Research Report 41

Strategies to support South African smallholders as a contribution to government's second economy strategy

Volume 2: Case studies

Edited by Michael Aliber

Report commissioned by the second economy strategy project

UNIVERSITY of the WESTERN CAPE

PLAAS
Institute for Poverty, Land and Agrarian Studies
School of Government • EMS Faculty

Strategies to support South African smallholders as a contribution to government's second economy strategy

Volume 2: Case studies

Published by the Institute for Poverty, Land and Agrarian Studies, School of Government, Faculty of Economic and Management Sciences, University of the Western Cape, Private Bag X17, Bellville 7535, Cape Town, South Africa.

Tel: +27 21 959 3733. Fax: +27 21 959 3732. E-mail: plaas@uwc.ac.za

Website: www.plaas.org.za

Institute for Poverty, Land and Agrarian Studies Research Report no. 41

ISBN: 978-1-86808-719-8

June 2011

Series editor: Rebecca Pointer
Cover photograph: PLAAS
Layout: Designs4development, info@d4d.co.za
Typeset in Frutiger
Printing: RNK Graphics

Thanks to Trade & Industrial Policy Strategies (TIPS), and the source of the funds, the UK's Department for International Development (DfID)

Contents

Project team

Rauri Alcock, Church Agricultural Projects
Michael Aliber, University of the Western Cape
Mike Antwi, North-West University
Mompati Baiphethi, Human Sciences Research Council
Abenet Belete, University of Limpopo
Ben Cousins, University of the Western Cape
Rick de Satge, Phuhlisani Solutions
Jonathan Denison, Umhlaba Consulting Group
Larry Field, Umhlaba Consulting Group
Tim Hart, Human Sciences Research Council
Peter Jacobs, Human Sciences Research Council
Irvine Mariga, University of Limpopo
Patrick Masika, University of Fort Hare
Simeon Materechera, North-West University
David Mayson, Phuhlisani Solutions
Nomakhaya Monde, University of Fort Hare
Barbara Tapela, University of the Western Cape
Wim van Averbeke, Tshwane University of Technology

Research assistants

TB Khosa, Tshwane University of Technology
Simon Letsoalo, Tshwane University of Technology
Maite Mafa, University of Limpopo
Themba Maluleke, University of the Western Cape
Tshililo Manenzhe, University of the Western Cape
Nape Mothapo, University of Limpopo
Gugu Mbatha, Church Agricultural Projects
Eric K Ralivhesa, Tshwane University of Technology
Mpfariseni Thagwana, University of the Western Cape

Preface

This is Volume 2 of the study 'Strategies to Support South African Smallholders as a Contribution to Government's Second Economy Strategy.' It contains the accounts of the 16 case studies that comprised the main 'data' for the analysis presented in Volume 1. However, beyond their function of supporting the analytical exercise presented in Volume 1, as a group these case studies have a life of their own as a rich and diverse repository of descriptive and interpretive narratives depicting various types of smallholders in diverse circumstances and environments.
Although the case studies respond to a common fieldwork methodology (see Appendix 1 of Volume 1), and although some guidelines were offered to the authors as to how to structure the write-ups, the researchers were given the latitude to deviate from the 'standardised approach', and so many case studies follow a near-identical structure but a number do not. The work in this volume reveals the authors' different styles, different emphases, and indeed different disciplinary strengths. The 'unit of analysis' also differs across case studies: some are studies of single individuals, others focus on particular schemes or projects, and still others involve a comparative analysis of individuals or projects.

Thought was given to the categorising of case studies in some meaningful way (e.g. by type of enterprise) or to sequencing them in some telling fashion (e.g. along a continuum from 'subsistence' to 'commercial'). However, the complexity of the case studies compelled us to abandon this idea: many, if not most, smallholders combine different types of activities, often dynamically, and while one cannot deny that there is a distinction between 'subsistence' and 'commercial' modes of production, it is very difficult to 'peg' actual case studies to a clearly-defined continuumt.

Therefore the case studies are merely grouped by province, with provinces sequenced very roughly from southwest to northeast. It should be noted, however, that the larger study makes no attempt to achieve 'national representivity' (thus, regrettably, there are no case studies from Northern Cape, Free State or Mpumalanga), although the case studies do address a wide breadth of agro-ecological zones and production systems.

1 Abalimi Bezekhaya and the Philippi Fresh Produce Market initiatives: contrasting attempts to stimulate smallholder agriculture in metropolitan Cape Town

Rick de Satge, Phuhlisani Solutions

Introduction

This case study provides a comparative analysis of two different initiatives designed to promote the smallholder sector in metropolitan Cape Town.

The City of Cape Town has developed an urban agriculture policy and initiated a joint venture between itself, the Provincial Department of Agriculture and private sector partners to put in place a fresh produce market in the Philippi area. The objective of the market is to provide the "suction force to enable the establishment of more than 2 500 emerging farmers and the development of more than 5 000 hectares of farmland over a five-year period in the Philippi and Cape Flats area" (Provincial Government of the Western Cape, 2006).

Abalimi Bezekhaya is an NGO with over 20 years of experience in supporting homestead growers and group gardens. It has focused on developing a comprehensive range of services to promote and 'push' small farmers to find their place in a production continuum encompassing survivalist, subsistence, livelihood and commercial scales and modes of production. Abalimi supplies small farmers with inputs and infrastructure, provides technical advice and institutional support, and recently introduced a planned production and marketing process known as the Harvest of Hope.

We examine what is involved in these different initiatives which aim to pull or push small growers into production and the market place. We profile the Philippi fresh produce market initiative and the services provided by Abalimi. We examine the three groups which Abalimi characterise as their most successful. In the process we assess what must be put in place to develop an enabling environment for a more vibrant and sustainable urban agriculture sector which enhances household food security and generates livelihood opportunities at different points along the value chain and identify lessons for improved policy and practice.

Context

The Western Cape is the second most urbanised province in South Africa (89% of the population is designated as urban), second only to Gauteng (for which the figure is 97%). According to the HSRC, it is also the province that experienced the fastest rate of annual population growth in the country between 1996 and 2001, at 2% per annum (Kok, O'Donovan, Bouare, and van Zyl, 2003). During this period the Western Cape experienced the highest net in-migration of metropolitan areas in South Africa, which accounted for approximately 58% of population growth within the City. The rapid growth of the City is associated with the urbanisation of poverty.

The 2003 Provincial Growth and Development Strategy, *iKapa Elihlumayo*, highlights the concentration of extreme poverty in the province's urban centres. It observes that in the Western Cape, unlike many other parts of South Africa, the cities are where the poor live while the rural areas are home to many of the wealthy.

In the Western Cape 57% of households earn less than R3500 per month, and of those more than half earn less than R1500. This economic profile means that "the majority of the population generally cannot afford service charges, let alone meeting home ownership obligations" (Department of Local Government and Housing, 2007: 25).

Smallholder agriculture as a poverty reduction strategy

In a context characterised by acute urban poverty, the low levels of skill of many of those in poverty and high levels of unemployment, different approaches have been taken to try to stimulate small-scale agriculture within the City on the assumption that it represents a viable poverty reduction and livelihood strategy. Interventions to grow small-scale agriculture take different forms. They range from policy formulation and investment in infrastructure development projects through to small-scale support initiatives providing a complete basket of services and facilitated market access.

At one end of the continuum, the City of Cape Town has developed an urban agriculture policy and invested R35 million in a fresh produce market in Philippi in a joint venture with the Department of Agriculture and private sector partners. However, this investment and infrastructure-led approach shows few signs of securing a return on investment in the short term, as many of the small-scale farmers which the market is supposed to serve have either yet to 'emerge' or are not yet a viable productive force. Overall, there remains a significant gap between the assumptions of policy and the complex realities which characterise small-scale production initiatives on the ground.

These 'complex realities' are highlighted by the experience of Abalimi Bezekhaya ("Planters of the Home"), a registered Non Profit Organisation (NPO) founded in 1982 which provides support services such as supply of low-cost bulk compost, seed and seedlings, training and on-site project extension to groups and individuals in townships and informal settlements. Abalimi is based at the Business Place in Philippi, Cape Town. It runs two non-profit People's Garden Centre's in Nyanga and Khayelitsha, which annually supply agriculture and horticulture inputs to an estimated 2000 to 3000 home-based survivalist and subsistence gardeners and approximately 200 community agriculture and greening projects on public land.

With the introduction of their Harvest of Hope marketing initiative in 2007, Abalimi have begun to provide an 'outgrower' model through which groups and individuals are contracted to grow organically grown but uncertified vegetables. These are harvested weekly and are sorted and packed into vegetable boxes which are delivered to collection points where they are picked up by suburban consumers who sign up for the service. Abalimi provides these groups with comprehensive services and support as well as a significant subsidy to enable them to begin to access the market.

The methodology

The preparation of this case study has involved the following elements:

- A rapid review of the literature on urban agriculture internationally with particular reference to Africa;
- A review of the documentation informing the development of the urban agriculture policy of the City of Cape Town;
- A semi-structured interview with Stanley Visser, an official in the City of Cape Town's economic development unit who has overall responsibility for urban agriculture policy development and support;
- Telephonic and e-mail follow-up with stakeholders involved in the Philippi Fresh Produce Market.
- Attendance of an introductory Harvest of Hope tour involving a visit to the Eden garden in Khayelitsha and a tour of the pack house facility and surrounds at the Business Place in Philippi;
- An interview with five members of Abalimi's field support team;
- Three separate interviews with members of the Fezeka, SCAGA and Eden producer groups.

The contribution of urban agriculture to the livelihoods of the poor

Researchers have attempted to disaggregate the different ways in which poor urban dwellers engage in food production. They highlight the following dimensions (Ellis and Sumberg, 1998):

- Farming activities on public and private land which is often in conflict with planning and land use management regulations in cities
- Personal strategies by women to develop independent livelihood streams
- Contributions to household food security
    - o as a substitute for cash food purchases
    - o as a means of supplementary income
    - o as a commercial rather than a subsistence activity

Research also highlights the importance of distinguishing the different categories of land on which this production takes place, including:

- Home plots or gardens;
- Cultivated or grazed areas that are apart from the household on public land;
- Cultivated or grazed areas apart from the household on private land;
- Peri-urban cultivation or grazing.

It has been argued that the keeping of livestock and growing of crops can make a significant contribution to the livelihoods of the urban poor. These have been characterised as "hidden livelihoods," based on the premise that many natural resource-based livelihood activities "are not recognised, or are overlooked, in assessments of urban livelihoods" (Slater and Twyman, 2003).

It should be noted that in South Africa and particularly in Cape Town (see below), urban agriculture policy, where it exists, often rests on the assumption that recent migrants to the City will be those who opt for agricultural livelihood opportunities. This runs counter to research evidence from the rest of the continent which indicates that "established urban dwellers are more likely to be involved in agricultural activities than new arrivals from the countryside" (Sanyal, 1986, 1987; Freeman, 1991; Sawio, 1994 in Ellis and Sumberg 1998). This research concludes that the ability "to command land access" is much more significant than recent agricultural experience, and that recent arrivals are at a disadvantage in this respect.

Urban agriculture in Cape Town

The importance of the potential of urban agriculture features in numerous spatial and development planning frameworks developed for the metropolitan area. The rural management framework for the City of Cape Town (SetPlan and Practiplan, 2002) emphasises the importance of protecting established and emerging farming areas in and around the City, and the opening up of opportunities for new and emergent farmers.

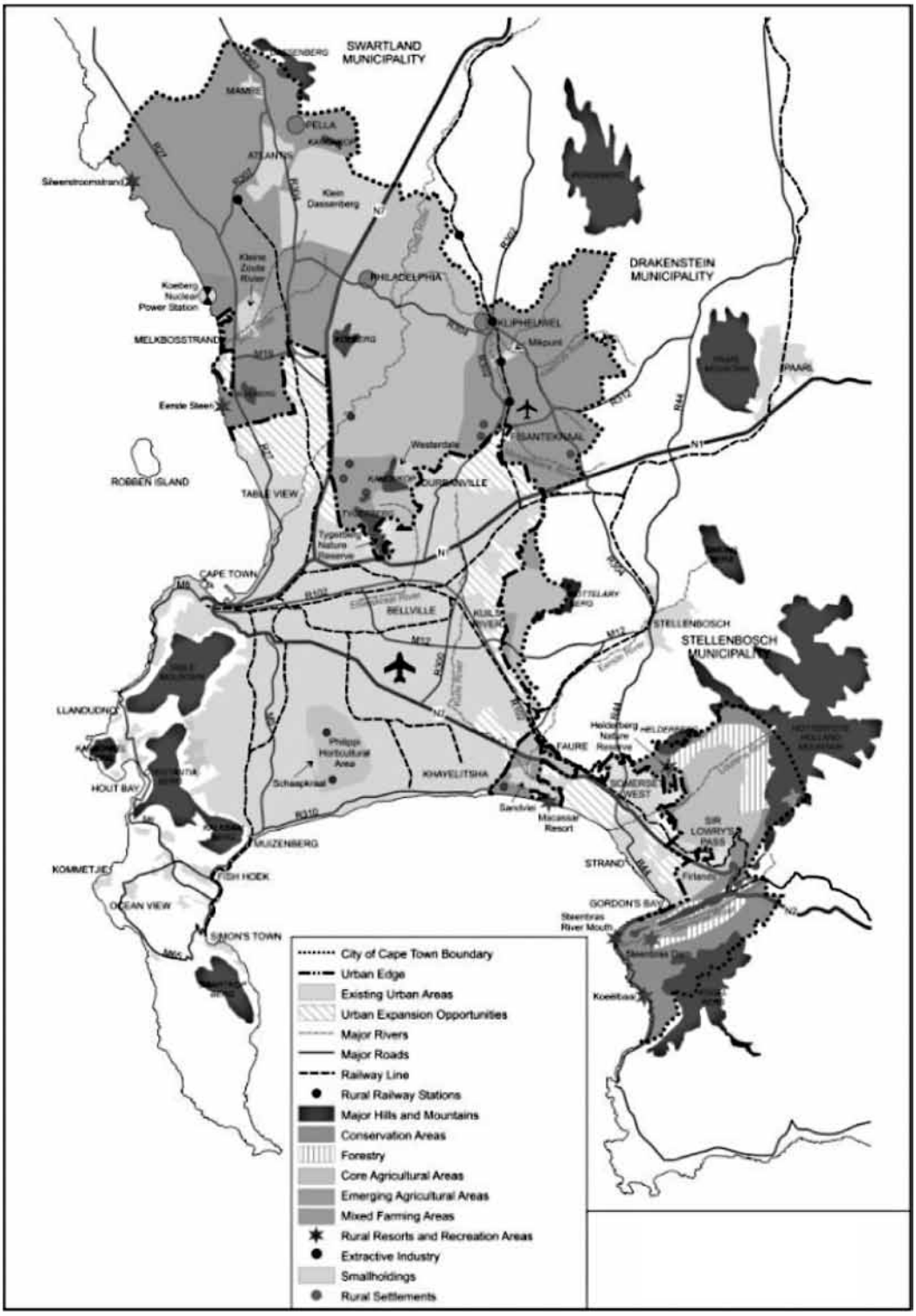
The long-term Metropolitan Spatial Development Framework (City of Cape Town, 2005) highlights the need to consolidate and expand a regional system of urban agricultural complexes. Currently, the Philippi Horticultural Area (PHA) and Joostenberg Vlakte are the only examples of such complexes. The spatial framework envisages that:

> *"A regional system of these, extending beyond Cape Town's current boundaries will ensure the ongoing sustainable production of food for the City, provide important income-generating opportunities for new arrivals to the City whose only income-generating skills are often limited to agricultural activities and provide a new way of addressing housing, economic and land restitution issues while at the same time safeguarding key parts of the City's agricultural resource base". (City of Cape Town, 2005: 5)*

As noted above, the conception which envisages agriculture as offering opportunities for new arrivals in the City runs counter to research findings which indicate that it is often long established urban residents with stronger social and political networks who are best placed to make use of urban agricultural opportunities.

In the metropolitan area agricultural land is concentrated to the north-east along the Tygerberg Hills, to the south-east around the Helderberg Mountains and to the south around Constantia and Hout Bay. Continued low-density residential expansion into these areas is placing pressure on remaining good soils and agriculture. The Philippi horticultural area situated to the south of the

Figure 1.1: Map of different land uses in the Cape Town metropolitan area



Map source: http://planet.uwc.ac.za/nisl/Conservation%20Biology/Conservation_CCT/rural_plan_for_ CAPE%20Town.pdf

City of Cape Town is also under threat from urban expansion.

The map on the following page highlights different land uses in Cape Town.

Agricultural land in Cape Town is also increasingly threatened by a mix of illegal dumping and occupation of public and private land to establish informal settlements. A number of constraints have been identified which currently limit the growth and livelihood potential of urban horticulture and livestock keeping. These include (City of Cape Town, 2008):

Conflicts of interest between livestock keepers and City officials (livestock keepers benefit from grazing their livestock on open land adjacent to where they stay in that they do not pay grazing fees and remain in close proximity to local markets);

- Lack of data on urban farming activities in the area;
- Insufficient agricultural knowledge and skills amongst urban farmers;
- Lack of access to and affordability of water;
- Availability of suitable land;
- Very weak linkages to the commercial agricultural sector in terms of supplies, marketing and sharing of opportunities;
- Low level of alignment and coordination between all main role-players;
- Lack of tools and production inputs.

Production in the City

Stats SA Agricultural Census of 2002 indicates the extent of vegetable production within the City of Cape Town. However, a reliable profile of who is actually growing and marketing this produce does not appear to be available.

The Philippi horticultural area (PHA)

A recent situation analysis for the MDP/Philippi Agricultural Project (City of Cape Town, 2008) surveyed and assessed urban agricultural activities in the Philippi area between the R300 and Lansdowne Road. The Philippi Horticultural Area (PHA) totals 3074 hectares in extent, however currently only 60% (1800 hectares) of the potentially productive land in the PHA is used to produce vegetables. Growers mainly supply the Epping Market and/or grow on contract to chain stores. Currently it is estimated that about 2000 people are (self-) employed in the PHA in varying capacities.

It is in this area that the Philippi Fresh Produce Market has been constructed (see below) and where Abalimi Bezekhaya has its offices in the Philippi Business Place – one of eight centres supported by Investec to grow small business in South Africa and Botswana. In Philippi, Investec has partnered with the American Tobacco Company, Abalimi Bezekhaya, and the Sustainability Institute. Investec acquired 11 hectares of vacant land around a defunct cement factory and seeks to develop the area into a site which will com-

Table 1.1.: Overview of vegetable production in Cape Town, 2002

Type of vegetable	Planted (Ha)	Production (tons)
Potatoes	489	12 274
Tomatoes	85	2 949
Cauliflower	194	4 768
Cabbage	465	19 113
Onions	115	2 559
Beetroot	38	522
Carrots	548	17 189
Sweet potatoes	15	121
Green beans	183	1 213
Pumpkins	117	1 942
Other	1 386	34 248

bine housing and urban agricultural opportunities. Currently (2008) the plan is to sell or lease small plots to local growers for income-generating cropping initiatives and subsistence food gardening programmes.

The urban agriculture policy process

The development of an urban agriculture policy for the City of Cape Town has taken over five years to be approved – partly a reflection of the changing political character of successive municipal administrations and the ongoing restructuring associated with the adoption of a unicity in September 2000.

An additional complication was that the Constitution of South Africa does not list agriculture as a function of local government and, "therefore, a lot of motivation and lobbying was necessary during the consultative process to convince city council decision makers that the development of urban agriculture should be viewed as part and parcel of poverty alleviation and economic development, which are the concurrent responsibility of all spheres of government" (Visser, 2006).

The City of Cape Town hosted the first 'Urban Agricultural Summit' on 8-9 May 2002 in order to initiate the process of formulating an urban agricultural policy for the City of Cape Town. This included an attempt to determine the current status of urban agriculture in the City, which was characterised as a "superficial assessment" (Visser, 2006).

The following year, the City hosted the a follow-up summit, on 18-20 June 2003, at which it introduced the draft urban agriculture policy, discussed livestock keeping in the City, and sought to identify urban agricultural opportunities in the City.

The period between the second summit and the final adoption of the policy in March 2007 appears to have largely been spent securing political approval in a fiercely contested council environment. The City of Cape Town claims to be the first city in South Africa to have developed an urban agriculture policy. This has four overarching goals:

- To enable the poorest of the poor to utilise urban agriculture as an element of their survival strategy (household food security)
- To enable people to create commercially sustainable economic opportunities through urban agriculture (jobs and income)
- To enable previously disadvantaged people to participate in the Land Redistribution for Agricultural Development (LRAD) programme in attempts to redress imbalances
- To facilitate human resources development (technical, business and social skills training).

The City of Cape Town distinguishes between four different types of operations:

- Home producers – home dwellers using their own gardens to grow vegetables and/or keep animals on a small scale in order to supplement the family diet
- Community groups – a group of people who produce food collectively for themselves or for a community institution, mostly on public land
- Micro-farmers – individuals or groups of people involved in urban agriculture to generate an income on small pieces of unutilised (private or public) land
- Small emerging farmers – individuals or groups of people who are or aspire to be full-time farmers

While community groups can count on various types of assistance, home producers are supported only with small tools, basic production inputs and some extension services; excluded is assistance with acquiring access to land or infrastructure as the Municipal Finance Management Act (MFMA) states that municipal capital may not be used to improve private assets (such as private land) (Visser, 2006).

The policy sets out to (City of Cape Town, 2007b):

- include urban agriculture in land use management and physical planning
- create linkage with other strategies
- establish urban agricultural consultative forums
- build strategic partnerships
- release municipal land for urban agricultural purposes

- provide subsidised water to vulnerable groups
- develop a specific strategy for livestock keeping in the City
- introduce a support programme for urban agriculture
- integrate urban agriculture into commercial agricultural industry
- provide assistance for urban agricultural practitioners.

The policy was designed to align different departments *within* the municipality in order to develop a common approach to urban agriculture rather than a joint programme framework which simultaneously aligned the City with the key provincial and national government departments responsible for agriculture, land and water. In the City's conception, a "formal policy will lay the legal basis for collaboration between all municipal departments on the issue of urban agriculture and will ensure each department's undisputed commitment; and it will eliminate the need to rely on the goodwill or preferences of individuals" (Visser, 2006). However the City's urban agriculture coordinator acknowledged that "our point of departure was that urban agriculture should be a good thing without doing a lot of research on what is the status quo" (personal communication, S. Visser, 2008).

Overall information on the nature and extent of agricultural activity in the City remains patchy. While the co-ordinator has "…pockets of information on livestock and …to a certain extent on garden groups…, I don't have a total picture on what exactly is going on in the City (*ibid*).

Implementation challenges

A number of practical and institutional constraints limit the effective implementation of the policy. In terms of capacity and co-ordination, the City's urban agriculture co-ordinator stated the following:

> *"With the Provincial department of Agriculture we are linking up with them on a local level but it is difficult. We talk the same language but when we hit the ground we just float apart again.*
>
> *"Agriculture, they can give extension support – they can talk – but the moment you want something more than that, it is a long process. You have to start an application for something and the decision-making process is too long and that is why we drift apart. They can talk with you but then when they go back it takes forever. Then when you stay on their case they disappear on you. I can understand they can't take decisions immediately but it is a problem.*
>
> *"Three years ago DLA approved that the City could purchase commonage. It is now three years later. I have given them 10 farms to consider but it has still not happened. The budget is there but it still has not happened. I think the process is too cumbersome.*
>
> *"All these civil servants they have meetings all the time and they make people despondent because nothing happens. What I am saying is that we know what the challenges are and we know what the opportunities are. Now we need to get our processes right" (ibid).*

Until recently, urban agriculture responsibilities in the City were scattered between different departments within the City and the Provincial administration but with very little co-ordination between them. At a recent strategic planning session it was proposed that the City needed 10 people to staff a mature unit promoting and supporting agriculture in the City of Cape Town.

Currently the City of Cape Town has just less than the equivalent of one full-time post working to promote and develop urban agriculture. However, they recently received approval to appoint an urban agriculture assistant and a professional officer for urban agriculture. The post was advertised in March and people were interviewed in July. However by August 2008 no appointments had yet been made.

There has been some discussion about the creation of a Special Purpose Vehicle tasked with agricultural promotion and support. One of the perceived advantages of such a unit is that it would not be bound to comply with the procurement processes of the City.

A second issue is competing land needs:

> *"Overall urban agriculture is not regarded as a priority by planners or by the majority of people settling in the City. While settlement planning frequently allocates land for*

gardens this tends to be restricted to the conceptual phase but when you get there you find that there are just houses. The pressure to find land for settlement tends to trump other land uses. In cases where land was allocated for gardening this is usually taken up by adding additional rooms or backyard dwellings" (ibid).

And a third issue is the tension between regulation and informality. The City has identified different categories of livestock owners in the townships and informal settlement areas. People with larger herds are often local business people with diverse livelihood sources who, the City argues, can absorb the transport costs associated with raising livestock on land outside the City. However the City has also identified many small-scale livestock owners who cannot afford such costs:

"At the moment it does not cost anybody anything to raise livestock in the City. Most stockowners don't buy food or anything so now when you come to the commonage you have to pay a grazing fee. Or if you go to the community kraal which is based on the principle of zero grazing you will have to buy food so then it becomes less profitable. Accordable to the health regulations the informal meat trade is not allowed. Likewise you are not allowed to sell raw milk in the City" (ibid).

The Philippi Fresh Produce Market – a 'suction force'?

Despite a low base of information and inadequate support systems in place, the City of Cape Town entered into a joint venture with the Western Cape Department of Agriculture and MBB Consulting Engineers to put in place a new R34 million Philippi Fresh Produce Market. The 'Philippi Market' officially opened for business in November 2006.

According to the Department of Agriculture, "the market is supposed to create the 'suction force' for the establishment of more than 2 500 emerging farmers and the development of more than 5 000 hectares of farmland over a five-year period in the Philippi and Cape Flats area." The MEC for Agriculture stated that, "We cannot allow 'land to lie fallow'. We need to utilise the land and unleash this productive asset to feed our families and communities, create employment and contribute towards economic growth and development of local and rural economies. We need to involve our young people who are jobless to roll up their sleeves and go to the fields. We want to say to them agriculture is cool!" (Provincial Government of the Western Cape, 2006).

The Philippi Market set targets to secure 75% of its supply from the emerging farming sector and empowered commercial farms by 2012. It anticipated that this would "unlock further Government funding into the resource poor farming sector of the Western Cape at a tempo of more than R50 million per annum and help fund satellite depots located next to larger concentrations of new farmers from where farm produce will be transported to the market for sorting, processing and marketing" (City of Cape Town, 2006).

However, to date the 'suction force' represented by the Philippi Market has yet to stimulate the growth of a mass of emerging farmers. After six months of operation only half of the rental units were operational and the pack house for emergent farmers was awaiting a lease confirmation. The City of Cape Town reported that established commercial farmers in Cape Town and the Western Cape were the primary suppliers and that produce was further sourced from Epping Market. The Department of Agriculture was reportedly drafting a strategy to develop emerging farmers. A review of the first six months of operation by Price Waterhouse Coopers recommended that a "vigorous marketing campaign" be undertaken to attract new customers and tenants (City of Cape Town, 2007a).

MBB is currently in the process of developing a supply strategy with the Department of Agriculture to improve the linkages between small, resource-poor farmers and markets, using the Philippi Market as driver (personal communication, Jan-Willem Boonzaier, 2008). This consists of a Project Manager situated at the Philippi Market, acting as link between the farmers and supermarkets and processors. The manager's role is to coordinate the supply from emerging farmers to meet the demand from the markets in terms of volume, quality and range of produce. The manager will have access to value-adding facilities at the market to pack produce according to specs from the supermarkets or processors.

According to MBB, other role players in the strategy include an input supply company to provide seed, compost, fertiliser and planting programmes for the correct cultivars to the farmers, and the extension officers of the Department of Agriculture, who should visit the projects regularly to ensure that the planting programmes are followed. The farmers will be responsible to pre-sort their produce before it is sent to (or collected by) the Market. This strategy was reported to "still be in a developmental phase" (*ibid*).

According to MBB the Market is currently about 70% occupied, and combines food processors, a bakery, fresh produce traders, a fresh produce wholesaler, a fresh produce pack house (focusing on procuring produce from small farmers), a banana ripening and fresh produce exporter, and a dairy outlet. Furthermore, the market is in the process of establishing fresh produce production on site for supplying the market, as well as a vermiculture composting unit to compost organic waste generated on-site into compost for small farmers.

MBB highlights that the major challenges remain transport for small producers and finding a way to coordinate supply from small producers, since individually the supply is still not consistent enough.

MBB argues that the Market is still a new venture which is in a building and marketing phase. People of the surrounding area rather buy their produce from where they bought it for the past decade then at the new market; however it is anticipated that this will change over time. The low number of customers coming to the market relates to low volumes kept by the traders, which increases the prices which results in fewer people buying from the market – in other words, a vicious circle. The market has to secure a larger volume of customers to buy produce to increase the volume that can be kept on hand to improve the profitability of the tenants.

MBB reports that:

> *"[S]mall farmers that do not want to supply the Philippi Market but rather try to market their produce elsewhere (like Cape Town/ Epping Market) despite them complaining that their produce is not sold at Epping (another vicious circle – the farmers probably do not want to supply the market because of the low number of people buying from the market, but more people would buy from the market if more produce were available at competitive prices)". (ibid)*

The Philippi Market model is based on private businesses renting space from the Philippi Market Operating Company, and trying to source some of their produce from emerging farmers. An important factor of the model is thus the drivers of these businesses – the nature of agriculture (and especially the resource-poor sector) requires dynamic businesses willing to pursue the goal despite the challenges and the set-backs that are more common than with the traditional commercial sector. MMB notes that sufficient time should also be allowed for these businesses to establish themselves; the time required to establish oneself in agriculture and agribusiness (and once again especially for the resource-poor sector) should not be underestimated.

Abalimi Bezekhaya and the 'Harvest of Hope' programme

We turn now to the other component of this case study, namely Abalimi Bezekhaya and its 'Harvest of Hope' programme.

Brief background on Abalimi

The work undertaken by Abalimi has a long history which spans the pre- and post-1994 eras:

Pre 1994 – Abalimi started working in 1982 from offices in the Catholic Church in Cape Town. It opened its first garden centre in Nyanga in the same year and developed a second centre in Khayelitsha in 1989. However, Abalimi only really took off in the period post-1994 when access to its constituency became easier.

1995 – In 1995 Abalimi employed two additional staff and established a field programme. Fieldworkers started to visit people to introduce Abalimi's services. Abalimi began to get requests from people for training, mainly in home gardens.

1996 – In 1996 Abalimi supported the formation of the Siyazama Community Allotment Garden Association (SCAGA) in Macassar, Khayelitsha. The garden was developed on 5000 m^2 in a corridor under low-intensity power lines that were later decommissioned. Abalimi estimated that SCAGA could provide three to four permanent,

full-time formal jobs, but opted to promote a garden which would create 30 subsistence or livelihood augmentation 'jobs' on a mixture of individual and communal plots. At the same time Abalimi started a programme for the greening of schools. The Schools Environment and Development Programme (SEED) grew up under Abalimi's auspices before becoming independent in 1997.

1997 – In this year Abalimi employed more staff (two agricultural field workers) and expanded its institutional footprint from Khayelitsha to cover Philippi, Nyanga, Gugulethu and Crossroads.

2001 – In 2001 Abalimi expanded further, employing three field staff from amongst the membership of the groups they served.

2002 – In 2002 Abalimi facilitated the launch of the Vukuzenzele Farmers Association (VUFA), which brought together people from about 70 groups of small growers. As Abalimi grew and developed it conceptualised a production continuum to locate and track the growth and development of smallholders from what it characterises as survivalist, subsistence, livelihood and commercial levels of productive activity (see Figure 1.2). Production ranges from individual homestead gardens to groups who farm plots on vacant municipal land and in the grounds of schools and other institutions. Abalimi also has a focus on improving nutrition for people who are HIV positive (Rob Small, Kaba, and Mahusa-Mhlana, 2005). Abalimi notes that agriculture remains an activity of last resort for those located at the survivalist and subsistence end of the continuum. At these levels many will abandon agriculture in favour of other economic opportunities should they arise. However, as production becomes more consolidated and benefits are more tangible, fewer people are likely to exit production.

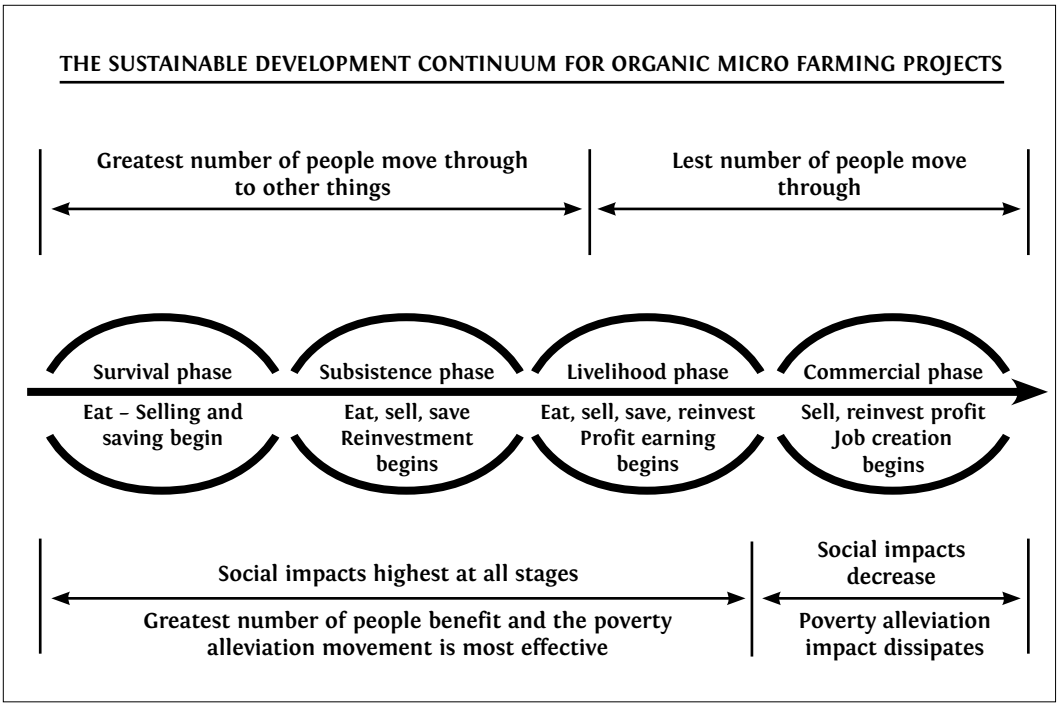
2007/8 – In 2007 Abalimi launched the Harvest of Hope programme. Current Abalimi staffing includes eight contract staff and seven permanent staff.

