

Goat production in the Northern Cape: What are the impacts of  
farmer training?

A thesis submitted in partial fulfillment of the requirements of the degree of  
Masters of Business Administration

Rhodes University (Rhodes Investec Business School)

By

Roberta Burgess  
G93b9217

July 2009

Supervisor: Prof Doreen Atkinson

## **DECLARATION**

I, Roberta Burgess, hereby declare that this research thesis is my own work, that permission was granted by the community of Campbell, Northern Cape for me to use there situation as a case study, that all reference sources have been accurately reported and acknowledged, and that this document has not previously, in its entirety or in part, been submitted to any University in order to obtain an academic qualification.

**R Burgess, July 2009**

## Contents

3.6	Motivation .....	4
1.2	Commercialisation of Goats Programme.....	10
1.2.1	Background.....	10
1.2.2	Organisational Framework .....	11
1.2.3	Institutional Framework .....	12
1.2.4	Infrastructural Framework .....	12
1.2.5	Kalahari Kid Corporation® (KKC).....	13
1.2.6	Skills Development Training.....	15
1.2.7	Learnership Training .....	16
1.3	Objective of the study .....	18
1.4	Thesis Outline .....	18
Chapter 3:	Research Methodology .....	41
3.2	Research Aims.....	42
3.3	Research Paradigm.....	42
3.4	Case Studies .....	44
3.6	Campbell .....	46
3.7	<i>Researcher's Role</i> .....	47
3.9.1	<i>The Questionnaires</i> .....	51
3.11	Ethics in research.....	55
3.12	Methods of analysis.....	57
3.14	Conclusion .....	57
4.1	Introduction .....	59
4.2	Campbell Co-operative .....	62
4.3	Questionnaires.....	63
Chapter 5:	Conclusion and recommendations .....	97

## 1. Introduction

### 3.6 Motivation

After many international sessions, meetings, conferences and debates the world is faced with the Millennium Development Goals (MDG), resolutions taken at the Millennium Summit where world leaders committed themselves to eight goals to be attained by 2015 ([www.un.org/millenniumgoals/goals.html](http://www.un.org/millenniumgoals/goals.html)). South Africa faces five of these challenges to comply with the MDG. These are:

- The eradication of poverty and extreme income and wealth inequalities,
- The provision of access to quality and affordable basic services to all South Africans,
- The promotion of environmental sustainability,
- A sustained reduction in the unemployment rate, and
- The attainment of sustainable high growth rates.

These challenges also form part of the Provincial Growth and Development Plan of the Northern Cape, and the Strategic Plan of the Department of Agriculture, and Land Reform (DALR) of the province.

Even though the environmental conditions of the province are rather harsh (arid to semi-arid conditions), agriculture still contributes about 31,8% to the GDP. This figure however, is sensitive to price changes and droughts ([www.tradeinvestsa.co.za/news/982513](http://www.tradeinvestsa.co.za/news/982513)). Livestock farming is the most common enterprise in the Province, with small stock such as goats and sheep being the most prominent. These enterprises are however of a dual nature, namely commercial and emerging, just like the rest of the agricultural sector. In the commercial livestock sector, goats make up less than one percent, comprising mainly of Angora goats for mohair production and Boer goats for meat production, and is found mainly in the Karoo and Bushveld regions (Directorate: Animal Production, 2007, Roets and Kirsten, 2005: 187). The majority of goats however, are found in the non-commercial sector.

Goats and small ruminants are the most popular livestock among the rural poor and resource limited masses of the world (De Vries, 2008: 221). For the past 7000 years, goats have played multiple roles in supporting humans either with milk, meat, skins or for products such as cheese or cashmere. They are kept mostly as part of a mixed flock by nearly all pastoralists in Africa (Peacock, 2005: 179).

Goats feed on many different products, are both grazers and browsers, and are among the most adaptable livestock animals and as such offer a form of food security to the poor (Peacock, 2005: 179, De Vries, 2008: 221). As droughts become more frequent, most pastoralists are diverting from cattle ranching towards keeping small ruminants, especially goats. These animals are often blamed for the degradation of the veld. They are however, the only livestock that can survive on denuded and trampled veld which has been overgrazed by cattle and mismanaged by humans, due to excessive ploughing (Peacock, 2007: 3). Goats are also relatively cheap to acquire and reproduce quickly, giving the farmers access to cash to purchase large livestock in good years (Peacock, 2005: 179, Seo and Mendelsohn, 2007).

In the United States of America (USA) there appears to be an increase in goat production for meat. This can be attributed to an increase in the demand for goat meat, as well as in an interest in ecologically sound ways of vegetation control. The market for meat goats in America is still largely based on the increasing population of Hispanic, Muslim and Caribbean people. America used to export its goat meat to Mexico, Canada and the Caribbean in the past, but today, with the migration of other cultures to America, it does not produce enough for its own consumption. American farmers are also being attracted to farming with meat goats as the goats fit in well with other livestock farming, especially cattle, and are even used in mixed operations to keep noxious weeds and bush under control in pastures (Coffey, 2006).

In South Africa, the 2006 statistics on goat numbers tallied at 6,8 million, with approximately 63% of the animals found in the informal sector. Analysing the statistics of animals slaughtered at registered abattoirs, assuming that the population remains fairly steady at about 7 million and that a conservative production ratio (i.e. between production and culling) is maintained, it is estimated that about 1 million goats are slaughtered annually in the informal sector (Ramsay and Donkin, 2000).

The FAO statistics (Table 1) indicates that for the period 1994 – 2006, an average of 150 000 tons of sheep and goat meat was produced in South Africa. Since this is a measure of the formal sector, one can assume that this was made up mostly of sheep meat as the domestic regulated goat meat market is very small. The nature of the domestic goat market makes it difficult to give an accurate estimate of how much meat is sold annually. Goat meat is predominantly sold on the informal market, with the majority of sales taking place during April (17%) and December (7%) and the rest of the year only 7%. (Directorate: Animal Production, 2007). This informal market is mainly in Kwazulu-Natal and in the high density urban areas.

**Table 1. Production of sheep and goat meat per 1000 tonnes for the years 1994-2006 (FAO statistical yearbook: [www.fao.org](http://www.fao.org)).**

<b>Production of sheep and goat meat</b>						
Statistics Division FAO 2009		<b>PRODUCTION OF SHEEP AND GOAT MEAT</b>				
FAO Statistical Yearbook		<b>(1000 tonnes)</b>				
<b>2007-2008</b>		<b>1994-1996</b>	<b>1999-2001</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
<b>Somalia</b>		57	73	92	92	90
<b>South Africa</b>		145	147	156	152	153
<b>Spain</b>		240	246	245	238	242
<b>Sri Lanka</b>		3	2	2	2	2
<b>Sudan</b>		228	263	284	334	334

In the commercial sector, the marketing of meat follows different paths from the farm to the consumer. In this sector, there is a well organized system with physical and institutional infrastructure, capital resources, institutions, export and import markets, set quality control standards and external support. In contrast, the small scale, non-commercial farmers mainly market their animals at live animal auctions, carcass auctions, tuck shop sales (the term given to selling to speculators) and transactions by means of Liaison Services (Directorate: Animal Production, 2007). This informal system does not have set qualities and standards so the buyers can manipulate the farmers, resulting in the market price fluctuating. Farmers are forced to sell their animals out of necessity, rather than choice (Peacock, 2005: 180; Roets and Kirsten, 2005: 187).

As in many Western Countries, traditional and religious groups (e.g. Muslims and rural dwellers) are the predominant consumers of goat meat in South Africa. Prior to 1994, marketers ignored the importance and size of this market both locally and abroad. This resulted in the lack of marketing and research institutions that service the sector being developed or established. This was also the case in many Western Countries. With the industrialization of agriculture during the 20<sup>th</sup> century, cattle and other livestock development progressed in the Northern Hemisphere, while less and less money was being invested in research to improve the genetic make-up of goats and the development of their production and management (Dubeuf, Morand-Fehr and Rubino, 2004).

