 10. UGQISI KUZO SIKWAZI NOKUBHATA
- 11. UQEQEQIMO



IZIPHO ZIBHLANGANO ENOLAKHO OMHLA

1. SIFISA UKUTHI SIBE PHABALINI ABABELELE.
2. SIFISA UKUTHI SIBE SESINEMALI EZOBHWA.
3. SIFISA UKUTHI AMASIMU ETHU ABIBELELE.
4. SIBABELELE PHAMBILI SIBE SIPHAMELELE.
5. SIFISA UKUBA PHAMALI OKUCHELELA.
6. SITHOLE NAMAGAZA OKULIMA.
7. SITHOLE UBOBESHO KWEZOLIMO NAKWEMIN.
8. SIFISA UKUTHI GANDAGANDA WENHLA.
9. SIFISA UKUTHOLA IMOTO ZETHU ZOKUTHUTHA.
10. SIFISA UKUBA NEMAKETHI YETHU.
11. SIFISA UKUTHOLA UMQUBA.
12. SIFISA UKUBA NOGESI.
13. SIFISA UKUTHOLA KLINE.
14. SIFISA UKUTHOLA IZIMBEWU.
15. SIFISA UKUTHOLA IMALI YOKUPHILA IZIBHAKO.
16. SIFISA UKUPHILA WAKUKHU.
17. SIFISA UKUTHOLA UMSEBENZI.



APPENDIX E

Forcefield log frame

1 The problem		
2a Present situation		2b Desired situation
3 Constraining forces		5 Driving forces
4 Actions to reduce or eliminate		6 Actions to increase
7a Steps towards influencing the forces		
7b Resources required		
8 Steps	How	When

APPENDIX F

Stakeholder analysis questionnaire

STAKEHOLDER ANALYSIS OF EMBO FARMERS PROJECT

The following questions are aimed at identifying and defining the characteristics of key stakeholders in the project. This analysis will also help in the assessment of the social environment in which stakeholders operate i.e. drawing out the interests, conflicts of interests, relations, capacity and participation of different stakeholders. Respondents are urged to elaborate as much as possible.

- 1. When was the project initiated? / What year did the project start?
.....
- 2. Who initiated it & how?
.....
.....
.....
- 3. How / when did you find out about the project?
.....
.....
.....
- 4. According to your understanding, what does the project aim to achieve?
.....
.....
.....
- 5. What is your own personal motivation for being involved in this project?
.....
.....
.....
- 6. What is your / organisation's interest in this project?
.....
.....
.....
- 7. Do you know who the other stakeholders are in this project? Name them.
.....
.....
.....
- 8. How do you regard the other stakeholders in the project?
.....
.....
.....

- 9. How often do you meet with the project's stakeholders?
.....
.....
.....
- 10. What is your relationship to the other stakeholders in the project?
.....
.....
.....
- 11. What benefits do you get out of the project?
.....
.....
.....
- 12. What resources do you / have you committed to the project?
.....
.....
.....
- 13. What stage is the project in now?
.....
.....
.....
- 14. What is your role in this project? (What do you contribute to this project?)
.....
.....
.....
- 15. Are you satisfied with the way things are going in the project at this stage? Please explain in detail whether happy or unhappy.
.....
.....
.....
- 16. How do you think things could be improved?
.....
.....
.....
- 17. What do you think needs to be changed? People, structure, programme, role players? Please elaborate.
.....
.....
.....
.....

Thank you for your time.

APPENDIX G

Code log and raw data

Code Log, Raw Data, Household Survey, EFO, 2002

HHSIZE	household size
SLAMAD	sold to local amadumbe
SHAMAD	sold to hawkers amadumbe
SPHAMAD	sold to packhouse amadumbe
SLPOT	sold to local potatoes
SHPOT	sold to hawkers potatoes
SPHPOT	sold to pack house potatoes
SLSOPT	sold to local sweet potatoes
SHSPOT	sold to hawkers sweet potatoes
SPHSPOT	sold to packhouse sweet potatoes
SLBJACK	sold to locals blackjack
SHBJACK	sold to hawkers blackjack
SPHBJACK	sold to packhuose black jack
SLAMARAN	sold to locals amaranthus
SHAMARAN	sold to hawkers amaranthus
SPHAMARAN	sold to packhouse amaranthus
SLBEANS	sold to locals beans
SHBEANS	sold to hawkers beans
SPHBEANS	sold to packhouse beans
SLNUTS	sold to locals nuts
SHNUTS	sold to hawkers nuts
SPHNUTS	sold to packhouse nuts
SLPUMP	sold to locals pumpkin
SHPUMP	sold to hawkers pumpkin
SPHPUMP	sold to packhouse pumpkin
SLMAIZE	sold to local maize
SHMAIZE	sold to hawkers maize
SPHMAIZE	sold to packhouse maize
HHAMAD	value of amadumbe consumed by the household
HPOT	value of potatoes consumed by the household
HHSPOT	value of sweet potatoes consumed by the household
HHBJACK	value of black jack consumed by the household
HHAMARAN	value of amaranthus consumed by the household
HHBEANS	value of beans consumed by the household
HHNUTS	value of nuts consumed by the household
HPUMP	value of PUMPKIN consumed by the household
HHMAIZE	value of maize consumed by the household
LOSSAMAD	value of amadumbe losses
LOSSPOT	value of potatoes losses
LOSSSPOT	value of sweet potatoes losses
LOSSbjack	value of blackjack losses
LOSSAMARAN	value of amaranthus losses
LOSSBEANS	value of beans losses