Overview of the Harvest of Hope (HOH) programme

A range of support elements have been combined in the Harvest of Hope (HOH) programme:

- Abalimi Bezekhaya provides training to enable growers at different scales to produce organically grown vegetables.
- Growers learn about the business side of farming through AgriPlanner courses run

Figure 1.2: The sustainable development continuum for organic micro-farming projects



Source: R. Small, 2007

by the South African Institute for Entrepreneurship.

- Vegetables are harvested fresh on order to customers who sign up to purchase a box of organic vegetables weekly. Vegetables are collected and packed at the Organic Pack shed established at the Business Place - a business service centre in Philippi.
- Support is provided by the Western Cape Department of Agriculture mainly in the form of improved infrastructure.

Other support interventions identified include:

- Horizontal learning (farmer-to-farmer) exchange
- Savings schemes
- Micro-credit to groups with consistent savings records will be available in the near future to projects entering the Livelihood and Commercial levels of the Development Continuum.
- Periodic farmers' markets, tunnel greenhouses, cold-storage rooms and value-adding packing sheds (Small, 2007).

Currently, Abalimi supports 22 active vegetable growing groups at different scales. Most recent figures (August 2008) indicate that 146 small growers from 9 projects produce vegetables for the Harvest of Hope programme. However the bulk of the vegetables are currently sourced through three groups – Fezeka in Gugulethu, and SCAGA and Eden in Khayelitsha which are the focus of this case study.

Assessment of the natural and physical resources

In all three cases the groups started with unimproved Cape Flats sands (Figure 1.3). With the support of the City of Cape Town and the Provincial Department of Agriculture, Abilimi has placed a major emphasis on soil improvement by investing in organic compost, manure and other organic fertilisers such as Rapid Raiser. Production methods also emphasise the importance of mulch and the planting of indigenous windbreaks.

Physical infrastructure

Each garden has had substantial investment in physical infrastructure including:

- Perimeter fencing
- Borehole drilling and pump installation

Figure 1.3: Photograph of SCAGA prior to establishment of vegetable farming scheme

Picture from http://harvestofhope.co.za/?page_id=32

- Electricity supply through the installation of prepaid metres[1]
- Water tanks
- Irrigation piping and microjets
- Small nursery enclosures constructed from creosoted poles and shade-cloth
- Hand tools and wheelbarrows
- Containers for implement storage and meeting space.

Production systems

The HOH production system is derived from an Excel-based planning and planting template that analyses weekly HOH box requirements including:

- Land area required by crop type
- Estimated yields per area of different crops by weight and quantity
- Production timelines and maturity dates of individual crops
- A succession planting plan
- An estimation of retail and wholesale prices by weight or volume for different crops.

Abalimi fieldworkers who support individual gardens manage the seedling orders, the planting process and assess availability of different vegetables for weekly harvesting on Tuesdays. Individuals in the group are responsible for watering, weeding and general husbandry of the HOH growing areas. In the SCAGA group these tasks have been individualised with individuals responsible for their own plots and receiving the value of produce sold from them. Any surplus or substandard produce is either sold or consumed by the growers. Where HOH runs short of produce they also buy from individual plots.

Economic aspects

Harvest of Hope is an organic vegetable box project which originated from a partnership between the South African Institute for Entrepreneurship, the Ackerman Pick 'n Pay Foundation and Abalimi Bezekhaya. The project has focused on the development of an organic pack shed at the Philippi Business Place.

Initially there was a focus on the training of growers to comply with organic certification standards. However, the focus subsequently shifted to ensuring the throughput of sufficient volumes of vegetables from the producer groups through the pack house and to the market. A consultancy, Just Think, was contracted to develop the Harvest of Hope programme concept which delivers a weekly box of vegetables to individual customers who collect their boxes from scheduled distribution points at four participating primary schools in the Cape Town area. As part of the planning and implementation process Just Think has developed the Excel template discussed above, as well as a crop planning hand tool. Initial crop targets were established for 110 boxes per week and eight producer groups were contracted to grow for HOH to specified targets (Just Think, 2008).

The overall objective is to elevate HOH into a self-sustaining business enterprise. This depends on the ability of HOH to be able to produce and sell 600 boxes weekly. Income is distributed across three cost centres:

- Payment to growers – 50% the selling price of a vegetable box
- Running costs – Abalimi expenses, Just Think consultancy fees and marketing costs
- Profit.

The initial allocation of running costs was calculated at 47% of revenue. As the number of boxes increases so will costs, but these costs will fall as a percentage of overall revenue. The target is to reduce running costs from 47% to 28%, or by 5% per quarter. From a start-up profit of just 3% for the first quarter (R1325/month) it is envisaged that the profit margin on 600 boxes will be 22% (R48 583/month).

Just Think has proposed that HOH be established as a for profit company with shares distributed as indicated in the chart below. The business model sets out to provide incentives to Abalimi staff who become the largest shareholder with the most to make from the success of the scheme.

Actual performance

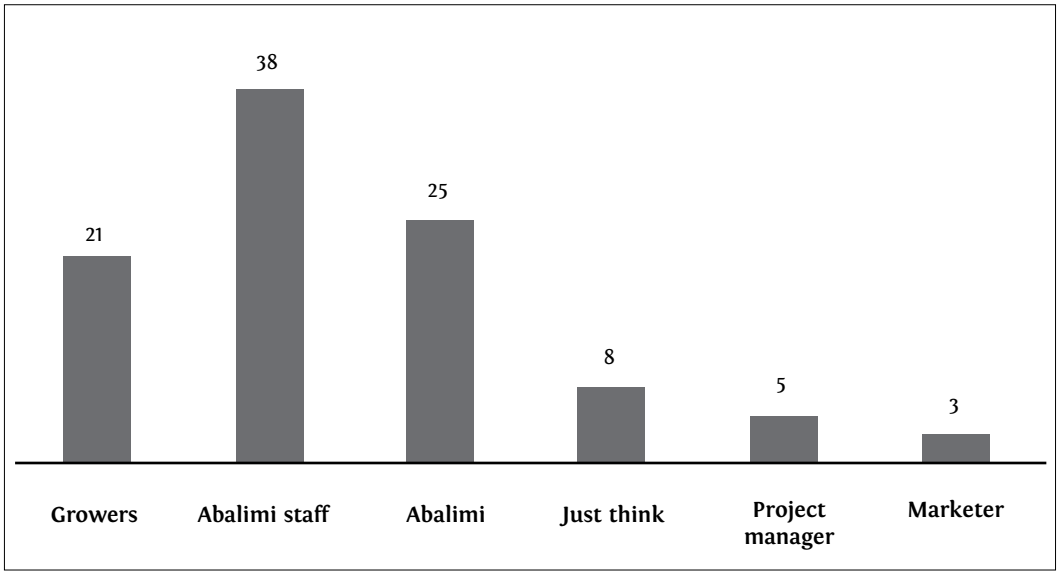
For the first three months of HOH the combined produce of the three groups amounted to 440 boxes of vegetables worth R37 410 from which they earned a total of R18 705.

1 In the case of Fezeka electricity is still provided free

Table 1.2: Projected production and income

Period	Feb – April 2008	May – July 2008	Aug – Oct 2008	Nov – Jan 2009	Feb – April 2009
Boxes per week	120	240	360	480	600
Monthly income (R85 x #boxes sold x 4.33 weeks/month	44 166	88 332	132 498	176 664	222 830
Quarterly income	132 498	264 996	397 494	529 992	668 490

Figure 1.4: Proposed distribution of ownership shares in HOH



Currently, Abalimi's target is for every individual to earn R600/month from the HOH project. They reported that they were "about half way there at present." Based on the projections above it appears that to date the scheme has not managed to leverage the projected volumes required to make a profit. When Phuhlisani visited the pack house on Tuesday 22nd July there were orders for 84 boxes – 70% of the weekly total projected for Quarter 1 and 35% of the total projected for Quarter 2.[2]

Group perceptions of utilisation of total productive output

The three groups used 'proportional piling' to estimate how their total production output was disposed of.

SCAGA individual grower sales

In addition to money paid to the SCAGA association, individual growers in the SCAGA project were also paid out for produce sold from their plots. The table below shows the value of the individual sales.

During the same period, input costs for Eden, Fezeka, and SCAGA were R3362, R6255, and R6421, respectively, as detailed in the following tables:

Assessing the extent of the Abalimi subsidy

Currently growers pay for seedlings, seed and electricity while Abalimi or other parties (including the Department of Agriculture, the Department of Social Services and the City of Cape Town) cover the costs of organic fertiliser, manure, transport, fencing and irrigation infrastructure repairs, transport and marketing costs.

In answer to a question about how the direct costs of production were spread between the growers, Abalimi, the City of Cape Town and the Dept of Agriculture, Abalimi responded as follows:

2 Given the lapse in time between the initial fieldwork and the finalization of this report, the authors took the occasion to check back with Abilimi in June 2009 as to production levels. According to Abilimi, current production levels are about 120 boxes per week, which they attribute to soft demand related to the financial crisis (personal communication, Bridget Impey, June 2009).

Table 1.3: Sales 1st February – 30th April 2008

Project	People	HOH area	08-Feb	08-Mar	08-Apr	Total paid	Produce value	Boxes
Eden	4	640	R 2 676	R 2 634	R 1 804	R 7 113	R 14 226	167
Fezeka	6	?	R 1 763	R 1 302	R 888	R 3 953	R 7 906	93
SCAGA	10	756	R 1 613	R 503	R 572	R 2 689	R 5 378	63
						R 13 755	R 27 510	324

Table 1.4: Summary of perceptions of product utilisation

	Lost due to theft	Lost to disease	Consumed	Sold independently	Sold through HOH
Eden[3]	10%	10%	25%	20%	35%
Fezeka	0%	10%	20%	20%	50%
SCAGA	0%	15%	20%	10%	55%

Table 1.5: Value of individual SCAGA grower sales for February through April 2008

Grower	Feb	March	April	Total
Grower 1	0	0	0	0
Grower 2	R 100	0	0	R 100
Grower 3	0	0	R 120	R 120
Grower 4	0	0	R 351	R 351
Grower 5	0	R 145	R 428	R 573
Grower 6	R 171	R 291	R 132	R 594
Grower 7	0	R 233	R 497	R 730
Grower 8	R 56	R 288	R 407	R 751
Grower 9	0	0	R 828	R 828
Grower 10	0	R 315	R 588	R 903
Totals	R 327	R 1273	R 3350	R 4950

3 The three men interviewed from the Eden Group found this exercise difficult. Each man reworked the relative proportions substantially. The final result appeared to be more of a compromise between them than a consensus about the output split.

Table 1.6: Eden's input costs from February through April 2008

Inputs	Quantity	Costs
Bean seeds	200 g	R 20
Beetroot seedlings	600	R 120
Broccoli seedlings	200	R 52
Cabbage seedlings	400	R 80
Cauliflower seetdlings	200	R 65
Kale seedlings	600	R 120
Kohl Rabi seedlings	1000	R 200
Lettuce seedlintgs	1400	R 280
Marigold seeds	1	R 11
Mulch	40 bales	R 1500
Onion seedlings	1100	R 245
Parsley	200	R 40
Radish seeds	4	R 44
Rapid raiser	200 kg	R 585
Total		R 3362

Table 1.7: Fezeka's input costs from February through April 2008

Input	Quantity	Costs in R
Bamboo sticks	180	540
Basil seedlings	200	40
Bean seedlings	200	50
Beetroot seedlings	400	80
Broccoli seedlings	600	156
Cabbage seedlings	400	80
Carrot seed	40 pkts	100
Fix well point		1 450
Kale seedlings	200	40
Lettuce seedlings	400	80
Manure	10 m3	2 227
Onion seedlings	1200	299
Parsley seedlings	100	20
Rapid raiser	360 kg	1 053
Spinach seedlings	200	40
Total		6 255

Table 1.8: SCAGA's input costs from February through April 2008

Input	Quantity	Costs in R
Bean seed	500	90
Beetroot seedlings	800	180
Brocoli seedlings	400	80
Carrot seeds	80 pkts	200
Cauliflower seedlings	200	50
Fix well point		1 850
Kale seedlings	100	20
Kohl rabi seedlings	400	80
Lettuce seedlings	1400	280
Manure	11 m3	2 587
Onion seedlings	800	160
Parsley seedlings	400	80
Potato seed	11 kg	143
Radish seed	5 pkts	63
Rapid raiser	120 kg	351
Spinach seedlings	1000	200
Turnip seed	3 pkts	8
Total		6 421

Table 1.9: Distribution of direct costs among various role-players

Direct costs	HOH Grower	Abalimi	City of CT/Social services	Dept Agric	**Notes**
Seed/seedlings	100%				Seedling costs deducted before growers paid
Compost/ manure		100%			Groups don't pay
Mulch		100%			Groups don't pay but we are realising that can't do this for ever
Pest and fungal controls					Use herbs with chilli, garlic sunlight liquid
Water/ electricity	People buy on prepaid card – pay as you go or sometimes utilise illegal connections	School pays for this where garden is on DoE land. Other land we apply for prepaid metre			Depends. Groups pushed to get borehole
Transport		100%			Struggling for transport – only one bakkie doing everything for the project. A significant expense, but only once a week. Fieldworkers get around by taxi
Post harvest processing and packaging		100%			
Marketing		100%			

Overall, Abalimi estimates that the ongoing subsidy per farmer to support them indefinitely at the survival/subsistence stage is between R1000-R3000 per farmer/gardener per annum, depending on the farmer's circumstances and context. This subsidy covers all costs including training, establishment, institutional development support and ongoing permanent follow-up, taking into account regular cheap and/or free key inputs.

Abalimi estimates that to enable growers to shift from subsistence to a livelihood or semi-commercial level requires a developmental subsidy of about "R1000/farmer (or farmer group)/month, including the pack-shed costs, transport, agricultural inputs and core fieldwork support to contracted farmers". However, Abalimi observes that, "…if we include all possible associated costs (e.g. specialised focus training interventions to enhance applied skills), then the figure could easily go up to about R8000/month/farmer or farmer group during the transition stage from Subsistence to Livelihood (personal communication, Rob Small, 2008).

Livelihood significance

Overall it would appear that the Abalimi and Harvest of Hope initiative have had positive impacts on the livelihoods of those participating. It is also clear that these impacts are also a reflection of the fairly substantial subsidy required to put in place an enabling environment for small-scale agricultural production. The exact value of this subsidy could only be calculated by a more in-depth study than was permitted by the time allocated to the research team.

Social and institutional dimensions

The Fezeka group currently consists of seven members – six women and one man. All of the members are of pensionable age. The group members have individual plots and combine to cultivate plots from which the produce is marketed through the Harvest of Hope scheme run by Abalimi Bezekhaya.

The SCAGA garden as a whole started in 1997. Abalimi reported that in 2005 the garden hosted its fifth group of 30 people. This suggests that four groups had come and gone prior to this and that all the previous groups had given up. This reiterates the notion that agriculture is an activity of last resort which provides marginal benefits in relation to the input required. The group reported that currently their membership was eight people – all women, down by more than two-thirds from those who were there at the outset.

> *"Many people came to start with high expectations of making money. When it became clear that they would not be paid a cent except from what they got from the soil many people left. Others also left in the period before the HOH project as the money from sales was not enough." (SCAGA group interview, 2008)*

Respondents reported that members were encouraged to join by local SANCO members who advertised opportunities on the project with a loud hailer. There is some inconsistency in the dates and group sizes from different sources. The group reported that they had started in 2003 and taken over from a previous group which had given up, while Abalimi indicated that the current group started in 2005.

Initially, individual plots for home consumption were cultivated and communal plots for the local market. However, it appears that since the introduction of the HOH programme internal disputes amongst the group members concerning uneven labour investment in the group plots have resulted in individualisation of production. Labour investment seems to account to some degree for the earning differentiation amongst the membership but the relative value of the different crops grown and harvested in each individual's plots is a significant other factor in earning differentiation. Given that the group is billed jointly for seedlings, and that these are of different prices, growers of higher value crops may be receiving an indirect subsidy as the cost of seedlings is not directly reflected in their sales figures.

The Eden group consists of seven men some of whom were illegally growing vegetables in a wetland area adjacent to the N2. They were encouraged to move to the SCAGA 2 site in July 2007. When they arrived much of the garden infrastructure, namely water and an electric pump, had already been installed, Irrigation infrastructure was added in 2008.

The men gave unemployment and hunger and because "we grew up planting at home" as their reasons for becoming involved. Men have their

own plots but there was a marked difference in quality and investment between plots grown for home consumption and plots grown for the HOH market. The three members interviewed expressed a preference for growing for the market. Interviewees reported that they depended on social grants and sales from the vegetables. One informant whose household did not qualify for any social grants reported that his sole income depended on sales of vegetables together with some informal selling of small items from a home spaza run by his wife. Given that this group had only recently started the men stated that they were not in a position to assess whether production was a success.

Clearly the projects make important social contributions. Women who have worked together for several years in Fezeka reported that:

> *"We support each other if a member gets sick. We also support some people in the community who are sick with HIV by donating vegetables"*

Fezeka reported that they paid themselves R1500 each at Christmas time. However, other benefits included a daily meal cooked from their produce, which they shared in the garden.

The groups with women members have also developed small savings schemes which members contribute to and can borrow from in proportion to their savings investments. The men in the Eden group reported that members can request to borrow money from the group in the event of a death in the family or a similar problem at home. However, there was some uncertainty about how to manage this process and ensure that there was not a run on the group's resources which would undermine their ability to continue.

While there are both obvious and hidden benefits it is also clear that the projects and associated organisation can also contribute to local conflict. This was evidenced by the SCAGA group members' decision to work and get paid individually as a response to perceived 'free riders' who were set to benefit disproportionately to their labour investment.

Institutional dimensions

Three institutional dimensions are examined:

- The extent to which the groups of growers function effectively and are enabled to increase their control over their business
- The extent to which growers are able to represent their broader interests through forming associations and engaging with the City of Cape Town, the Department of Agriculture and other institutional actors
- The extent to which the different spheres of government, NGOs and private sector partners combine effectively to support small growers.

Growers in different projects had also set out to establish their own association with the support of Abalimi. However management of the association was not without its challenges as observed by Abalimi manager, Christina Kaba:

> *"The growers have their own organisation which they call Vukuzenzele Urban Farmers Association which has a Committee and an Executive Committee. I have seen bad things happen when people get into management. If they see those funds (from donors) they think it belongs to them. We get funding for seed and seedlings and funding for manure. People want to change this and say they want a bakkie because our project is big. Money even within Vukuzenzele has caused problems. The groups are not all on the same level. Some are big and others are small but to them they say we need to share the money equally."*

As noted in the introductory section, there are a number of role players attempting to make a

Table 1.10: Perceptions of support

	Abalimi	Dept of Agriculture	Social services	City of Cape Town
Eden	45%	30%	10%	15%
Fezeka	20%	35%	20%	25%
SCAGA	50%	50%		

Table 1.11: Abalimi's self-assessment of its support services

Services and support	Yes / No?	Comments
Group formation	Yes	
Farmer to farmer extension – horizontal learning	Yes	We have taken people on trips from Cape Town to Transkei and Maritzburg. We organise farmers' days for the different groups to meet each other. We find that those groups supported by government often lack information. When we present what we do they always want to come to us. But we don't want them to come to us. We want them to get information
Clarifying production options and costs	Yes	
Provision of production credit	Yes	
Facilitation of group savings schemes	Yes	SCAGA started last year and saved R2/member each week. Now SCAGA members have increased the amount that they are saving and are banking R100/month in its own savings account which is separate from the project account
Production of budgets and records	Yes	In-house and to some extent with groups
Securing access to land	Yes	Assistance with contracts with government as landowners
Urban agriculture advocacy and integration into City of Cape Town IDP	Yes	Played an initial role in policy development forums; however this role has diminished.
Fencing and water infrastructure	Yes (apply to Agric)	We help them apply to Dept of Agriculture and the City of Cape Town if we can't help them ourselves
Garden design and layout	Yes	
Planting succession planning and rotation	Yes	
Access to tools and equipment	Yes	
Soil analysis	Yes	The Department of Agriculture does this. We have also examined this as part of our exploration of organic certification. In those gardens which are close to informal settlements we frequently test for soil contamination from human waste
Soil preparation	Yes	A big focus with investment in manure and organic compost to boost soil quality
Provision of compost and mulching material	Yes	
Seedling propagation/supply	Yes	Some gardens produce their own for certain crops and we also supply. HOH buy seedlings every two weeks for each planting. When the vegetables are sold the cost of the seedlings is deducted. We have considered possibility of a separate enterprise to produce the seedlings but don't have the labourpower to set this up at present. There are other projects like the Sustainability Institute who could become involved in this.
Pest and disease management	Yes	Only companion planting and natural remedies used – garlic and chilli, handpicking of snails and good soil quality. Also, plant health to reduce likelihood of fungal infections
Quality assurance	Yes	We do not have a big problem with this. Overall we have good soil preparation which ensures good quality.
Organic certification	Incomplete/ abandoned	We were working on getting organic certification for 10 projects but this fell to 3 and then to 1. Part of the problem is that people could not see far enough into the future to know what they wanted to plant. Organic certification works best in the context of long term planning and reasonable certainty about what will be grown. What we think will work best for us is to write our own organic standards. We work on a trust basis and we inspect every week. We can see when people are using chemicals and we do not buy from them. Examples provided were of a garden which had sprayed weedkiller and another which was using snail bait.
Advice and support for production for consumption and exchange	Yes	

Services and support	Yes / No?	Comments
Advice and support for production for local markets, as well as production for Harvest of Hope organic market	Yes	We are also working on local markets. We are examining the Harare market in Khayelitsha. (Interestingly no mention was made of the local Philippi Fresh Produce Market)
Group individual record keeping and production accounting	Yes	On a very simple basis
Conflict resolution	Yes	There are often leadership conflicts or financial issues. When money is on the table there are often big problems to do with spending priorities – how much get reinvested and how much people take home. We get help from other organisations in the Business place who specialise in group support

contribution to urban agriculture. However, it is clear that the working relationships between them are far from optimal.

Participants in the three projects ranked the assistance they received from different role players quite differently. In some instances however it seemed clear that for the project participants, institutional roles, functions and boundaries had become blurred.

Unfortunately the Department of Agriculture was not interviewed about its role. The groups perceived the Department of Agriculture as providing capital for pumps, equipment and some inputs but this is where their role appeared to end.

Despite Abalimi and the Department of Agriculture working from the same building it appeared that working relations and communication between them was far from optimal.

> *"I don't see them starting something. They just support what we do and supply what people ask them to give them. They are mainly providing things – fencing and equipment. They support projects but they support them financially. They don't try to make them more independent and then when they have finished with them Agriculture walks away and projects fold. They do not provide on-site follow up and support.*

> *"When HOH was starting to try and secure organic certification Agriculture provided growers with a whole consignment of non organic compost which was a problem. They asked us, 'What is organic? Why are you trying to grow organic?' We tried to explain about the compost and they said we only get compost where it is cheaper.*

> *"They have got extension people but they don't touch the soil. They are not in touch and on the ground. They want to see urban agriculture but they don't know what they are looking for or how to make things happen." (Christina Kaba – Abalimi manager)*

None of the parties interviewed for this case study appeared to have a good understanding of the urban agriculture policy and the opportunities it might create. Within Abalimi all questions about the urban agriculture policy and what the City of Cape Town could be doing to stimulate urban agriculture were referred to Rob Small. Neither the pilot project in the Philippi area or the Philippi Fresh Produce market was mentioned in any interview.

Gender, class and human dimensions

The group profiles highlight the predominance of older women, although the Eden group consists of men only. Overall the groups appear to be catering for people with few economic alternatives. From our assessment of the membership of the three groups it is clear that in the main the formal education of people is very low. This is likely to impact on members' abilities to manage the key planning, technical and financial components of the project which are critical for their short and long-term success.

Abalimi has attempted to address the skills deficit through the design of an interactive enterprise simulation based training process called Agriplanner. This is designed to help growers "go beyond the practicalities of merely growing produce…. [G]rowers learn how to get the most productive use out of their land as well as how much money their land could produce for them, if they use it well". The programme has been designed to engage with key questions such as:

- How much money can we make from our land?
- What can we plant? When can we plant it?
- How can we keep our land productive for the whole year?
- How much money do we need to get going?
- How much money can we make each month from our land?

The programme integrates a variety of planning systems, charts and tools that growers use to plan what they will grow and what returns they are likely to achieve.

We were not able to assess this programme in action or obtain any independent evaluations of it in the time available. However it was clear from our interactions with group members interviewed that numeracy levels were poor which was likely to present an obstacle to successful participation in the learning programme.

Overall the relative success of a HOH programme in producing sufficient and regular volumes of vegetables for the market appears to depend on the strong and directive management input by Abalimi. All the groups spoke about their dependence on Abalimi to provide the planting plan, provide the required seedlings, oversee the planting and harvesting processes, and get produce to market.

> *"There is a production plan where we plant very two weeks. We know what we are going to plant when. At the moment it is the fieldworker who makes the decisions about what to plant when and where, as she has the information on the current growing conditions and plantings on the project she supports. The next step is to increase the involvement and capacity of growers so that they can move up the hierarchy into the livelihood and commercial zones". (Interview with Abalimi field staff, 2008)*

Clearly the development of local technical and managerial skills must become a key focus for future development. However this seems only likely to succeed if the skills and age profile of the groups is to change. This creates a conundrum as it is clear from the case study that access to land and ability to grow vegetables are not sufficient to secure household livelihoods. Access to a reliable and expanding market and the ability to secure a reasonable share in the value chain appears to remain the critical success factor.

Environmental aspects

Abalimi's focus on organic production limits the likelihood of negative environmental impacts. In the case of the Eden group it can be argued that the project has had a beneficial environmental impact as it has encouraged people farming in a wetland area to relocate to land more suitable for agriculture.

It is not clear however what permissions have been sought to sink boreholes and the extent to which these may impact on ground water. It is also not clear to what extent the water quality of the groundwater is assessed. In informal settlement areas where there is inadequate sanitation Abalimi does take precautions to test soils for contamination.

As Abalimi has noted, they function on relations of trust with the different grower groups with respect to adherence to organic farming principles. This trust is not always well founded. On two occasions they have found growers using herbicides or pesticides, but they argue that close and ongoing contact with growing groups will usually ensure that pesticide use can be detected. This does however raise a potential concern with respect to the lack of certification or independent inspection to ensure standards of organic practice are met. However, it is clear that the transaction costs associated with organic certification are much too onerous for small producers like the Abalimi groups to bear.

The future of the HOH programme

The Just Think business plan envisaged the establishment of HOH as a for profit company as discussed above. However our interview with Abalimi fieldworkers indicated concerns that the introduction of HOH had resulted in some neglect of individual homestead production. Fieldworkers stated that they needed to renew their focus on household food security and were concerned that the HOH model resulted in a net outflow of food to specialised middle class markets.

Conclusions

The case study highlights different approaches to stimulate the development of smallholder agriculture:

- Measures designed to create an enabling environment which helps pull emerging producers into production and the market from above
- Measures to directly engage with, grow and support small producers and push them into production and the market from below

The effectiveness of 'pulling'

The City of Cape Town and the Provincial Department of Agriculture have invested millions in the construction of the Philippi Fresh Produce Market. It seems that while there is a role for infrastructure investment in creating an enabling environment for small producers, that on its own it is not sufficient to bring new smallholders into production and the market place, or rather, that this process takes time. The construction of the Fresh Produce Market does not appear to have been preceded by an in-depth study of existing smallholder agricultural production in Cape Town and has proceeded on the basis of assumptions about would constitute an effective stimulus to this sector. Without other measures being put in place the Fresh Produce Market may end up as an expensive white elephant.

'Pushing' – the boundaries

The Fezeka, SCAGA and Eden cases show that many urban smallholders operate in a highly constrained operating environment which is characterised by low levels of human capital, inadequate access to land, equipment, finance and infrastructure for production, technical and institutional development support, market intelligence and enterprise management capability.

Abalimi Bezekhaya have attempted to put in place a comprehensive and subsidised production support system which systematically addresses these constraints. However there remain questions about its sustainability and the extent to which growers will become locked into relations of dependency on the support agency (however benign the latter). While it seems undeniable that these support measures are essential if small growers are to develop and in particular to access the market in a remunerative fashion, the question remains how to extend them at scale and in a way which will enable long-term sustainability of both the services and the enterprises which are established.

The effectiveness of 'pushing' appears to depend on two things:

- The capacity and co-ordination of the agencies responsible for grassroots development support, and
- Clarity as to what role subsidies should play in developing an emerging smallholder sector and the form in which they are targeted.

Support capacity and co-ordination

The case studies indicate the current limitations of available support capacity. This seems particularly acute with respect to government land identification and agricultural extension capacity to support small growers in metropolitan Cape Town. Interviews highlight the slow processes associated with acquiring land that can be used for commonage purposes. They also indicate an approach to extension where it seems that extensions officers 'do not touch the soil' and operate more as dispensers of infrastructure and equipment.

Although Abalimi and the Provincial Department of Agriculture operate out of the same building their functions and programmes do not appear to be aligned. Likewise the services offered by the City of Cape Town and the Provincial Department of Agriculture seem in some respects to overlap.

Reframing subsidies?

Abalimi Bezekhaya and the Provincial Department of Agriculture provide support which substantially reduces the costs of growers who participate in the HOH scheme. But there remains a lack of clarity about what constitutes legitimate subsidy and support for smallholder production.

In the EU, agricultural subsidies have been defined as "a benefit provided to individuals or businesses as a result of government policy that raises their revenues or reduces their costs and thus affects production, consumption, trade, income, and the environment. The benefit generated by policy may take different forms such as an increase in output-price, a reduction in input-price, a tax rebate, an interest rate concession,

or a direct budgetary transfer" (Mayrand, Dionne, Paquin, and Pageot-LeBel, 2003).

According to a recent OECD review of agricultural policy reform in South Africa, policy transfers to South African agricultural producers – as measured by the OECD Producer Support Estimate (PSE) – equalled 5% of gross farm receipts on average in 2000–03. This is well below the average level of support for OECD countries which stands at 31%, but is similar to levels of support provided in Brazil, China and Russia (Organisation for Economic Co-operation and Development, 2006).

Internationally, subsidies to producers in developed countries have gone to the large farmers and have also contributed to an agriculture which is dependent on high inputs of fertiliser and chemicals and mechanised production with a high carbon footprint.

It should be noted that the above definitions and approaches are narrowly economistic in nature and ignore triple bottom line accounting precepts that assess social, environmental and economic dimensions and their interrelationships.

There are strong arguments for subsidies which encourage and support organic and/or low input agricultural production and which build social capital. In the WTO context such domestic support measures can be associated with the so called Green Box which includes support for environmental programmes, government research, extension, and infrastructure provision together with income safety-net programs (La Vina, Fransen, Faeth, and Kurauchi, 2006). Overall these need to provide incentives for the development of a more sustainable and low input agriculture which has environmental benefits.

Rethinking certification

The Abalimi experience suggests that attempting to secure formal organic certification is too onerous for small producers. This requires a new approach which either utilises state support or an alternative framework with more appropriate standards and assessment measures.

It is clear that the development of an urban agriculture policy is an important first step in the stimulation of urban smallholder production. However, for the policy to have meaning and to be implementable there needs to be investment in implementation capacity. This must combine and balance measures to simultaneously align human and financial resources and that strategically 'pull' and 'push' to secure the emergence of new smallholder producers engaged in agricultural activities which are socially, ecologically and economically sustainable.

References

City of Cape Town, (2005) *Sakha iKapa 2030: Long-Term Metropolitan Spatial Framework – Strategic Direction,* retrieved 28 August, 2008 from http://web1.capetown.gov.za/idp/pdf/B.Spatial.Cape%20Town%202030.pdf

City of Cape Town, (2006) *Brand new fresh produce market for Cape Town*, retrieved 30 August, 2008 from http://www.capegateway.gov.za/eng/pubs/news/2006/nov/147918

City of Cape Town, (2007a) *Philippi Fresh Produce Market shows good potential for growth*, retrieved 30 August, 2008 from http://web1.capetown.gov.za/press/ Newpress.asp?itemcode=2051

City of Cape Town, (2007b) *Urban agriculture policy for the City of Cape Town*, retrieved 14 June, 2008, from http://www.capetown.gov.za/en/ehd/Documents/EHD__Urban_Agricultural_ Policy_2007_8102007113120_.pdf

City of Cape Town, (2008) *Situational analysis for MDP/Philippi Agriculture Project*

Department of Local Government and Housing, Western Cape (2007) *Isidima: the Western Cape Sustainable Human Settlement Strategy*.

Ellis, F., and Sumberg, J. (1998) Food Production, Urban Areas and Policy Responses *World Development*, Vol. 26, No. 2, 213-225.

Just Think, (2008) *Harvest of Hope Business Development Proposal.*

Kok, P., O'Donovan, M., Bouare, O., and van Zyl, J. (2003) *Post-apartheid patterns of internal migration in South Africa*. Pretoria: HSRC.

La Vina, A., Fransen, L., Faeth, P., and Kurauchi, Y. (2006) *Reforming Agricultural Subsidies: "No Regrets" Policies for Livelihoods and the Environment*: World Resources Institute.