Today, goat's meat and milk is considered healthier than mutton, beef and pork. In the light of these new nutrition research results, as well as the advancement of information technology, the world markets, especially the east, opening to trade in different commodities, goat farmers may see an increase in the demand for goat meat and its products. Traditional people are also migrating to different corners of globe and many countries are seeing an increase in the demand for goat's meat, milk and goat products (e.g. leather, cashmere). In the developing world, goats offer their owners a wide range of products to sustain themselves (Table 2.).

**Table 2. Goat products and their services**

<b>Products</b>	<b>Services</b>
Meat (raw, cooked)	Cash income
Milk (fresh, sour ,yogurt, cheese)	Food security
Skins /leather (clothes, storage containers, thongs)	Gifts / cash income
Hair (cashmere, mohair etc)	Cash/ loans
Horns	Religious rituals
Bones	Judicial role
Manure (crops / fish)	Draught power / fuel medicine

[sourced from: Peacock (2005: 180)].

Peacock (2005: 185) reported that goats were at last coming into their own as a species worthy of serious investment due to the new poverty-focused agenda that professes to address the needs of the rural poor. Dubeuf, et. al. (2004: 172) shares the same sentiment as Peacock, that goats have contributed significantly to sustaining and feeding the rural poor of the developing world, so formalizing and commercializing the market could assist the farmers with uplifting their livelihoods. So if the basic knowledge in goat production has sustained the rural poor what are the constraints that prohibit commercialization?

Tefera, Gayathri, Emmanuel, Clerkson, Margaret, Chrispen and Oneile (2004) working with communal farmers in the Sekhukhune District of the Limpopo Province reported some of the following reasons farmers are unable to commercialise. These include;

- Farmers' objectives for goat production were not for the formal market as they never encountered goat meat on the shelves in stores or butchers and therefore did not perceive it as a product that could be sold to a market.
- That the socio-traditional aspects and peoples perceptions of goat meat needed to be changed through a market drive and awareness campaign (people still felt goat meat has an odour)

- Lack of suitable facilities
- Farmers lacked access to proper grazing due to over grazing so animal quality was poor
- Farmers lacked collateral to acquire loans to assist with purchasing additional inputs
- Theft, disease and predators were causing farmers severe losses they could not afford.

Ahuya, Okeyo, Mwangi-Njuru and Peacock (2005: 202) however also feel that these rural farmers need frontline extension officers who have adequate knowledge in goat husbandry in order to assist the farmers. They must also be able to simplify the information without diluting the meaning, as most farmers are illiterate. This also applies to the activities of the extension officers working with the emerging farmers in South Africa, however many of the extension officers are young and lack the necessary skills and knowledge to be of assistance to the farmers. The Campbell farmers, just like the Kenyan farmers, need their problems investigated through research (Ahuya et. al. 2005). The Campbell farmers report high mortality rates as well as losses through predator activities. This directly impacts on their livelihoods as one animal lost, is one less to sell.

For commercialization of the goat industry to materialise for South African producers, Roets and Kirsten (2005: 196) report that assistance must be given to farmers to form co-operatives. These farmers would also need proper and accurate marketing information, assistance to acquire proper infrastructure and the formation of institutions that link them to the market place.

Knowing the benefits that goats offer, many aid agencies are using goat projects as a means to promote local development, in many parts of the world and more especially Africa (Peacock, 2005: 180). These aid agencies assist poor, rural families and especially women to successfully raise goats as a means of improving their income, social status and even their local environment (Peacock,

2005: 180, De Vries, 2008: 222). Goats are known to be very adaptable animals and can stand a wide range of climatic conditions, and even small scale production of these animals are a benefit to many rural and peri-urban families world wide (De Vries, 2008: 221). In light of these factors, as well as scientists' predictions that 87% more meat will be eaten worldwide by 2020, the South African Government decided to assist the many informal small livestock, especially goat farmers to become organized and to structure the goat industry. The Department of Agriculture and Land Reform (DALR) therefore decided to initiate a programme that will assist the small, non-commercial or emerging farmers to become part of the economic growth opportunities offered by goat production (Gebremedhin, and Gebrelul, 1992: 46, Roets and Kirsten, 2005: 188, Peacock, 2004 and 2005).

In the past, external factors prevented the development of the small scale non-commercial goat farmers and goat meat industry into a formalized mainstream industry. This included a lack of appropriate research, markets and access to information (Ahuya, Okeyo, Mwangi-njuru and Peacock, 2005: 197, Roets and Kirsten, 2005: 188). Roets and Kirsten (2005: 188) suggest that to grow the industry, commercialise it and to assist these small farmers, co-operatives should be formed, with the farmers contracted to produce goats for the industry. These sentiments are also expressed by authors such as De Vries (2008) and Peacock (2004 and 2005). In order to do this, the Northern Cape Department of Agriculture and Land Reform (DALR), introduced the commercialization of goats programme.

## **1.2 Commercialisation of Goats Programme**

### *1.2.1 Background*

In 2004, the DALR held a workshop with different stakeholders and role players to discuss the status of goat farming in the Northern Cape Province. This

workshop highlighted the gaps within the industry and the constraints faced by the emerging livestock production sector. This resulted in initiatives where the DALR decided to provide the necessary organizational, institutional and infrastructural framework within which the emerging goat farmers could have access to quality livestock, training in production practices and be assisted to access markets for their animals more readily (Directorate: Animal Production, 2007).

### *1.2.2 Organisational Framework*

This initiative includes assisting farmers in organizing themselves to form co-operatives at different levels, such as at the village and / or district. These co-operative members are then trained in organizational development and the potential benefits of co-operatives. The reason for forming co-operatives are to give the farmers a “collective voice” to bargain for better prices when selling their animals or when having to purchase production inputs, such as veterinary products or feed. Their members are also empowered and encouraged to become active members of the livestock and red meat producers associations in the Province. The co-operatives are informed about the different business ventures in the value chain of livestock production, and encouraged where possible, to seek entrepreneurial opportunities in the different sectors. These opportunities abound in the transporting of their animals to the auctions or in the production and distribution of feed, or the distribution of veterinary products. An opportunity also exists where the co-operative can arrange local auctions where their members will be able to sell their animals to other farmers. One of their duties should be to impress on their members the importance of registering their identification markings as well as assist their members to mark their animals. These identification markings assist with the traceability of the animals along the value chain. It is also a benefit to the farmer with keeping records and assists for animal identification with stock control and theft.

### *1.2.3 Institutional Framework*

As a part of the project, co-operatives each receive seeding stock from the DALR in the form of 100 ewes and 3 rams. Selected members of these co-operatives receive training in the basics of goat production practices, animal health, life skills and basic finance and bookkeeping skills. To assist farmers with marketing their products, the Department of Agriculture and Land Reform with public and private partners formed the Kalahari Kid Corporation (KKC) ®. This organization (KKC) was tasked with establishing an organized and supported system of marketing of the goats and goat meat of the co-operatives and emerging farmers. They are also to assist the farmers with establishing linkages with abattoirs and agri-businesses for the processing of their goat products.

Heifer International and FARM Africa are two non-government organisations (NGO) with similar projects, working in parts of Africa and South Africa. They provide improved livestock and training as part of an improved farming system to assist farm families to improve their lives (De Vries, 2008). FARM Africa refers to it as their “Goat Model” (Peacock, 2007:1). In this model they concentrate on improving the productivity and economic value of the animals of rural villagers.

### *1.2.4 Infrastructural Framework*

At the workshop in 2004, it was also proposed that the Koopmansfontein Research Station, 110 km Northwest of Kimberley, in the vicinity of Delportshoop, Northern Cape (Appendix 1, Map 1) be developed as a centre of excellence, where training and research in small livestock development can take place. The objectives of the centre are:

- That it will be a place where farmers interested in small livestock production in the province can develop their production skills while receiving the necessary training and young researchers can develop as specialists in applied research.

- To provide the academic and physical environment to foster agricultural training at the highest level, and thus to be pivotal players in the knowledge driven economy, through targeted training and research in small livestock production suited to the Northern Cape environment.
- To create an educational environment that is proactive and innovative in the training needs of the farmers, to ensure that the farmers meet the changing demands of the market and the environment in which they farm.
- To assist the learners, farmers and researchers to foster partnerships with industry, other tertiary institutes, in the development of better farming practices and enhanced genetic material that is suited and adapted to the Northern Cape environment.