LOSSNUTS	value of nuts losses
LOSSPUMP	value of pumpkin losses
LOSSMAIZE	value of maize losses
INPUTSBUY	purchased inputs costs
INPUTSHOME	non-purchased inputs costs
EQUIP	equipment needed costs
HIRELAB	costs of hired labour
OWNLAB	costs of own labour
OTHERORG	other organisations selling organic crops around the area
PRICEDIFF	does the price of organic & inorganic crops differ: 1=no, 2=yes
TOTLINC	total income from crops sold to locals
TOTHINC	total income from crops sold to hawkers
TOTPHINC	total income from crops sold to packhouse
TOTSELL	overall total from all the crops sold
HHTOT	overall total of crops consumed by the household
TOTVALUE	TOTSELL
TOTLOSS	total value of all crops lost
TOTCOST	total value of purchased and non-purchased inputs,equipment costs,hired and own labour costs.
NETVALUE	profit made after subtracting total loss and total costs from the total value.

Raw Data, EFO Survey, 2002

pricediff	lpriceok	totline	tothinc	totalphinc	totalsell	hhtot	totvalue	totloss	totcosts	netvalue
0	1	600	0	200	800	0	800	150	160	490
0	1	550	0	550	1100	45	1100	0	0	1100
0	1	500	0	400	900	390	900	40	846	14
0	1	0	0	600	600	210	600	270	1660	-1330
0	1	0	0	250	250	240	250	0	1005	-755
0	1	360	0	0	360	0	360	0	1635	-1275
0	1	2500	0	0	2500	3000	2500	0	8005	-5505
0	1	0	0	202	202	90	202	0	7570	-7368
0	1							0	2940	
0	1	500	1000	0	1500	260	1500	0	700	800
0	1	0	0	0	0		0		1055	
0	1	0	0	0	0	420	0	0	1930	-1930
0	1	870	0	608	1478	1240	1478	0	1420	58
0	1	500	0	0	500	0	500	30	3730	-3260
0	1	200	0	0	200	0	200	0	1187	-987
0	1	1815	0	510	2325	1360	2325	595	4770	-3038
0	1					2280		300	1640	
0	1	120	0	750	190	780	190	630	2300	-2740
1	1	0		180	595	415	595	300	822	-527
1	1	500	0	500	1000	85	1000	60	4147	-3207
0	1	50	50	0	100	100	100	0	1910	-1810
1	1	0	0	400	400	0	400	0	1015	-615
0	1	160	0	493	653	905	653	0	3760	-3107
1	1	10	15	420	445	0	445	0	1345	-900
1	1	1000	400	4670	6070	4831	6070	3611	10355	-7896
1	1	0	0	1120	1120	130	1120	265	1425	-570
1	1	0	0	377	377	1638	377	924	3840	-4387
2	1	600	0	0	600	1110	600	315	1105	-820
1	1	255	0	107	362	263	362	35	4485	
1	1	180	180	180	540	1427	540	160	10800	-10420
0	1	300	0	300	600	432.5	600	543	3868	-3811
0	1	212.5	0	1572.5	1785	1444	1785	796	5385	-4396
2	1					2230		270	3132	

Raw Data, EFO Survey, 2002

lossspot	lossbjack	lossamara	lossbeans	lossnuts	losspump	lossmaize	inputbuy	inputhome	equip	hirelab	ownlab	otherorg
0			0	0	50						160	0
							56	50	260	200	280	0
40							0	500	105	105	950	0
120							0		230	300	475	0
							300	0	135	750	450	0
							110	200	270	5175	2250	0
									350	7100	120	0
							540			1200	1200	0
							100	0	150	0	450	0
							135	20			900	0
							370	130	80	900	450	0
							275	225	120	600	200	0
						0	435	25	120	1800	1350	0
0							100		180	682	225	0
100			120			75	770	190	210	1500	2100	0
150			100			30	0	100	180	680	680	0
120						360	290	500	130	1380	0	0
300							362	60		100	300	0
						60	1000	75	540	1780	750	0
0			0	0		0	480		80	300	1050	0
							280			735	0	0
			0			0	350		120	2100	1190	0
							0	180	375	450	540	0
60			100	31		120	0	45	200	7410	2700	0
75							0	215	330	500	380	0
200			450	10	70	100	0	0	220	3460	160	0
			0			15	105	340	390	270		0
12.5					10		0	0	2085	1600	800	1
60			100				395	2000	375	480	10800	0
75		100	20			75	2	30	680	2160	1056	0
186			200	0	10	0	56	380	280	2675	1994	0
250			100			15	56	265	540	1224	1032	0