Mayrand, K., Dionne, S., Paquin, S., and Pageot-LeBel, I. (2003) *The Economic and Environmental Impacts of Agricultural Subsidies: An Assessment of the 2002 US Farm*

Bill and Doha Round, retrieved 14 September, 2008 from http://www.cec.org/ files/pdf/ ECONOMY/ Eco-Envi-Impacts-Agric-Subsidies_ en.pdf

Organisation for Economic Co-operation and Development, (2006) *Policy brief: Agricultural policy reform in South Africa.*

Provincial Government of the Western Cape, (2006) *Speech by Mr Cobus Dowry, Western Cape MEC for Agriculture, at the opening of Philippi Fresh Market, delivered by MEC for Sport and Cultural Affairs Whitey Jacobs*, retrieved 30 August, 2008 from http://www.polity.org.za/article.php?a_id=97588

SetPlan and Practiplan, (2002) *A rural management framework for the Cape Town Metropolitan Council, Volume 1: Findings and recommendation*, retrieved 28 August, 2008 from http://planet.uwc.ac.za/nisl/Conservation%20Biology/Conservation_CCT/rural_plan_for_CAPE%20Town.pdf

Slater, R., and Twyman, C. (2003), Hidden livelihoods? Natural resource-dependent livelihoods and urban development policy *ODI Working paper 225*, Retrieved 30 August, 2008 from http://www.odi.org.uk/publications/working-papers/225-natural-resource-dependent-livelihoods-urban.pdf

Small, R. (2007) *Can community-based organic micro-farming create food security?* : CSI Handbook, 8th Edition.

Small, R., Kaba, C., and Mahusa-Mhlana, S. (2005) *Urban Agriculture projects and HIV-Aids: Abalimi's experiences,* paper presented at the Workshop on urban micro farming and HIV/AIDS, Johannesburg/Cape Town 15 - 26 August.

Visser, S. (2006) *Concrete Actions: Cape Town's Urban Agriculture Assistance Programme*, UA Magazine 16 - Formulating Effective Policies on Urban Agriculture, retrieved 30 August, 2008 from http://www.ruaf.org/node/1082

2 Friemersheim agricultural association: commercial smallholder potato farmers in a Southern Cape land reform project

Tim Hart, Centre of Poverty Employment and Growth, Human Sciences Research Council

Introduction

This example of land use by beneficiaries of land made available through a Settlement and Land Acquisition Grant (SLAG) project was selected for inclusion into the study because those farmers engaged in potato cultivation do so predominantly for commercial purposes. Relative to the size of the original beneficiary group, only a handful of beneficiaries are still actively engaged in crop production. Most of these sell their seasonal harvests to local residents in the village and to hawkers (street vendors) in the neighbouring coastal towns. However, one farmer collaborates with his employer and through this relationship is able to produce potatoes and vegetable crops for the commercial fresh produce market or on contract to a local subsidiary of an international food processing and packaging company. In essence, while most active farmers are engaged in producing for the 'second economy', one farmer, who rents land that is owned by other SLAG beneficiaries, is able to produce for the 'first economy' by virtue of his relationship with his employer. Interestingly, this farmer is not one of the original SLAG beneficiaries but is a resident on a neighbouring farm.

Methodology

The author has conducted a number of studies in this village over several years since April 2000 until the end of August 2008. Between April 2000 and January 2006 the author visited the village at regular intervals while conducting fieldwork on a number of agricultural projects. From January 2006 until March 2008 the author lived in the village at various times for periods of up to six weeks while conducting ethnographic fieldwork. The data obtained during the different studies has been used to compile the current case.

Participatory Rural Appraisal tools (PRA) tools were used at various stages and for a number of purposes, but particularly during 2000 and 2001 in order to get historical information about the village, the farmers, agricultural projects and practices and to generate an awareness of what types of crops were produced, consumed and sold. Approximately 40 people from the village were interviewed or attended some of the workshops. Most of those interviewed were male (thirty) as agriculture is predominantly a male activity in this village. About ten females were interviewed during the course of the study, only one of whom was engaged in any agricultural activity. Those interviewed were between the ages of twenty-five and eighty-five years. Except for four men and one woman, most were over forty-five years of age at the start of the fieldwork in 2000. Attendance of the workshops was entirely voluntary and the numbers fluctuated between two and fifteen farmers and sometimes their wives. Data from the workshops was further explored by means of participant observation, and semi-structured and informal interviews. Interviewees included some of the men and women who attended the workshops as well as a number of others who were unable to attend the workshops. Interviews and partici-

pant observation sessions were typically carried out during the course of the researcher's interaction with farmers and other village residents. As crops can be grown throughout the year, participant observation sessions on agricultural practices were conducted during both growing seasons. Eight potato farmers were surveyed during 2006 and were interviewed on a number of occasions between June 2006 and August 2008. Data collected at workshops and during interviews informed the design of the survey questionnaire. The average age of those surveyed in 2006 was fifty-one years.

Historical perspective

The village of Friemersheim lies close to the south-eastern seaboard of the Western Cape. The climate is temperate with a number of smallholder farmers and large-scale farmers in the area producing potatoes and other vegetable crops. Dairy farming is also a common activity amongst neighbouring large-scale farmers. The village and the surrounding agricultural holdings fall within the winter rainfall area of the Western Cape.

The village dates back to the early 1800s with some residents tracing their ancestry back to this period. In the middle of the 19th Century the Dutch Reformed Church (NGK) established a church and mission station. There are currently 186 households in the village. Approximately 95% have electricity and 98% have access to potable water on their property. Infants and school going children were said to make up the greatest proportion of residents. Most of the adult residents either work seasonally on neighbouring large-scale commercial farms (mainly female residents) or as artisans in the surrounding towns (mainly male residents). Some female residents work as shop assistants or as part-time domestic workers in the neighbouring towns and villages. A very small minority of the residents work for local and provincial government organs in the village, such as the primary school and the municipal offices. About four to five home-based (spaza) shops are operating in the village and provide a limited range and quantity of essential goods. There is a local general dealer that provides other supplies such as gas, electricity, groceries and even some seed. According to local residents very few people in the village are extremely poor although there are a few households that are considered to fall into this category.

The closest town is about 50 kilometres away and the neighbouring village is about 20 kilometres away on a gravel road. Once there residents can take a taxi to the towns. While there are no taxi services to the nearest towns or the neighbouring village there is a bus service between the two villages. However, the bus service only operates during weekdays, leaving the village at 6:30 am and returning in the evening at around 6:30pm. Consequently, travel outside of these times makes it necessary for households to have a motor vehicle or at least access to one. The closest hospital is in the nearest town and high school learners need to go to the neighbouring village to attend classes. Transportation to medical and educational facilities is problematic if a resident does not have a motor vehicle. As a result most households have a motor vehicle.

In 1995 one of the village elders, who was a local councillor, heard about the new land reform process and the SLAG in particular. He discussed it with about six of his contemporaries and they organised a meeting with the nearest Department of Land Affairs. At the meetings it was explained that in order to get enough money to purchase any land in the area they would have to form a communal property association (CPA) and get more members, as the proposed grant of R16 000 per household for the seven households would not be sufficient to purchase any local agricultural land. The group then approached other residents until a group of thirty members was obtained. A CPA was formed and consisted of 30 households, of which 28 were male-headed and two were female-headed. Nine of the household heads were pensioners and three were recipients of disability grants. A further three worked in the village and the remainder all worked outside the village with some only coming home on weekends or on a more irregular basis. Despite claims that all these people had a long history of experience in agriculture, for most these claims were unfounded. Probably less than half the CPA members had any experience in agriculture and for many it was confined to small vegetable gardens at their homes. A handful had been engaged in limited agricultural production on the local commonage. In the 1970s a number of residents had been engaged in dairy activities. However, most of the beneficiaries were not involved in these agricultural activities. Most agricultural activities in the village up until this time had been on a micro-scale.

In 1996 the Kagiso Trust supported this group in implementing a potato production project with the purpose of making the CPA some money for future agricultural activities. (At this stage the CPA had not yet acquired its own land through the land redistribution programme. However, adjacent to the village was a portion of farmland in extent of 115 hectares. While it was administered by the local town council its ownership was in dispute and it is still pending a decision from the Land Claims Commission. It was decided to use about five hectares of this farm for the potato project. The Kagiso Trust, local farmers, local agrochemical suppliers, and the Western Cape Department of Agriculture all supported the CPA members and the potato project. Interestingly, none of the claimants were part of the CPA and none of them were invited to be part of this project which was exclusively for CPA members. However, there was a lot of internal conflict within the CPA as many members could not help with the project, either because they did not want to or because they were employed and not available to help. A lot of friction arose and when it was decided to pay those who had helped and not the other members, further antagonism arose between members and the chairperson and those who had actually helped out on the project. In the end the CPA made very little money and a lot of ill-feelings were created amongst the members.

In September 1999, the CPA formally took possession of its own piece of land through the land redistribution programme. However, contrary to the original intention, the chairperson of the CPA organised with the Department of Land Affairs that the land be subdivided. This was a direct consequence of the conflict that arose when the farmers attempted to work together during the 1996 potato project. As a result, each household head was to obtain ownership of approximately two hectares of the land and this land was to be farmed on an individual basis. The remaining thirty-nine hectares was held in trust by the CPA. The balance of the SLAG money was used to purchase a tractor and some implements in 1999. These were and still are managed by the CPA which formed into a local farmers' association.

The subdivision of the land was effected in early 2000 and each household was allocated its stand. However, formal transfer of the subdivisions only came about in September 2007 as there were a lot of problems relating to water access. Since transfer, three households have sold their land to people from outside of the village. These were households that had not used their land at all since they obtained it in 1999.

When the land and new machinery were obtained in 1999, approximately twelve of the beneficiaries cultivated their land between January 2000 and January 2003. However, following this initial burst of excitement, there have been no more than seven farmers actively producing crops, and perhaps another four cultivating fodder, during any season. A recent visit in 2008 indicated that only five farmers had actually planted any vegetable crops for that year. Over the years discussions with the farmers – those who had planted crops at some time on this land – elicited the information that farming was for most a secondary activity. Employment off-farm was the main activity and farming was done to increase income or to increase household food supply. Some farmers did not farm for two or three seasons because they were too busy with off-farm employment activities. While the more energetic farmers considered the acquisition of farmland to be a post-retirement benefit, many of the non-farmers considered this to be an investment in land, the value of which they correctly surmised would increase in the future.

As a result of the subdivision, most farmers farm individually. In some instances related land holders may pool land and share input costs, for example siblings. Amongst the active farmers the land is predominantly used for vegetable and potato production, especially if the farmers work in the village or are pensioners or disability grant recipients. Others who are engaged in farming, but who work outside of the village, tend to use their land as grazing for cattle and to this end will plant oats and other fodder. The actual amount of land under cultivation at any one time depends largely on the season, weather patterns, the farmers' time for agricultural activities and his or her access to inputs. Most of these individuals are employed or are recipients of private or state disability grants.

Natural resources

The village is situated at the foot of the Outeniqua Mountains in the Southern Cape and is between 300 and 325 metres above sea-level. Rainfall throughout the year is relatively consistent and ranges between 580 and 695 millimetres per annum. According to farmers the driest peri-

ods are during the months of December, January and February, and again during June and July. The area is considered to have a mild climate with temperatures ranging from a low of 8 degrees Celsius in mid-winter to 29 degrees Celsius in mid-summer.

Until the 1960s most agricultural production among Coloureds was conducted on residential plots for household consumption. Initially these plots were about 8000 m2 but as the population increased in the village the residential plots became smaller, curtailing the volume of agricultural produce that could be generated in the home gardens and on the commonage. In 1999 thirty households each got access to approximately two hectares of land when a neighbouring 99 hectare farm was purchased through the state land reform programme. The thirty-nine hectares that are held in trust are currently overgrown and much of the land is unsuitable for agriculture as it is mountainside and gullies.

A March 1998 report by the Western Cape Department of Agriculture describes the landscape as undulating, with deep ravines in places and that 25% of the land has a gradient of 1:4. The soils are deep and have good horizontal and vertical drainage. They are acidic, severely leached due to the high rainfall and low in phosphorous, copper, zinc, potassium and manganese. Parent soil material is Tafelberg sandstone and the soils on top of that have a residual nature. Red and yellow apedale soils occur on the shale layers found in the Tafelberg sandstone. Mechanical and/or biological protection of the fields is considered essential. The report pointed out that any crop could be grown on this land with the exception of tropical and sub-tropical crops, as long as the chemical content of the soil is adjusted accordingly. Small grains were not recommended due to the heavy reliance on expensive mechanised machinery. The climate was considered unsuitable for deciduous and other fruit. Vegetables from the root crop (potatoes and carrots), legumes, onions, curcubit and brassica families were recommended. Sweet corn was also recommended. The veld is largely covered in fynbos and grass and the investigators determined that it has a very low livestock carrying capacity. The natural rangeland has a carrying capacity of one livestock unit per 15 hectares. The outcome of this report was that as a result of the limited water supply only five hectares of irrigated vegetables could be cultivated during any season on the land to be acquired. This recommendation was not followed by the farmers because they wanted to farm individually and were not interested in working together.

The farm lies adjacent to the village in a south-easterly direction. It is almost L-shaped and this provides those farming on it with problems of access to water for agricultural purposes. Only those farming on the westerly side of the farm have access to water from the dams fed by the local irrigation network. This network supplies the village and the large-scale commercial farms in the area. Water allocation is based on a quota system. Sluice gates can only be opened on certain days for a few hours in order to fill the dams. This farm receives access to the system one day per week for 24 hours. Those smallholders farming close to this network have no problem with access to water as the sluice opens directly into two dams. This sluice is only really opened regularly during early summer when the area is particularly dry. Those farming on the easterly side of the farm have virtually no access to irrigation water. Initially they attempted to make use of a dam situated on adjacent land but as they do not have permanent access to this land, they have had very insecure access to irrigation water since 2000. Now there is a land claim application pending on this land and the water is not accessed at all. The distance between the dams that came with the farm is so great and the terrain so uneven that no attempt has been made to channel water to the other side of the farm. The Provincial Department of Agriculture and the Department of Water Affairs and Forestry conducted a number of visits over the years to determine how best to supply water to the stands on the eastern side of the farm. However, as of September 2008 this problem has not been resolved. All the proposed solutions are deemed unworkable as a result of the costs involved.

Since 2003 some beneficiaries and one or two non-beneficiaries, leased fallow uncultivated land from the inactive SLAG beneficiaries or their families. This was done in exchange for a small portion of the harvest or in exchange for clearing alien Hakea species from the land, which had been fallow for about a decade. In 2006 there were approximately thirteen people who were farming on this land, although only about seven were engaged in any form of vegetable cropping. Those who lease land are farming on anything between two and six hectares but not more than half of this is under cultiva-

tion at any one time. This is due to crop rotation requirements and also limited finances to purchase inputs. The most sought after land is that situated next to the two dams that are fed by the local irrigation network.

The agricultural stands are split almost equally between the two different sides of the farm and some of the farmers have now borrowed land from those owning, but not farming, the land closest to the irrigation network. This is a short-term solution and many are concerned about the future when the owners either return to farming or decide to sell the land. The sale of three stands in late 2007 was met with regret by some of the more active farmers. The current arrangements allow farmers temporary access to more land for agricultural purposes. Changes in access will curtail their agricultural activities. One farmer reported that he was already noticing the constraints. As he developed his agricultural activities and experience, his ability to increase in scale was restricted by lack of access to more agricultural land and also to finances.

During the first two years after receiving the farm the farmers identified that they had a root-knot nematode problem. A subsequent survey by the ARC indicated that the problem was severe. However, because farmers did not have the money to fumigate the soil it was recommended that they plant cabbage and work the residues into the soil as a form of bio-fumigation. The alternative, and one which most farmers opted for, was to sow oats on their field for a number of years in order to reduce the root-knot nematode problem. Oats are a bad nematode host and their presence tends to drive down the population numbers. Farmers used the oats as fodder for their cattle and consequently it was mainly those who had cattle in the beginning who followed this practice.

Physical resources

Some mechanised agricultural implements were purchased by the CPA members using own funds and the balance of the SLAG monies, and some were provided by the Provincial Department of Agriculture. The list in Table 2.1 was first compiled in October 2002.

At the initial assessment in 2002 the farmers requested building materials in order to build proper storage facilities for their implements. They were concerned that these would get damaged as a result of the lack of adequate storage. A store was eventually built in 2005 with money provided by the Department of Agriculture. Initially the tractor had been stored at the chairperson's house and upon his death in late 2003 it was moved to one of the containers. Currently it is stored in the new storeroom.

A cursory inspection was carried out in 2008 and this indicated that most of the equipment was still there plus a bushcutter obtained from the Department of Agriculture in 2005. The implements were still usable but many had been damaged and farmers complained about this. Some of the second-hand ploughs and potato harvesters could no longer be used as they were damaged and not repaired. Farmers reported that they were no longer looked after as well as they had been although the tractor was being serviced at the allotted periods.

Basically it is the responsibility of the chairperson and the treasurer to look after the implements and see to the hiring and maintenance of the implements. Those currently responsible for this were often not available due to work commitments, many of which took them away from the village for weeks at a time. Many accusations were made during the interviews about abuse of the implements, stealing of diesel and failure to report damage.

In order to ensure that the implements could be maintained in good order and replaced after a number of years, the Department of Agriculture recommended in 2000 that an initial fee of R150 per hour be charged for the use of the tractor and implements. This included diesel for the tractor. Since acquiring the implements in 2000 the hourly charge was R50 for CPA members and R60 for non-members. In 2002 this fee was still the same. At the time the treasurer said that it was unlikely that the CPA could make a profit or even manage to cover the maintenance and diesel costs if the fee remained so low. Opposition voices said that the tractor was theirs because it was bought using the remainder of the SLAG funds and that the government could not dictate to them what they had to pay for its use. It was also felt that the rising costs of diesel would make the use of the tractor prohibitive if the fee was increased at that time. By August 2008 the farmers were paying R100 (R110 for non-members) an hour to use the tractor and implements. They had been doing so for the past two years despite the rising costs of diesel. The same com-

Table 2.1: Mechanised agricultural implements at mechanisation centre in 2002

Implement	Date obtained	Obtained from	Storage	Condition
5-ton Trailer	2000	DoA	On fenced-in farmland, but exposed to the elements	Good
Disc plough	2001	DoA	On fenced-in farmland, but exposed to the elements	Good
Cultivator – seed bed preparer	2001	DoA	On fenced-in farmland, but exposed to the elements	Good
3-bladed mouldboard plough	2000	DoA	On fenced-in farmland, but exposed to the elements	Good
Tractor mounted chemical sprayer	2001	DoA	In a container	Good
Large mech anised potato planter	2001	DoA	On fenced-in farmland, but exposed to the elements	Good [4]
Two second-hand storage containers	2000	DoA	On fenced-in farmland, but exposed to the elements	Good
Landini 53 kw 4X2 tractor	1999	DLA-SLAG	Under a shelter at the chairman's house	Good
Diesel irrigation pump	1999	DLA-SLAG	Usually unprotected and next to the dam	Good
Irrigation Pipes	1999	Land Affairs Grant	Usually unprotected on fields or on trailer	Good[2]
One second-hand Potato extractor	2001	Purchased from local farmer using own funds	On fenced-in farmland, but exposed to the elements	Fair with a section of the mechanism broken
One second-hand furrow plough - cultivator	1999	Purchased from local farmer using own funds	On fenced-in farmland, but exposed to the elements	Fair
One second-hand trailer	1995/6	Obtained from Minister Lampie Fick	On fenced-in farmland, but exposed to the elements	Fair to good and still used regularly
One second-hand 3-bladed mouldboard plough	1995/6	Obtained from Minister Lampie Fick	On fenced-in farmland, but exposed to the elements	Fair, but some blades damaged and need replacing
One second-hand disc plough	1995/6	Obtained from Minister Lampie Fick	On fenced-in farmland, but exposed to the elements	Needs repairing as some discs are bent or have come off

4 Interviewees are concerned about the quality of these pipes. When under pressure the couplings come apart. The couplings are glued to the pipes and some interviewees considered this to be poor workmanship.

plaints remained with regard to the inability of this low fee to enable the CPA to replace the implements when they were no longer serviceable. The opposition voices remained the same. There is a lot of conflict over these resources and in some cases a few of the more active farmers resort to borrowing implements and tractors from neighbouring large-scale producers. Some use their own tractors on occasion.

Given the sizes and layout of the plots many farmers tend to use animal traction along with mechanised implements. While the latter is used for the heavier and larger work such as pre-planting soil preparation, the former is used for planting and harvesting of potatoes. However, as the farmers get used to the implements, or borrow suitable implement from neighbours, so this practice is declining. One farmer who rents farmland from one of the CPA members only uses animal traction as he is unwilling to pay the cost involved in using mechanisation. A clear observation over the past several years is that the layout of the farms and the size of the implements often make it difficult for the farmers to use the mechanised implements appropriately in the confined spaces. This is evident by the bad ploughing and crop spraying practices that are used. For example, some farmers plough down the gradient, rather than across the gradient, so that they can manoeuvre the tractor-mounted herbicide sprayer more easily. This leads to water run-off problems.

During 2006 eight of the farmers reported owning or having access to the mechanised or handheld implements for primary agricultural activities as indicated in Table 2.2.

Farmers had access to most of the mechanised implements recommended for commercially-oriented agricultural production and most had access to motor vehicles. More than half accessed and used animal traction on smaller areas and sometimes in between seasons for practical purposes and also to reduce input costs. While non-members of the local farmers association can hire many of the mechanised implements, some do not because the land they work is small. Animal traction is used, either borrowed or self-owned. These people feel that the cost and effort of us-

Table 2.2: Respondents' access to agricultural implements

Implements	Self-Owned	Borrowed	Hired	Self-owned and hired	No Access
Tractor			7	1	
Car	2	1	1		4
Bakkie (pickup truck)	3	1	1		3
Truck		1	1		6
Tractor mounted chemical sprayer			7		1
Tractor drawn plough		7			1
Horse drawn plough	4		1		3
Planter		1	6		1
Cultivator			5		3
Spade	8				
Hand held hoe	5				3
Fork	8				
Rake	6				2
Pick axe	8				
Watering can	2	1			5
Wheelbarrow	5	2			1
Hosepipe	5				3
Sprinkler	2	1	3		2
Drip-irrigation system					8
Handheld pump sprayer for chemicals	4	1			3
Diesel or electric irrigation pump	1	6			1

ing the available mechanised implements is not worth the return. Similarly, if they hired these implements as often as they wanted, this would put pressure on all the farmers who wished to use them, members and non-members alike.

During the 2006 survey only one household out of the eight surveyed owned a tractor but along with the other seven households it also had access to the tractor and implements owned and managed by the local CPA. Seven of the households, as members of this association, had access to irrigation equipment, including pipes, sprinklers and a pump. The other household reported having no access to irrigation equipment, mainly because there was no water source nearby. In fact only two of the households were farming land near the local irrigation network and could access the water that came into the two dams via this network.

Since obtaining their plots the active farmers have fenced in their land and most have removed alien vegetation. Hakea trees are often used as fencing poles and droppers. The land held in trust is also enclosed but the alien vegetation has not been removed. People seldom venture on this land for any agricultural related purpose.

Production system

Farmers in the area grow a number of crops such as potatoes, green beans, beetroot, carrots, cabbage, maize, pumpkin and peas. The two main commercially produced crops are potatoes and pumpkin. Potatoes cover the largest portion of the fields at any particular time, so the data referred to in this case relate mainly to potato production. Also, many of the other crops such as peas are only found in home gardens tended by female residents. The men initially planted carrots and beetroot, but the nematode problem discouraged them from continuing with this on a large scale. It has not, however, prevented the most active farmers from planting potatoes.

All the farmers interviewed reported that in this area there are two potato seasons in a twelve month period. However, one farmer pointed out that he only planted potatoes in winter because he experienced many problems with regard to water access during summer. In summer he would plant pumpkins as these were more tolerant to drought. As he was involved in contract farming he was able to sell his pumpkin harvest as he had a ready market for this crop. Seven of the respondents had planted and cultivated potatoes at some stage between 2003 and 2006. Only four had actually done this during the previous potato season, which was winter 2006. Those who had not, reported the following varied responses:

- one farmer was working with his brother and was experimenting with changing to cattle farming as crop farming inputs were becoming too costly and his employment was taking up too much of his time;
- one farmer was ill for some time and had allowed the land to fallow for the past three years but then planted pumpkins in 2005 and potatoes in the 2006 summer season;
- one farmer was still concerned with the nematode problem and had planted oats in an attempt to reduce the nematode population;
- one farmer had not planted at all as it was too dry in September 2005 and the access to water for irrigation purposes was a problem; also, this farmer was no longer planting as his wife had started to receive a pension and the household now had the benefit of his and her pensions.

Most farmers considered production of potatoes for sale as the most important reason for engaging in agriculture. One farmer, a pensioner, produced for household consumption and did not sell his harvest. All the farmers kept potatoes for seed and all ate some of their harvest. However, for seven of the farmers the primary purpose of production was cash income. Potatoes were not produced for any other purpose such as animal fodder.

Four of the respondents sold directly to local villagers from their homes or from their fields. Two farmers sold to hawkers who came to the village to purchase the pockets of potatoes. Only one farmer had access to the fresh produce market in one of the district towns, and this was a result of his farming in conjunction with his employer. The latter provided this access to the formal market in the form of contract farming and included his employee's produce along with his own when travelling to the market. He also did all the price negotiating and marketing on behalf of himself and the employee. This farmer was not particularly happy with this arrangement as he felt he was being under-rewarded by his employer.

Irrigation of potatoes

Only four of the respondents actually irrigated their potatoes. The fact that the others did not can be attributed to the water problem on the farm, as previously discussed, and the fact that irrigation equipment was shared amongst the farmers who were members of the local association. This last point meant that people often had to wait for others to finish irrigating their crops before the equipment was available. Of course when there was a dry spell everybody wanted to irrigate immediately. The four respondents who irrigated their potato crops all reported using sprayer irrigation, as this was the equipment to which they had access. The sharing of irrigation equipment could lead to water stress of the crop. However, some sharing is still better than total dryland production, which is associated with higher risk. As has been mentioned, one farmer does not plant potatoes at all during summer in order to reduce his risk to crop failure from seasonal stresses and lack of sufficient irrigation. Alternatively he plants pumpkins and has an established market for this crop.

Methods for obtaining seed potatoes

Farmers were asked where they sourced their seed from in an effort to identify the cultivars that are used and in an effort to determine the use of farmer-kept seed practices. The seed sources could explain some diseases experienced by farmers and the possible health status of the plants before they emerged. It would also indicate the reliance of farmers on certain forms of seed supply such as self-stored or purchased tubers. Farmers saved potatoes for seed and also purchased seed potatoes from a local producer and sometimes the local co-op. These activities were carried out irrespective of the cultivars and farmers predominantly bought what was available or what other farmers suggested. Farmers indicated that they kept seed from the previous season's crop and when it came to planting for the next season they would purchase more seed depending on the quality and quantity of the saved seed and the size of the land they intended to plant. They did not always plant the same size of land every year or every season. With the exception of the farmer who was involved in contract farming with his employer, some might plant a hectare at a time but most planted a quarter to a half hectare every season. The reason for this was the limited finances for inputs. The effectiveness of the seed planted could not be established as too many variables determine if these farmers buy seed or not. Generally most of the farmers purchased second generation tubers (uncertified) from a neighbouring large-scale farmer because these proved cheaper than purchasing from the co-op. Combining the practice of planting uncertified and certified seed raises more questions than it answers. This is especially in light of the extremely short rotation cycle that these farmers use. If the seed is on the same fields, season after season, the effectiveness of buying seed becomes questionable, especially if uncertified seed are infected with soil-borne diseases, as the two are often planted together.

Potato variety preference

Farmers only cultivate BP1, Vanderplank, Astrid and Mondial. The order of preference in terms of area of land under cultivation is as follows:

- All the respondents reported producing the potato variety BP1. BP1 is a versatile cultivar that has multiple uses and generally good yields. While one person reported that it was mainly grown for food purposes, the remaining seven all said that it was grown primarily for sales and then for food because it had a good taste and was readily available in the area. One of these seven reported that it was a good summer crop. Six of the respondents reported that most of their potato production area was primary planted with BP1. Five of the respondents ranked this as their preferred cultivar.

- Four farmers indicated that they cultivated Vanderplank for food and one of these reported that it was a good cultivar for winter sales. Only one of these four farmers considered this variety to be of primary importance in terms of area under cultivation. Two of the respondents ranked it as a highly preferred cultivar. This cultivar tends to have a small but dedicated consumer group who prefer the taste and the fact that it does not go very soft when cooked. It is an excellent salad and French fry potato.

- The potato variety Astrid was cultivated by four of the farmers. Only one of the farmers considered it to be of primary importance in terms of area under cultivation and this farmer also ranked it as a highly preferred

cultivar. Astrid is a yellow coloured potato with a very specific taste that is preferred by some people. This cultivar is mainly grown in the western and southern parts of the Western Cape.

- Five of the farmers cultivated Mondial, and while all mentioned that they produced this variety mainly for sales, one of them reported that the fact that it was resistant to blight was an important reason for planting this variety. None of these respondents reported that Mondial was of primary importance in terms of area under cultivation. Nor was it ranked as number one in terms of preference. Mondial is an imported cultivar that is slightly drought resistant.

Careful analysis of where farmers obtained their seed tubers and what they planted indicates that because BP1 was the most common potato that their seed supplier had it was consequently the most common one which they had access to and therefore planted. It was available locally at a cheaper price than that supplied at the co-op and this was the main reason it was purchased. Also, its versatility means that there is a market for it in the surrounding area. In essence the appearance is given that farmers will plant what is locally available as long as the yields are generally good and there is a market for the harvest.

Crop rotation patterns

In order to understand farmers' crop rotation patterns, they were asked to indicate what crop they had planted in the two preceding planting seasons on the land where they had most recently planted potatoes. Previous experience had shown that most farmers had trouble remembering what was planted more than two seasons previously as most farmers do not record field histories. In an effort to get some idea of the rotation it was limited to just two seasons, as it tends to identify rotation with solanaceous and other unsuitable crops. At least six of the farmers have a rotation system that would generally be regarded as too short. It is suggested that the rotation for potatoes is every four years, thus limiting the build-up of soil-borne diseases that affect potatoes. One farmer indicated that his field was fallow for several seasons; however, the fallow period was due to his illness and was probably not normal practice. Poor rotation practices of farmers need to be addressed, since this can lead to a build-up of diseases that can eventually lead to the loss of these soils for potato production. Crop rotation must take the farmers' needs into consideration, as well as the specific agro-ecological environment where they farm. Making use of brassicas for biofumigation to help control nematodes (an important pest for them) and not planting host crops are very important strategies. Ensuring that no solanaceous plants are incorporated into the cycle is also very important. A four year crop rotation is seen as the best in most cases. Where crop rotation is shorter the use of certified seed becomes crucial as the chances for infection of the soil with soil-borne diseases is reduced. However, this does not mean that a rotation shorter than four years is acceptable. These farmers need to get help from a knowledgeable potato production person who would be able to help them establish the best rotation practice for their specific circumstances. Combining their fields to help establish a longer rotation is probably not an option as local farmers prefer to take responsibility for their own land and crops.

Support from the various state and parastatal research and extension services has not been forthcoming is this regard. Since farmers obtained the farm in 1999 they planted potatoes. However, nobody has ever assisted the farmers to develop an appropriate crop rotation system based on the crops they selected to plant. This could be one factor that led to the rise in root-knot nematodes after the first three years of production.

Potato storage practices

Farmers stored potatoes for three specific purposes: food, seed and for sales. The latter practice – followed by only two of the farmers – was to allow them to introduce potatoes onto the market when prices might be more favourable, and is also common among local large-scale commercial potato producers. However, this practice can be risky as market prices fluctuate and might not be favourable, and because storage conditions are not necessarily such as to maintain the quality of the potatoes, typically for a period of about four months. While seven farmers stored potatoes for food purposes, all eight stored potatoes for seed which they would plant in their next planting season.

Farmers were asked how they currently stored their 'table potatoes' (those they intend to consume) and seed potatoes. Cold storage was

unavailable in this village so none of the farmers could make use of such a facility. The most common method for storing potatoes was either in bags or in crates in the store. Often individual farmers made use of more than one storage means or facility. Use of a facility or storage type is dependent on availability of space and bags or crates in which to pack the stored potatoes. All respondents reported storing table potatoes in bags no matter what structure was used. Using bags for table potatoes helps limit exposure to light, thus preventing greening of the tubers. This is essential as they cannot sell green potatoes and greening breaks the dormancy of the tubers, thus causing sprouting. Consumers will buy neither green nor sprouting tubers, if they are aware that potatoes are in this stage.

A positive point is that the farmers do not store their tubers in the soil. This is especially fortunate given their expressed root-knot nematode problems. This would increase nematode populations in the soil. The piling of seed on the floor can result in many storage losses due to rodents, poor ventilation and the diseases that are associated with this. Piling of tubers makes good management of seed during storage difficult to nearly impossible. Storage of seed potatoes in bags is not always the best, as the ventilation can be compromised if the wrong types of bags are used. Ventilation is one of the most important aspects of successful storage, as the heat generated by respiration needs to be removed from the environment in order to prevent water from forming around the tubers and thus creating conditions for diseases. Storing loose tubers in crates or in thin layers tends to be the best method for storage under non-cold-room conditions. The use of diffused light during the storage of seed greens the tubers, breaks dormancy and encourages the formation of thick sprouts that do not easily break-off. Storage trials of seed at ARC-Roodeplaat and on-farm found this method to be effective for up to eight months.

Potato storage problems

Respondents were shown photographs of 23 pests. They were asked to identify which of the pests they experienced as problems with regard to potato production, table potato storage and seed potato storage. Once the pests were identified, respondents were asked to rank them in order of significance. The most significant problem was given a ranking of 1, the second a 2, and so on. With regard to problems encountered during the storage of both food and seed potatoes, the most commonly identified problem was the presence of potato tuber moth larvae damage. In this village this damage was not originally attributed to the potato tuber moth but in fact to mites. However, when the farmers examined the photographs of various pests and the damage they cause, they identified this mite damage as being potato tuber moth damage. Although nematodes are mentioned as storage problems, they are actually a consequence of production rather than storage practices. The open method of seed storage (in piles, open on floor, in crates) can lead to tuber moth infestation at this stage, as the tubers are unprotected from tuber moths who can lay their eggs on these tubers. However, it is not always certain where the tuber moth problem comes from. Poor management practices in the field could result in infestation before or during harvesting. These farmers are well aware that steps to control nematodes and tuber moth should be implemented during production. They were both identified during the discussions on storage as it was often only after periods of storage that the farmers uncovered the damage. Some basic production and storage training could help these farmers to minimise their losses.