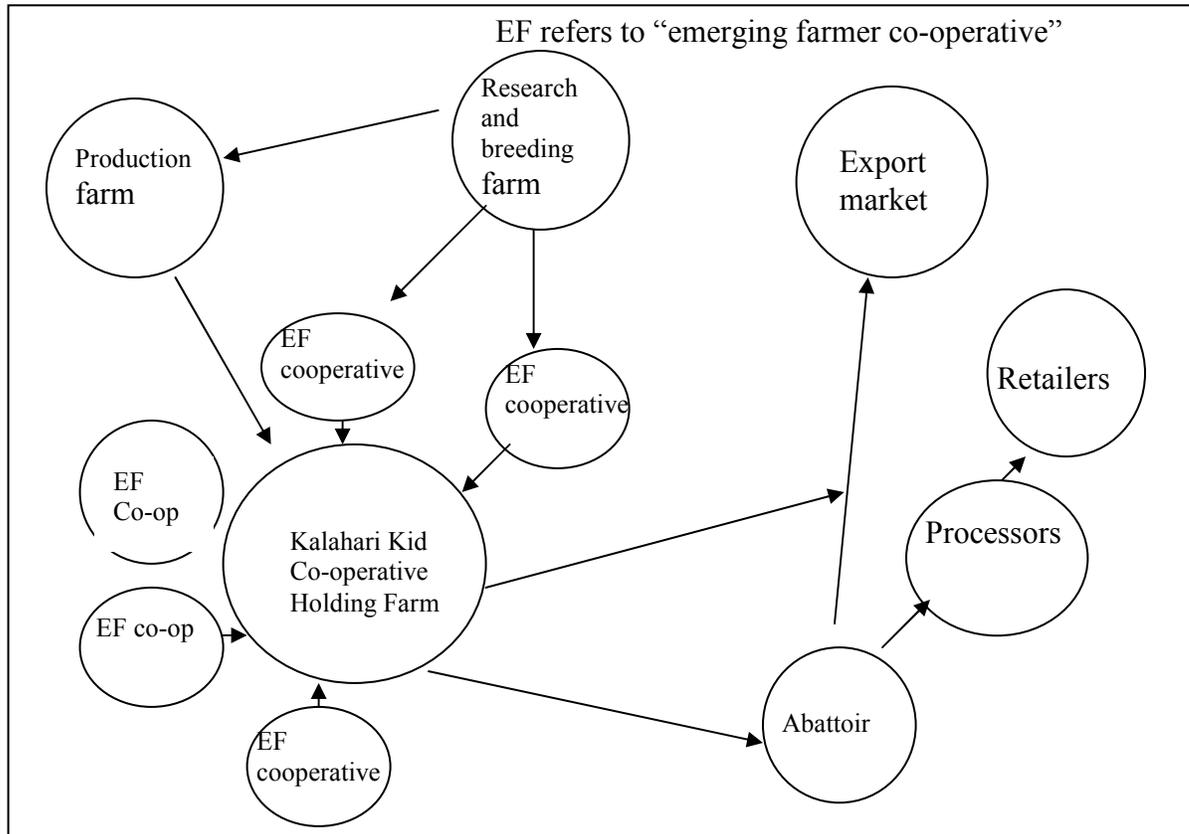
Here, both the physical and institutional Infrastructure will be developed for young emerging farmers, junior researchers and specialist researchers to have access to an outdoor laboratory (the veld and animals) and research facilities. Specific goat research projects in genetics, nutrition, diseases, veld management and general animal production will be developed and pursued on the farm so that farmers can benefit from the results obtained. Other research farms managed by DALR will be used as production farms for the reproduction of the improved genetic material. The emerging farmers and co-operatives will have the opportunity to purchase these improved animals from the DALR, at a subsidized rate, via the livestock improvement programme (LIP) initiative.

#### *1.2.5 Kalahari Kid Corporation® (KKC)*

The DALR, with the assistance of private partners and funding organisations established the Kalahari Kid Corporation ® (KKC; [www.Kalaharikid.co.za](http://www.Kalaharikid.co.za)). The business of KKC is to facilitate the empowerment of the emerging goat farmers through training, offering assistance with marketing, processing and exporting of

goats and goat meat products. KKC will work with farmers (referred to as contract farmers) who are specifically contracted to produce for them, according to their (KKC) norms and standards. The following figure is a diagrammatic representation of the KKC supply chain structure.

**Figure 1: Kalahari Kid project supply chain**



[Source: Status of the South African Goat Industry Report, 2007:4]

Part of this initiative and the institutional framework is the training of the farmers. The DALR together with KKC provide training to farmers and members of the co-operatives. Two different types of training are provided, namely skills development training and learnership training ([www.Kalaharikid.co.za](http://www.Kalaharikid.co.za)).

### 1.2.6 Skills Development Training

This training is based on “the Kalahari Kid Contract Grower’s Manual” and is facilitated by a trainer employed by KKC. KKC has a subsidiary referred to as Kalahari Kid Training Company. This company is accredited by the AgriSETA, ([www.AgriSETA.co.za](http://www.AgriSETA.co.za)). AgriSETA (Agricultural Sector Education and Training Authority) organizes and facilitates agreements on behalf of the Department of Labour and manages all the sub-sectors demarcated to primary and secondary agriculture. It also monitors and controls all training (skills and learnership) and service providers of training, which service both primary (production) and secondary (agribusiness etc) agriculture.

Skills training is occupational based learning programmes, which focus on practical skills, based training. Learnerships on the other hand, are learning programmes that lead to an occupational qualification. It combines theory and practice.

The training offered by KKC includes the following;

- General Goat Management Training as regards product specifications and “natural” quality requirements
- Contract arrangements: Farmers are taught what is required to qualify as a contract grower. They are taught about the market standards and specifications required from them, and ultimately KKC. They are also trained in what the legal requirements are of a co-operative and assisted with registering their co-operative as a legal entity.
- Purchase procedures ([www.kalaharikid.co.za](http://www.kalaharikid.co.za)). In order to sell their goats’ meat and products using the KKC label and brand name, the farmers have to comply with certain requirements, e.g. traceability from birth to final product. Farmers are taught about the different requirements and how to comply.

This training is ongoing and is done on-farm, meaning that farmers are trained on their farms or on a farm close to their community, village or homes. Farmers' basic knowledge and understanding of what is taught during the training is assessed according to the AgriSETA, National Qualifications Framework (NQF) level 1, unit standards for goat production (Appendix 2). These assessment criteria are based on the rules and regulations as stipulated in the KKC grower's manual. The assessment and its outcome are governed by the SETA and any disagreements with the outcome of the assessment can be lodged with the Education and Training Quality Assurance (ETQA) (Appendix 3). Learners are assessed as either competent or not yet competent in the specific unit standard or skill.

#### *1.2.7 Learnership Training*

This training follows the requirements of the AgriSETA Goat Management Training Course NQF 1. This course lasts for about ten months to 1 year, or 1200 hours of learning, and provides the learners with a National Certificate in Animal Production (goat specialization). This course consists of a three month, on-station theoretical and practical training programme at Koopmansfontein Research Station while the rest of the time is part of experiential learning on a farm. The training includes the KKC training aspects as mentioned above as well as some of the following modules, namely, goat management training, life skills, business and finance training. Each of the three sections of the skills training consists of specific unit standards.

*A Unit Standard is a registered statement of desired education and training outcomes and their associated assessment criteria together with administrative and other information as specified in the NSB Regulations. Unit standards are the building blocks of the outcomes-based education and training system for which the NQF stands (source: [www.wrseta.org.za](http://www.wrseta.org.za) ....).*

The goat management training includes unit standards on basic goat production, the breeds, breeding methods, their general management, nutrition and housing. The life skills training includes, unit standards that should equip the learners with the basic knowledge in corporate identity, conflict management, communication and how to deal with cultural diversity. The business and finance unit standards are based on general marketing management, financial management, bookkeeping and general management ([www.kalaharikid.co.za](http://www.kalaharikid.co.za)). At the end of the training the learner is assessed in the critical outcomes of the unit standards, which is in turn moderated in order for the learner to qualify for the above mentioned certificate ([www.AgriSETA.co.za](http://www.AgriSETA.co.za) and [www.kalaharikid.co.za](http://www.kalaharikid.co.za)) (Appendix 2 and 3).