Raw Data, EFO Survey, 2002

shmaize	sphmaize	hhamad	hhpot	hhspot	hhbjack	hhamaran	hhbeans	hhnuts	hhpump	hhmaize	lossamad	losspot
				45							100	0
0	0	240	80	50	0	0	0	20	0	0	0	0
0	0	150	120	90							150	0
		240										
0	0	300								60		
		3000										
				90								
	0											
		90	20	90						60		
0	0											
0	0	70		0			300			50		
		1000	200	40								
0	0	200									30	0
0	0	600	120	200			240			200	300	0
0	0	600	160	150			1100			270	0	20
0	0	240	180	180						180	150	0
		175		240								
0	0	45	40								0	0
										100	0	0
0	0						0				0	
		10	436	9			150			240	60	0
0	0	2000	250	150			400	31		2000	3000	300
		30	75	25							90	100
0	0	232	120	75			600	120	300	200	44	40
0	0	300		150			600	0		60	0	
0	0	105	75	12.5			50		2.5		0	12.5
0	0	350	200	200			600		72		0	0
0	0	30	15	50		200	40			22.5	300	45
0		500	60	0			800	84	60	600	400	0
0	0	600	160	250			1100			120	0	20

Raw Data, EFO Survey, 2002

slamaran	shamaran	sphamaran	sIBEANS	shbeans	sphbeans	slnuts	shnuts	sphnuts	slpump	shpump	sphpump	slmaize
									250			
0	0	0	0	0	0	200	0	0	0	0	0	0
0											0	1
0	0	0	0	0	0	0	0	0	0	0		50
												60
				0		0						0
0	0	0	0	0	0	0	0	0	0	0	0	0
			0	0	0							0
			0	0	0			0				0
			480	0	0							125
			0	0	0							0
				0	0				0	0	0	120
												300
			0									
			0	0	0	0	0	0				0
						186	0	0				120
			0	0	0	0	0	0	0	0	0	0
			0	0	0	0	0	0				0
			0	0	0	0	0	0	25	0	0	0
			0	0	0				0	0	0	0
0	0	0	0	0	0							0
			0	0	0	0	0	0	0	0	0	0
			0	0	0							0

[illegible]

Raw Data, EFO Survey, 2002

case	hhsz	seasons	age	gender	amadum	potatoes	spot	blackjack	amaranth	beans	nuts	pumpkin
1	7	2	23	1	1	1	1	0	0	0	1	1
2	12	1	51	1	1	1	1	0	0	0	0	0
3	7	2	59	1	3	0	1	0	0	0	0	0
4	7	2	51	1	1	1	1	1	0	0	1	1
5	3	2	54	1	1	1	0	0	0	0	1	0
6	5	0	38	1	1	0	0	0	0	0	0	0
7	9	4	50	2	5	1	0	0	0	0	0	0
8	7	2	39	2	0	3	3	0	0	0	0	0
9	14	1	49	1	4	2	6	0	0	0	0	0
Jan-00	5	0	48	1	6	2	6	0	0	0	0	0
20	6	0	48	1	0	0	0	0	0	0	0	0
21	7	0	59	1	0	0	0	0	0	0	0	0
22	7	1	66	2	5	0	5	0	0	0	0	0
23	6	3	60	1	3	0	0	0	0	0	0	0
24	9	0	50	1	1	0	1	0	0	0	0	0
25	5	3	53	1	5	1	1	0	0	0	1	0
26	11	2	62	2	5	3	5	0	0	0	1	0
28	11	2	54	1	3	0	3	0	0	0	1	0
29	7	1	47	1	3	0	0	0	0	0	0	0
30	8	4	20	1	3	1	0	0	0	0	0	0
31	3	0	60	1	6	0	0	0	0	0	0	0
32	3	4	49	1	3	3	3	0	0	0	0	0
33	6	2	43	1	3	1	3	0	0	0	0	0
34	12	2	75	1	3	0	6	0	0	0	0	0
11	9	2	63	2	5	5	3	0	0	0	0	0
12	11	1	40	1	3	3	3	0	0	0	0	0
13	15	2	26	1	3	0	0	0	0	0	0	0
14	4	0	46	2	1	0	0	0	0	0	0	0
15	13	2	41	1	5	1	5	0	0	0	1	1
16	9	2	27	2	7	7	7	0	0	0	0	0
17	8	2	32	1	0	0	5	0	0	0	0	0
18	3	2	49	1	3	0	5	0	0	0	0	0
19	11	2	62	2	5	5	3	0	0	0	0	0