General potato production problems

In response to being asked what problems they generally encountered with regard to potato production the respondents provided the following information, presented here in terms of the frequency of responses:

- Lack of access to water (7 responses)
- Blight (6 responses)
- Nematodes (5 responses)
- Millipedes (3 responses).

In total the respondents reported fourteen problems, but the above list only refers to those that were mentioned by more than one respondent. Given the problems with the water supply for a large portion of the farm, it is not surprising that the lack of access to water ranked the highest. This has been a problem since the farm was obtained and nine years later there does not seem to be any solution in the immediate to long-term future. High levels of root knot nematode populations in the soil are another problem that has been around for a number of years. Some

Table 2.3: Potato input costs as of August 2008

Input costs per hectare (oftr plant 0.25-0.5 ha in a setason)	How often purchased	Amount purchased	Actual Cost	Where purchased
Seed (tubers)	Every season	3-4 X 25 kg crates @ 18 X R60 per crate	R3780	Neighbouring farm
Fertilisers				
Fertiliser 2-3-4 30%	Every season	2 X 50 kg per ha @ R486 per 50kg	R902	Local depot
KAN/LAN 28%	Every season	2 X 50 kg per ha @R400 per 50kg	R556	Local depot
Fertiliser 101 44%	Every season	2 X 50 kg per ha @R400 per 50kg	R758	Local depot
Fertilisers (organic)				
None	Insignificant and no cost		R0	None
Herbicide				
Granazon	Every season	R400 per 5 litre but uses 2 litre per ha	R160	Local co-op
Pesticide				
None			R0	None
Tractor use (R100 per hour includes implements, diesel and maintenance)				
Soil preparation				
Plough	Every season	2 hours @ R100 per hour	R200	Farmers association
Disc	Every season	2 hours @ R100 per hour	R200	Farmers association
Smooth	Every season	2 hours @ R100 per hour	R200	Farmers association
Plant				
Planter	Every season	2 hours @ R100 per hour	R200	Farmers association
Weed control				
Spray	Every season	2 hours @ R100 per hour	R200	Farmers association
Harvest				
Mechanical harvester	Every season	2 hours @ R100 per hour for 2 days	R400	Farmers association
Labour - only for harvesting and sorting				
Female labour	Every season	4-6 for 2 days @ R80 per labourer per day	R800	Neighbouring farm
Own transport for purchases and sales	Every season	100 km @ R2 per km	R400	Own car
Rates on land	Monthly	R2.10 per month for 12 months	R25	
Packaging	Every season	R1.20 per pocket	R1200	
Total expenditure			R9982	

farmers are trying to control the population by planting oats; however, there is some evidence that this might not be a good strategy for reducing the population if the varieties are not resistant to root knot nematodes. If the oats varieties are resistant to the nematodes, they should assist in reducing the root knot nematode population in the soils. The soil population of root knot nematodes has been exacerbated by the presence of numerous Australian black wattle trees on the farm. These are hosts of root knot nematodes. Advice on integrated pest management (IPM) that incorporates aspects of biofumigation might help these farmers to reduce the nematode population, but this will only be effective if they change their rotation to four years (eight planting seasons). Given the small pieces of land actually planted this might well be possible. Blight and millipedes are also considered significant problems with regard to potato production. However, during the interviews farmers said that these could be controlled if the correct chemical controls were applied when necessary. However, most farmers admitted not using these chemical controls due to the expense associated with them.

Economic aspects

Involvement in agricultural activities was predominantly for the purpose of supplementing household income, even for the two full-time farmers, with only the pensioners using it as a source of extra household food. Therefore, most households in this sample can possibly be construed as being 'resource-medium'. They had access to some resources and tended to farm for more commercially-oriented purposes, although they consumed some of their produce and in many cases did not rely on their agriculture production for their main source of income. For most of this sample, agriculture was important for an extra food supply and also for generating an extra income. Generally, land for agricultural activities is small in this village. Even those now farming on two hectares or more reported experiencing constraints which prevent them from scaling up their production.

During winter of 2006 and again in winter of 2008, farm budgets were compiled with potato producers. In 2006 this was done in an attempt to determine the amount of money spent on inputs and what percentage this was of the household income. In 2008 a similar activity was carried out but with the sole purpose of obtaining a general picture of the input costs associated with the production of potatoes amongst the commercially-oriented farmers, i.e. those producing predominantly for household consumption were excluded. In both instances the input costs per hectare and sales of per hectare yield was used to get the figures reported here. The figures for the expenses are indicated in Table 2.3 and for income under three different yield volumes in Table 2.4.

Farmers indicated that they do not get a consistent yield every season and that it often depended on the quality of the tubers, the season (more in summer and less in winter) and access to irrigation. They said that in their experience one could get anything from 400 to 2000 pockets per hectare depending on success of the planting. They felt that around 1000 pockets was the current average although one or two reported not getting much more than 400 -600 pockets, which meant they barely broke even. Profit is indicated below in Table 2.4 for three different scenarios.

One farmer indicated in 2008 that his input costs had doubled since the discussion in 2006. Others were equally concerned. The contract farmer indicated that his input costs had also increased to almost double. For all the farmers increased input costs were a concern as yields did not improve with the increased costs and the recent increase in market prices had not really benefited them to any significant extent that they could claim an increase in profits as a result. Two of the farmers – the more commercially oriented of the group – indicated that potato farming was not really viable for them and that many of the neighbouring commercial farmers had moved away from potato production in recent years and were now planting other crops. They saw this as a clear indication that other crops were more viable. They mentioned pumpkin and butternuts as a more viable summer crop because of their lower input costs and high yields. Planting potatoes without irrigation was also becoming a problem as they were realising that the yields in winter were less than in summer, but in order to maximise summer planting they required irrigation.

Table 2.4: Profit from potatoes based on three different yield volumes

Scenario 1	400 pockets @ R25 per pocket	R10 000
Total Income (400 pockets)		R10 000
Scenario 2	1000 pockets @ R25 per pocket	R25 000
Total Income (1000 pockets)		R25 000
Scenario 3	2000 pockets @ R25 per pocket	R50 000
Total Income (2000 pockets)		R50 000
Profit = Income - Expenditure		
Scenario 1 (400 pockets)		- R18
Scenario 2 (1000 pockets)		R15 018
Scenario 3 (2000 pockets)		R40 018

However, in an interesting turn of events, the farmers who have recently become most active tend to be those who are situated the furthest from the irrigation dams; these are the farmers whose plots are closer to the village, and thus for whom combining farming and other livelihood activities is most convenient.

Some of the SLAG beneficiaries have cattle on their land, although these are mainly those who do not plant crops. Discussions were held to determine the viability of cattle rearing and selling. All the farmers who had at some time kept cattle reported that this was not really an enterprise. Rather, the cattle performed the function of a savings account which could be accessed when required. The return was fairly good and the input costs were minimal. Those who no longer practised this said it was not a viable way of saving money because if the cattle died you lost all your money. They also said that they did not have sufficient land with adequate grazing capacity. Most of those who did not keep cattle suggested that it was only the poorer households who did so. However, observations clearly illustrated that this was not the case. People had various reasons for keeping cattle and access to different resources. These determined the care that the cattle were given. The figures given in Table 2.5 below are reported for what can be considered the general costs incurred to rear a calf in the manner practised by most households who planted feed and occasionally used communal land for grazing. Those who only used communal land would spend less money. Animals were usually sold off after three years but this was by no means a rule. The current expected price was between R2700 and R3200 per animal after three years. The figures illustrate that if the animal has no serious illnesses and the owner experiences no uncommon expenses, then cash costs are less than half of cash earnings.

Policy aspects

It can be realistically argued that the South African Government does not really have any rea l policy with regard to addressing the needs of smallholder farmers. It can also be strongly argued that any policies that are aimed at bringing about agrarian reform in South Africa are largely commercially oriented and focus specifically on supporting groups rather than individuals. The SLAG aspect of the land reform programme is a good example of this group focus and as noted above it resulted in the active farmers having to co-opt a number of predominantly non-farmers into the CPA in order to access land. While the successor to SLAG – the Land Redistribution for Agricultural Development (LRAD) programme – has somewhat reduced the pressure for applicants to form groups, it tends to ignore the poor and especially resource-poor farmers. According to officials with the Western Cape Provincial Department of Agriculture, the SLAG beneficiaries in this village are entitled to submit applications under the LRAD support programme. However, this has been done by very few as the funding is predominantly for infrastructure development and not for implements and solutions to individual problems, etc. The store was built from some of this money. It seems that the water constraints cannot be addressed under this support programme as it is too costly an exercise. With the arrival of an Agricultural Development Officer in the village, some of the beneficiaries have accessed funds from the Comprehensive Agricultural Support Programme (CASP). However, they have had to do this in groups and these are all new projects and do not necessarily build on existing activities. Only one land reform beneficiary really has anything to do with this Agricultural Development Officer. Others argue that this official has nothing to offer except piggeries and household gardens. None of the current problems are being addressed such as the water problem and the high price of inputs.

Social and institutional aspects

Besides organising the occasional training course, suggesting and financing the occasional project and providing some advice, local state agricultural extension does not interfere with farmers' activities. The establishment of the mechanisation centre has been useful to farmers. Farmers in the village, more specifically the land reform beneficiaries, have access to one tractor and associated implements. However, non-beneficiaries generally do not make use of this facility unless they are farming large tracts of land. Probably because numbers are small and some farmers have their own mechanised implements, they did not emphasise access to mechanisation as a constraint. Also evident from the time spent in the village is that there is a lot of conflict around the care and payment for the use of the implements at the centre. One concern was that many people were abusing the implements and accurate records were not

Table 2.5: Cattle rearing costs and return for a single livestock unit over three years

Input	How often purchased	Amount purchased	Cost per unit	Where purchased	Cost of 1 livestock unit for three years if purchased
Calves	0	0	R200 - R320	Neighbouring farmer	R300
Breeding services	1 per year	1 service	R50 - 100	Local bull owner	R75
Feed (planting of oats)	2 per year	8 50 kg bags per year	R86 per bag	Co-op	R229
Growth accelerator feed	1 bag per calf and mother for first year	1 bag 50 kg	R120	Co-op	R120
Block of vitamins	1 block per year	1 block for all the cows	R85	Co-op	R85
Actoban	1 per year	250 ml	R90	Co-op	R270
Tick fever, Redwater - Teramycin	1 per year	250 ml	R80 - R110	Co-op	R300
Shelter	Once only	R500	R500	Hardware	0
Fencing	Once only	R1 500	1 ha - 2 ha	Co-op	0
Maintenance	When necessary	R100	R100	Co-op	0
Total					R1379

being kept. Consequently, this compounded by the low hourly tariff would prevent the future replacement of the tractor. The mechanisation centre is seen as useful and a necessity in order to access mechanised implements, but some feel that it has brought its own set of problems. Similarly, the CPA very seldom meets and this means that problems or uncomfortable issues are never resolved.

Farmers cultivating on the land reform farm tended to exchange information and also to share inputs when appropriate. Exchange of information was common between peers. Often during discussions over the years farmers reported to the researcher that they conducted certain agricultural practices. However, it was later uncovered through participant observation that they in fact did not carry out these practices because they were expensive. The rationale for telling these 'white lies' appears to be that these farmers were aware from other farmers that these were 'good commercial practices,' and did not want to be seen wanting. It also became evident over the years that farmer-to-farmer exchange is most often between peers and family members and not between different age groups, making it difficult for the young to learn from older residents.

Peers noticed that they did not always trust one or two of their number and as a result would not collaborate with a particular person or persons when it came to farming together. One must recall that the first group farming activity in the village was seen as a disaster by most of those involved. Also, it seems that local and often long-term disagreements prevent people from working together.

Local farmers and particularly the beneficiaries have always cooperated well with outside

agencies such as the Department of Agriculture, Department of Land Affairs, Agricultural Research Council and various non-government organisations. This cooperation was historically extended to local large-scale farmers, on whose farms some residents worked and elder residents enjoyed good relationships. Relationships with many of these organisations has enabled them to obtain many of the resources they require for farming, such as land, inputs, implements and some technical knowledge. Those beneficiaries, especially the active farmers, who see these relationships as being valuable, are hesitant to criticise and go to great lengths to keep up good relations. It is felt by maintaining these relationships more resources may be obtained in the future.

Six farmers purchase their seeds, plant material and agrochemicals from the co-operative in the nearest town. However, many of these also purchase potato tubers from a local commercial grower in the area, seemingly because the price is significantly less. These tubers are second generation and are not certified, hence their significantly lower price. Most of the fertilisers are bought at the local depot because this is closer than the co-operative and also because a local farmer has agreed to pay their value-added-tax, making their cost significantly lower. The co-operative only seems to be a source of agrochemicals in the form of weedkiller. Other inputs are only purchased from the co-operative when they are not available locally. Generally, most of the active farmers have a good relationship with local large-scale farmers. Often implements are lent and advice is given. On a few occasions large-scale farmers have also given old implements and tractors to local farmers. There appears to be a good supportive relationship here but again it is largely between the older and active farmers and their large-scale peers.

One farmer who had no access to a motor vehicle purchased his seeds and plant material from the local general dealer in the village or he obtained these from other farmers in the village. He also obtained his agrochemicals in this fashion but indicated that he did not use very much. The contract farmer obtained all his seeds, plant material and agrochemicals from his employer of 22 years on credit. He repaid these debts from the sales of his harvest, which as mentioned above was marketed by his employer. The other seven respondents had accessed neither formal markets nor credit facilities. However, in respect of markets, this is mainly because they preferred to get paid at the point of sale (whereas with formal markets there is often a considerable delay), produced at too modest a scale to justify marketing at great distances, and generally were unable or unwilling to cooperate with one another in order to market collectively. However, with regard to credit, one permanently employed farmer had previously made use of a Land Bank loan to purchase a second-hand tractor, but was disappointed at the interest rates charged at the time of his loan in 2001. In 2008 he was still repaying this loan after eight years because of the increasing interest rates.

The human dimension

Historically farming is a male activity in this village and very few women are actively engaged in any form of agriculture. In 2002 a daughter of a beneficiary inherited her father's land when he died. She planted a wide variety of vegetables on the land but water constraints eventually made her stop this activity. Her husband now uses the land to graze cattle. She is busy with a chicken layer project and manages this with another villager.

The arrival of the Agricultural Development Officer in the village in 2005 saw five women get involved in household gardening using rainwater harvesting technologies supplied by the Department of Agriculture.

At present all the potato and other vegetable production on the farmland is done by male beneficiaries.

Farmers have received *ad hoc* training from various sources over the years starting in about 1996, soon after they had established the CPA, as part of the requirements to apply for the SLAG. The Department of Agriculture has provided training to some of the farmers, both beneficiaries and non-beneficiaries. This has included pig farming, vegetable production, layer production, some advice on cattle husbandry and also training on crop spraying and irrigation scheduling. Two beneficiaries were trained in tractor maintenance and driving. However, it is the opinion of the author that the farmers need more training in some of these skills along with more regular support and advice. Currently they get no advice from the extension services and only one of the active beneficiaries and farmers was aware of the presence of the Agricultural Development

Officer. Discussions with this person indicated that she was aware of many of the social constraints experienced by the farmers but was not aware of technical constraints due to virtually no interaction with most of the active farmers.

The Agricultural Research Council had conducted a few courses on general soil preparation and crop management in 2000 and 2001, but this was largely focused on fynbos cultivation which only one farmer experimented with. They also provided a series of business development courses in 2003 and 2004 that were well attended. However, these unfortunately clashed with beneficiaries' other commitments and many were unable to attend.

During the 2006 survey two of the respondents reported that they had no access to agricultural training and a third reported the use of his experience of 22 years as a farmworker on a commercial farm in the area. Five of the respondents received agricultural training and advice from the local office of the Provincial Department of Agriculture when this was available. This included attendance of some of the courses indicated previously. One reported getting his advice exclusively from other farmers. During discussions it became clear that all those in the sample shared experiences and practical advice with one another at some stage. They also used one another as sources to obtain inputs or at least to get an idea of what the purchase price of inputs should be. There is a potential within this group for sharing information and experience, but it is limited to peers. However, farmers do not want to farm communally and prefer being in charge of their production activities.

Household livelihoods

During the 2006 survey the following profile of livelihoods was obtained and in 2008 a review of this status illustrated that it was unchanged over the past two years. Two of the respondents were full-time farmers and both received disability pensions (one private and one from the state). However, they both engaged in other off-farm income generating activities when the situation arose. Five of the farmers considered themselves to be part-time farmers with full-time employment, either in the village or in the surrounding area. However, their actual involvement in agriculture depended largely on the time they had available and their desire to experiment with new sources of livelihoods. One person was a pensioner whose agricultural activities had declined in recent years due to old age, ill-health and the fact that his wife was now receiving a pension. In essence, all respondent households had some other form of income besides that derived from agricultural activities. This status applies generally to all the SLAG beneficiaries as most were employed or received social grants at the time they applied for and eventually obtained the farm. While sometimes considered an important source of income for rural households, none of the respondent households received any form of remittances from members residing outside the household. In any event they all indicated that agriculture was not the primary livelihood of the household.

State social grants do not constitute an important contribution to most of the households, except for one household that was dependant on two state pensions as the sole form of cash income. Only three of the other seven households received at least one social security grant. The mean annual income derived from formal employment for the remaining seven households was R31 714 with a minimum of R5 400 and maximum of R63 600 per annum. The sample mean for annual income derived from formal employment for the eight households was R27 750 and the median R23 100. Only two households had members engaged in part-time employment and their average annual income from this source was R10 200.

Annual income generated from the production and sale of crops was estimated between R1500 and R20 000. Only seven households were currently engaged in this activity. While one household was realising a value of R100 per annum from household consumption of their agricultural produce, six were realising between R1000 and R2000 per annum. One household had not produced any food crops during the 12 month 2005/2006 period under review. This situation remained approximately the same when further enquiries were made in 2008.

None of the respondent households had generated any income from animal production as no animals had been sold during the period. Six households reported not consuming any animals during the period. For those two households that had consumed livestock, one reported realising a value of R100 per annum and the other a value of R2000. It appears that very few households consume livestock and seem to only sell livestock

in specific instances. Sometimes, a particular animal would be purchased four or five months before it was intended for slaughter, e.g. for a feast or special occasion such as Christmas. This was especially the case if it could be obtained at a good price. When clarity was sought on these points it was indicated that livestock, in particular cattle, are an investment and are used by households as a form of savings. They are sold when the household needs money for something specific. Even where households were trying to build up their numbers of livestock, these were not to be sold on a regular basis but when the household needed some extra income.

The total annual household income was calculated by including the above sources, except for the in-kind values as these proved uncertain due to possible under-reporting. In this village the value of R100 in a year from one household does not seem correct. The total annual income for the households ranged from R19 680 to R83 600 with a mean of R46 318. None of the households had a total annual income from agriculture that exceeded total annual income from other sources. This suggests that agricultural activities were predominantly for the purpose of supplementing household income. However, for one of the respondents the income derived from agriculture slightly exceeded personal income from other sources. For another it was only slightly less than income from other sources. Table 2.6 indicates the percentage of household income spent on agricultural inputs and the percentage contribution of agriculture to household income. Given the fact that income is often under-reported and expenses are over-reported, these figures should be treated with caution. At best they indicate a pattern rather and a fixed income or expenditure.

From Table 2.6 we can see that six of the households were getting a better percentage return on household income when investments in agriculture were made. But for some this return was not that great when compared with other households. Interestingly enough, household 8 was following conventional practices and the return on income in terms of input costs was not remarkable when compared to some of the other households. Household 1 can be explained away by the fact that the respondent was no longer actively involved in household food crop production because of his age and health and it is likely that he was unable to recall accurate figures. It is also probable that he could not calculate the correct return on his investment, as the figures he cited for return on investment were very low (R100/annum). The performance of household 5 is understood by the fact that the farmer had sown oats to improve the soil health and that he had only planted a small portion of food crops.

Local significance of agriculture

During 2006 farmers were asked a number of questions with regard to their agricultural practices for household food security, as a source of income, production patterns, input expenditure trends and general agricultural trends over the previous five years. The purpose was to get some idea of the changes in agriculture as a significant

Table 2.6: Percentage of household income spent on agricultural inputs and the percentage contribution of agriculture to household income

Respondent HH	Annual HH input expenditure	% income spent on agricultural inputs	% contribution of agriculture to HH income
1	420	2.0	1.0
2	1100	2.8	35.9
3	1295	3.5	0.0
4	1380	1.8	11.7
5	1720	4.5	6.7
6	2485	6.7	45.8
7	5430	6.5	26.3
8	19700	46.9	50.0

source of food or income and also to see what changes had taken place with regard to input expenditure, which is often considered to be an important constraint to agricultural participation.

One farmer reported that agriculture had become less important as a source of food during the past five years because his wife started receiving her state pension during this period and his health was declining due to his age. Also, he was not a beneficiary of the land reform programme and only had access to approximately a 0.5 hectare piece of land which was exclusively rain-fed. The other seven reported that agriculture had become more important. Six reported that increased access to land had allowed them to produce fresher and cheaper food for their households. One reported that improved access to land enabled increased production for both household consumption and sales. Two of the respondents noted that agriculture had become less important for them as a source of income. One pointed out that it was never a source of income as produce was used exclusively for household consumption. The second said that his other enterprise (non-agricultural) required fewer inputs and was a better source of income if one considered the input expenditure required for the two different income generating activities. He farmed with his brother who was in the same line of off-farm work. Later discussions indicated that the brother felt the same way. The other respondents gave the following individual replies:

- One accessed land from land reform beneficiaries who did not farm, so he was now able to produce more and sell more of the surplus;
- Few village residents plant crops and those that do have only small pieces of land, therefore there is a good local market;
- One farmer felt that access to more land meant it was now cheaper to plant for household consumption and for sales;
- Agriculture and subsequent sales helps improve the household's standard of living;
- Agriculture increases household income and pays for cost of school-going child's education;
- Agriculture both reduces household income expenditure on food and brings in an extra income.

With regard to household expenditure on inputs during the previous five years, one respondent noted that less was being spent at present because he now farmed much less than he did previously. The remaining seven currently spent more on agricultural inputs. One reported that the increase in expenditure was a result of the increasing costs of inputs, although he was not always buying more as the size of his land under production varied seasonally. Three farmers noted that the high price of inputs was the sole reason for spending more on inputs. The other three also cited the high costs of inputs but noted that they were farming more land than they had been five years previously. Generally, input costs had increased but the impact of this differed from individual to individual according to their different farming activities.

Identity

Land reform beneficiaries in the village who were still actively producing crops in 2008, and those other farmers who were now farming on the land that belonged to other beneficiaries, felt strongly that for a farmer to be successful one had to have farming 'in the blood'. A person needs to know how to work with the soils, the crops, water and the environment and needs the knowledge and experience to do this. It was strongly felt that to be a farmer one must have a love for farming, otherwise one cannot truly be a farmer. The person must also be willing to experiment with new ideas and have sufficient money to farm. All the farmers raised the problem of the rising costs of inputs and that often the rising food prices were not enough to set-off these costs, so profits remained low. None of them felt that they could make a living exclusively from farming and relied on pensions, disability grants, and permanent and occasional off-farm employment. The two farmers with disability grants were adamant that they also needed to do occasional off-farm work in order to survive and were both fortunate that their wives worked.

The contract farmer makes a living from on-farm employment as a farm worker and also through farming the land he has borrowed from two SLAG beneficiaries, so in some sense he derives an income exclusively from agriculture, but not from 'own agriculture'. He is far from happy with the arrangement with his employer who dictates what crops should be planted and how much is required. If the farmer wants to

plant more that is fine but the employer does not guarantee that he will market the extra produce. There is also discord regarding the money put on credit and that received after the crops are harvested and sold. Consequently, this does not seem to be a happy relationship, although it has been going on for almost four years and the farm worker is not willing to stop. Also, the relationship increases this small-scale farmers' household income significantly and it also raises his prestige amongst the SLAG beneficiaries who farm similar crops, who respect his ability to provide information on inputs, pest, diseases and prices. But at the same time they are jealous that he is able to enjoy the support and cooperation from his employer, despite any problems that he may have with this relationship. He is able to farm up to two hectares of crops during a season with this support. None of the beneficiaries are able to do this.

Environment

The farming operations are so small that their effect on the environment at present seems insignificant. Very little land is actually under cultivation during any one year on the recently acquired farm. Apart from the contract farmer, those who are farming seldom use any pesticides. Their use of herbicides is of much less cause for concern than that of their large-scale neighbours. The trust land has never been used for agricultural purposes since it was obtained in 1999. It was used for grazing by a few livestock owners in the beginning but this practice has stopped due to its unsuitability: cattle died from tick fever and some broke free into neighbouring farmland. In any event, livestock numbers in the village are relatively small. Those owned by the SLAG beneficiaries and a few other residents are grazed in enclosed camps and fodder is planted for them. A few local residents make use of a neighbouring large tract of enclosed land to graze their cattle. However, the beneficiaries do not use this land as the ownership thereof is under dispute and a claim has been submitted by a group of village residents to the Land Claims Commission. In general the beneficiaries make use of conventional agricultural practices which are neither organic nor environmentally friendly. However, their use of agrochemicals is very limited. One concern in this regard is the observation that none of them wears any protective clothing when spraying.

The future

Generally, the various farmers consulted over the years are far from optimistic about the future of agriculture. Some were concerned about the recent sales of land by three of the SLAG beneficiaries to outsiders whom they did not know. They believed that this meant that the farm land was being taken out of circulation and that if they ever needed to expand in the future this land would become less and less if the trend to sell off the land continued. Some of the land that was on the market was that next to the main irrigation dam and this might complicate their access to this water. The lack of a solution to their water problem and the continual rising cost of agricultural inputs were regularly reported as concerns. One farmer has emphasised over the years that while his father was able to support and educate a family of eleven members as a sharecropper; this would be impossible to do nowadays. Another farmer reported that agriculture appeared to become more technologically advanced with each year. He cited the example of the increased diversification of agricultural activities among many neighbouring farmers, including into tunnel farming. He said that obtaining the latest technology required increased capital expenditure and also more land. He summed up these changes by noting that the small-scale farmer would not be able to do this as both the finances and the land were extremely limited. The water problem was the biggest constraint for farming and he said that even if agriculture was not becoming so technologically advanced, the beneficiaries would always have a problem because of the water constraints.

A number of farmers in the village and land reform beneficiaries were interviewed to determine how their production trends and those in the village had changed since 1999. Most beneficiaries who had been consistently active since 1999 noted that they had been very involved in preparing their land and in producing vegetables in the first three years. However, these activities had declined for various reasons. Some beneficiaries noted that they were producing more crops since 1999 as a result of access to more land and the fact that over the ensuing years they had developed more experience in farming. One farmer attributed this to accessing more land but indicated that access to a tractor and associated implements were also major contributing factors. The farmer who was engaged in contract farming pointed out that

due to some beneficiaries not making use of the land he was able to borrow land in the village. In 2008 he was farming two hectares of land (and would be / had been? for three years) and had access to at least another two to three hectares. In 2004 he had not farmed in the village. As a result of this relationship and that with his employer, contract farming was increasing his household income by almost 100%.

Responses during discussions on whether agricultural activities were generally increasing or decreasing in the village were mixed. Some felt that it was decreasing and gave the following reasons:

- Married couples were getting grants for their children these days so households had more disposable income. Consequently, fewer households were planting crops in their home gardens.
- It was also reported that the youth (including those in their thirties) are increasingly uninterested in farming and while many farmers recalled helping their fathers or their uncles when they were young they noted that this trend had stopped. However, some youth are interested in agriculture but have no access to land.
- High input costs have put farming out of the reach of many households so people with small pieces of land farmed less or stopped altogether. Money is now spent on bought food rather than on the production thereof.
- Only a few of the households and the land reform beneficiaries are actually engaged in agricultural activities. Some are no longer involved due to ill-health or old age. Therefore, they are no longer able to farm as efficiently as they had done previously.

One person felt that people were farming more because some now had access to large pieces of land. He was considering output and area under cultivation rather than the number of local people engaged in farming. Other residents mentioned that the agricultural activities in the village as a whole had largely remained unchanged and gave the following reasons:

- There was no significant change in agricultural activities in terms of the number of people involved or the extent of land under cultivation. People had simply shifted from the commonages to the newly acquired farm. However, this argument appears unsound as the commonage has not been used for many years and houses now take up a large part of it.
- Receipt of land from the state land reform programme meant that some people now farm on bigger pieces of land and thus produce more, placing greater emphasis on commercial production. This does not mean that the numbers of people engaged in agriculture have increased. Often these have decreased but people are now able to farm larger areas of land.
- Generally households tended to plant less because land was scarce in the village. Only a few households and farmers planted at present. This was a trend that had started in the 1960s with the rising population and the scaling down of land (commonages) allocated for agricultural activities.

The author's perception, based on several years of work in the village, is that agricultural activities have decreased at household level and also on the land received from the state. However, those few beneficiaries still planting crops on the land received from the state seemed to be doing so more intensively and indicated that their incomes were improving as a result of their increased farming experience and access to this land, despite occasional seasonal mishaps such as dry spells or flooding. In terms of numbers of people actively involved in agriculture in the village, the current impression is that this has declined. However, it is also clear that none of the active beneficiaries farm all their land at any one time. There are a number of reasons for this and the most commonly mentioned one is the cost of inputs and the water constraints which prevent them from planting more than about half a hectare to a particular crop. Often only one hectare of any crop is planted in a particular season. On the other hand the contract farmer who is supported by his employer never plants less than two hectares of crops during a season. His area of land under cultivation is decided each season by his employer.

3 Prince Albert Commonage: diverse individual and group enterprises on municipal commonage land

David Mayson, Phuhlisani Solutions

Introduction and history

Prince Albert is a village located in the south eastern part of the Great Karoo in the Western Cape. It is situated at the foot of the Swartberg Mountains and this location provides a strange situation where there are significant water resources for agriculture close to the mountain, from water that flows to the area from the other side of the range, but it decreases rapidly within a few kilometres from the town. The rainfall in the area is between 150-200 mm per year and thus it is a semi-arid area.

Small-scale farmers have been farming in and around Prince Albert for many years but this farming has been on existing portions of municipal land (which is not large in size) and on other land obtained through *ad hoc* negotiations with current land owners. This meant that their enterprises were severely constrained and many livestock farmers have had to sell their stock when such conditions have become too restrictive.

In the late 1990s, the farmers gathered into three farmers' groups based on particular activities – pig farmers, vegetable farmers and small stock farmers (primarily sheep and goat) – and also to lobby jointly for more land as the Prince Albert Small-scale Farmers Association. The target of their request was the municipality and the Department of Land Affairs (DLA). After different options were explored it was decided that the Municipal Commonage route would be followed.[5] In association with the Department of Agriculture (DoA) and the DLA, the Treintjiesrivier farm was identified and acquired. The land was to be held by the Municipality and to be farmed by the local emerging farmers in the Association.

Commonage policy

Most of the towns in the Western Cape and Northern Cape have acquired land over the last 150 years which became designated as municipal commonage. Such land was granted to the municipalities by churches, by individuals and by the national state (or Crown) and was granted for the specific use of the residents of the town.[6] Such municipal commonage land, because it is acquired as a result of a grant (as opposed to being bought by the municipality) becomes land of a special type with specific constraints on the sale and other adjustments to it. Moreover, the cost to the user of that land should only be to ensure the maintenance of the land and other assets – it should not be used for the generation of additional income by the owner, i.e. the municipality (Anderson and Pienaar, 2003).

Under Apartheid, commonage land increasingly became reserved for white people only, and over the years, increasingly became more privatised – most often being subject to a contractual arrangement with an individual commercial farmer, with market-related rentals attached. This was contrary to the law related to the use of commonage.

With the introduction of the *White Paper on Land Policy* introduced by the Department of Land Affairs in 1997 (Department of Land Affairs, 1997), the Department brought back the concept of municipal commonage for the use of the community. It introduced a municipal commonage policy with an associated grant to municipalities in order to acquire such land and ensure that the infrastructure and resources were in sufficient good order for the use of people in the town. A number of requirements were included with

5 The Municipal Commonage programme is one DLA's 'redistribution products', alongside SLAG, LRAD, etc.

6 This was the era before South Africa had 'wall-to-wall' municipalities, rather the 'municipality' generally referred to the jurisdiction of a town.

this grant: 1) that a notarial deed be placed on the property to ensure that it was used for the purpose for which it was bought and to place a constraint on the sale of the land (the Premier of the province must authorise such a sale); 2) that a commonage committee be established to manage the land (Department of Land Affairs, 2005); and so forth.

The Commonage Policy expressly aims to provide access to land for two primary purposes: for food security purposes, and as an initial stepping stone for those emerging farmers who want access to land from which to expand further. Importantly, commonage land only provides leasehold rights – the land remains the property of the municipality.

Methodology

The methodology used for project-specific information and analysis was essentially primary research in the form of documentation collection and analysis; semi-structured interviews and observation. In addition, documentation regarding the related policy, industry specific information, and other more general information was obtained and analysed.