Within the commercialization of goats' programme are other initiatives such as the livestock improvement development programme. This programme allows emerging farmers to purchase quality livestock from government research stations, at government rates, in order to improve the quality of their own stock.

All of these initiatives, however, have one disadvantage, and that is that like similar initiatives in other provinces, very few youth are involved (Mahanjana and Cronje, 2000). Unfortunately, most youth still associate farming with the painful experiences of the apartheid era, where non-whites were the farm labour, or if farmers they were mainly small scale or subsistence. The youth attach a stigma to farming: "to farm is to suffer" (Catling, 2008: 57). Many youth migrate to the urban area in search of work that offers a salary and ready cash, either on a weekly or monthly basis. Some might work for commercial farmers, but do not see themselves as being able to earn a living from farming. Government has tried to encourage the youth to get involved in agriculture by establishing projects under the programme YARD (youth in agriculture and rural development). In the Northern Cape, very few such projects exist.

### 1.3 *Objective of the study*

The aim of this study is to evaluate whether the training the farmers have received, has had an impact on their farming enterprises and ultimately their livelihoods.

The aim, will be achieved by trying to answer the following questions, namely

- \* Who are the farmers who received training?
- \* Who trained them and what type of training did the farmers receive?
- \* Has the training made a difference in their goat production practices?
- \* How have the farmers' methods of goat production changed?
- \* What other forms of training or knowledge acquisition do farmers engage in?
- \* Has the training ultimately had an impact on livelihoods?
- \* Have the farmers who received training influenced the other farmers?

A case study of the members of the co-operative in Campbell, Northern Cape (see Map, Appendix 4) was pursued using participatory methodology as well as in-depth interviews.

### 1.4 *Thesis Outline*

The thesis is divided into five chapters. Chapter 2 gives a brief discussion of some of the literature and authors of evaluation research, which is the type of research design explored in the study. Evaluation research has been widely written about in the past 20 years by many researchers working in different fields

of study. The literature review explores topics of evaluation and evaluation research and its history. The different paradigms of evaluation research are also briefly discussed. The concept of programme evaluation is introduced, and how it originated and established itself as a methodology is discussed. Different approaches and methods to evaluate programmes have been developed through the years. How they are used in evaluating programmes is addressed. Finally, the concept of participatory evaluation and its methods are explored. The concepts of quantitative versus qualitative research are briefly described and the rationale for triangulation, used to verify data, is discussed.

In chapter 3 a brief description of case study methodology is given. The different participatory methods used in the study to seek answers and clarification to the questions posed, is briefly discussed.

Chapter 4 discusses the findings of the fieldwork. Chapter 5 deals with the concluding remarks on whether the objectives of the study have been realised and the research questions answered. As part of the concluding remarks, recommendations will be made to the Department of Agriculture and Land Reform with respect to the outcomes of the evaluation. In turn, the DALR will be able to advise Kalahari Kid Corporation on how to improve and structure their training programmes to add value to the livelihoods of the farmers. This chapter will also recommend to DALR what important research questions remain to be addressed.

## **Chapter 2**

### *2. Literature Review*

#### *2.1 Background*

The Department of Agriculture identified a number of programmes to assist the government with reaching the goals of poverty alleviation and food security. These include programmes in the different sectors of crop and livestock production and natural resource utilization. One such programme within the livestock sector is the massification of livestock. South Africa is a net importer of red meat and one of the objectives of the livestock strategy is to reverse this trend and make the country a red meat exporter. While massification in itself means to increase, it is however not the only context in which it is being used. In the Northern Cape, which is arid to semi-arid, the term “massification” refers to improved quality and better production practices rather than a massive increase in animal numbers. In order to do so the Department of Agriculture and Land Reform realised that emerging farmers lacked the technical and scientific knowledge of modern production practices. Prior to 1994, non-white farmers were excluded from direct access to technical agricultural knowledge, improved genetic material, adequate land, market information and from marketing their products in the formal sector.

In order to address these issues, the project to commercialise goat production was implemented. In the Northern Cape, both skills and learnership training for the emerging farmers, forms part of the project. This training has been implemented and numerous members of co-operatives throughout the province have received training. The aim of this research project is therefore to evaluate the training project to assess whether it is having an impact on the livelihoods of the recipients of the training.

The research project therefore is based on evaluation research. The following is a brief review of the literature to give an understanding of what evaluation and

programme evaluation research is and an understanding of the different evaluation approaches, traditions, methods and paradigms.

## 2.2 *Introduction*

The intention of this chapter is to provide the reader with a background to some of the relevant literature on evaluation research and programme evaluation. The purpose of the review is to put into perspective the research methodology used during the programme evaluation, with regard to the training project of co-operative members, of Campbell, Northern Cape, in the commercialisation of goat's programme.

## 2.3 *Evaluation and Evaluation Research*

Briedenhann and Wickens, (2005: 86), refer to the quote by Patton, from Halcolm's *The Real Story of Paradise Lost*, where he suggests that evaluation was born on the eighth day after the creation, when the archangel posed the following questions: "God, how do you know that what you have created is very good? What are your criteria? On what data do you base your judgement? Just exactly what results were you expecting to attain? And aren't you a little close to the situation to make a fair and unbiased evaluation?"

This quote clearly illustrates the many aspects of evaluation and the difficulty one has with defining it. Some authors define evaluation as the process of determining whether the objectives of a process, programme, project, or as in the case of educational evaluation the criteria and performance measurement have been met (Nevo, 1983: 118, Worthen and Sanders, 1991: 3) or whether an impact has been made or the outcomes achieved (Worthen and Sanders, 1991: 5, Vaessen and de Groot, 2004: 1, Potter, 2006: 84). Nevo (1983: 118), reports

that consensus has been reached regarding the definition for evaluation, “as the assessment of merit or worth or as an activity comprised of both description and judgement.” On the other hand, Calder (1995: 13) feels that evaluation means different things to different people and as such the definition “depends on one’s philosophy of education and how one intends to use the acquired information.”

#### 2.4 *History of Evaluation Research*

Evaluation and evaluation research appears to have developed as a need to answer questions within the field of education. Since the development of formal education, religious and/or political beliefs dictated how and what would be included in education (Worthen and Sanders, 1991: 4). Evaluation and evaluation research developed in the early 1900’s and gained momentum as the tools and methods to measure student performance was developed. This was enhanced and received more attention in the mid 1900s when the Soviets successfully launched Sputnik I. This event by the Soviets sparked a reaction in the United States with the Government calling for a review of their mathematics and science education system. This resulted in large amounts of money being spent on different education programmes to improve the development of learners in both Mathematics and Science. With this came the demand to know how the money was being spent and whether these investments were being effective in bringing about improvement in the quality of learning and the change which was expected. President Kennedy was instrumental in implementing a system where all schools and programmes receiving federal grants needed to submit an evaluation report. This resulted in teachers and trainers having to evaluate their programmes. The results were questionable as none had received training in how to evaluate or even what methods to employ (Altschuld and Thomas, 1991: 23, Worthen and Sander, 1991: 4, Potter, 2006: 87). At this stage, evaluation was in its infancy and few if any methods existed, no previous studies had been done which could act as a guide, and no curricula on evaluation had been developed so no one was really qualified in the field of evaluation. This resulted

in researchers from the social sciences being called upon to assist. This resulted in different research methods and standardized tests being implemented but that the results obtained were inadequate.

Scholars in education were the first to respond with the development of different models. Initially, Donald Kirkpatrick introduced a four-level model which he developed for evaluating training programmes. This model has four levels of evaluating training programmes namely, reaction, learning, behaviour, and results (Kirkpatrick 1977: 9). The four aspects are:

- the reaction learners have to the training programme,
- how much learning took place,
- whether the learning by the trainees changed their behaviour and
- what the overall results were of the training programme (Catalanello and Kirkpatrick, 1968; Kirkpatrick 1977, 1979 and 1996).

In order to evaluate the four aspects learners were requested to fill out questionnaires which relate to the four aspects dealt with above. The objective of the model was to stimulate training providers to evaluate their training. It was also to give them some form of guidance on how to do it, and how to analyse the findings (Kirkpatrick, 1979: 92).

With the development of this model, Kirkpatrick and colleagues hoped that trainers and programme directors would be stimulated to use it to evaluate their training programmes and to use the results (Kirkpatrick, 1979). When implementing the model, programme directors and training facilitators or implementers needed to seek evidence that change had occurred. Finding the evidence for the effectiveness of a training programme is normally easy however establishing that the training resulted in the change is not always easy. In other words it is not easy to measure proof for the change (Kirkpatrick, 1977: 12).

Even with different models for evaluation being proposed and used, very little of the results obtained were implemented to improve the programmes. This lack of

changes to the training programmes was interpreted as weaknesses in the methods used to assess accomplishments as well as in the training of the evaluators (Altschuld and Thomas, 1991: 23; Worthen and Saunders, 1991:5). This problem was remedied by requesting the support of technically skilled researchers in fields such as psychology, sociology and others technically trained in research to assist with the evaluations. Most of these researchers were however trained in scientific methodology where a randomised, experimental paradigm was implemented. These methods were solely a positivist approach, much like the Kirkpatrick four-level model, where data could be quantified (Rossi and Wright, 1984; Fetterman, 1988; Worthen and Saunders, 1991; Catalanello and Kirkpatrick, 1968). Evaluations were based on experimental versus control groups with specific objectives which were measured accordingly. The results obtained using this method however did not have clear outcomes as it was not easy to differentiate how much of the result was due to the training and how much was due to other factors that impacted upon the training and the students. Numerous debates and discussions by researchers on the strategies used for evaluating programmes evolved. This led to the revision of strategies, the development of new methodologies as well as the training of evaluators. This was the dawning of a new era where evaluation was being institutionalised in the American Education System, and a new profession was emerging (Scriven 1971-72: 183; Altschuld and Thomas, 1991: 24, Mervin, 1985; Fetterman, 1988: 18; Worthen and Saunders, 1991:7).

With these developments, evaluation research shifted from being represented purely by a positivist culture to one of a “multidimensional, pluralistic, situational and political activity that encompasses much more than simple application of the skills of the empirical science” (Fetterman, 1988: 18; Worthen and Saunders, 1991: 5). Evaluation grew as a discipline. It was now offered as a subject at universities and numerous evaluation centres emerged. The 1970s and 1980s even witnessed the emergence of professional societies, associations and networks which were dedicated to refining evaluation methodologies. The field

was maturing and was being driven by the demand for accountability on how funding was being used both in the United States as well as their projects sponsored internationally. The field of interest broadened into the social sciences and applied researchers (O'Sullivan, 2004).

However, the momentum dwindled in the 1980's, with the funding for social and educational programmes being reduced (O'Sullivan, 2004: 7). This resulted in numerous qualified evaluators now being available with less money available for projects to be evaluated. The field now became competitive with programmes having to provide proof of their outcomes and impact and programme directors being able to choose who to employ to do the evaluation. A boom in the American economy in the 1990s saw a reintroduction of money being spent on social programmes both locally and in countries sponsored by them. These programmes came with the demand to prove accountability, increasing the need for the evaluation of these programmes. This was the dawning of programme evaluation as a professional field with developed curricula and professional training offered at tertiary institutes. Professional organisations were being established world wide which was guided by professional criteria and standards (Scriven 1971-72: 183; Nevo, 1983 124.; Fetterman, 1988: 18; Worthen and Saunders, 1991: 7; O'Sullivan, 2004: 7). Today South Africa also boasts a professional society for programme evaluators, namely the South African Monitoring and Evaluation Association ([www.samea.org.za](http://www.samea.org.za)).

## 2.5 *What is Programme evaluation?*

There are numerous definitions of programme evaluation. Firstly, programmes are a collection of activities or projects which are normally implemented to meet certain criteria with specific outcomes or to solve identified problems (Babbie and Mouton, 2006; 334), while evaluation means to “estimate the value or worth of something.” In the early sixties, programme evaluation was defined as information for decision-making. Later, in the education circles, evaluation was

used to assess the effect of the methodology used, by testing the students' knowledge but there was no evidence whether what was taught had an impact. Terre Blanche and Durrheim, (2002: 211) quote Posavac and Carey as defining it as "a collection of methods, skills and sensitivities necessary to determine whether human service is needed and likely to be used; whether it is sufficiently intense to meet the need identified; whether the service is offered as planned; and whether the human service actually does help people in need without undesirable effects." Programme evaluation is multi-disciplinary, "evaluation research which focuses on the effectiveness of a particular programme at a particular place in a particular time frame (O'Sullivan, 2004: 9)." Babbie and Mouton (2006: 335) further defines it as "the use of scientific methods to measure the implementation and outcomes of programmes for decision making."

Programme evaluation has been the fastest growing social science field of research since the 1980's, with governments and corporate organisations investing and sponsoring social programmes both locally and in developing countries (Terre Blanche and Durrheim, 2002; 211). During the 1990's, an awareness grew in South Africa as donor agencies needed evaluative evidence to account for funds they invested in projects and to ascertain the changes or impacts these social projects or programmes were having on the lives of the project members. This gave rise to an increase in the demand for programme evaluations and the training of evaluators (Terre Blanche and Durrheim, 2002; 210).

## *2.6 Different types of evaluations*

Programme directors, project managers, donors, governments, and economists all have different purposes for evaluating their programmes e.g. is the project properly managed? Is it cost-effective? Have the outcomes been met? These purposes can all be summarised into three main reasons, namely, to make judgements on the value of the programme, to improve the programmes and to

generate knowledge (Babbie and Mouton, 2006; 337). On the other hand, programmes are also evaluated because it is a requirement of the donor or the public, or for accreditation, quality, reliability, validity and many other reasons.

If the project is being evaluated to establish whether the training of the farmers has brought about a change in their farming practices and whether these changes have resulted in a difference in their livelihood (has it had an impact) then the purpose is to establish the merit of the training. In this case it is referred to as a judgement –orientated evaluation (Babbie and Mouton, 2006). It answers the question did the training succeed in its goals? Was it effective? Did it make a difference? This type of evaluation will also be employed to establish whether a programme should continue receiving funding or just whether it should continue.

If the questions asked were based on trying to evaluate what needs to change in order for there to be an effect then we are dealing with an improvement-orientated evaluation. Here we are dealing with questions which relates to the strengths and weaknesses of the programme.

A not to common purpose for evaluation is the knowledge –orientation. Here the evaluation is done in order to develop new knowledge, or to understand a programme better in order for it to succeed (Babbie and Mouton, 2006: 337).

## *2.7 Paradigms in evaluation research*

The different approaches, different models and different methods have all been debated for some decades now. These approaches can broadly be categorized into three different traditions: “the experimental or positivistic approach, the interpretivist or qualitative approach which is grounded in the interpretivist

paradigm and the participatory tradition which has affinities to the critical metatheory” (Babbie and Mouton, 2006: 350).

### *2.7.1 Experimental tradition (quantitative approach)*

In the early 60's and 70's, evaluation research was based mostly on the scientific approach of having experimental and control classes within the programme evaluation. The methods used were of a quantitative nature where the criteria to be measured are set upfront and the time period over which the measurements will be taken determined. The data which is collected is assimilated and analysed according to some or other statistical method. These evaluations are formative evaluation and are focussed mainly on causal effects of programme interventions. They provide feedback on the process, the product or the project in order for it to be improved (Rossi and Wright, 1984; Worthen and Sanders, 1991; Greene and McClintock, 1991; Babbie and Mouton, 2006). The quantitative method is concerned with whether the method can be repeated, and how objective the information is (Bryman, 1984).