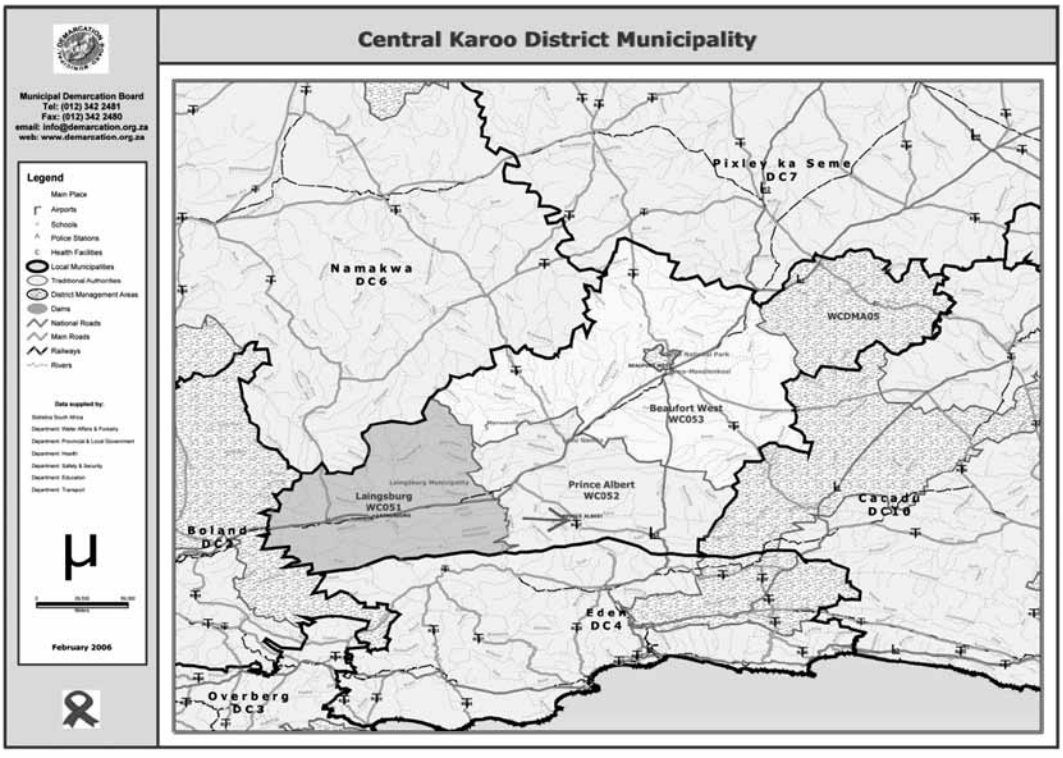
The documentary sources include the following:

- Government reports and policies including the White Paper; the Commonage Policy; the Grants and Services documents of the Department of Land Affairs; the Comprehensive Agricultural Support Policy (Department of Agriculture); and others.
- Specific plans and reports on the commonage project and the Treintjiesrivier farm, including the initial land reform business plan for the acquisition of the land; applications for the CASP and Land Care Funding; the Constitution of the Commonage Committee; agricultural plans for the Truitjiesrivier as a whole as well as for specific portions.
- Contracts between the specific farmers and the Mohair South Africa, Klein Karoo Seed Marketing (Pty) Ltd, National Development Agency and the Municipality.
- Legal documents of the Farmers Association and the Onion Producers.

Semi-structured interviews were undertaken with the following people:

- Emerging farmers

Figure 3.1: Location of Prince Albert



Source: Municipal Demarcation Board

- Officials from the Department of Land Affairs and the Department of Agriculture.
- Officials from Mohair South Africa and from Klein Karoo Seed Marketing.
- Municipal councillors and officials.

A number of visits were undertaken to the farm and it was during these visits that most of the interviews with farmers took place. At the same time, the condition of the animals, the infrastructure and the natural vegetation was observed as were the relationships between the different parties in their working operations.

Natural and physical resources and farm layout

The farm Treintjiesrivier (portion 1 of the farm Damascus no.153 in the Prince Albert area) was purchased in 2005. The farm is situated 6 kilometres west of Prince Albert and has a harsher climatic aspect than properties situated on the east, where river systems are stronger. It is located on the edge of the mountain range and thus includes mountain land as well as 'karoo plains'.

The size of the farm is 5580 hectares and includes the following resources, according to the valuation report submitted to the DLA at the time of purchase:

As the table above highlights, the previous owner used the land for both arable and grazing purposes and farmed with onion seed and lucerne and, in addition, raised ostrich chicks on contract to ostrich farmers in the Oudtshoorn area.

The Department of Agriculture undertook a soil potential assessment of the area where the previous owner cultivated. The assessment was divided into 6 profile areas. The dominant soil form is Oakleaf 2120 and Oakleaf 2220, both of which the Department indicates provide medium to high potential for vegetable production. One area on this section of the farm has Westleigh 2000 soil and this is indicated as poor soil for vegetable production.

There are 12 hectares of land that are currently being used for cultivation purposes, and this land is fenced with stock-proof fencing. However, a major problem is the fact that kudu roam freely on the farm and are able to scale the normal cattle-proof fencing and thus decimate the crops. The erection of Kudu-proof fencing is included in a current application for funds from the Comprehensive Agricultural Support Programme (CASP) of the Department of Agriculture.

The key resource in this area for both arable and grazing farming activities is water. The farm has eight dams in total – two earth dams with water supplied through capture of mountain water, and six cement dams supplied by as many boreholes. The water is led to the dams and drinking troughs in each camp through the use of windmills and gravity feed. In addition, there are overflow dams which capture additional water during the winter rainfall season.

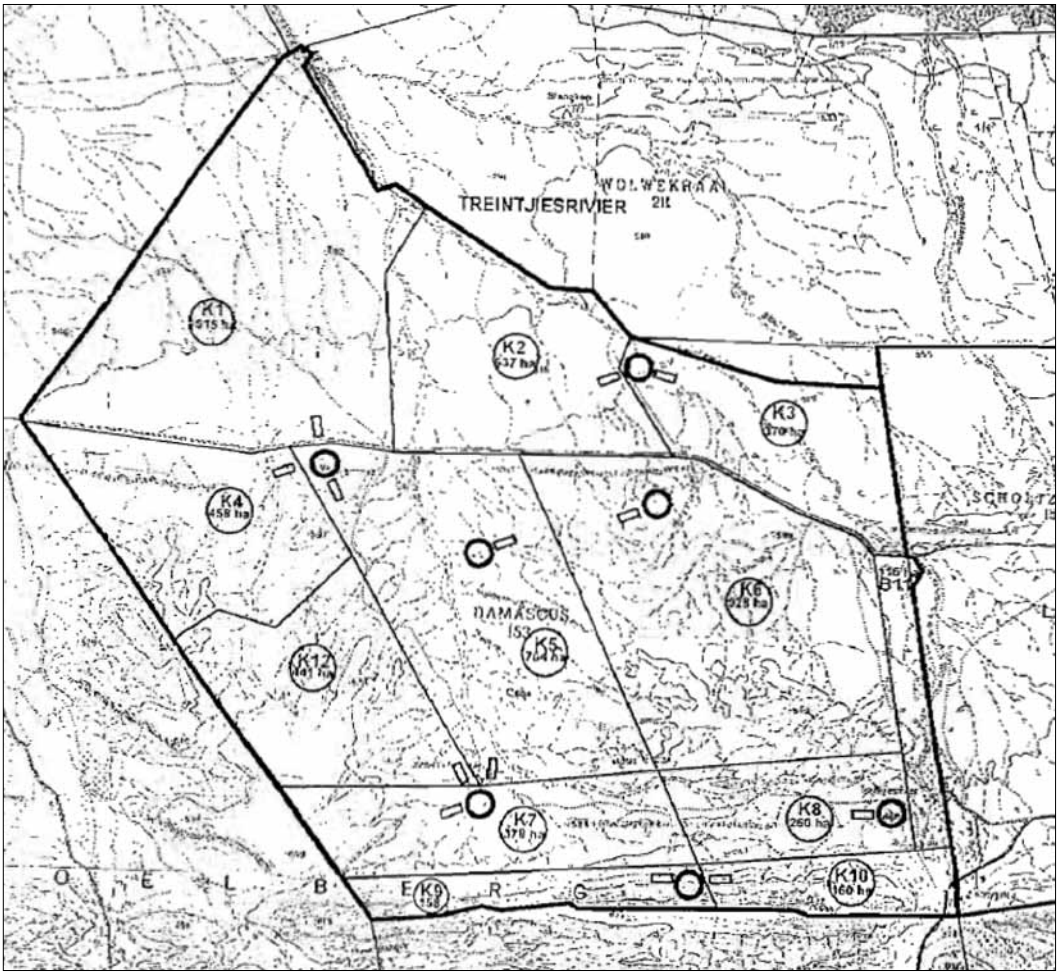
All the grazing land on the farm is natural grazing and includes pioneers karoobossieveld and grass types such as 'Boesmansgras'. The carrying capacity is estimated at 42 hectares per large stock unit. The total number of small stock possible on the farm therefore is in the order of 800 small-stock units. The farm is divided into 10 grazing camps.

Table 3.1: Summary of agricultural assets

Type of asset	Extent (ha)	Valuators estimated value (R)
Irrigated land (lucerne)	7.0	280 000
Irrigated land (cash crops)	1.5	52 500
Dry with potential to irrigate	11.5	57 500
Grazing	5 560.3	3 058 000
Total land value		3 448 000
Accommodation		867 000
Other buildings		336 480
Dams		362 000
Total value		5 013 980

Figure 3.2: One of the two earth dams built by the previous owner

Figure 3.3: Diagram of the location of the various camps, dams and windmills



According to the valuation report, when the farm was acquired the 10 grazing camps and the farm boundary were all fenced with stock fencing, none of which is jackal-proof.

The farm also has the following additional infrastructure:

- A house of 235 m²
- A storeroom of 175 m²
- A steel shed of 162 m²
- A chicken house of 60 m²
- Three farm workers' houses of a total of 210 m².

Farm layout

The Department of Agriculture has supported the project from the beginning and developed a farm plan based on separating the grazing area into three sections (with the ten grazing camps divided between the three) and dividing the arable area into different sections as indicated below.

The farmers

The project was initiated in 2004/05 to accommodate the immediate needs of 26 farmers, of whom 5 were women and 21 were men. Ten of the men were youth (35 and younger) and 18 were farm workers. Since the initial application however, the numbers of farmers in the group increased substantially to 87, with an active group of 35 active members.[7]

It was reported above that there were three groups of farmers initially – those undertaking vegetable production, pig farmers and small-stock farmers. At the time that the project was initiated, the pig farmers had formed themselves into a formal group for the sale of the pigs, called Zwartberg Varke. They had sixty five pigs at the time.

Also, at that time (2004/05), the livestock farmers had in the order of 64 sheep and goats, as well as eight calves, thus they went beyond 'small stock' farming. The vegetable farmers were farming on a small piece of land but had undergone a variety of training courses, and had worked with the DoA in order to develop a proposal to "move from subsistence farming towards the semi-commercial farming sector."[8] It was with this development in mind that the group was seeking access to additional land.

In 2008, at the time of this research, the number of actual farmers on the land was the following (note that some of the farmers are involved in more than one activity):

- 15 onion seed farmers
- 15 stock farmers farming with sheep and boergoats
- 3 stock farmers farming with Angora goats
- 3 farmers farming independently with vegetables; and
- 15 farmers (or workers) farming as part of the NDA project.

Onion seed farmers

In 2006, the Municipality started a project where it organised the planting of 2 hectares of onions as a community project in which certain people were employed. However, once the land was planted, the Municipality changed the approach and provided the opportunity for a group of people to harvest and sell the seed. Fifteen people, focused around a particular family (the Hinkmans), came together into the 'Group of 15'. A section of this group then formed themselves into a close corporation, given that a CC has a limit of 10 members, but the group now want to form a cooperative which will allow the larger group to join.

The group members include older people and youth; most of the youth are the children of the main Hinkman family. The older people are all ex-farm workers who have experience of fruit farming, vegetable and vegetable seed farming, ostrich chick rearing, and extensive livestock farming. The key person in the group has been part of the farmers' association since 1996, and held stock on municipal land until he was forced to sell it by the Municipality.

These farmers have entered into a contractual agreement with the Klein Karoo Seed Marketing company whereby they will be provided with a range of resources to produce onion seed of a particular quality, and market this through the company. Once the sale of the seed has taken place, the expenses will be recouped and the remaining amount (profit) will then be paid over to the farmers. This contract arrangement has

7 According to the Chairperson of the Association.

8 Fundraising proposal for the Prince Albert vegetable farmers association.

Figure 3.4: Diagram showing the use of the extensive grazing area

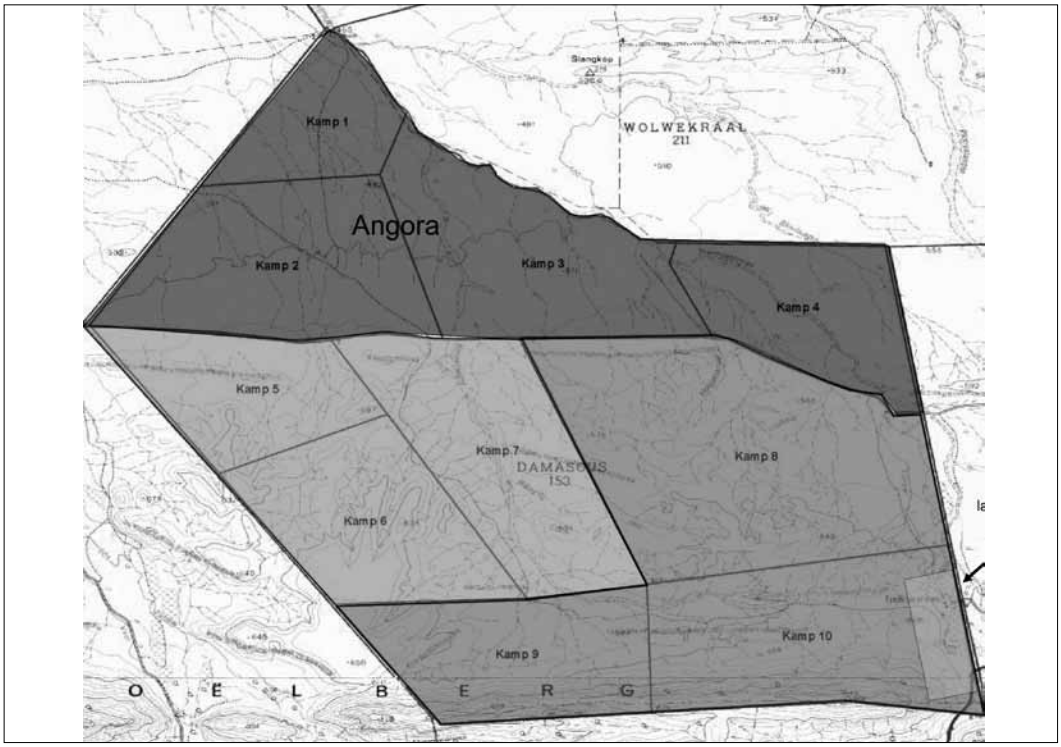
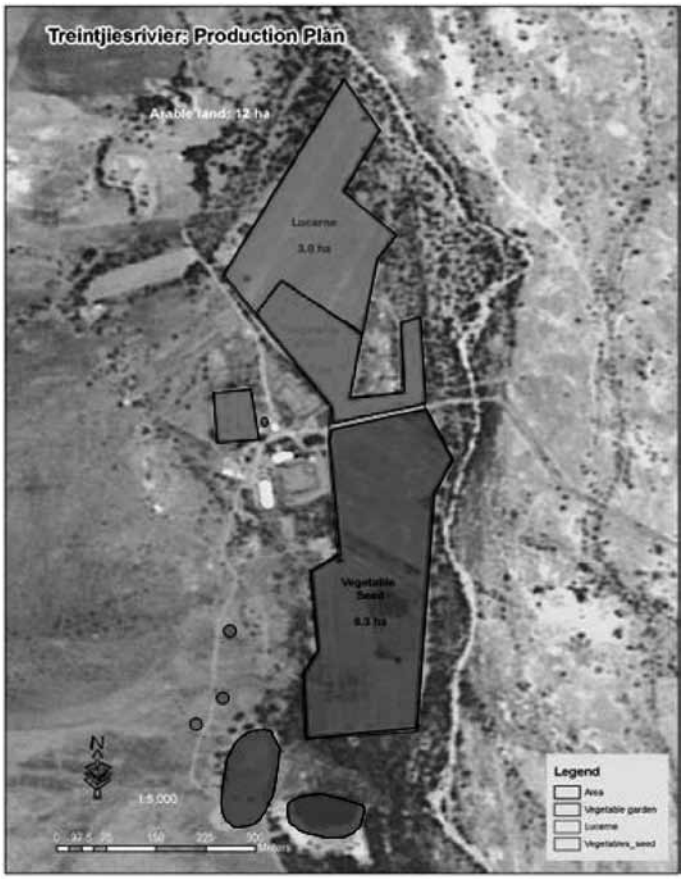


Figure 3.5: Department of Agriculture's plan showing the existing arable land and the dams with their proposed land uses



entered its second year, the first year in which the group has been responsible for production from planting through to harvest. In the previous season the farmers took over the production process after the planting had already happened as part of a municipality project.

Angora goat farmers

The Angora goat farmers' enterprise began as a result of an interest by Mohair South Africa (MSA) to start a training project with emerging farmers, modelled on a similar arrangement supported by MSA in the Eastern Cape. In this arrangement, Mohair South Africa provided a herd of 174 Angora ewes with 7 rams to a group of four emerging farmers who are being trained and mentored over a three year period. During this period, the clip from the animals and all the progeny are acquired by the emerging farmers. At the end of the period, the farmers are required to give back a similar quality herd to MSA, who will then give that to the next group of emerging farmers. The goats were given in April 2008 so it is still a new arrangement.

The opportunity of going into the arrangement was advertised in the broader emerging farmers association and interested people were asked to apply. Only four members applied and they then formed the group. All of them are ex-farm workers, one of whom has extensive experience with Angora goats. In the early period, however, one of the members withdrew from the group, indicating that he was no longer interested. Three men therefore remain.

Sheep and goat farmers

The sheep and goat farmers mostly include farmers who, prior to the acquisition of the commonage land, held stock in the residential area. These animals roamed freely during the day and then were kept in the backyards of the owners at night.

The current group of farmers are all members of the Farmers Association. There are currently a total of 15 stock owners who have sheep or goats on the farm. The stock holdings range from 2 to 64 animals per owner. Only one of these farmers is a full-time farmer; this person happens to also be the key onion seed farmer. All the rest of the farmers engage in stock farming as an addition to the other sources of income, e.g. from small enterprise (taverns), wage employment, etc.

Vegetables farmers

The vegetable farmers include two types – there are farmers who have access to individual plots of land and there is a group that is drawn together into a group production process in a project funded by the National Development Agency (NDA).

Of the three farmers who have their own portion of land, two work together and one separately. The NDA-supported project appears to have 35 people working formally in/for it. It has an employed project manager, and the other people are employed on the basis of a daily wage of R35. The funding, and thus the beginning of the project, was delayed as a result of the fact that the contract with the Municipality for the use of the land took time to finalise. It therefore only began in June 2008, more than a year after the intended start.

Production systems and economics

Each of the different enterprises undertakes farming in a different way and has different economic arrangements.

Onion farmers

The onion farmers are organised into a production co-operative. The production systems were developed through consultation between the mentor (De Wit), who was appointed by the Klein Karoo Seed liaison person, and Mr Hinkman, the most experienced of the emerging farmers, who maintains strict control of the process.

The farmers do not own any major equipment – specifically a tractor, plough and rake which Hinkman indicated are the most important items for onion farming. They have developed a mentoring arrangement with the previous owner of the farm (De Wit) as a result of the intervention by a councillor. De Wit continues to have an interest in the success of the farm and so provides various resources to the onion seed producers. He initially offered a service to plough and otherwise prepare the land for the farmers. But when he arrived to plough the land, a number of the other farmers, including the leadership of the Farmers Association, refused to allow him to plough, as it had not been agreed that the onion farmers should have access to the land where he was going to plough. The onion farmers then negotiated that they should borrow the tractor

for a period and do the work themselves, once they had clarified which land would be available to them. De Wit then agreed to this and the farmers now only provide the diesel for the tractor and have constant access to it.

The onion plants are provided by Klein Karoo on an annual basis. In the most recent season, starting in April, the plant material was in fact surplus material provided by the Klein Karoo, which meant that the farmers did not have to pay for it.

The production process is as follows:

Preparation of seedlings

Onion seed is planted in March/April of year 1 in-well-prepared soil which should not have a high clay content. It is planted at a density of about 4 grams per square metre. It is important that weeds, diseases and pests are managed and this is done with the intervention and under guidance of the production advisors of Klein Karoo Seed. This advisor also guides the irrigation and feeding of the plants.

Bulb production

The seedlings are transplanted after about 12 to 14 weeks (from June to August) and sowed in a density of about 600 000 plants per hectare. The bulbs that develop are then dug up during December and are taken to the drying sheds which were built by the previous owner of the farm. Once dried, the bulbs are stored in a well-ventilated space for 3 to 4 months.

Planting of bulbs

The bulbs are planted again during April (year 2) and are planted in a density of about 100 000 bulbs per hectare, depending on the variety. Weeds, diseases and pests are strictly controlled by prescribed chemicals and a detailed spraying programme is worked out in conjunction with the advisors from Klein Karoo Seed. Regular visits are made by the company advisors and the locally based mentor is also close at hand during this period to address any problems as they arise.

Pollination

The flowering period is between 32 and 40 days and begins in the third week of October. This is a sensitive period and it is important for the process to be done correctly. The Klein Karoo Seed advisors are on hand and recommend a density of 8-10 beehives per hectare – for the Prince Albert farmers this means that that have had to acquire about 30 hives for their three hectares.

Harvesting

The harvesting of the seed takes place when 25% of the seed heads have turned black and this is about three weeks after the pollination process and is generally in the last two weeks of December.

Figure 3.7: The shed for drying onion seed with extractor fans

Drying, threshing and winnowing of seed

Drying of the seed on the farm takes place in the drying sheds where air is forced through the seed heads with the help of fans. Once the seed is sufficiently dry, the seed is drawn out of the heads with a machine and then further winnowed. Once this is done, and the seed is clean, it is delivered to the Klein Karoo Seed offices for further working and packaging and sale. The farmers were complimented in the last season for the cleanliness of the seed they produced.

Economics of onion production

The costs per hectare incurred in the course of producing onion seeds are as follows:

The estimated income from production depends on the type of onions produced but the following is a guide assuming an exchange rate of R7.74= $1:

Given that the farmers had not had a full season where they had been involved in the full production process, it is unclear yet how the farmers will fare. The farmers do not appear to have a clear understanding of all the financial aspects of their production but have been informed that they produced a profit of R30 000 in the previous season. By agreement, the Klein Karoo Seed company is keeping this for the various production costs for the current season.

Angora goat farmers

The Angora goat farmers are in a training contract relationship with Mohair South Africa[9]. For Mohair South Africa, the longer term aim of the training programme with the Prince Albert farmers is to increase the throughput of mohair, while at the same time contributing to the development of black farmers in South Africa. For the emerging farmers, the aim is to maximise production in order to obtain as much return on their animals.

Table 3.2: Per hectare costs related to the production of the onion seed

Item	Cost (Rand)
Fuel	600
Fertiliser	5 900
Pest control	533
Bulbs	10 000
Bulb planting costs	2 200
Pollination	2 400
Weed control	842
Pest control	3 718
Insurance	0
Harvesting costs	3 190
Drying	700
Irrigation and electricity	4 840
Machinery	129
Cleaning costs	3 000
Total	39 052

Table 3.3: Estimated income from onion production

Onion type	Production per ha (kg)	Expected income per ha (R)	Profit (range)	Break even – (kg/ha)
OP	1000	69 660	25 000 - 30 000	400
F1	450	80 109	36 000 - 41 000	220

9 Mohair South Africa Ltd was established as the representative organization of the industry, to facilitate functions such as research, training, information, national and international relations, and activities aimed at enhancing the entire mohair industry. The board of directors of Mohair South Africa reflects representation by all the major directly affected groups, mostly in the early stages of production, namely growers, labour, breeders, processors, buyers and brokers. J. M. van der Westhuysen, P. D. Wentzel et al. (2004).

The visit to the farm was only four months after the farmers had started operating on the farm and so the production methods for the farmers were still being sorted out and adjusted to their specific conditions.

The farmers have developed a system where one person will be responsible for looking after the stock for a month at a time, and the person will be paid a wage of R1000 which is paid by Mohair SA and then recouped from the wool sales.

All the activities are undertaken by the farmers, with additional labour or support brought in when needed. During the research visit to the farm, it was lambing time, and the farmer that is deemed most experienced with Angoras was the person that was asked to work during the August month (he had recently also been retrenched from his formal job and so was available). Importantly, he had brought another person to the farm on the day of the visit in order to help him with the lambing tasks – marking the new lambs with the same mark at their mothers.

There are usually two shearings per year, in January and July. The shearing is undertaken by the farmers themselves and they had done the first shearing in the July. The clip was then taken by the representative of Mohair SA and, in a careful assessment of the market, was sold at a time when a good price was paid. Such a system of the Mohair SA representatives obtaining the clip from farmers and selling it is undertaken by most commercial farmers as well.

The project coordinator of the training programme (Grobler), while highlighting that "it is difficult to estimate with any degree of certainty" what the income of the project would be, provided initial estimates of a twelve month budget for the enterprise, based on two shearings and on 2006 Cape Auction prices:

While this estimation is given for the gross income, Grobler stresses that "the students need to get an income from the project; the amounts involved will depend on the net income, budget requirements for the next year, and whether they wish to build up reserves for when they start out on their own".[10]

It is clear that from a financial point of view, the Angora goat farmers are being provided with an important opportunity to build the basis of their stock holdings for future farming.

Boer goat and sheep farmers

The boer goat and sheep farmers are all individual farmers and generally farm their stock individually. A number of the farmers do, however, farm in a more cooperative manner – looking after each other's stock, dosing the stock together, working out ways to look after the new-borns together and so forth. There is also some ill-feeling or competition between the farmers, with some farmers accusing others of being drunkards and lazy, and not looking after their animals.

The animals of the farmers are obtained from a variety of sources. Some farmers obtain the

Figure 3.8: Piet Loff and his helper herding the goats into the enclosure for marking

10 Personal communication and unpublished document provided by Grobler for this research.

Figure 3.9: Piet Loff and his goats

Table 3.4: Estimated income associated with the Angora goat enterprise

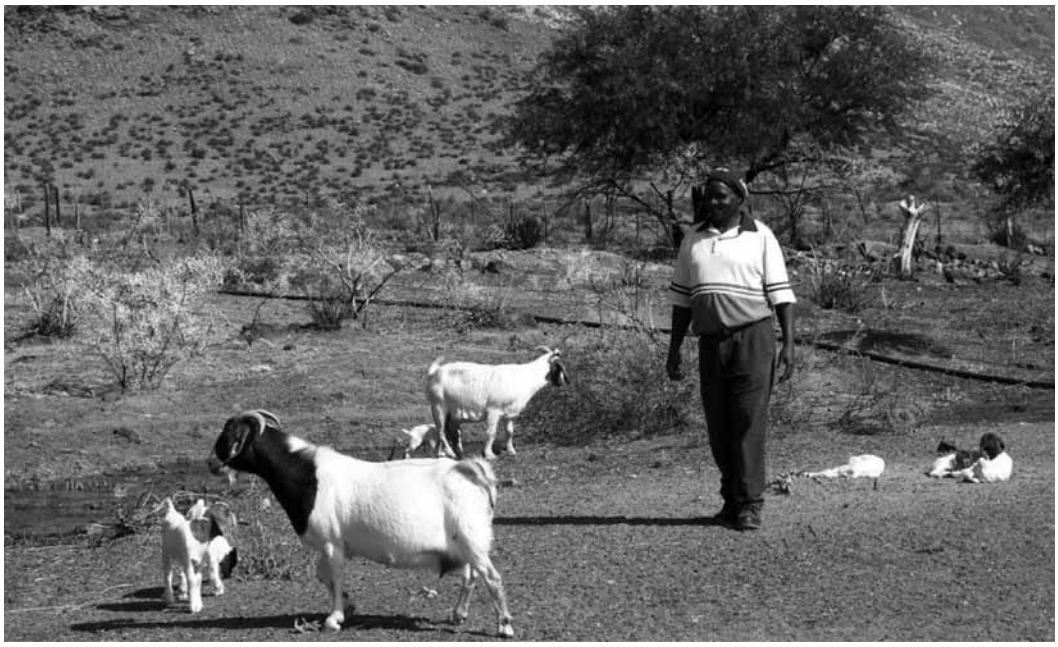
	Mass	Price/Unit	Number	Value
Production income				
Hair: kid	1.8 kg	122	80	17 568
Hair: young goats	3.5 kg	74	70	18 130
Hair: ewes	4.0 kg	50	100	20 000
Sub-total				55 698
Trade income				
Old ewes	40 kg	8	20	6 400
Kapater kids	20 kg	Sold as farming stock	35	8 750
Ram	60 kg	6	1	360
Sub-total				15 510
Gross income/100 ewes				71 208

animals as gifts from farmers where they have previously worked; others buy the animals from other emerging farmers, from commercial farmers or other sources.

At this stage the aim of the sheep and goat farmers is to either just keep the stock that they have, or to grow their herds or flocks. Not many of the offspring are therefore sold – only the spare rams are sold. The key spokesman indicated that he had had 18 goats prior to the farm being bought, but had been forced to sell them. With the current lambing season he had once again built his stock up to 18 – but he "dreams of animals" and so was intending to expand his stock significantly.

The goat and sheep farmers generally sell their stock in the local township, but those that are growing their stock numbers have begun discussions and negotiations with local large-scale farmers to understand the marketing arrangements and to see how they can tie into these so that they can get better prices for the stock that they do sell. In addition, they have begun discussions about changing the breed of the goats in order to get a better quality animal and thus a better price when they are sold.

Figure 3.10: Oom Elvis and his prize ewe that gives him twins or triplets each season



Vegetable farmers

There are two types of vegetable farmers – those who farm for themselves and those who are part of a project sponsored by the National Development Agency. There are four farmers who farm individually on portions of land that are put aside by the chairperson and endorsed by all. The right to the specific portions of land seems to have gone on for a number of years with one farmer claiming that some of the other farmers want his piece of land because it produces very good sweet potatoes.

The individual farmers produce on about half a hectare of land each. Mr Christiaan Witbooi, the most successful of the vegetable farmers, farms with his brother on their allocated plot. They try to get the various inputs in the cheapest way possible:

- He bought seed (tomato, pumpkin and water melon) in the first year that he farmed on the land, in 2006; since then however, he has successfully produced his own seed.
- He is also a pig farmer, and has got links with a beef farmer that used to gather his stock in the town before selling them; Witbooi has used the manure from these animals successfully in the last two years.
- He has purchased insecticides and other poisons from the local nurseries and other shops in the town at prices higher than he would pay if he was a member of the co-operative (which he can not become because of the high joining fees).
- His highest cost is transport – to take the fresh produce to town to sell.

While he could not provide the detail of his costs during the season, the payment of which is done from various sources through the year, Witbooi indicated that he had made a "profit"[11] of R6000 in the previous season. Most of the produce is sold to residents in the local town of Prince Albert but some is kept for the use of Witbooi and his brother.

Livelihood impacts

The farmers currently on the farm employ a range of livelihood strategies other than agriculture, the key ones being pensions and other state social grants, the running of taverns in the local township, wage labour, taxi ownership and so forth. More importantly, however, it seems that many of the farmers engage in other income-generating activities to be able to invest in agriculture. In the onion co-operative, for example, some of the members have specifically obtained work in other jobs to provide some of the finances for the farming whereas the Angora farmers have adjusted work responsibilities to

11 It is assumed that this is total income from the sale of produce – primarily tomatoes, pumpkin and water melons.

enable some members to take up opportunities that became available outside of the farm[12].

Most of the farmers that use land at Treintjiesrivier appear to use the social relationship developed there for those specific activities only – they do not appear to engage in joint activities outside of the farm. The key exception here is the relationship between the chairperson and the deputy chair of the Association, who farm together on the farm, engage in joint family support activities when needed in the town, and are continually involved in organisational activities around the Farmers' Association.

The farm does not seem to be used for other livelihood strategies such as the collection of wood, flowers, and other natural resources, nor does it seems to be used for other business premises. As is normal in municipal commonage situations, the use of the other natural resources is assumed to be against the contracts that users have, but this is not clear as the contracts have not been finalised as yet. The management of the resources will be important and fortunately, as this point, it is under control. It is known, however, that the onion seed farmers cut down and sold some of the trees on the farm in order to get funds to buy fertiliser and other production needs in the previous season. Importantly, they were not disciplined or reprimanded for this and so it may have a negative effect for the future attempts to manage resource use.

Environmental dimensions

There are two key environmental issues that face farmers in the Karoo, in particular the stock farmers, namely dealing with predators and managing grazing regimes in a context of ongoing drought. The main factor in this is fencing so as to manage the movement of stock and to keep predators out.

With regard to grazing, the history of land use in the area is worth noting:

> *"Early white colonial pastoralists adopted the migrant herding strategies of the Khoikhoi herders. Transhumance practices (migration with livestock to more productive areas, as and when seasons or rainfall dictated it) constitute an appropriate and sustainable environmental management strategy in the Karoo. Where rainfall is sparse and patchy, this arid, 'event-driven' eco-system could only be used on an opportunistic basis by highly mobile human groups taking advantage of highly localised conditions." (Atkinson, 2005, 2)*

With the shift to freehold tenure, on a surveyed piece of land, Atkinson quotes Hoffman to show that:

> *"Settlement around privately owned water sources and rangeland meant that grazing orbits shrank dramatically. Livestock was herded from rangeland to water source to kraal on a daily basis... (and) (t)his kraaling system has been blamed for a great deal of the degradation of the Karoo rangelands." (ibid, 2)*

A report by Phuhlisani goes on to say that:

> *"(i)t was only with significant intervention of the state and the provision of a spread of infrastructural support (windmills, fencing and so forth) that enabled the introduction of rotational grazing methods of farming and thus the relative sustainable continuation 'of alien land use practices' on 'inherently incompatible indigenous ecosystems.'" (Phuhlisani, 2008, p.79)*

This sensitive context needs to therefore be treated with care because once damaged, it will take a long time to rehabilitate.

The Prince Albert Commonage has a lack of fencing on the farm – it does not have jackal-proof fencing on the perimeter and internally the stock-proof fencing has broken. Besides the social difficulties of managing grazing in a communal management arrangement (discussed below), the lack of good fencing means that it is almost impossible to manage the grazing in an environmentally sustainable manner. The result is essentially as described in the Hoffman quote above – that overgrazing is evident around a few water sources while much of the land is not grazed at all. It is therefore fortunate that the total number of stock on the farm is well below the carrying capacity for the whole farm at the moment. The Department of Agriculture is using its CASP funding programme to try to address this fencing problem over the current two years.