It monitors whether the programme is being implemented as planned and assists to identify the strengths and weaknesses and what can be improved. Did the trainees like the programme? Were the proper methods of training used? With the formative method of evaluation the reaction may mean one thing to the trainer while it has a different meaning for the trainees (Calder, 1995: 8; Terre Blanche and Durrheim, 2002: 217; O'Sullivan, 2004:15; Babbie and Mouton, 2006: 345). Data is normally collected for a period of time in the inception phase of the programme and is then analysed and assessed and the changes needed are implemented in the next phases (Nevo, 1983, Babbie and Mouton, 2006; Potter, 2006). This process is used to regularly evaluate and report back so that the necessary changes and interventions can be brought about in order to prevent the programme going to completion before discovering the gaps, or lack

of desired outcomes (Babbie and Mouton, 2006: 345). As long as the information gathered is used to change the way things are being done the evaluation is a formative evaluation

An example of such an evaluation would be a training programme received by a group of students. The group is randomly divided into two where one group receives training (the experiment) and the other not (control). The criteria to be measured could be whether the students who were trained have more knowledge about the topic than the ones in the control group. Examples of the models developed to assist with this kind of evaluation are the CIPP model of Stufflebeam.

This model suggests that, the analysis should focus on the context, input, process and product (the most important four variables) when collecting the information regarding each project or programme evaluated. If a project to evaluate training were to be used as an example, then,

- The *context* would refer to the assessment of the project's needs, (i.e. what is the purpose)
- The *input* would refer to the strategy followed
- The *process* refers to monitoring the procedures of the project as it happens in order to make the necessary adjustments, and
- The *product* refers to measuring the success of the project (Nevo, 1983: 119; Calder, 1995: 9; O'Sullivan, 2004: 7; Potter, 2006: 87).

Another well known model that was developed for the evaluation of education programmes is the Kirkpatrick Model mentioned earlier in this chapter. This model is also developed around the experimental (quantitative) approach.

In the above models the data is collected quantitatively and can be evaluated and analysed. The data is most probably collected by means of a questionnaire and the data analysed by means of some or other regression analysis. The

interpretation could be that the group who received the training did acquire more knowledge or that there is no difference between the groups.

If the interest is in the effects of, or impact of, the programme however, we are looking at summative evaluation. This form of evaluation mostly looks at the evidence related to pre-determined criteria or indicators of the programme's effectiveness. It makes use of methods such as cost effectiveness or cost benefit analysis in its methodology. It also makes use of "quasi-experimental or *ex post facto* research" to establish whether a difference has been made, for example, in the livelihoods of members of the project (Nevo, 1983: 119; Calder, 1995: 8; Terre Blanche and Durrheim, 2002: 212; Babbie and Mouton, 2006: 345).

While most of the literature refers only to the above two functions of evaluation, Nevo (1983: 119) also makes reference to evaluations being used to increase the awareness of certain activities or as a public relations exercise.

It is important that the reason for the evaluation and what is to be evaluated be established at the start of a project or programme as summative and formative evaluations are not specific per programme type but rather they are interchangeable depending on the time or phase of the programme being evaluated (Nevo, 1983: 119). The specific criteria to be evaluated should be correctly identified as different stakeholders would have different criteria. The evaluation will then follow different stages, such as setting the criteria, determining specific standards of performance, measuring and analysing the results into a value judgement (Kirkpatrick 1979: 85, Nevo, 1983: 120, Babbie and Mouton, 2006: 345; Potter, 2006: 88).

These different methods of evaluation however did not consider that there are other ways of knowledge acquisition other than training. It also did not consider the external factors which may have affected the result. Many programmes and

projects also do not lend themselves to a randomised experimental design while in some it is difficult to create proper control groups. Other challenges encountered in these methods are that some experiments take too long to obtain legitimate results. In cases where the experimental or quantitative approach was used in evaluations of experiments which were timely it resulted in the evaluations being too expensive in some cases while in others, the subjects were lost and results therefore were not trustworthy.

These difficulties resulted in researchers seeking other methods and so the quasi-experiment design was developed. The only difference between this method and the experimental method is that subjects are not divided randomly, between the experiment and control groups (Rossi and Wright, 1984: 335; Babbie and Mouton, 2006: 351, Potter, 2006: 88). The weaknesses in this method were soon discovered but rather than not do evaluations, adjustments were made to these methods. In order to balance the weakness of the method, different methods of establishing some form of control was incorporated in the method. This is done by finding a “control” group that is similar to the experimental group, e.g. if farmers of a village cannot be assigned randomly to control and experimental groups then finding a group in a similar village which could be used as a control would suffice. Another way is to use time-series designs. In this case results are evaluated over a period of time before and after an intervention to ascertain whether there is a difference. This difference is then compared to a situation where no intervention was made. Another method is to use multiple time-series designs. Here more than one time-series analysis is used (Babbie and Mouton, 2006: 353). This however exposed the limitations of the evaluation as the duration of the experiment was again questioned. In most cases this method resulted in the experiment having to be performed over a period of time and / or in a number of areas, which could result in it becoming expensive. The validity of the method was also questioned, as there is always the problem of taking certain data as true, when in actual fact they are artefacts (Rossi and Wright, 1984: 335).

Other problems which arose was that most of the results of the evaluations obtained using the quantitative approach and applying positivist or experimental or quasi-experimental methods were never used or implemented by those requesting the evaluations or that the results obtained were not what the stakeholders were interested in (Chen and Rossi, 1980). Knowing that a programme failed was of interest but in most cases it became important to know why the programme failed. Other evaluation results obtained from the experimental and control groups resulted in a “no effect” outcome. This resulted in no changes being brought about or the findings implemented. These results were “interpreted as reflecting the failures of the social engineering efforts embodied in the programmes, that is we just do not know enough to develop programmes that are effective enough to achieve the goals set” (Chen and Rossi, 1980: 107). These results were discussed and debated by numerous researchers and the conclusion was that the methods employed to evaluate were a failure and not the programmes per se (Chen and Rossi, 1980).

With many of the problems highlighted with both experimental and quasi-experimental methods of evaluation a need arose to develop methods which were easy to implement, less expensive, less timely and applicable to and useable by relatively unsophisticated officials but that appealed to funders, programme administrators and government officials (Rossi and Wright, 1984: 341). This led to an interest in qualitative methods of evaluation.

### *2.7.2 Qualitative methods*

Qualitative methods deal mostly with the human activities from a personal perspective, also known as the “emic” perspective (Babbi and Mouton, 2006: 53). “The goal is defined as describing and understanding rather than the explanation and prediction of human behaviour (Babbie and Mouton, 2006: 357).” The qualitative method of evaluation draws its methods from a number of different

social sciences such as Psychology, Sociology, Anthropology and even economics. Rossi and Wright (1984: 336), state that “qualitative research evaluation has always had some following in the social sciences because it is able to stay close to reality and to promote an understanding of social processes through intimate familiarity with field conditions.” As evaluation methods, they are also attractive as they appear less expensive, less time consuming especially for small scale projects and appear to reflect the administrators’ needs (Rossi and Wright, 1984: 334; Babbie and Mouton, 2006). Shortcomings of the methods are that they are very labour intensive and rarely give results on effects which are very specific and there is always the possibility of bias and subjectivity (Rossi and Wright, 1984: 343).

The evaluation techniques employed in the qualitative method could include surveys, case studies, observations, individual descriptions of experiences, and interviews. When developing the different methods, the interest of stakeholders is taken into account in order to extract the necessary responses which will answer specific needs. These methods have to consider the contexts in which the evaluation is to be done as it is important especially if the evaluation will support decision making with regard to policy development, or whether it is in terms of social and political development of communities (Terre Blanche and Durrheim, 2002: 214).

### *2.7.3 The Participatory / Empowerment Method*

In the case of participatory evaluation, it is, as the word depicts, that there is participation on the part of the stakeholders, the subjects and sometimes the programme directors in the evaluation. Babbie and Mouton (2006, 358) defines it as “an educational process through which social groups produce action-orientated knowledge about their reality and reach consensus about the action to be taken.” In the case of participatory methodology it is easier for the findings to offer improvement and development. In this situation the evaluator acts as a

facilitator or coach while the people involved in the research study are engaged in the evaluation. There is still a debate as to whether the evaluator should lead the study or whether it should be by the participants but what is important though is that participants criteria should be considered in the evaluation process (O'Sullivan, 2004). This method of evaluation is therefore a partnership approach where the stakeholders actively engage in developing the evaluation and are involved in the process throughout resulting in a learning experience for all involved (Zukoski and Luluquisen, 2002: 3)

An example of such an evaluation is that of the Early Excellence Centres in the UK. Here the evaluators were internal and external stakeholders, such as the pupils, parents and teachers, and the methods employed were informal interviews, mapping provision, action planning and target setting in areas selected for development, documentary analysis, case study, narrative accounts and testimony to mention a few. This was done to identify the relevant questions that needs to be researched or for which answers are required, what the design of the evaluation would be, which measures would be used and for the data collection and who would finally gather the data and analyse it (Zukoski and Luluquisen, 2002). Throughout the evaluation, regular meetings were held between all members, especially the parents, teachers and evaluators, involved to negotiate how the evaluation will be conducted. The concept of ownership was emphasised as well as the control of the agenda for action and for future development throughout the process (Campbell, 2003: 240). Challenges were encountered with analysing and evaluating the large quantities of statistical data collected and still having time to engage in the qualitative research and evaluation needed. The qualitative research and evaluation supported the innovative development and renewal of the professionals of the centre. In the qualitative research, participatory methodology was used and although diverse stakeholders were involved, different methods used to evaluate the conclusion was that early excellence centre were making a difference to the lives of the

participants (parents, children etc) in many and varied ways (Campbell, 2003: 243).

We see then that when evaluations are done today the methods used are not exclusive but rather both quantitative and qualitative methods are used depending on the way the programmes need to be evaluated. Non government organisations such as FARM Africa who work in different countries or even in different areas of the same country, evaluate their programmes using a diversity of approaches. When programmes or projects are implemented which require some form of accreditation either by a local standards' setting body or an overseas organisation, e.g. fair trade, it requires participation from different stakeholders to assist with developing the evaluation criteria. In order to establish whether the programme complies and will qualify for accreditation by the specific organisation, experts are recruited to do the evaluation and the programmes are measured according to set norms and standards.

In the case of some non-governmental organisations (NGO's) or international donor funded projects, the expertise and participatory methods are applied. FARM Africa projects were normally evaluated in this way where an expert is appointed to evaluate the project with respect to its implementation, to assess whether the objectives have been met and the finances correctly administered. In terms of evaluating the effect and impact of the project a more participatory approach is applied.

The differences in these evaluation processes bring to light the differences between the quantitative and qualitative approaches to evaluation. In the quantitative approach the emphasis is on the process, criteria and how the funding was applied, while in the qualitative approaches the emphasis is on the involvement of all stakeholders and role players and their subjective evaluation of the success of the programme.

**Table 3. A summary of the differences between participatory evaluation and traditional evaluation**

<b>Participatory</b>	<b>Traditional</b>
It has a participant focus and ownership of the evaluation	It is donor focus ownership of the evaluation
Indicators identified by community groups etc.	Professional evaluators
A broad range of stakeholders participate	Stakeholders often do not participate
The focus is on empowerment Local knowledge Verification of information by key players	The focus is on accountability Standard indicators
It has a flexible design	A predetermined design
Participatory methodology (RRA & PRA)	Formal methods
Outsiders are facilitators or participants	Outsiders are evaluators
Mostly time, energy and commitment from stakeholders and community	Consultant fees

(sourced from: Zukoski and Luluquisen (2002: 4). Participatory evaluation)

#### *2.7.4 Mixed Methods*

Ultimately, the method or type of evaluation should offer the programme, results which are usable, implementable, and affordable. It is suggested that in any evaluation, in order to achieve these results the methods used should be multiple approaches.

Mixed method approaches therefore would typically use a quantitative (defined by numbers) and qualitative (defined by words but capturing the experiences of the subjects) strategy in their design, method, data collection and interpretation (Green and McClintock, 1991: 20; Caracelli and Greene, 1993: 195; Mason and Plewis, 2005: 186). Where methods are separate and only combined when interpreting the data, it is referred to by Hammond (2005) as a multi-method approach rather than a mixed method. Vassen and de Groot (2004) used a mixed method approach to evaluate the outcome and impact of small-scale development interventions. The authors report that the mixed method approach

used was quite valuable in assessing the outcome and impact but had little effect in terms of the project design and implementation. They however assign this to the timing of the study.

Other researchers such as, Bryman, Greene and McClintock, Caracelli and Green, and Plewis and Mason, all support the use of mixed or multi-method approaches to evaluation.

Caracelli and Greene (1993: 196) identified five reasons for mixed method approaches, namely triangulation, complementarity, development, initiation and expansion. They define each in turn:

- Triangulation seeks convergence, corroboration and correspondence of results across different methods. Multiple methods can be used at the different levels of the evaluation in order to overcome the deficiencies and biases that could originate due to a single observer. Since social science is dynamic, situations are often changing and one might need to adjust the study as it progresses.
- Complementarity is when qualitative and quantitative methods are used to measure overlapping, but distinct areas of the indicator being investigated e.g. using participatory methods to qualify an indicator such as wealth or income by using a different method and indicator.
- Development; the results of one method is used to develop the other method. They often interpreted to include sampling and implementation well as measurement decisions.
- Initiation designs are meant to recast questions or results from one method type with the questions or results from a contrasting type.
- Expansion occurs when researchers expand the inquiry question range by using different methods for the different enquiries

Quantitative methods of evaluation normally assess programme outcomes while qualitative methods usually play a supporting role of examining programme process (Caracelli and Greene, 1993: 196).

The reason for using a mixed method is because each method has its own strengths and weaknesses and that by combining them in the study the maximum gain is obtained. For example, participatory methods have the advantage that it includes the meanings of the participants, but the disadvantage that their judgement may be skewed.

As the above definitions indicate, the combining of methods are used to obtain varying results, where, for example, the results of the first method is used to inform the development of the next method or where the results of the two methods are used to strengthen the results of the study. To put it differently, the two methods do different things and must be used and allowed to pursue their strengths and not compete with each other. It is therefore important that the evaluators design and execute the evaluation in such a way that the best and optimal results are obtained for the purpose of the study.

The mixed or multi-method approach is used to establish the trustworthiness of the data, to build a more rounded argument, and to reduce the possibility of personal biases that could arise from single methodologies (Perlesz and Lindsay, 2003: 26). We therefore employ the principle of triangulation – “cross-checking information by use of multiple and different sources, methods, investigators and theories” (Babbie and Mouton, 2006: 275; Holland and Campbell, 2005: 8). In this study multiple methods were used to support the most valid overall picture presented by the findings (Perlesz and Lindsay, 2003: 26).

## 2.8 Conclusion

In conclusion, this chapter described key approaches to some of the readings dealing with evaluation- and programme evaluation research, how it developed and the processes it went through to where it currently finds itself today. A number of different approaches exist which depicts the history of evaluation research. Methods and models were developed by different analysts at different stages as the discipline developed through the years.

Initially the methods and models were developed around the evaluation of educational programmes but later were expanded to development projects. An example is the 4-level model developed by Kirkpatrick more than fifty years ago. Kirkpatrick (2007: 12). This model of evaluating education and training programmes is still widely used today as it was fifty years ago.

When evaluation methods were first introduced, it was as part of the positivist paradigm. Later researchers realised that quantitative methods merely gave an outcome of the result but did not elaborate on what external factors could have impacted on the results. The methods were criticised and social scientists were requested to assist with developing methods which could evaluate the impact on a programme. This gave rise to the qualitative approach to evaluation.

The arguments made by Caracelli and Green (1993) and other authors however suggest that the best way to evaluate programmes is to have a mixed or multi-method approach. In the assessment of the programme multi- methods will be used to triangulate the data obtained in order to strengthen the results and discussion.

While evaluation research started way back in the 1960's in America and other countries it is still a very underdeveloped in South Africa. Many international funders and government projects request evaluation processes but it is still

under-recognised and utilised. This might also be due to the fact that there are not many researchers working full-time in this field in South Africa.

Finally, as suggested in the literature, a multi-method approach using both quantitative and qualitative methods will be used to evaluate the impact of skills training, on goat farmers in the Northern Cape.