The management of predators is a national problem of increasing proportions; as state support for agriculture decreased over the years, it appears that fencing of large extensive grazing

12 One of the farmers is an experienced fencing specialist and an opportunity came up for him to fence a local farmer's farm. The farmers adjusted schedules and responsibilities to enable him to do this outside work.

farms has been one of the main areas that has suffered.[13] The result is that jackal, caracal and other small predators essentially have free reign on vast areas of the central parts of the country.

All the farmers on the Prince Albert Commonage farm have suffered stock losses as a result of jackal and caracal attacks – the most severe was a loss of 20 sheep from a flock of 40! The Department of Agriculture is once again assisting in the upgrading of the perimeter fencing through their CASP funding, but the problem is then going to be getting rid of the many predators that are already on the inside, who have open access to the vulnerable stock. This is an issue which the Farmers' Association will need to address as the new fencing goes up.

Social and institution issues

Tenure arrangements

The land is commonage land acquired through the Department of Land Affairs' Commonage programme. The land is therefore owned by the Municipality, from which the farmers are required to lease it. Formally the Municipality is supposed to manage access to the land through a system of contracts and via land allocation. In practice, however, the Farmers' Association leadership have played that role in the absence of such management by the Municipality, which appears to be distracted by a state of perpetual political transition and turmoil.

Contractual issues

According to the Commonage programme of the DLA, when a municipality receives land through the programme, it is required to establish a commonage committee to provide overarching management of the land, as well as entering into lease agreements with the users of the land.

At Prince Albert the users of the land have no contract with the Municipality despite having requested such a contract for a number of years. For the users, contract will provide them with a formal document enabling access to government and non-government grant funding and other support. Given the intense political infighting that has been prevalent in the Municipality, as well as the lack of capacity to develop such a contract, it has been an ongoing issue.

A local NGO, the Southern Cape Land Committee (SCLC), has been assisting the Farmers' Association and the Municipality in developing the contract but it appears that there has been an inability to find solutions to what appear to be different approaches. The SCLC has developed a draft contract which would be signed between the Municipality and the Farmers' Association, rather than between the Municipality and the specific users. The Municipality has objections to such a formulation, preferring to sign a contract with specific individual users. However, given the political tension in the Municipality, this approach has not been formally communicated to the SCLC and to the Farmers' Association, and no progress has therefore been achieved in finalising the contract.

The current situation therefore is that the only farmers who have any formal contract are the Angora goat farmers, which is a jointly signed agreement between the 'trainees', the Municipality and the SA Mohair Association. The other farmers, including the NDA project participants who received a total of R817 000, are all farming without signed contracts.

Importance of the Farmers' Association – inhibiting open access

The lack of involvement by the Municipality, and therefore the absence of any external management intervention, is not uncommon in municipal commonage situations around the country. Anderson and Pienaar's study has highlighted this clearly (Anderson and Pienaar, 2003). In the Prince Albert situation, however, the tenure arrangements have not disintegrated into open access. While there are complaints about the leadership of the Farmers' Association from the membership, it is apparent that the association has stepped into the void and maintained some control over the process of acquiring and using land. The following process is required if a person wants to use land on the farm:

- They must take a copy of the Association's constitution and their identity document to the police station to be stamped.
- They must get a stamped certificate from the police to say that the livestock that they might want to bring onto the farm are not stolen.
- They must take the Constitution and the certificate to the Municipality to be registered.

13 Farmers in the Central and Hantam Karoo, as well as in the northern areas around Kimberley reported these developments in separate interviews.

- The Association leadership will then identify the area where they can farm on the land.

While this system is new, and there are tensions, it is apparent that there is control over the entrance and exit of land users. While on the farm, the researcher witnessed the approach by a new entrant who requested, and was granted, a specific site in order to farm with livestock, separate to the other farmers already on the farm.

The Farmers' Association has a management structure which, besides the formal portfolios, includes a 'coordinator' in each of the various divisions through whom other people work – in the goat and sheep farmers, the Angora goat farmers, the vegetable farmers and the onion farmers. While this is quite a loose arrangement, these coordinators act to ensure there is some order maintained in particular sections.

The role of the 'Champion'

The chairperson of the Farmers' Association plays an extremely important role in the whole commonage initiative. He has been part of the group for a number of years although only joined the group in the latter period as the moves towards acquiring the land were at an advanced stage. While he grew up on the farms, as a child of farm worker parents, he moved to town at an early age, where he completed his matric. Importantly, he joined the South African army permanent force and the commandos and in the process – according to him and others in the town – developed a number of organising and management skills. While there are a number of people amongst the farmers' group that complain about him and feel that he favours one group above another (the onion farmers, for example, felt that he favoured the vegetable producers), it is apparent that he is successful in balancing the interests of the different groups. There are a number of key roles that he plays:

- If there are any disputes, he is called upon by the participants to mediate or arbitrate.
- He has developed a number of links to various service providers and grant makers and is able to combine the different needs of the different farmers' groups and develop training programmes and seek funding opportunities and market linkages for the different groups of farmers and other members of the Association. Importantly, he is assisted by the SCLC in this regard.
- He develops unity amongst the farmers and acts as their spokesperson. Any individual or company trying to consult with the Association or its members is required to go through the Chairperson. The Chairperson indicated that some people have had a problem with this approach, fearing that he is a gate keeper. However, it was evident that where formal procedures were not followed, misunderstandings by outsiders created expectations and assumptions by farmer members which could not be met in the context. The onion producers, for example, wanted to expand their production, and the previous owner of the farm (their mentor) encouraged them to do so and arrived to plough additional land one day. The land that they were to plough however had been allocated to other farmers even though they had not yet worked the land. The result was an unhappy group of onion farmers (antagonistic to the chairperson) and a disgruntled previous owner who felt that his offers of support were not appreciated and that "the farm was in chaos".
- He provides a 'service' to the members to explain the complicated issues involved in the development of the farm and their farming, particularly the legal aspects, in terms that they understand.
- He takes the initiative in formalising issues in an attempt to ensure security of tenure of the farmers on the land; other arrangements are also formalised through other mechanisms. In particular, with the help of SCLC, they have developed legal entities where these are necessary.
- He plays the crucial role of mobiliser or 'dynamiser', particularly in getting the farmers to work together in a cooperative manner.

In the context where there is a significant lack of support from the state, the role performed by the chairperson has been absolutely critical for the success of the farmers in their various enterprises, and for the initiative as a whole. A project 'champion', 'dynamisor' or development facilitator appears to be crucial for the success of land and agrarian reform initiatives.

Commonage Committee

The DLA's Commonage Policy also requires the formation of a Commonage Committee and in

the Prince Albert situation a Committee was established for Prince Albert municipal area as a whole – not just for the Treintjiesrivier farm. The Committee includes the following role players:

- Prince Albert Municipality
- Prince Albert emerging farmers and tourism entrepreneurs
- Klaarstroom emerging farmers
- Prins Albert Weg emerging farmers
- Leeu-Gamka emerging farmers
- Vyebossie Women's Association
- Southern Cape Land Committee
- Department of Agriculture (Laingsburg)
- Department of Land Affairs (Beaufort West).

Its primary task, according to the Constitution, is to provide a "platform for all role-players to facilitate cooperation and communication for the sustainable use of commonage land in the Prince Albert Municipal area" (Prince Albert Municipal Commonage Committee, 2008). The Committee has the following secondary roles, amongst others:

- To develop contracts to hold people responsible for the sustainable use of the land and to ensure that these contracts are reasonable and affordable;
- To establish commonage committees for each farming enterprise or group and to stipulate roles and responsibilities of the committees;
- To support users in their land rights to ensure security of land rights
- To identify resources for funding and technical training for livelihood projects
- To identify markets for products, and
- To identify and obtain additional land, where necessary.

While these aims are important and relevant for the success of the various initiatives on the land, the fact that the Committee falls under the Municipality has meant that its role has been limited. It does however provide a crucial point around which the various important role-players can meet and engage on the issues facing the farmers. In reality, therefore, the Committee appears to provide the institutional backup for the Chairperson and the role he plays. If the Chairperson was not there, playing the role he does, it is unlikely that the Committee would have any role.

Extension support

The different farmers have differing levels of extension support, depending on who they are linked to. The goat and sheep farmers appear to have no extension support from any source and the vegetable farmers are similarly not supported. The onion farmers and the Angora goat farmers, on the other hand, are supported in two ways – there is a local farmer who acts as the mentor and then each farming group also has an external specialist (or 'project manager') that visits the farm regularly to monitor developments and offer advice.

It appears that the Department of Agriculture, while they have a local "community development worker", do not provide any ongoing extension advice to the farmers. The nature of their support appears to be:

- As a funder of the infrastructure developments (through their CASP funding);
- As a training facility, providing general agricultural courses at their offices in Oudtshoorn; and,
- Providing full farm planning services (through their implementing agency – CASIDRA).

Departmental support to individual farmers in their enterprises is therefore essentially non-existent. Moreover, if farmers do not have a relationship with a local farmer, or through a marketing company, they have had to develop this on their own.

Mohair Trust

The Angora goat project is specifically designed as a mentored programme of farmer development initiated and guided by the industry.

The aim of the project is to train emerging Angora goat farmers who, after an approximate three years hands-on training period, can graduate from the project and have the necessary skills to become active, self-sufficient commer-

cial producers of mohair. It is envisaged that every project should be able to rotate a group of students every three years.

The training includes breeding, kidding, the shearing process and classing of mohair, animal health, grazing management, financial management, budgeting, as well as management of infrastructure. Where necessary, experts in their specific fields will be involved to assist with the training (personal communication, G. Grobler, 2008).

In the Prince Albert arrangement, there is a project coordinator who is based in Jansensville in the Eastern Cape. He provides the quality controls on the hair that is produced, the maintenance of the infrastructure and the overarching management issues. He also manages the sale of the hair and animals in order to get the best price. Locally, a commercial farmer, who is also a very successful mohair farmer and on the board of the Mohair Growers Association, provides more immediate mentoring on farming practices.

At the time of this research, the programme had just begun and so it is unclear how successful this mentoring programme would be with this group of farmers; however, a similar approach is in process with another group of farmers in the Eastern Cape, and reportedly has been very successful thus far.

Karoo Seed

The onion seed farmers are in a more formal contractual arrangement, and while the company makes allowances for the fact that these are new farmers, through providing access to cheap plant material, for example, the relationship is much more of a commercial contract farming arrangement. The 'mentoring' from the company, while important, is therefore much more that of a monitoring role where the company wants to be assured of quality produce in the end, especially given that the company is extending credit through the season.

The onion farmers therefore approached the agricultural representative on the Municipal Council to assist them in identifying a suitable mentor for their operation. The councillor approached the previous owner of the farm, who was also a vegetable seed producer, and he agreed to provide such a service to the farmers. This relationship appears to be based on a personal commitment by the farmer to supporting emerging farmers (and a link to the farm – that he was forced to sell due to a family tragedy). It has been extremely advantageous to the seed farmers, as it has included access to a tractor and other equipment, continuous and immediate advice through the season, and encouragement in the process of farming.

The future

The future opportunities for the farmers involved in farming at the different levels of the farm are dependent on a number of aspects: access to land to expand their initiatives, the extent to which they are able to develop the expertise and capital to expand, the extent to which they want to remain at a small-scale level, and so forth.

Taking these issues into account, the following issues impact on the different groups of farmers, affecting their future prospects:

- For stock farmers, the Area Based Plan provides for access to increasing numbers of hectares acquired under the DLA's Proactive Land Acquisition Strategy (PLAS) programme – these are conceptualised in terms of PLAS 1 farms (where farmers will be able to grow their stock numbers to 90 small-stock units) and PLAS 2 farms (where they will be able to grow their stock numbers to 300 small-stock units). Currently, land acquisition in the district is proceeding according to plan according to the DLA but the additional support and management systems proposed in the ABP are not being implemented due to confusion between the DLA and the Department of Agriculture on the implementation of the Land and Agrarian Reform Project (due to be coordinated by Agriculture). Land will be available, but it appears that the necessary controls, which operate on the commonage farm through the farmers' association, will not be present on the new farm acquired.
- The problem facing the goat and sheep producers is that they have little support in terms of access to capital and expertise. The expansion of production, as is the intention of those that were interviewed, is therefore likely to be slow even with the acquisition of additional land.
- Angora goat farmers are being well set up to become independent producers (with

support in all areas) and, with access to additional land after the three year initial training programme (through the PLAS programme), it is likely that they will be successful producers in the future.

- Arable land is limited in the area, with water the primary constraint particularly further away from the mountain. There are no specific proposals to acquire arable land under the ABP, but there are allocations to joint ventures which are primarily on arable land in this district. The onion seed producers have the opportunity to become independent farmers but access to land is going to be their greatest constraint – and is already a constraint. The group has a number of skills and experience beyond onion seed and options to diversify are also possible – ostrich chicks, vegetable and other seed production have all been highlighted as options by the farmers and, given that they are all produced in a contract farming arrangement, it is certainly possible that such developments could happen – if the primary constraint of access to land is addressed.

- The lack of formal contracts has been a constraint for all the farmers as it has inhibited their sense of security of tenure and of the investment in the land that they have obtained access to, and they have been unable to use the contract as a means to secure a loan of whatever size. If there is increasing involvement of municipality in management of the farm and in the finalisation of the contracts then it is likely to provide the possibility for more structured developments by all farmers in the future. This is unlikely at present, however, as the current political battles are too strained between the ANC and the DA.

- The ABP proposed realistic institutional arrangements in the district (building on already existing institutions) – in terms of supporting the organisation of farmers, the provision of technical support and so forth. If these structures are implemented, then greater, coordinated support to all the farmers can be expected. This may then provide the much needed support at a general level, but also at a specific level with, in particular, the goat and sheep farmers. As discussed above, however, this is dependent on LARP being clarified in the province and then in the district, and sufficient resources being applied to its implementation.

References

Anderson and Pienaar, (2003) *Municipal Commonage,* Evaluating Land and Agrarian Reform in South Africa series, no. 5, Programme for Land and Agrarian Studies (University of Western Cape), Cape Town, South Africa.

Atkinson, (2005) *People-centred environmental management and municipal commonage in the Nama Karoo*, in Commons South Africa, no.11, published by Programme for Land and Agrarian Studies (University of Western Cape), Cape Town, South Africa, and the Centre for Applied Social Sciences (University of Zimbabwe), Harare, Zimbabwe.

Department of Land Affairs, (1997) White Paper on Land Policy, Department of Land Affairs. Pretoria, South Africa.

Department of Land Affairs, (2005) The Commonage Programme, Department of Land Affairs, Pretoria, South Africa.

Phuhlisani Solutions, (2008) Central Karoo Land and Agrarian Reform Area-based Plan, Phuhlisani Solutions, Cape Town, and the Department of Land Affairs (Western Cape), Beaufort West.

Prince Albert Municipal Commonage Committee, (2008) Draft Constitution of the Prince Albert Commonage Committee, Department of Agriculture, Laingsburg, South Africa.

Prince Albert Municipality, (n.d.) *Prince Albert Vegetable Farming Project Business Plan*, Prince Albert Municipality, Prince Albert, South Africa.

Van der Westhuysen J. M, Wentzel. D, and Grobler M. C, (2004) *Angora Goats and Mohair in South Africa*, Mohair South Africa, Port Elizabeth, South Africa.

List of interviewees:

The Onion Farmers including Mr Koos, Freek and Isak Hinkman, Bianca Alexander and Mrs Hinkman.

The vegetable project workers including Mr Pieter Williams, Ms Hester Abrams, Ms Marie April and Mr Klaas Stols.

The individual vegetable farmer – Mr Hendrick Witbooi.

The Angora goat farmers – Mr Piet Loff.

The Goat farmers – Mr Elvis Guga.

The Chairperson of the Association – Mr Jan Loff.

The Acting Mayor – Ms Gaye von Haselt.

The Angora goat mentor – Mr Clive van Haselt.

The Angora project manager – Mr Gielie Grobler.

The representative of the Klein Karoo Seed company – Mr Nantie Fourie.

The Department of Land Affairs official – Ms Gaynor de Jager.

The Department of Agriculture official – Mr Charl du Plessis.

4 Chata Irrigation Scheme: individuals pooling their land and farming as a group

Larry Field, Umhlaba Consulting Group

Introduction

Chata Irrigation Scheme is an example of smallholder irrigation scheme where landowners have grouped their plots together to farm together commercially. The case is particularly interesting from the perspective that the scheme is partly managed by its support non-governmental organisation (NGO). In this case the NGO has largely taken over the essential aspects of the management of the business, including financial and production management. This relationship is however structured in a typical NGO/community partnership manner, whereby the partnership is not defined by a paper contract, but rather by relationships, and where consultation and joint-decision making takes place on a reasonably extensive scale. In other words there is perceived mutual ownership of the outcome of the partnership work.

The scheme is located in the village of Chata on the slopes of the Amathola Mountain Range, some 230 kilometres from East London, and 17 kilometres beyond the town of Keiskammahoek. Chata is within the Amahlati Local Municipality.

The scheme is 22.75 hectares in size, made up of 20 individual plots. The plot owners became members of the scheme. Although 22 farmers were initially trained for participation, currently only 15 work and benefit from the scheme.

Historical evolution of the scheme

The context of revitalisation

The revitalisation of the scheme is one outcome of the settlement of the restitution claim originating from the betterment planning that occurred in the 1960s. The settlement was finally awarded in 2000. As part of the settlement, 50% of the award went to individual households, while 50% was allocated to community development. The development process has been administered by the Amatole District Municipality since mid-2001. Between 2001 and 2003, the community and various stakeholders participated in an integrated planning process which outlined how the community was to be re-developed and how the award money was to be allocated.

The success of the restitution case (particularly as a betterment case) rested on the partnership between the community and the Border Rural Committee (BRC), an NGO based in the Eastern Cape. This partnership around land rights laid the foundation for the ongoing relationship in relation to the planning and implementation of the community development initiative.

The Chata Integrated Development Plan sets out different focus areas for development, namely: infrastructure, forestry, agriculture and other LED initiatives (including tourism). Infrastructure developments flowing out of this plan have included roads (including tarring of certain steep access roads), a community hall which contains a resource centre and a crèche, as well as school classrooms. The forestry investment included rehabilitation of the wattle plantation and the planting of a pine plantation.

The main focus of the agricultural sphere has been the irrigation scheme. The scheme was based on individual family-owned plots which had been developed in the past with a flood irrigation system.

The socio-economic profiling of the villages that took place in 2000 identified 422 households living in Chata encompassing some 2300 individuals. Most of these families depended on remit-

tances from family members working outside of the area, and government grants, while only an estimated 8% of household income was derived from agriculture. Of the people living in the village only 58 had formal employment, and 13 of those were employed in the agriculture and forestry sector.

1999–2002: pre-scheme establishment

A small number of the land owners worked their land individually. BRC provided basic agricultural support to the land owners who wanted to cultivate their land. The results and outputs were disappointing, leading to BRC putting their support on hold until the scheme could be revitalised. This was the period in which the focus of work for BRC was on facilitating the settlement of the land restitution case.

2003–2004: initiation with group management

The first years of the group scheme were a difficult period for the initiative. The scheme was initiated in 2003 with a focus on infrastructure rehabilitation, training, and group establishment. The first harvest by the group occurred in 2004.

The infrastructure rehabilitation included fencing, levelling for irrigation, cleaning irrigation furrows, dam repairs, and soil preparation. Approximately 30 people gained short-term employment on this work. As part of the overall community development, the road that leads past the scheme was upgraded and is now a good quality gravel road.

The most important aspect of the initiation was that the scheme was established as a group scheme with the plot-holders as members. The group became the Masiphathisane Farmers Association, a constitution was developed, and members were provided with institutional training. The arrangement was that the members would be assisted by BRC, who would provide inputs, administer the finances, and ensure that advice and direction were provided. For the purpose of technical support, a farm manager from East London was contracted to provide planning, instruction and in-field production advice. Members were to receive any income earned from the crops, based on the amount of work they had put in, as tracked through the 'labour register'.

The first planting was only about 1 hectare in size and consisted of maize and cabbage, and the crop was not very successful. The maize was lost due to the lateness of planting and was therefore affected by the weather. This problem was partially due to the difficulty in securing the timely services of a tractor for ploughing. The cabbages were successfully harvested and sold, although size and quality was poor. The members estimated that their earnings were between R320 and R1000 per member for the year. Participation in the scheme rapidly dropped to about 13 from the original 22.

In the members' own evaluation of this period problems were identified as: a lack of vision among themselves, not receiving any income (wages) to motivate work, and members being 'lazy'.

2005–2006: evaluation and transition

By 2005 those involved in the project began to look for a new direction to save the initiative. The key problem areas were identified as being the lack of real motivation from the participants and inadequate management on the project. The first issue was linked to the lack of consistent and adequate levels of financial returns. Members perceived the situation to be one of 'volunteerism' on the project, and people clearly did not 'buy into' the concept of earnings through profit. In this context, it became understandable why external, contracted management/mentorship would prove inadequate. The contracted farm manager expected members to take responsibility without being managed on a daily basis, and react to farming needs on their own initiative as well. For their part, BRC felt the contracted manager was unable to overcome local problems and motivate the project members sufficiently.

It was therefore agreed that the project would be 'taken over' by the CPA. Formally, that meant that the project members would be employed as workers, and that the CPA would take ownership of the project. In terms of what the project members wanted, the CPA resolved to use its funds already ring-fenced for agricultural development to pay monthly wages. This was initially agreed for a one year period and later extended. In terms of management, agreement was reached with BRC that it would expand its role on behalf of the CPA and take over as full-time project managers.

2006-2007: expansion and new beginnings

The following year and a half saw a substantial financial injection into the scheme as well as an increased level of management support aimed at improving the scheme's productivity.

Funds were secured from Tina Sinakho and the National Development Agency during this period. Funds went to upgrading the scheme's assets. The old shed on the scheme was renovated so as to accommodate an office, equipment storage, produce storage and a large garage for farm vehicles. A one-ton truck was acquired for marketing purposes.

In terms of management arrangements, the contract with the East London based consultant was not renewed, in favour of appointing a manager from among the beneficiaries. This manager works under the direction of the designated BRC project officer. The members received regular wage payments leading to greater commitment to the scheme.

Production levels were also increased significantly during this period. In 2006, about 15 hectares were planted with a wider variety of vegetable crops. Maize was dropped off the planting list. In 2007, approximately 300 fruit trees (mainly apples and pecan nuts) were planted. However, the scheme continued to be plagued by poor crops. The 2005/2006 summer season crop was affected by heavy rains which caused water logging in the fields.

During this period the scheme began to attract attention as a success story, seeing a variety of visitors, including the MEC for Agriculture, and delegations of foreign funders.

2008: striving for profitability

The 2008 period appears to be one in which the focus has begun to shift to increasing productivity and effectiveness, in search of scheme profitability. Existing crops were been successfully produced and marketed both locally and in the East London area. Crop diversification and experimentation continued. New crops such as wheat and tomatoes were planted for the first time. The failed fruit orchard was replaced with a new planting of 500 apple trees, this time with better advisory support.

New equipment was purchased with NDA funds, including a tractor, a ridger, a disc, a ripper and a trailer. Two Rotivators (weeding machines) were also bought and replaced use of hand hoes.

However, concerns about the long-term viability of the scheme are evident. BRC and the scheme have begun to lobby the Amathole District Municipality to support the installation of a drip irrigation system to replace the flood system. This is expected to improve crop productivity substantially.

Institutionally, a management committee was set up, including the project members, BRC, and the CPA, with the intention of improving local participation in decision making and management processes.

Natural resources

The scheme is located in the upper reaches of the Amatola Mountain range. Altitudes in the area range from 800 metres to 1800 metres at the mountain top.

Climatic conditions recorded in the Keiskammahoek area are as follows:

However, being higher in the mountains, conditions in Chata may be more extreme than presented in this table. Greater detail of the climatic conditions can be found in the Chata IDP (2003).

The main water source for the area is the Chata River and the many small mountain streams which feed it. The river is dammed about a kilometre below the scheme (the Chata dam).The quality of water is reported to be extremely pure. Water is used downstream for domestic needs. The vegetation above the scheme is rich in natural Afromontane forest, as well as large areas of pine and wattle plantation. The lands immediately surrounding the scheme comprise grasslands of the Dohne Sourveld variety.

A soils analysis was carried out by the Department of Agriculture in 2001. Approximately 51 hectares have been irrigated in the past. Soils identified were Oakleaf, Cloverly, Shortlands and Vaalriver. The depth of the soils varies considerably and this and the different soil types indicate the need to carefully match crops to areas within the scheme.

A generalised vegetable crop suitability framework, based on the assessment of climatic conditions and the soils, was identified as follows:

Table 4.1: Minimum and maximum temperatures and precipitation

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Mean min temp (Celsius)	16	16	14	12	8	5	5	6	8	11	13	15
Mean max temp (Celsius)	30	29	20	18	14	11	10	13	16	18	25	27
Mean precip. (mm)	88	95	111	62	48	29	30	38	64	87	91	83

- Crucifers (cabbage, broccoli, spinach, etc.) are suitable climatically and for Cloverly, Shortlands and Vaalriver soils, with the best growing period being October to April.
- Bean varieties are suitable for any of the soils as long as the drainage is good, and is most optimal from November to March.
- Cucurbit (squashes, cucumbers, etc.) are suitable in well drained soils between November and March.
- Potatoes are suitable on well drained soils, with optimal growing periods being December to February.

Physical infrastructure and resources

The scheme is 22.75 hectares in extent. The lands are divided into five sections. Sections 1 to 4 are fenced and farmed. Section 5, the southernmost section next to the school, is not fenced or utilised at the moment.

The irrigation system is a gravity-fed system via cement furrows with two water draw-off weirs on the Chata River. There is also a storage dam that is fed from a furrow from the river. Section 1 is fed directly from the river. The dam feeds Sections 2 and 3, and can also feed Section 4. Section 4 is primarily fed from the lower weir, except in times of very low river flow. Section 1's irrigation channel requires maintenance (leakages/unmaintained), but the other channels are in reasonably good condition.

The in-field irrigation is a flood system. However, many of the flood channels are not adequately levelled, and coupled with poor drainage soils in some sections, achieving appropriate irrigation for all crops is difficult. This problem has resulted in parts of Section 2 and 3 being left unutilised.

The installation of a drip irrigation system is proposed to overcome the problems of the flood system. A cost estimate of R700 000 has been obtained for the installation of the system for the whole scheme. It is hoped that the Amathole District Municipality will fund this development, even if installation takes place in phases.

The project has a relatively new storage and administrative centre, which includes office space, equipment storage facilities, and a large storage/shed area for vehicles and crop storage (but still waiting for doors to be put on the shed area).

The scheme has its own tractor, plough, discs, ripper, a one-ton delivery vehicle, two weeding machines, sprayers, hoes, spades, buckets and other small equipment. All equipment is in good to excellent condition, with much of it being less than two years old. The tractor, however, is formally registered in the name of the CPA and also utilised on the forestry project. Equipment is maintained, and during the assessment one of the weeding machines had been taken in to the supplier for repairs.

The fencing around the sections is in good condition and is goat-proofed. The gravel access road to Chata is in excellent condition. The scheme is located along this road.

The production system

Crop selection

The scheme has focussed on vegetables for its income. In the longer term, income is to be realised through fruit and nut orchards. Future planting will include fodder crops.

In the 2007/2008 summer season approximately 14 hectares were planted. Current land utilisation is as follows:

- Section 1: mainly pecan nut trees (of which 90% are dead)
- Section 2: replanted with 500 apple trees
- Section 3: planted with vegetables and wheat
- Section 4: planted with vegetables and wheat.

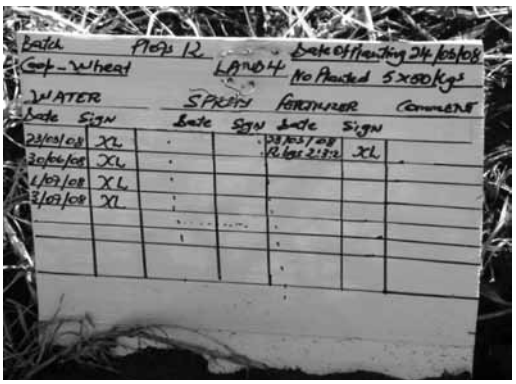
For the 2008/09 summer season the following vegetable crops have been planted: cabbage, spinach, beetroot, broccoli, green pepper, butternut, potatoes, tomatoes and two hectares of wheat. Approximately 10 hectares of vegetables have been planted so far.

In 2007 the scheme expanded into fruit and nuts, in a bid to become more profitable. These were mainly pecan nuts and apples, but also included peaches, plums and pears. Some 300 apple trees were planted. However, the scheme members and farm manager had had no prior experience of deciduous trees and training was only received after the trees were all planted. It is believed that due to incorrect watering (linked to the positions in which the trees were planted) and incorrect fertilisation the trees all died.

Similar problems were experienced with the pecan nut trees with the majority of the trees dying. It is believed that the cause of the problem is related to the poor drainage from the flood irrigation channels, and possibly also frost problems.

The scheme has recently replanted 500 apples trees and is hoping for better results. Besides the

Figure 4.1: Photos of Chata Irrigation Scheme



one-day training on apples, they get *ad hoc* visits and telephonic advice from the specialist who supplied the saplings.

Production planning

The BRC utilises a simple production plan guide which sets out crop cycles, seed and planting requirements, and establishes types and quantities of fertiliser, pesticides and herbicides needed. The plan also requires crop rotation in the fields. The costs and anticipated income associated with this are set out on a spreadsheet.

Purchases of inputs are done through Umthiza in Keiskammahoek, although sometimes purchases are made in King William's Town. Orders always go through BRC, although needs can be identified to the farm manager, if the planned inputs prove to be insufficient or there are unexpected needs. BRC pays the accounts directly to the suppliers.

Staff structure

The scheme operates with 16 landowners employed on the scheme. Besides land owners there are three full time labourers employed and two drivers. The non-landowner employees started in August 2008. The labour component is structured as follows:

Of the five non-labourer posts, four are held by males and one assistant supervisor is female.

Management responsibilities

While responsibilities can broken down to where responsibilities primarily lie, the overall approach is a consultative one which emphasises reaching consensus. BRC's management role on the scheme has developed out of its formal appointment as implementation agent for the restitution development by Amathole District Municipality, which administers the restitution funds. BRC takes primary responsibility for:

- Annual planning (strategy and production goals)
- Financial planning
- Administration
- Production planning (quarterly)
- Marketing.

The farm manager takes primary responsibility for:

- Implementation of production plans
- Monthly and weekly task planning meetings with members
- Oversight of labour management and instructions to supervisors
- On-site management
- Ordering of inputs as and when required
- Representing the scheme.

Supervisors take responsibility for:

- Organisation of their teams in the field
- Keep of timesheets
- Advising farm manager of needs and problems
- Standing in for the manager when he is away.

This division of responsibilities is reflected in the approach to the farming of the apples. The decision to plant apple trees would be motivated by BRC to the scheme members as part of the an-

Table 4.2: Employment structure at Chata

Position	Wage (per month)	Employer
Farm manager	R3 000	BRC
Supervisor	R1 300	CPA
Assistant supervisors (2)	R1 100	CPA
Labourers	R900	CPA
Drivers (2)	R1 300	BRC
Records clerk	R900	CPA

nual planning. Once this was agreed, BRC would source the funding and put the contracts and arrangements into effect. Consultation would occur with the farm manager as to which lands to allocate, and arrangements around the implementation of the planting, training, etc. The farm manager in turn would discuss this with the members, and a team would be selected to work on the planting and looking after the apples. The details of what needs to happen when would be agreed with BRC, and the farm manager would ensure its implementation through the weekly meetings and in-field guidance.

Administration and financial management

The scheme employed a records clerk in 2007. The clerk is a scheme member from a family which owns a plot in the scheme.

Every Friday BRC collects records of sales and stock utilised, as well as cash from sales, and returns the records on the following week.

The project does not employ any security for their office or fields, and have not had any need for security.

The scheme does not have a separate bank account. All credit and financial arrangements are made via BRC. Income from sales are not used to offset expenditure (as input costs are from grant finance), and this income is paid over to the CPA twice yearly to utilise at its discretion. As the scheme members receive salaries they have no claim to this income.

Marketing arrangements

Crops are sold through the following avenues:

- Direct purchases from the office
- Selling via the scheme's truck in nearby villages and towns (in Keiskammahoek they discount by R2 per bag for purchases of over 10 bags)
- Selling according to arrangements/orders in King William's Town and East London (BRC arranges for the orders and the price, phones through the orders to the office, and money is collected by BRC into the account directly).

It is estimated that roughly half the crops are sold in the Keiskammahoek area, and half in the King William's Town / East London area. But this depends on production levels. For the mass production planned for 2007, 80% of the crops would have been sold to commercial outlets. During 2007 some retailers were collecting directly from the scheme. Prices vary from crop to crop but staple crops like cabbage achieve better profitability locally.

Local sales take place regularly, but sales are always better at month end (after payday) and after pension payouts. For August 2008 average daily sales from the office were between R100 and R120 rand.

Clients in the Buffalo City area include:

- East London: Pick 'n Pay, Fruit & Veg City, Pro Veg, Spar (2 branches), OK Bazaars, Sanans
- King William's Town: Fruit & Veg City, Popular Market.

Marketing with the retail outlets is undertaken by the project officer and an administrator in the BRC offices. The marketing approach is fairly basic, in that retail prices are established, and then offers are made to the various outlets. Prices are highly negotiable depending on what the retailers are willing to pay. There are no formal contracts in place. The main weakness in the marketing is that no ongoing arrangements can be established in respect to retailers' needs be-

Table 4.3: Some examples of prices recently achieved

Crop	Price local	Price Buffalo City
Butternut	R12	R20
Onion	R15	R20
Cabbage	R2	R3.50

Source: figures provided by the farm manager.

cause of the lack of stability in production quantity and quality. BRC must first assess what is at hand before attempting to market.

The scheme members do their own packaging.

In terms of the new wheat crop, the scheme will have to find a miller before attempting to sell and arrangements are not yet in place. In the longer term the intention is to mill locally and produce bread for local sales.

There is no formal marketing strategy that has been evaluated for the apples, but there is an intention to process the apples in Chata and produce jams for selling.

Overview of external support to the scheme

Border Rural Committee support

As the project initiator and manager BRC is intensively involved in supporting the project. This support includes:

- Production management
- Marketing
- Finance and administration (including contract administration)
- Liaison and administration related to restitution funds and various donor funding
- Public relations
- Strategic planning and capacity building.

In 2006 the value of BRC support (direct costs) were budgeted at R278 500, which included:

- Wages of the farm manager and the driver on the project
- BRC staff wages
- Finance and administration costs
- Farming input subsidies.

In 2007 this budget had undergone a major re-evaluation and was increased nearly threefold to R828 000, and in 2008 this again increased substantially to R1.2 million, with major increases in all categories of expenditure.

The budgets have been funded from the National Development Agency (NDA) to an amount of R940 000, by Tina Sinakho to an amount of R1.58 million, and various other smaller grants.

It must be noted that this is the first major agricultural management job undertaken by BRC. BRC lacks an experienced irrigation crop specialist and has had no prior experience in marketing. BRC is learning 'on-the-job', and while the fresh approach of the NGO in managing the project has paid dividends in overcoming the initial crises, many serious production and marketing problems could have been overcome with adequate technical knowledge within the BRC team or if BRC had more effectively brought in specialist inputs.

Other technical support for production

The private company Earth Innovations was contracted to provide farm management services for the period up to June 2006. This was the period in which the project experienced its worst performance, although the causes underlying these problems are varied and cannot be allocated without further investigation. The scheme members still recall this relationship in a positive manner. This farm manager and BRC parted ways partially due to different visions as how to take the scheme forward.

Currently technical support is provided for the growing of the new apple trees. As part of the supply contract, the supplier (from nearby Hogs-

Table 4.4: Key budget items for BRC

Budget Item	Budget 2006	Budget 2007	Budget 2008
Administration costs	R21 000	R49 500	R95 000
Motor vehicle expenses	R10 000	R22 000	R37 500
Programme costs	R22 000	R74 000	R140 000
Project resources	R70 000	R420 000	R577 890
Salaries	R65 000	R110 000	R407 600

back) assessed the lands for suitability and now provides advisory services. However these services are low intensity.

Support from the Department of Agriculture

In the early years of the project BRC made it a specific objective to get the Department involved in the project. However, the response of the extension services from Keiskammahoek has always been limited. It was noted that extension officers periodically visited the scheme, but have done little more than collect information on the scheme. The extension service's slow response to requests for assistance in identifying diseases, etc., was highlighted as an example of the lack of support from the Department.

The Department has donated a tractor to the community of Chata (not the irrigation project), but this is currently parked at the community hall and evidently remains unused.

Economic aspects

Production figures for 2007 and 2008 were made available although figures provided were not for the full year. The information is presented on an annual basis, due to the major difference in production levels between the two years. In 2007 production was planned at maximum farm utilisation with the intention of achieving financial profitability. However, there were massive losses due to heavy crop damage from rains. BRC staff acknowledge that these losses were largely caused by a lack of farming experience on their part. The impact of such losses caused trauma within the organisation and resulted in a scaling back of production levels in 2008. While this is understandable considering the losses sustained in 2007, production levels in 2008 will, for the year at least, require heavy subsidisation of the scheme.

Production in 2007

Following the take-over of the farm management, BRC attempted production at maximum possible levels in 2007. The intention was to achieve overall profitability. Figures provided from May 2007 set out the following plans:

Production costs and returns were anticipated as follows (8 month period):

In terms of actual production the following planting and harvesting returns were achieved (9 month period):

This level of production should have generated at least R250 000. However, quality of the crop was reportedly to be mostly poor. Particular problems were also experienced in getting certain crops like spinach to the market fresh enough, resulting in further losses. In all a total income of only R110 000 was achieved during 2007, resulting in losses of over R200 000, excluding management/support costs or taking account of capital investments.

Production in 2008

Following the problems of 2007, planting has been scaled down to about two thirds of 2007 levels (at a rough estimate) in terms of vegetables. However, with the planting of the new apple trees the scheme is still planting intensively.

Table 4.5: Production plans

Crop	Numbers to be planted (8 month period)	Actual Planted (9 month period)
Cabbage	180 000	137 000
Broccoli	20 000	19 600
Cauliflower	20 000	25 000
Spinach	20 000	17 000
Beetroot	13 000	16 000
Lettuce	8 000	10 500
Potatoes	160 kilograms of seed	
Onions	0	10 000
Peas, green beans, carrot, pumpkin, butternut, sweet potatoes	Various smaller amounts	

Table 4.6: Anticipated production costs and returns

Item (up to August 2008)	Amount
Cost of seed inputs	31 234
Other input costs	81 865
Wages	164 809
Total production costs	277 908
Total income achieved	42 450

Table 4.7: Actual returns

Crop	Actual Planting (Jan-Aug 2008)	Harvest Potential (Jan-Aug @100%)	Actual Harvest (recorded)
Cabbage	55 000	25 000	6131
Broccoli	2 000	1 000	23
Spinach	6 000	6 000	371
Beetroot	16 000	16 000	1596
Onion	27 000	0	0
Potatoes	35 bags seed	1225 bags	7

Table 4.8: Recent plantings and harvest potential

Crop	Actual planted	Actual harvested	Percentage harvested
Cabbage	137 000	51 000	37%
Broccoli	19 600	9 600	49%
Cauliflower	25 000	12 050	48%
Spinach	17 000	12 000	70%
Beetroot	16 000	9 750	60%
Lettuce	10 500	4 875	46%
Onions	10 000	7 500	75%

Table 4.9: Total costs and income

Item	Amount
Cost of seed inputs	61 688
Other input costs	138 000
Wages	135 000
Total production costs	334 688
Total income expected (anticipated 70% production returns)	354 820

Table 4.10: Annual wage bill

Year	Details	Amount	Monthly Average
2006	End year only	R26 000	
2007	Full Year	R223 000	R19 400
2008	January to August	R165 000	R20 600

Note: figures have been rounded off.

Note that these figures do not reflect input supplies in stock or unsold crops. It also does not separate out the fertilisers and soil preparation costs for the planting of the apple trees.

The supplier costs for the apple trees was R20 000.

Wage costs

Wages on the project are paid both from the Restitution Fund allocation (the labourers, supervisors and records clerk) and through BRC utilising their grant finances (the farm manager, the tractor driver and the vehicle driver).

The annual wage bill, since the adoption of the wage framework on the project, is as follows:

At full land utilisation, this equates to a requirement of R11 200 in income per hectare per annum just to cover the wage bill.

General observations

The lack of profitability from the vegetable operations is a major problem for the scheme. The failure to break even is mainly based on poor production levels and high fixed salary overheads.

Scheme members are clearly aware that the project is running at a loss. They indicated that this had been made clear from the AGM meeting. Members still expressed hope that a profit would be generated. However, profitability is not a day-to-day concern for the membership and the ongoing losses do not appear to cloud members' positive outlook on the project.

For BRC, profitability is clearly a much greater daily concern, and the staff hold a real worry about the future of the project unless losses can be turned around. Nevertheless, there appears to be a sense of uncertainty on how to turn the financial situation around. BRC is hoping that the additional activities of the fruit orchard and fodder production will assist with improving income levels.

Institutional framework

Land ownership

As part of the former Ciskei the scheme is established on communal tenure land. The 'land owners' who are part of the scheme are in fact from families with Permission to Occupy (PTO) certificates; in most cases the PTO is in the name of a deceased grandfather. The individual members involved therefore do not necessarily have sole land ownership rights, but rather exercise their involvement and claim their benefits as a member of a family with historical rights to the land.

Project ownership

In 2006 the rights to the scheme were technically transferred to the Communal Property Association (CPA). However, in practice the CPA does not see its role in managing the scheme, but merely in providing a legal framework for the scheme's business operations. The CPA's role is described in terms of "providing vision and overall guidance". This role also includes resolving internal problems.

The project is currently not separately registered as a legal entity. Its bank account, credit arrangements with suppliers, and other legal commitments, are all conducted in the name of the BRC. The intention is however to set up a separate legal entity. This was provided for in the 2007 BRC Annual Plan, but is it is not regarded as a priority at this stage.

Institutional structure

While daily and weekly decision making is made by BRC in liaison with the farm manager, monthly decision making and longer term strategic planning is done in a representative committee called the Company Committee. This committee comprises BRC representatives, CPA representatives, the farm manager, two workers, and the record keeper (as secretary). Both BRC and the farm manager present reports to this committee.

The outcome of reports and issues from this meeting are fed to the CPA Managing Board, who in turn are responsible for keeping the general community informed of issues. The CPA appears to limit its role, leaving actual management to its management agent (BRC) and the scheme members.

There is a multi-stakeholder steering committee, involving government departments and municipal representatives, which deals with the developments in Chata in general, including the irrigation scheme.

Profile of scheme participants

The farm manager: Mr Mongameli Rode

The farm manager has a visible passion for farming and is the 'champion' or 'driver' of the scheme. Thirty-eight year old Mr Rode is a plot owner and has been farming since 1997. He had been the farm manager for 18 months as of the undertaking of the research for this case study. His previous farming experience has been in maize and vegetable production on his family plot. He has not had any special training but indicated that besides practical experience he also learns through reading.

Mr Rode perceives himself to be a farmer for life, proudly declaring that he was born in Chata and will never leave. His farther was a farmer, and he is very clear that he would like his children to learn farming as well.

Profile of other scheme members

Age levels of the scheme members range between 35 years and 65 years. Education levels range between grade 2 and grade 12, with the mean being grade 6. Members however expressed the opinion that formal education is relatively unimportant for successful farming in comparison to local knowledge and practical skills.

Seven of the scheme members are the sole breadwinners for their families. Three families receive government grants, one member has a second business (spaza shop and steel works) and the other families have another member earning wages as well.

A variety of reasons is given for individual participation in the scheme ranging from household food security and household survival, to the satisfaction of deriving value out of the land. Scheme members tended to express the opinion that it is unlikely that their children will ever get involved in farming as their children see better futures elsewhere.

Perspectives of performance

Scheme members are currently very positive about the scheme, largely because of stable wages and a marked improvement in their livelihoods, as well as providing them with a sense of achievement and purpose. The members indicated that even if the BRC support was withdrawn they would attempt to continue with the farming (although this commitment is clearly tinged with knowledge of the past failure to farm on their own), albeit possibly with less commercial aspirations.

The project also generates a sense of community commitment. The project is seen not only to be good for those directly involved but also for the village. "There are no families starving in Chata anymore". The scheme provides a source of cheap food. For example non-commercial quality cabbages are sold for 50c and scraps are given away. Further examples of community benefits cited by the members included: fruit and nut trees encourage birdlife which will benefit the tourism venture in the village; the planned fodder production will benefit the livestock project; and the planned process operation (milling/ bread; jams from fruit) will also provide the community with cheaper food.

Conclusions

The Chata Irrigation Scheme is perhaps a story of potential. Whether the future will show a lost potential or a sustainable enterprise will largely be dictated by how current problems are addressed.

On the positive side certain key foundation conditions for the success of the scheme are in place. These include:

- A clear institutional framework within which the group functions, which sets out roles, responsibilities and how benefits are allocated.
- A clear contractual relationship between scheme members, BRC and the CPA.
- Ownership rests in a body divorced from the daily management, so it can intervene in internal disputes which so often lead to group paralysis.
- A clear and accepted management framework with a farm manager and a supervisor directing work in the fields.
- An established support environment.
- A highly committed NGO supporting the scheme which has also brought in support from funders and technical specialists. And although the limited technical support is arguably one of the key weaknesses on the

project, the mechanism within which to bring in such support is in place.

- The scheme initiative is taking place within a context of overall community development. This results in livelihood improvements from a number of sources, meaning greater demand for produce from the community, and greater household food security for participants in the scheme.
- The project driver appears to be in place in the person of the farm manager; a group project requires the dynamism of at least one person with commitment, passion, ability to learn, and an entrepreneurial vision.
- Although he has limited experience of crop varieties and of running the farm as a business, the farm manager demonstrates the required characteristics.
- Beneficiaries are able to recognise benefits and receive direct benefits
- The outlook of the membership is very positive in terms of the impact of the scheme and they value the income received from their work on the project, a marked improvement from when the scheme was initially revitalised.
- The means of production is sufficiently in place for efficient production.
- The scheme has been rehabilitated and has received key resources needed for production and for marketing.

In terms of weaknesses, the following aspects raise concern about the sustainability of the project:

- The scheme is hugely subsidised without any clear perspective on how long this subsidy will be (or needs to be) in place or what aspects are appropriate for subsidisation.
- The management lacks critical technical skills and/or experience and this is resulting in significant production failures.
- The scheme's overheads (e.g. its fixed wage bill) place the potential future profitability of the scheme under constant pressure.
- The solution to current problems is frequently identified to lie in further capital investment (drip irrigation, etc.) which deflects a focus from other core problems.
- The framework for building the business skills and business management within the project is not in place or adequately visualised by role-players.
- While the effect of paying wages has been positive on the scheme members' motivation, it has also removed the rationale for building a profitable (i.e. sustainable) business from the members.

References and sources

Interviews:

Mr Mongemeli Rode (Scheme Manager).

Group interview with all the Scheme Members in attendance

Fanelwa Mhaga (Border Rural Committee, Project Officer responsible for the scheme)

Charmaine Cockcroft (Border Rural Committee Financial Manager).

Additional ad-hoc consultation / discussions took place with:

Zanelwa Semane (Border Rural Committee Programme Manager)

The Manager, Sanans Vegetable Shop (Purchaser of scheme vegetables)

Documentation:

Chata Integrated Development Plan (2003)

Chata Agricultural Business Plan (undated copy)

Border Rural Committee Web Site (www.brc21.co.za)

Border Rural Committee, Annual Plan, 2005

Border Rural Committee, Annual Plan, 2006

Border Rural Committee, Annual Plan, 2007

Border Rural Committee, 6 Monthly Report, January to June 2006

Border Rural Committee, 6 Monthly Report, July to December 2006

5 Mr Booi and the Zanyokwe Irrigation Scheme, Keiskammahoek: a successful smallholder relative to his peers

Nomakhaya Monde, Department of Agricultural Economics, University of Fort Hare

Introduction

In the new municipal demarcations, Zanyokwe Irrigation Scheme (ZIS) falls under the Amahlati Local Municipality of the Amatole District. The climate of the area where the scheme is located can be described as semi-arid with a mean annual rainfall of about 590 mm per annum (Van Averbeke et al., 1998). The ZIS is divided into six sections, namely, Kammafurrow, Burns Hill, Zingcuka, Zanyokwe, Ngqumeya and Lenye. These are villages that make up the scheme. The Lenye section is divided into three sub-sections, namely Lenye West, North and South. Figure 5.1 shows the fields of Lenye South. Mr Booi, the subject of this case study, is one of the farmers in that section.

Historical perspective

Mr Booi is 56 years old, married and has four children. For five years he worked as a mine worker at Carletonville. According to Mr Booi, most farmers at ZIS started working as mine workers. However, while most of them were affected by retrenchments that began in the early 1990s, Mr Booi did not leave the mines due to retrenchments. He decided to leave his job in 1981 as he was earning very little. Back at home he made a living by selling chickens until 1984, after which he was employed as a farm worker at the scheme.

The ZIS was established in 1984, initially with 48 members (Van Averbeke et al., 1998). At the time, the Ciskei government had a strong relationship with Israel. The two governments signed a five-year agreement whereby skilled Israelis would run the scheme. The main objective of this agreement was to build the capacity of the local farmers in the areas of farming and farm management. The local farmers would then take over and run the scheme at the end of the contract period. During the contract period, the farmers – of whom Mr Booi was one – were engaged as workers under the guidance of the Israeli managers.

During this era, all agricultural inputs were subsidised by government, and all machinery and equipment were provided by government. Support services such as marketing and extension were government priorities. Most marketing functions (grading, packing, selling and buying) took place at field level. The scheme was endowed with a lot of infrastructure, including marketing facilities. A store was built on the site where buyers could come and buy products. Facilities like potato washers and maize driers were on the site. The Ciskei government employed a large number of extension officers of whom three served various sections of the ZIS on a full-time basis (Bembridge, 1999).

In 1989, the contract with Israel expired, and the scheme was handed over to the 48 members under the management of Ulimocor, a parastatal. The scheme entered a phase in which farmers began to struggle to make a profit. According to Mr Booi, the main problems that affected farmers during this time were poor management,

Figure 5.1: Zanyokwe Irrigation Scheme

poor record keeping, and reduction in extension services. In addition, government withdrew many services (input and tractor subsidies) and sold most of the scheme's equipment and implements. With very little government support, farmers struggled to pay the labourers and as a result, many labourers stopped working for farmers.

In 1996, Ulimocor was disbanded and farmers were advised to form a trust whose main responsibility was to manage the scheme's affairs and look after its infrastructure and equipment. The scheme was supposed to be managed by a Board of Trustees, but it would appear that the trust deed was not registered with the relevant authority, and as a result, the proposed trust did not have the authority to run the scheme (Van Averbeke et al., 1998). So, the period between 1996 and 2001 was the worst time at ZIS as there was neither production nor management at the scheme. The scheme's infrastructure began to disintegrate, partly through vandalism.

In 2002, the farmers received a grant of R1 million from government in an effort to revitalise the scheme. Farmers were advised to elect a management committee to run the scheme. A committee of 12 members was elected. They also received loans from Uvimba Bank in King William's Town. However, farmers struggled to pay back the loans. In 2005, the trust was changed to a Producers Assembly (PA) committee (Monde et al., 2005).

Currently, the ZIS farmers have a co-operative, which was registered in 2007 (Monde et al., 2008). They also received a further sum of R3 million from government to improve the scheme's infrastructure. In addition, ZIS's farmers are members of the Eastern Cape government's Massive Food Programme, which aims at increasing the production of maize by small-scale farmers. In the Massive Food Programme, farmers benefit from subsidised inputs (seed, fertilisers and herbicides), while government arranges for their maize to be marketed. The fence around the scheme has been repaired, the scheme's offices refurbished, and most irrigation equipment replaced. The main problems at ZIS are markets and extension services. According to Mr Booi, the extension services have gone from bad to worse.

Natural and physical resources

The area under irrigation in Zanyokwe is uncertain but the land area is estimated to be 635 hectares. Altogether there are 66 individual small farms ranging from 1 to 20 hectares. Mr Booi has access to 6.3 hectares of land. Of this land, 5.3 hectares is the land allocated to him, and he leases an additional one hectare from another

farmer on the scheme. The average land holding at the scheme is 3 hectares.

The soils at the scheme are rated from moderately to highly suitable for irrigation, however a significant percentage are classified as having a moderate potential (Monde et al., 2005). The main limitations are: poor depth, heavy texture and a high percentage of fine sand and silt. Cultivation difficulties and slow permeability occur on some of the heavier soils. This shows that irrigation should be carefully managed to avoid soil-related problems on the scheme and the need for appropriate training.

ZIS receives its water via an 80 centimetre pipeline from the Sandile Dam. The pipeline tapers down to a smaller diameter towards the end of the scheme. The Kamma Furrow section, which is at the very far end of the scheme, has a separate pump unit to pump water from the Keiskamma River into their reservoir or directly into the distribution system.

Because the dam also supplies domestic water, the pipeline is operated and maintained by the Amatola Water Board on behalf of the Department of Water Affairs and Forestry (DWAF). There is very little contact between the scheme and the Water Board. The assured yield from the dam is 12.7 million cubic metres and its capacity is 30.7 million cubic metres. Depending on the dam level the pressure or head at the wall varies between 10 and 50 metres. The outlet of the dam is fitted with state-of-the-art water control and measuring equipment that is in good working order.

There are nine main off take points along the pipeline to distribute water to the scheme (see Figure 5.2). The water supply to the scheme is designed with a duty of about 0.9 litres/second per hectare. This is considered to be adequate at this level of scheme utilisation. If all of the scheme were to come into production, the water would still be adequate if well managed. Each off-take was originally fitted with a flow metre, pressure gauges and filters, but at all the points visited during the fieldwork, these devices were no longer functioning and many pipes leaked (Monde et al., 2005).

ZIS makes use of sprinkler irrigation system. The sprinklers are mounted on quick coupling pipes and the water is delivered from a hydrant for each block. The hydrants receive water from a network of subsurface pipes, which are connected to the off-takes from the Sandile pipeline, or from the booster pump station or from a night storage dam. Until recently, the irrigation infrastructure at ZIS was in very bad condition. The

Figure 5.2: Example of block off take showing flow metre, pressure gauge, filters, non-return valve and electrical supply for booster pumps

Figure 5.3: A stack of new pipes in Booi's homestead

Figure 5.4: A facility used to dry maize (maize drier) at Zanyokwe Irrigation Scheme

pipes were damaged and leaking, there were no hydrant pipes, and the valves did not work properly. But the infrastructure upgrade that took place in early 2008 has substantially improved the situation (see Figure 5.3).

Most of the lands on the irrigation scheme are irrigated by gravity from the pipeline, but water at Lenye North has to be pumped to a reservoir, from which irrigation is by gravity. About 15 farmers depend on this pump. Until recently, the electrical power to the pump was disconnected and apparently this had been the case for 10 years because of money owing to Eskom. The reservoir into which water is pumped leaks.

Mr Booi has access to the scheme's other physical infrastructure as well. However, most of this infrastructure is either not working or is in very bad state. For instance, the various storage facilities on the scheme are generally unusable, so farmers either use their own storage facilities or, more typically, none at all. Also, the scheme used to have maize driers (see Figure 5.4) and a potato grader (see Figure 5.5), but these are no longer in working condition.

However, the one aspect of non-irrigation infrastructure that has been recently restored is the scheme's offices; the building has been repaired and furniture and office equipment acquired (see Figure 5.6). This was largely through additional funding which the farmers managed to secure from the National Development Agency and the Small Enterprises Development Agency, which was also used to purchased some farm machinery to improve tillage and cultivation services, and to install drip irrigation on about 20 hectares of the scheme area.

Production systems

Main farming enterprises

Mr Booi is involved in the production of three main crops, namely, cabbages, butternuts and maize. Apart from these crops, he also grows vegetables such as spinach, carrot and onions on relatively small plots. In summer, the largest share of the land is allocated to cabbage (2.5 hectares), followed by butternut (2 hectares), and then maize (1.5 hectares); the other three vegetables are each planted on about one tenth of a hectare. In winter, he again plants cabbage (though less than in summer), as well as various vegetables. The method of cultivation is by tractor traction. Farmers at ZIS have access to three

Figure 5.5: An old potato grader

Figure 5.6: Renovated ZIS offices

tractors that are hired by farmers for tillage purposes. For cabbage and maize, Mr Booi buys all production inputs at cost while those of butternuts are subsidised by government.

Maize and butternut farmers at ZIS are members of the Massive Food Programme (MFP) of the Eastern Cape Department of Agriculture. Government purchases and delivers all inputs to the production site. When maize is sold, farmers pay a certain percentage of the production costs. The MFP is a five-year programme. During the first year, farmers did not pay for inputs, while in the second year they paid 25% of production costs, and every year the proportion increases until farmers incur the full costs of producing maize. Although Mr Booi is a member of the MFP, he no longer produces maize under MFP. In 2007, he decided to pull out and produce for another market. Therefore, he buys maize inputs himself from Umthiza Co-op in Alice, about 40 kilometres from Zanyokwe. With regard to cabbage and butternut, Mr Booi obtains the production inputs (seed, fertilisers and chemicals) either from King William's Town or East London, and hires transport to fetch them.

Labour inputs

Mr Booi has one permanent farmworker, but also calls upon 'semi-paid' family labour. The farmworker is paid a salary of R45/day (about R900 per month), which is a lot higher than the average of R30/day that other farm workers earn at ZIS. Mr Booi's wife is also actively involved in farming and his two children, who are scholars, also participate in some farming activities such as weeding and harvesting. Mr Booi keeps his children motivated by paying them for the tasks they undertake on the farm. Apparently, the school children in the area have a tendency of working for other farmers when they do not receive payment in their own households. Another source of labour is 'labour exchange', which is mainly used during harvesting. The only crop that demands a lot of labour at harvesting is maize. While some farmers resort to temporary labour which is paid in cash during the harvesting (especially for maize and beans), Mr Booi turns to his relatives and pays them in kind through 'food parcels'. Those who resort to hired labour complain about the untrustworthiness of the exchange labour, however, Mr Booi does not encounter this. Instead, people are willing to help him. He thinks that they feel obliged as he usually gives them farm produce even when they did nothing for him. He usually donates food when they have social functions or simply when they do not have food. Mr Booi therefore cultivates these relationships as a means of guaranteeing a relatively cheap source labour.

Marketing and transaction costs

During the past three years efforts have been made to improve access to markets by small-scale farmers in this scheme. Before these efforts the marketing 'system' consisted mainly of farmers seeking to hawk their produce at informal markets, so in parallel with the revitalisation programme, government has sought to make sure that these farmers have access to formal markets as well. As a result the farmers have been linked to supermarkets such as Pick 'n Pay in Port Elizabeth, the Umtata market, Provege in East London, Fruit and Veg City? in King William's Town, as well as the University of Fort Hare's Agripark processing unit. The main problems however with these markets are high transport costs and delays in payment. Farmers either hire transport to take produce to the market or the buyers pick up the produce from the production site using own transport. Either way, farmers have to pay for the transport. Most farmers complain that they do not make money as almost all profit goes to transport costs.

Farmers not only lose money on transport, but on poor quality and packaging as well. Mr Booi makes an effort to improve quality and make sure that he performs extra marketing functions such as grading and packaging. In addition, his marketing strategy is different from that of the other farmers at the scheme, as he does not rely only on the buyers or markets arranged for him, but rather searches for his own buyers and make an effort to comply with their demands. The production of maize at ZIS is supported by the Eastern Cape Department of Agriculture under the Massive Food Programme (MFP). The market for this product is Umthiza, which was also organised by the Department. Umthiza buys a 40 kilogram bag of grain at R40. This means that farmers get R1000 for a ton of maize. When Mr Booi noticed the poor price the MFP maize was fetching, he began to search for an alternative market. In 2006, he found one in Seymour in the Fort Beaufort area. He then pulled out of MFP and began to produce maize for this buyer. Mr Booi and his buyer (who is a dairy farmer), have an informal contract. The buyer wants both white and yellow maize, and when the produce is ready he collects it from the production site. The agreed price for yellow maize is R40 for a bag of cobs, which is about twice the price of R40 for a bag of grain as earned under the MFP. Mr Booi sells his white maize at R100 per 40 kilogram bag of grains. The difference is again huge as the kilogram fetches twice as much (R2.5/kg) compared to only R1/kg in the MFP. Mr Booi is happy with this arrangement and is even thinking of expanding the maize area by renting-in more land. At the time of this investigation he already contacted the land owner and the conditions of the lease were being finalised.

Mr Booi's main markets for his cabbage are hawkers and the Umtata market, which is about 300 kilometres away. According to Mr Booi, the advantage of selling to hawkers is that he does not have to pay for transport; they make use of their own transport and if the cabbage is sold at R3/head, as a producer that is exactly what he gets. In other markets such as the Umtata market, it is that price less transport costs. Together with other farmers, Mr Booi hires a truck to take the produce to this market. The cost of transport for one trip is R2000. In order to make money, the truck load must be at least 2000 bags of cabbages, i.e. so that transport costs account for R1 per bag. If the load is less than that, the effective cost per bag increases. According to Mr Booi, it is quite an effort to achieve this target. He says some farmers are not committed to production, and therefore they rarely reach the target of 2000 bags, and as a result, the cost is always more than R1/bag.

Economic aspects

The financial analysis of agricultural enterprises is demonstrated in Tables 5.1 (farming expenses), 5.2 (gross farming income) and 5.3 (net farming profits).

The net farming profit figures of all enterprises are positive, showing that Mr Booi is making a profit in all these enterprises. However, these figures are still very low for Mr Booi to make huge investments on the farm. Maize has the lowest net farming profit (R2 715/1.5 ha) of all the crops. But in terms of maize yield, Mr Booi receives about 164 bags (50 kg) of maize, which translate to 8.2 tons from land of 1.5 hectares. This means that he is producing about 5.5 tons per hectare, which is an acceptable yield under irrigation. The main problem is high production costs, especially the costs for permanent labour. By the standards of the commercial farming sector, the wage paid by Mr Booi is average, but his wage bill is exceedingly high relative to the small number of hectares he is farming. Taking the second cabbage crop into account but excluding income from the vegetables that he plants on a

Table 5.1: Farming expenses of cabbage, butternut and maize

Input	Cabbage (2.5 ha)		Butternut (2 ha)		Maize (1.5 ha)	
	Amount	Cost	Amount	Cost	Amount	Cost
Seed/seedlings	10 000 seedlings	1 800	60 kg	250	40 kg	1 200
Fertiliser	6 50 kg bags	1 156	8 50 kg bags	1 476	8 50 kg bags	1 476
Pesticide	5 litres	200	10 litres	429	6 kg	30
Ploughing	2.5 ha	1 250	2 ha	1 000	1.5 ha	750
Discing	2.5 ha	875	2 ha	700	1.5 ha	525
Marker	2.5 ha	750	2 ha	600	1.5 ha	450
Casual labour	30 days	900	30 days	900	20 days	600
Permanent labour*		3 375		2 700		2 025
Transport – inputs		150		50		200
Transport – outputs		575		120		-
Total		11 031		8 225		7 256

* Permanent labour costs about R10 800 per year, which as been roughly apportioned to the different enterprises.

Table 5.2: Gross farming income of different enterprises

	Cabbage			Maize			Butternut (10 kg bag)		
	Yield (head)	Price/ unit (R)	Income (R)	Yield (50 kg bag)	Price/ unit (R)	Income (R)	Yield (10 kg bag)	Price/ unit (R)	Income (R)
Produce sold	9 000	2	18 000	70 white	100	7 000	900	15	13 500
				83 yellow	40	3 320			
Produce consumed	50	2	100	3	100	300	6	15	90
Produce donated	120	2	240	5	40	200	14	15	210
Produce fed to animals	0	-	0	3	40	120	-	-	-
Total	9170		18 340	164		10 940	920		13 800

Table 5.3: Net farming profits of different enterprises

	Cabbages (R)	Maize (R)	Butternuts (R)
Gross income	18 340	10 940	13 800
Farming expenses	11 031	8 225	7 256
Net farming profit	7 309	2 715	6 544

small-scale, Mr Booi's annual total net income is approximately R22 415, which takes into account the imputed value of own consumption.

Livelihood significance

Although farming contributes more than 70% of his household income, Mr Booi's household is one of the few who have other means of surviving as well. One reason is that, like Mr Booi, most of the other farmers are in their 40s and 50s, thus contradicting the stereotype that black farmers are invariably pensioners, but also implying of course that they are not eligible for old age pensions. Mr Booi, however, has access to a monthly disability grant of about R870 for chronic disease (diabetes), and moreover has the good fortune to have two grown-up children who are working elsewhere and who send home about R300 per month. Apart from crop production, Mr Booi is also involved in animal production. He keeps cattle and chickens, which are sometimes sold for income. The money earned from the sale of animals is sometimes used to purchase agricultural inputs or pay for children's education.

Access to natural capital is a general problem at ZIS. The majority of original farmers have discontinued farming due to factors such as old age, ill health or lack of interest. Most current farmers either rent or borrow the land they cultivate. Most of those who are renting are in fact sharecropping it, i.e. the owner is rewarded not with an up-front cash payment, but with a share (e.g. 50%) of the crop or the proceeds from the sale of the crop. Whether sharecrop or loan arrangements exist, these are short-term and thus generally unstable. A typical pattern is that when a cropper does well, the owner decides not to renew the arrangement for the following planting season but rather try to resume farming for their own account, or at least threaten to do so. The common perception of sharecroppers is that owners are 'jealous' of them whenever they show signs of succeeding.

However, Mr Booi's situation appears to be better than that of most farmers at ZIS, because he owns most of the land he is using. He only rents about a fifth of the land he uses, and this by means of an upfront cash payment, which owners find highly preferable to sharecropping arrangements. In other words, it is mostly his land, and in that respect he has more secure land rights than most farmers who are cultivating land that belongs to others.

The problem of land tenure affects all farmers at ZIS. According to Mr Booi, it not only prevents them from accessing loans from formal financial institutions, but discourages farmers from remaining in farming. While in 2004 there were 60 farmers at the scheme (Monde *et al*., 2005), in 2007 there were only 47 farmers. Land tenure was mentioned as one of the reasons for discontinuing farming.

Mr Booi's strategy to deal with limited access to physical capital is to sell all his produce from the production site. Other farmers have adopted this strategy as well. However, most of them experience problems such as product spoilage due to lack of market. Mr Booi hardly experiences this problem because, to the extent that he is able, he first finds buyers or markets for his products. In other words, despite not having his own transport does he does not passively wait to see if buyers arrive at his doorstep or not, but organises for his produce to be purchased. His labour strategy, too, is different. He has at least one permanent worker; other farmers believe they cannot afford permanent labour. Having permanent labour gives Mr Booi a sense of security and peace of mind, knowing that everything is taken care of when he cannot be at his field. Most farmers make use of family labour but do not pay for it. Mr Booi also makes use of family labour, but pays for it, and to some extent pre-pays for it. Donations of farm produce to relatives and friends provide him with access to willing workers, which is most needed to accomplish farming activities such as weeding and harvesting.

The most important livelihood outcomes for Mr Booi's household are cash and food. Hunger is not a problem at all in this household. They can afford three meals a day. The adequacy of diet in terms of quality is however another issue that is beyond the investigation of this study. But the main source of vegetables is own production even though most other food items are purchased.

Social and institutional dimensions

The land tenure in ZIS is complicated and varied, with close relation to the history of the villages that make up the scheme. A bigger share of the scheme is located around Lenye and Burnshill villages. Mr Booi is a resident of Lenye village. Lenye is located on what used to be white-owned

farms. When the whites left the area, the land was taken by the state and registered under the trust tenure system. Land under trust tenure consists of formerly white-owned land situated in proclaimed native areas. The land was eventually made available to people through the Native Trust and Land Acts. Hence the land occupied in Lenye North and South is referred to as the State or Trust Land and the farmers from Lenye therefore do not have title deeds for the land they have access to.

Mr Booi is also one of the few who have relatively secured rights over land. When the scheme was established, the fields allocated to individuals were combined, and the owners of these fields were made members of the scheme. But the labour force of the scheme included both land owners and landless. When the farmers took over, landless people were also interested in farming. There was not enough arable land and so some surrounding range land was brought into the scheme for cultivation. This land had been commonage land, in that, historically, it did not have individual owners. Mr Booi received his share of scheme land from this range land. Some of the original share-croppers have put in applications to reclaim the land and have documentation of proof of ownership. Those ZIS farmers presently using this land live in fear, not knowing when original land owners might want their land back.

The support for the scheme comes from various sources. The Department of Agriculture supplies farmers who are members of the MFP with inputs at subsidised prices. Through this programme, farmers also received free implements and a tractor. Although Mr Booi is no longer producing maize under the MFP, he is still involved in butternut production under the scheme, and thus is still a member. Therefore, he benefits from the input subsidy. The farmers at ZIS also benefit from the MAFISA and CASP programmes in the form of loans and infrastructure grants, respectively.

Furthermore, Mr Booi has access to the extension services of the Department of Agriculture. However, the quality of service has gone from bad to worse, supposedly because of the introduction of the 'ward system', whereby the already limited number of extension officers has to serve an even larger area. This results in fewer and less regular visits. Fortunately, however, ZIS has a full-time manager who provides farmers with advice.

Mr Booi is a member of the Best Management Practices (BMP) project, run by the University of Fort Hare. Researchers sometimes conduct trials in farmers' fields, and farmers have to give up land for these trials. Not many farmers are keen to do so, but Mr Booi always cooperates. Unlike many other farmers, he is open to new ideas and is always willing to learn new things. So, he benefits from the technical advice given by researchers.

The Department of Agriculture together with the University of Fort Hare have provided market support to ZIS. This support takes different forms, including a specific effort to link farmers with Pick 'n Pay, providing training courses and arranging visits to formal markets in order to expose farmers to how formal markets work.

Gender, class and human dimensions

Although there are women farmers at ZIS, the majority are men. The wives of the male farmers, however, do participate in the scheme, but usually on a temporary basis, e.g. during weeding or harvesting times. As it is the case with communal areas, ownership of land at ZIS is in the hands of men. The few women farmers are either widows or tenants. Although not intentional, men farmers benefit more, and this is reinforced by a management structure composed mainly of men.

In terms of class, Mr Booi classifies himself as an emerging farmer coming from a historically disadvantaged background. In terms of schooling, he passed standard five. However, when the ZIS scheme was established in 1984, he received training in agronomic practices at Fort Cox College (a nearby agricultural college) for a period of six weeks. Following this course, he was trained to do book keeping at the Border Technikon (now Walter Sisulu University). However, he claims that most of his agricultural knowledge was obtained from the Israelis who managed the scheme in its early days.

Perceptions of performance

According to the economic analysis of his main enterprises, Mr Booi is makinga modest profit and not enough for him to purchase capital. His dream is to have transport of his own, as well as a tractor because the three scheme tractors inadequate (only two are in good condition as the third one often breaks down). There are often

delays in planting as farmers have to wait for the tractors to become available.

Policy environment

Small-scale farmers in irrigation schemes in the Eastern Cape have benefited from a number of policies aimed at the improving this sector in the 1980s. However, most of these initiatives were short-lived due to financial or political reasons. During the homeland era, new irrigation schemes were established with funding from South African Government. Irrigation development during the independent homeland era was characterised by modernisation, functional diversification and centralisation of scheme management (Van Averbeke and Mohammed, 2006). Overhead irrigation systems were used instead of surface irrigation in most schemes including ZIS. Also, the irrigators enjoyed benefits of subsidised inputs (including tractor services) and institutional support services (extension services) during this era. However, these were withdrawn for financial reasons.

With political changes in the 1990s, attention was focussed on irrigation management transfer. The closing down of parastatal organisations such as Ulimocor left a vacuum and an effort was made to transfer the management to farmers.

Conclusion

There are a number of factors that makes the case of Mr Booi interesting:

- he has secure property rights unlike most of the other ZIS farmers. Most farmers have access to land that belongs to others, which they access either through renting or borrowing.
- he has arranged access to additional land on his own, and is not waiting for government and its Land Reform Programme. While most farmers at the scheme obtain more land by borrowing or sharecropping, Mr Booi rents the land and pays cash. With this kind of arrangement, he has not had problems, because land owners appear to prefer to rent their land for cash instead of a share of the produce, the amount of which is uncertain.
- his marketing strategy is interesting and makes him one of the successful farmers. He seeks out buyers and adheres to their specifications. He knows his limitations (e.g. lack of storage facilities) and decides to go for contract farming in which he does not have to store the produce.
- he is a hard worker and always willing to try new things.

References

Bembridge, T. J., (1999) Guidelines for rehabilitation of small-scale farmer irrigation schemes in *South Africa. WRC report No 891/1/00*, Water Research Commission, Pretoria, South Africa.

Monde, N., C. Chiduza, M. O. Brutsch, P. N. S. Mnkeni, S. Mtshali, R. Dladla, A. T. Modi, B. E. Mthembu, I. Van Der Stoep, and J. Stevens, (2005) *A Situation Analysis Report on the Zanyokwe and Tugela Ferry Irrigation Schemes for the Water Research Commission Project NrK5/1477.*

Monde, N., C. Chiduza, and A. Mushunje, (2008) A Socio-Economic Impact Assessment of the Zanyokwe Irrigation Scheme, report for The *Water Research Commission Project NrK5/1477*

Van Averbeke W., C. K. M'marete, C. O. Igodan, and A. Belete, (1998) An investigation into food plot production at irrigation schemes in the central Eastern Cape, Water Research Commission Report No: 719/1/98, Faculty of Agriculture and Agricultural and Rural Development Research Institute, University of Fort Hare.

Van Averbeke, W. and S. S. Mohamed, (2006) *Smallholder irrigation schemes in South Africa: past, present and future, Centre for Organic and Smallholder Agriculture*, Department of Crop Sciences, Tshwane University of Technology, Pretoria.

6 Rabula freehold farmers: two established middle-class farming households with contrasting farming/ livelihood strategies

Larry Field, Umhlaba Consulting Group

Introduction

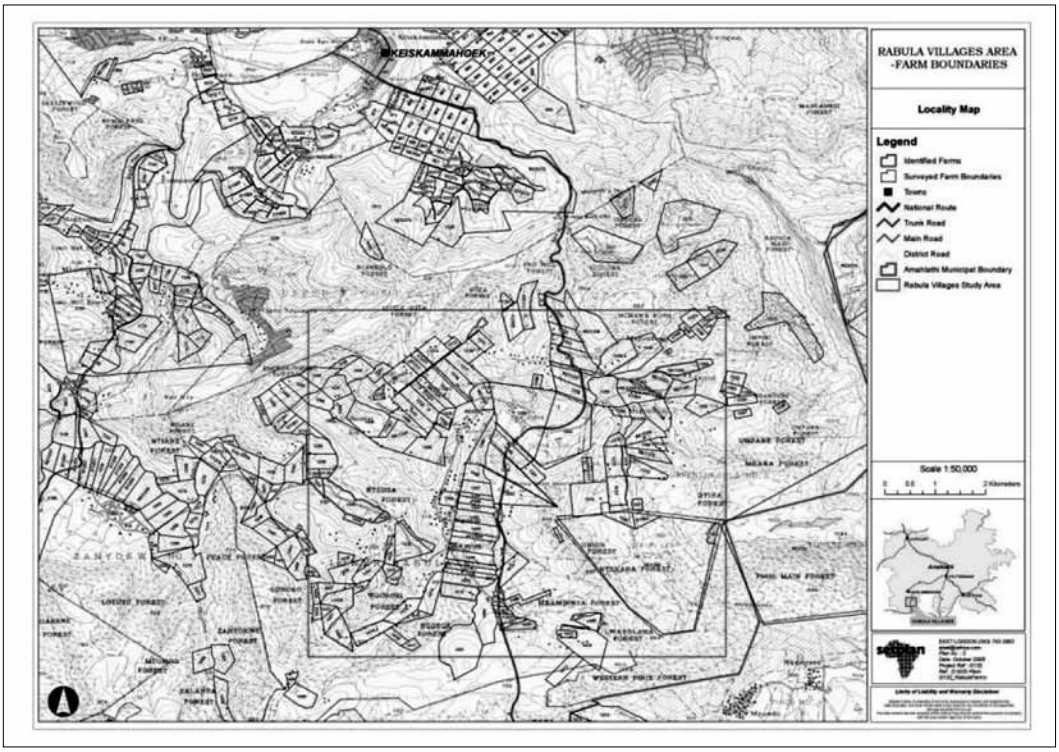
Rabula is a small rural traditional authority administrative area within the Magisterial District of Keiskammahoek, now part of Ward 11 of the Amathlati Local Municipaly. Rabula is no more than 40 kilometres from King Williams Town, easily accessed from the main tar road linking Keiskammahoek and King Williams Town. To the north of Rabula is the town of Keiskammahoek, to the west the well known irrigation area of Zanyokwe, to the east the wooded mountain slopes and forests of the Pirie area, and to the south the outskirts of Dimbaza.

Rabula currently comprises a number of communal tenure villages, commonage lands, and privately owned freehold farms (see Figure 6.1). The freehold farms are particularly interesting for study for a number of reasons:

- Firstly, these farmers come from a generation of family farmers. They have had occupation and ownership of their land for generations. In the two case studies one has had occupation of the current land parcel for nearly 30 years (but had occupation of a nearby farm long before), while the other family has had occupation and ownership since 1908.
- Secondly, these examples reflect on black smallholder farmers who have historically acquired their land through their own financial means. This is a very different context to households moving onto land post 1994 as part the government's subsidised land redistribution programme.
- Thirdly, these smallholders are interspersed with communal (Trust) villages and shared commonage lands. As such they represent a context which may emerge as the norm if the Communal Land Rights Act is applied to communal areas in the future.
- Finally, it can be argued that these farmers are small independent smallholders, as perhaps one perceives the vision of agrarian transformation goals of the current (emerging) policy of government. These farmers own small farms with multiple land uses, and in independent landholdings; i.e. they are not part of a state-initiated and organised scheme.

This case study attempts to explain the social, political and economic context within which the freehold farmers have functioned and then explore the circumstances of two freehold farmers in Rabula, namely Mr Tswengiwe and Mr Njemla. While these two farmers cannot be said to be representative of all farmers, their circumstances do reflect the realities of established freeholder farmers in the area. The farmers were selected due to their involvement in the Rabula Farmers Association, and their continued attempts to make a livelihood out of farming. The one farmer, Mr Tsengiwe, is mainly a livestock farmer, but with cropping activities as well. He lives predominantly from his farming activities. The second, Mr Njemla, has more substantial off-farm income, and his approach is far more based on a mix of many different types of activities on the farm.

Figure 6.1: Map of Rabula villages showing farm boundaries



Unfortunately, none of the farmers were willing to go into detail in relation to their profitability, and the research parameters did not allow the time to develop a more detailed picture of the economic aspects of the case studies. However, the case studies will show that the challenges that the farmers face are multi-faceted, from economic, technical, and social perspectives. These challenges are located not only in current economic realities but also in the strong historical legacy of how Rabula was shaped from colonial times, through apartheid, and finally how current government policy is impacting on smallholders today.

The historical context of land ownership and land rights in Rabula

Rabula was established by the British colonial authorities on land vacated during the Frontier War of 1850-1853. Lots were demarcated and became available for purchase from 1865. Both blacks and whites were allowed to acquire land in terms of British colonial laws. Land was originally sold as freehold, but later sold as quitrent. Records indicate that by the end of the nineteenth century 186 lots had been established in Rabula of which the majority had been purchased by blacks (De Wet, 1995). At this stage Rabula was characterised by individual land parcels owned through freehold or quitrent, while the land owners also had user rights to commonage land.

Land settlement initially existed almost exclusively on the farms, consisting of the land owners and their 'farm workers', who were usually in a labour tenancy relationship. Over the years labour tenants began to settle on the commonage to gain more freedom from the land owners. Children of land owners, unable to secure their own land, are also recorded as having moved onto the commonage. These people were effectively 'squatters' and were known as such by the landowners.

In 1936 Rabula became a 'released area' in terms of the Native Trust and Lands Act (18 of 1936). Whites were no longer allowed to buy land in the area and the South African Native Trust (SANT) began a process of buying up white farms. The government began a process of resettling the landless people residing on the commonage on the Trust farms, giving them household plots and arable lands. Initially the emphasis of this betterment process was on establishing viable farmers on the Trust lands, but later the emphasis appears to have shifted to settlement needs. However the betterment process

Table: 6.1: Summary of tenure types

Tenure type	Number (percentage)
Freehold/quitrent	Approximately 500 (60%)
Trust areas	59 (7%)
New residential areas (on Trust land)	237 (28%)
Informal settlement on commonage	Approximately 40 (5%)

never completely removed all 'squatters' from the commonage. Research carried out by De Wet (1995) identified the following breakdown of households by tenure:

Thus Rabula today is characterised by people with different land rights histories, which forms the basis for deeply rooted social tensions that are still evident today. In the early years the land owners treated the landless as a subordinate class of people. Landowner families tended to be bigger, wealthier, and dominate important social events and positions (De Wet, 1995). The betterment process however seems to have created opportunities for those in labour tenancy relationships with the provision of land rights for landless families. De Wet notes that landowners appear to make greater use of own family for labour in the post-Betterment period (1970s onwards). For this and a number of other reasons, Betterment in Rabula appears to have had a less negative impact than in many other areas of its application.

During the homeland period, landowners embraced the opportunities provided by the new homeland bureaucracy. These opportunities included both an extensive agricultural support programme initiated by the Sebe Government, and employment opportunities in the bureaucracy for those with education. However, in the post-1994 breakdown of the land administration system in the communal areas, tensions between land owners and the landless / village residents was re-focused on the commonage, with land owners' claims of exclusivity of rights being largely ignored. Land owners also found themselves increasingly marginalised in terms of status and influence within the community. The new government's land reform programme, and other social and development benefits, have all been focused on the historically landless and resettled village groups. Black freehold land owners have been largely ignored both in policy documents and in local application of agricultural development support.

De Wet's research turned up the following farming information in Rabula as at 1990:

- Only one third of landowners used their entire property. Cultivation levels, as an average per hectare, appeared to be higher in the Trust areas than on the landowner farms. This situation possibly reflects a lack of capital, support, and availability of labour for landowners to make appropriate use of their greater land assets.
- However, landowners tended to invest more in livestock, which has greater status and requires less intensive management and labour inputs. Landowners had, on average, 7.85 cattle, 10.39 sheep and 11.04 goats per household. In comparison, non-landowners had, on average, 0.16 cattle, 0 sheep and 5.0 goats per household.

The natural resource base

The Rabula area consists of the Rabula River valley and three smaller valleys encircled by steep hills, bordered by the foothills of the Amathole mountain range. The hills that border the Rabula area are covered in thick indigenous bush (Afromontane forest), while the lower slopes are covered in thicket and grasslands with sweet thorn. The eastern mountain and hill slopes are particularly thick in indigenous forest as well as cultivated plantations (Kingwill, 2008).

The altitude within the small Rabula area ranges between 500 metres and 800 metres above sea level, although heights of up to 1400 metres are reached just to the east of Rabula villages.

The climatic conditions recorded in the Keiskammahoek area are shown in Table 6.2.

The main water source for the area is the Rabula River and the smaller tributaries of the Gxulura and the Gqubushe.

Table 6.2: Minimum and maximum temperatures and precipitation

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Mean min temp (Celsius)	16	16	14	12	8	5	5	6	8	11	13	15
Mean max temp (Celsius)	30	29	20	18	14	11	10	13	16	18	25	27
Mean precip. (mm)	88	95	111	62	48	29	30	38	64	87	91	83

Profile A: Mr Tsengiwe

Profile of the farmer

Mr Mtobi Tsengiwe grew up on the farm and remembers working on the land as a school boy. As an adult he obtained employment in the Department of Agriculture as an extension officer in the Ciskei area. He eventually specialised in establishing agricultural co-operatives for the Ciskei Department of Agriculture, having received training in England for such activities. However, even while he worked as an extension officer, he continued to run the farm. Mr Tsengiwe is now over 70 years old, having gone on pension in 1996. He indicated he expects his son, who currently works as an official in the Provincial Government in Bisho, to take over the farm upon his death.

Mr Tsengiwe's history as a farmer is in many senses not unusual for South Africa, but is certainly not common for a black farmer in present-day South Africa. Mr Tsengiwe is also 'not unusual' as a commercial farmer in South Africa in terms of personality, being strong willed and outspoken on a range of problems and issues facing farmers.

Despite his age Tsengiwe remains an active individual and an active farmer.

Farm details and land use

The Tsengiwe family owns five portions of land in Rabula. One portion (farm 1439) is owned by Isaac Tsengiwe, Mtobi's brother. Mtobi Tsengiwe owns one portion in his own right (farm 1410, comprising 16 hectares), and three portions (of farms 1440, 1441 and 1438, totalling 104 hectares) are owned in equal shares by Mtobi and his three sisters. Most of this land has been in his family's name since 1908. In 1932 his farther purchased additional portions. The portion of land owned by Tsengiwe's brother is unoccupied as this brother and his household have left the farm.

The major part of the farm is in the Lower Rabula area, past the villages of Lower Rabula in the valley below the Ntsusa Forest. The gravel access road is in reasonable condition, and eventually links Rabula with Zanyokwe. In addition, Mr Tsengiwe has access to the commonage land for his livestock. However, the exact extent of the available commonage, and the utilisation of the commonage by livestock owners, could not be obtained within the scope of this study.

The separate portion of land (farm 1410) is only 16 hectares in extent, and is located near the main tar road below the Trust village. However, this portion is not farmed at present. Mr Tsengiwe indicated that problems of squatters and theft prevent him from utilising this land.

The utilised portions of his farm consist of grazing lands and arable lands. The main farm enterprise today is livestock, with the farming of cattle, sheep and goats. Although Mr Tsengiwe is unsure of the size of his arable lands, the size was estimated to be about 20 hectares. This land is farmed as dryland. About 3 to 4 hectares used to be farmed under sprinkler irrigation until the pump was stolen. The dry land is mainly used for fodder for the livestock, with some commercial and home-consumption vegetable production taking place.

Additionally, the farm has a small orchard with orange and pecan nut trees. Mr Tsengiwe also keeps chickens and pigs around the homestead. These are for home consumption, although he will occasionally sell if approached by a member of the community.

Infrastructure and equipment

The infrastructure on the farm can be summarised as follows:

- The main Tswengiwe homestead, including garages and numerous water tanks. The homestead is in good condition.
- The homestead of Mr Tsengiwe's brother, which is more traditional in nature (wattle and daub / rondaval construction) and is in average condition.
- The homesteads, arable lands and farm boundaries are all fenced. The fencing is generally old but mostly still functional, although requires frequent repairs.
- A number of stock dams, fed by surface water run-off from the rains.

The following equipment list was provided:

- 2 old tractors (1 working, 1 in need of repair).
- 3 disc ploughs
- 1 planter
- 1 disc harrow
- 1 harrow
- 1 cultivator (7 tooth)
- 1 bakkie.

The equipment is old but, except for the 1 tractor, in working condition.

Mr Tsengiwe had a pump for irrigating about 4 hectares, but this was stolen in 1993. He has not replaced the pump, most likely due to his focus on investing in livestock farming for his income.

The production system

Livestock

Until a few years ago, Mr Tsengiwe's herd included 120 goats and 80 sheep. However, he lost all of his sheep and the vast majority of his goats to tick-related disease and is now attempting to rebuild his herd. He has 30 goats and recently purchased a ram for R2000 from a commercial auction in Bedford. He currently also has 35 head of cattle.

Cropping

Crops planted in the past 12 months include wheat (1 hectare), maize, oats, and a range of vegetables (potatoes, cabbage, pumpkin, onion, spinach, beans and peas). The maize and oats are used for stock feed. The vegetables are used for a mix of commercial and home consumption. As of September 2008, Mr Tsengiwe had only 4 rows of vegetables planted in one field, along with the wheat. He indicated he is waiting for the rains, which usually come in October, before planting any further.

Field preparation is done by tractor, which is an important asset and needed in the community. However, Mr Tsengiwe does not hire out his tractor, although he may occasionally do a neighbour a favour in ploughing their lands if the family is experiencing particular hardships. He used to be a member of the tractor association in Rabula, but the association is no longer active.

Mr Tsengiwe has cut back on crop production. This is likely due to a number of factors, including old age and Mr Tsengiwe's limited marketing strategies (see below). Another factor, which Mr Tsengiwe himself identifies, relate to labour problems and the situation of the freehold farmers within the Rabula area. Mr Tsengiwe is clearly reluctant to be reliant on labour from the Rabula area and expresses his unhappiness with the lack of willingness of people from the villages to work in agriculture. He indicated his purchase of a planter for the wheat was a result of his desire to be able to plant without labour.

With his age he is obviously able to do less than previously, hence it is understandable that production on labour-intensive activities has been reduced. For regular work Mr Tsengiwe has the assistance of members of his extended family. When he does use labour from the community he uses traditional methods of compensation, i.e. by providing food and beer for workers, along with a little monetary compensation. He usually 'employs' about 15 people during harvest periods.

Mr Tsengiwe indicated that although small, crop theft does occur. Bigger problems in terms of 'theft' occur with troops of monkeys raiding his fields.

Wheat

Along with other farmers he received assistance from the Department of Agriculture through the Massive Food Campaign in 2006, receiving seed and fertiliser. However, he indicated that this support was not a result of active government initiative, but only after the Rabula Farmers Association had approached the Department and shown the Department that they were already planting wheat on their farms. No assistance was granted beyond the 2006 supplies.

Assistance from the Department of Agriculture

Besides the transitory assistance with the wheat farming, Mr Tswengiwe has received no assistance and has limited contact with extension officers. His perspective on the Department's extension services since the integration of the Ciskei Department of Agriculture into a single Department under Bisho is that the officers have become 'desk clerks' who don't know how to farm.

The Rabula Farmers Association (representing freehold farmers) has asked for fencing for arable lands, fencing for the commonage (which is disputed in terms of rights), a tractor for the farmers in the area, and machinery for threshing and milling of wheat. They have also asked for improved control over the commonage to prevent the informal expansion of housing onto the commonage. To date this support has not been forthcoming.

Marketing

Livestock

Oxen are sold to traders who visit the area. Most sales though are to local households for ceremonial needs. A large livestock unit is sold for between R3500 and R4500 per animal. Mr Tswengiwe is not selling any goats at present, but when his herd was at its optimum size (given at 120) he was selling up to 60 goats per annum.

He does not currently participate in the stock sale days that take place at Keiskammahoek. There used to be stock sale facilities in Rabula during the homeland days, but this has long since stopped and the facilities have been vandalised.

Vegetables

Mr Tsengiwe previously sold vegetables in Stutterheim and King Williams Town, but presently appears to be less interested in, or able to cope with, regional marketing than in the past. His current approach to marketing involves driving his loaded bakkie to town to sell to retailers, but without prior arrangements or negotiations. His experience has understandably been increasingly unsatisfactory in terms of prices offered. On a recent trip to King Williams Town in February 2008, he returned home with his full bakkie load of pumpkins, refusing to sell at the prices offered.

He also used to sell to hawkers in Keiskammahoek. However, he became dissatisfied with these arrangements as hawkers kept trying to negotiate credit with him. Mr Tsengiwe refuses to sell any produce on credit, even within Rabula, citing past experience of such arrangements resulting in financial losses as people default on their debts.

The following Marketing information per crop type is shown in Table 6.3.

Profile B: Mr Njemla

Historical background

Mr Makuza Njemla owns a 14 hectare farm in upper Rabula near the village of Magcumeni.

Table 6.3: Overview of marketing information per crop

Crop type	Price information
Pumpkins	Offered R2 per pumpkin by small retailers in February 2008. Declined to sell and is mostly utilising the crop for home consumption.
Potatoes	Good demand, a 10 kg pocket is sold for between R10 and R15 locally.
Maize	Sold in 50 kg bags or smaller tins. He however has not sold for a while as he utilises the maize as stock feed. He estimates a price of R120 per bag would be attainable.

The wheat is sold to the mill in Fort Jackson (East London).

The family took ownership of the farm in 1980 as part of a land swop organised by the Ciskei government. The Njemlas had land (farm 1431) that was wanted for forestry development, and the current farm was vacant, having been taken over from the previous white land owner in 1966. The Njemla family was therefore persuaded to move as part of a land swop. Although the farm is legally owned by Mr Njemla, the land is considered a family asset, and both his brother and his sister have homesteads on the farm.

The white family that previously owned the farm was the Cookes. During their period of ownership, the Cookes farmed oranges using an irrigation system they established based on access to an off-farm river which fed a holding dam above the land. This dam is still evident today. The Cookes also ran a small farm shop servicing the neighbouring village, which was established from 1938 onwards as Hamans 6, in terms of the Betterment processes.

The Cookes left in 1966 after being bought out by the SANT in terms of the 1936 Native Trust and Land Act. When the Cookes left, the Department of Agriculture removed all the citrus trees and the land was left vacant from 1966 until 1980, during which it was used as commonage, presumably for the new Trust village. During this period the property was extensively vandalised and the buildings, irrigation and other infrastructure destroyed.

The only assistance given to the Njemla's in re-establishing the farm was from the Department of Agriculture, which bulldozed the thorn trees out of the arable lands so the lands could be planted once more.

Profile of the farmer

Mr Njemla is a part-time farmer. His primary occupation was as a teacher, following which he became a school principal. During this period he ran the farm with the help of a foreman. However, when Mr Njemla retired at the age of 65, he carried on farming without a foreman.

Mr Njemla is now 73 years old. As he has gotten older, he has cut back on his farming, and estimates that he currently spends no more than 20 hours per week on farming. He indicated that he would be willing to lease out the arable lands if there was a serious offer. When he dies, the family would select a new family member to run the farm. However, the farm will never be sold as it is the family's home.

The Njemla family could be considered middle class. Both Mr Njemla and his wife were employed by the state and now they receive government pensions. His brother and sister also receive pensions. He has four daughters, two of whom are earning salaries (one is employed in government), and the other two are engaged in *ad hoc* or temporary employment activities.

Farm details and land uses

Mr Njemla is best understood as a smallholder engaging in mixed income generating practices, all of which contribute to the total household income. These household income sources include:

- Employment / pension
- Crop production (vegetables and wheat)
- Tractor services (ploughing and cartage)
- Milling (grinding maize for other farmers/ villagers).
- Chickens (selling eggs and meat)
- Ad hoc cattle sales.

The 14 hectare farm has about 6 hectares of arable land. The lands are farmed as dryland. The only stream on the farm is insufficient to support irrigation, and the previous (off-farm) irrigation network could not be re-established due to a number of factors, including costs, tensions with the villagers around water use, and possible vandalism or theft.

Besides the cropping, Mr Njemla keeps a small number of cattle for his family use. The cattle are not for commercial purposes, although an animal may occasionally be sold to a local family for ceremonial needs. Besides the small amount of grazing lands on the farm, he has access to the commonage lands for grazing.

Infrastructure and equipment

The farm has three homestead areas for the two brothers and sister. The homesteads are large and in good condition, reflecting significant investment. Even for the residential uses, water remains a problem. Besides the many rain tanks, Mr Njemla has a water tank on a trailer which he fills from the river.

Besides the residential buildings, there is a zinc and pole construction garage facility in poor condition, and there is a self-built chicken house and pig sty.

Mr Njemla has significant ploughing equipment. This includes four tractors, all purchased second-hand. Three of the tractors are still in use. The fourth tractor no longer works, but was already in poor condition when purchased. The three functioning tractors are all Massy Fergusons, including two 240s (one 1992 and one 2000 model), and a 2004 290.

The MF 290 was purchased for an amount of R69 000. Mr Njemla paid R15 000 in cash from his savings, and took a Land Bank loan for the remaining amount of R54 000. This loan was repaid within the three-year loan period.

Besides the tractors the following equipment is available:

- 3 ploughs (all in good condition)
- 1 disc harrow (in poor condition)
- 1 disc plough (not in working condition)
- 1 trailer
- 1 hammer mill (old but in working condition).

The production system and marketing

Tractor services

Although not an income derived directly from farming his family's own land, the tractor services are perhaps the most lucrative income generating activity for Mr Njemla. His services appear to be in high demand, and he is apparently the only service provider residing in Rabula.

Ploughing is charged at R450 per hectare, which appears to be an accepted rate for the area. Mr Njemla only ploughs in the Rabula area, and refuses to service needs beyond this. For carting of wood he charges R200 a trailer load, irrespective of the actual distances travelled within Rabula.

Mr Njemla either drives the tractors himself or uses the services of a driver when necessary. The tractors are serviced by a part-time mechanic from Keiskammahoek.[14]

Vegetable production

Vegetables planted include: maize, potatoes, tomatoes, beans, pumpkins, cabbage, spinach and peas. At least half of what is planted is utilised for home consumption, although this depends on amounts planted and harvested. The maize is also used as feed for the chickens and pigs, although a portion is usually sold.

Since going on pension, Mr Njemla no longer uses the services of a foreman for his crops. At the beginning of a season he has no specific plans as to what to plant. He will first gauge the rains and then decide on what to plant and the appropriate quantities. All supplies are obtained from Umthiza in Keiskammahoek.

Those vegetables that are sold are sold off-farm to local villagers. This is mainly because the quantities being sold are fairly small.

Prices achieved in the recent past are shown in Table 6.4.

Livestock

Mr Njemla currently has a herd of 20 cattle. A herder is employed to look after the cattle. Interestingly, the herder is from Lesotho and not a local person. The herder is given accommodation, food and a very small wage.

No small stock are kept due to problems with predators living in the forest, such as lynx and wild pigs.

Table 6.4: Prices (2008) received per crop

Crop	Price information
Potatoes	R20 per pocket
Tomatoes	R4 to R6 per dish (depending on the size of the dish)
Cabbages	R7 to R8 per head
Spinach	R3 to R5 per bunch

14 According to Mr Njemla, this man's situation reflects the collapse of the services from the Department of Agriculture. This mechanic is employed by the Department of Agriculture. Within the Ciskei homeland period he was employed as a mechanic, but as no such posts were allocated to Keiskammahoek, he is now employed as a watchman and does vehicle repairs in his spare time.

Poultry

Mr Njemla buys batches of 50 chicks at the age of 4 days, from a nearby white farmer. He grows the chickens until 3 to 4 months old, at which stage he sells the cocks for meat and keeps the hens for egg production. Once the hens become too old for good egg production he sells these for meat as well.

Eggs are consumed by the family, and whatever is surplus is sold locally.

Milling

Mr Njemla uses the hammer mill to grind maize and wheat for home consumption and as an additional way to earn income. He charges R20 for grinding a 50 kilogram bag of maize. The level of demand for this service is dependent on how good the maize crop is in the area. As the mill is powered by a tractor, there are diesel costs associated with the milling operation.

Conclusions

The two case studies reveal interesting differences as well as similarities. In terms of differences, the farms are considerably different in size, offering very different economic opportunities. The smaller farm (14 hectares) is such that the Njemla's middle class lifestyle is crucially dependent on agri-services (such as the tractor and milling services) and non-farm income, while the larger farm (100 hectares) is such that the Tsengiwes are far more focused on traditional land-based farming activities. The other noticeable difference relates to the farmers themselves: where Mr Njemla appears to have integrated his economic activities with the needs of the local community, Mr Tsengiwe has largely made his activities independent of the wider community. This situation may be partially personality based, and partially related to the different enterprise orientations of their farms.

In terms of similarities both case studies reflected the following situations:

- Both farmers have reasonable non-farm based income sources (employment and then retirement pensions).
- There is evidence that household residence for the wider family remains an important component in the utilisation of the farm (i.e. the land is not just a market commodity). This family-based understanding of ownership of the land is also the basis for succession of one farmer to the next (though whether succession of farming actually takes place remains to be seen and is somewhat doubtful).
- Both farmers have made considerable personal financial investment into their farming operations without any government assistance (e.g. tractors, fencing, breeding stock, etc.).
- Interestingly, neither farmer was prepared to invest in irrigation, preferring to focus on other enterprise opportunities. This may be the result of the cost of irrigation investment, but also appears to be related to other factors which could bring the farmers into difficult social negotiations, especially over water and labour. This meant that, although dryland cropping was practiced, it was regarded as too risky to constitute the primary enterprise.
- Indeed, both case studies indicated problems with labour. While Mr Tsengiwe indicated this directly, there is indirect evidence to the same effect from Mr Njemla's case, for example the employment of a foreigner and lack of any real other employment on the farm. Clearly the social context of smallholders (including and perhaps especially 'freeholders') located within a context of communal land / resources, is important.
- Both farmers indicated that they receive no state assistance, either in the form of grants or extension support. It is also noteworthy that the nature of assistance that farmers are seeking is different to that of the group-based projects. The individual farmers are firstly seeking support in developing their enabling environment (roads, fencing of the commonage and along the roads, management of the commonage); and secondly assistance in equipment / support that can be pooled for their operations (shared milling and tractor equipment under the auspices of the Farmers Association).
- In the same vein, the support that was briefly received in the form of subsidised seeds and fertilisers for the wheat farming, appeared to be welcome, but was not pri-

mary on the list of needs considered. This is probably because the farmers recognise that without the milling infrastructure the planting has more limited financial opportunities. Furthermore, the farmers engage in a diverse range of cropping types, and any 'massive' food mono-crop focus runs counter to their diversification strategies.

In conclusion, it is also important to note that both farmers are over 70 years old. However, with adaptations to their farming practices they are both still active and able to generate an income out of their farms.

References and sources

Interviews:

Mr Makuza Njemla (farmer).

Mr Mthobi Tsengiwe (farmer)

Rosalie Kingwill (researcher)

Secondary material:

De Wet C: (1995) Moving Together Drifting

Apart, Witwatersrand University Press.

Kingwill R (2008) Rabula: Patterns of Land Ownership, in Parts and Parcels: Land administration in South Africa and the disjuncture between formal land management system and customary and offregister systems, draft chapter for doctoral thesis, University of Western Cape.

Documentation:

Deedsweb Enquiry Farms 1360, 1410, 1438, 1440, 1441, 1439

Census 2001 Stats for Rabula enumerator areas