## **Chapter 3: Research Methodology**

### *3.1 Introduction*

This chapter provides an overview of the participatory evaluation approaches employed in this case study research. Both quantitative and qualitative methods were used in the study. Training programmes have mostly been evaluated using quantitative methods. While this has been informative of whether the trainees have liked the training programme and how well it was accepted, it has not been able to measure the effect or impact the training has had. The qualitative, case study approach is implemented to establish an in-depth understanding of the effects the intervention (Plewis and Mason, 2005: 186).

Data was collected by a combination of these methods to support or reject the hypothesis, that there is a significant relationship between farmers who received training in goat production and their livelihoods. This would be done by exploring the following questions:

1. Who are the farmers who received training?
2. Who trained them and what type of training did the farmers receive?
3. Has the training made a difference in their goat production practices?
4. How have the farmers' methods of goat production changed?
5. What other forms of training or knowledge acquisition do farmers engage in?
6. Has the training ultimately had an impact on their livelihoods?
7. Has the training resulted in secondary impacts on other farmers?

The quantitative methods used were questionnaires and semi-structured interviews; in contrast, the qualitative methods entailed participatory rural appraisal techniques, which included Venn Diagrams, time lines, mapping, most significant changes and focus group discussions. This “mixed” or multi-method approach was used to generate confidence about what we were observing, measuring, analyzing and finding. It was implemented to give credible results as

well as to build the farmers' capacity to reflect and build on their work and co-operative development.

The case-study approach is used to get an in-depth understanding of the training the co-operative members received, how it was done, what the outcomes were and how it impacted on their livelihoods.

### 3.2 *Research Aims*

The main aim of the research was to establish whether the skills training or learnership training, as described in chapter 1), had made a difference in the production practices and ultimately in the livelihoods of the farmers of the Campbell Agricultural Co-operative Enterprises (referred to as the Campbell Co-operative), Northern Cape.

### 3.3 *Research Paradigm*

The study was conducted in the post-positivist and constructivist paradigm. Perlesz and Lindsay (2003: 29) state that "post-positivism is ontologically closer to positivism than the unambiguously relativist ontology of constructivism. Epistemologically, however, post-positivism and constructivism assume that knowledge is value dependent, and to differing degrees is created in interaction between researcher and respondents." They further suggest that, post-positivism is a useful paradigm when one maintains an interest in some form of quantification that is, assigning numbers to the qualities of things. This way statistical analysis can be done and relationships between different aspects of the study can be predicted. This is done by holding some variables constant, in order to focus on the relationships between two or more specific variables. This relationship between variables allows researchers to identify the outcomes of the intervention. The assigning of numbers also allows the researchers the opportunity to investigate the distributions and the prevalence of certain

relationships (Holland and Campbell, 2005; 4). Quantitative research therefore allows the researcher the opportunity to make observations and decisions based on analytical tools. In quantitative research, the researcher tends to study human action from the outside according to a set of objectives established with very little concern about the observations by the subject.

The constructivist paradigm, on the other hand, is a subjectivist approach where knowledge is created by the interaction among the researcher or investigator and the respondents or subject (Guba and Lincoln, 1994). Guba and Lincoln (1994: 113) states that “in constructivism the aim of inquiry is understanding and reconstruction of the constructions that people initially hold, aiming toward consensus but still open to new interpretations as information and sophistication improve.” According to this approach, qualitative research is an example of the constructivist approach as it stresses the interpretive nature of knowledge construction and recognizes that there is a different interpretation of reality and that the data becomes a social product” (Holland and Campbell, 2005: 6). Qualitative researchers always tend to study the human involvement from the participants’ perspective, and this is based on describing and understanding rather, than on predicting and explaining (Babbie and Mouton, 2004: 53)

Participatory research shares much in common with the constructivist paradigm, or qualitative methodology, and in this study, we hope to link the social investigation of the training received and the action. With the participatory methods applied, data will be gathered, associations created and this will done in conjunction with each other (Jackson and Kassam, 1998: 31).

By engaging both the quantitative and qualitative methods, we can effectively combine the methods to both describe and explain why we accept or reject the hypothesis that training has made a difference in the livelihoods of the farmers of the Campbell Co-operative.

In this study, different methods are implemented in a case study to explore the research aims.

### 3.4 Case Studies

Gray (2004: 123) mentions that, case study methodology is mainly used to answer questions such as how and why. They tend to be more deductive in nature, not easy and rely on a number of different methods (both quantitative and qualitative) to obtain data that will help develop an understanding of the different social levels on the subject (Gray, 2004: 124, Babbie and Mouton, 2006: 231). ICase study methodology requires multi-skilled researcher who is flexible and able to formulate good questions, especially in the language of the subjects in order to guide the subjects and the processes. The researcher should possess the skills to apply different methods of analysis (Gray, 2004). Case study methods are used for many different studies, “including the evaluation of training” Gray (2004: 123) which is exactly what this study will be doing.

Case studies can be very valuable in understanding the intricacies, the experience of real life situations of subjects, from their perspective. Different methods will need to be applied to collect the necessary data. The process entails being able to ask good questions to elicit the desired response which will guide the researcher to the correct observation (Gray, 2004).

Different types of case studies designs exist, as illustrated in the figure below.

**Table 4. Different types of case studies**

	<b>Single case design</b>	<b>Multiple case design</b>
<b>Holistic (single unit of analysis)</b>	Type 1 Single/holistic	Type 3 Multiple/ holistic
<b>Embedded (multiple unit of analysis)</b>	Type 2 Single/embedded	Type 4 Multiple /embedded

[sourced from: Gray, D (2004: 132) Designing case studies]

The single case study may be holistic or embedded. The holistic approach examines a single phenomenon, which may have boundaries, may be specific in time, place or event. The embedded approach in contrast means that there are different perspectives of multiple units regarding the particular phenomenon (Gray 2004; 132).

This research involves a single holistic case study approach, where the Campbell Co-operative is being investigated as a single unit (Gray, 2004). Although it is not a unique case as co-operatives have been established in other villages as well, resources and time did not allow multiple cases to be evaluated. The researcher therefore sees this study as a pilot for a later multiple study.

Most developmental agencies and governments feel that education and training of farmers is the answer to better business ventures, without considering that there might be other reasons why the farmers are not making a success of their enterprises. The results show, that some farmers have been farming for over twenty years but are still small-scale farmers. Historically, farmers lacked access to information and training. Since 1994, however the emphasis has been on training small-scale and emerging farmers, but very few have emerged to become large commercial farmers. The reason for this is that there are other factors, that impact on whether farmers are able to market their produce or not. Kaaria, Sanginga, Njuki, Delve, Chitsike and Best (2009: 111) identify numerous barriers to market access which include, “a poor asset base, lack of market information, weak institutions, the inability to capture benefits from value-added processes, and low involvement of the private sector and commercial relationships.” Other factors, that impact on farmers’ livelihoods are HIV/AIDS, drought, stock theft and predation.

Kipuri and Sørensen (2008) identified four key factors that affect the livelihoods of pastoralists in Kenya and make them vulnerable. These factors are access to good genetic quality livestock, drought, fluctuating market prices and unfavorable

policies that further marginalize pastoralists by reducing their capacity to cope with stress and increasing their loss of land. In the Northern Cape the most important aspect impacting on farmers' livelihoods is stock theft, predation and disease (Festus and Joseph, 2007: 8).

### 3.5 *Reliability*

According to the principle of reliability, when one applies the same method to test the same question, the results that are obtained should be the same each time. In the social sciences, reliability appears to be a constant concern especially where a single researcher is the source of the data. This however is not the only source of concern as the subjectivity of researchers (even in group research) can also lead to unreliable data. In order to eliminate the problems associated with reliability, the methods that are used must be those which give the same information when repeated. The reliability of the data improves with repetition so the sample to be studied should allow for the method to be repeated, in order to establish the reliability of the method (Babbi and Mouton, 2004: 122, Catley, Burns, Abebe and Suji (no date): 47).

With a single case study there is normally a lack of comparative information. In this case, the reliability of the data is dependent on the skill, sensitivity and training of the researcher. Without a group to compare the results to, the conclusion of the evidence of impact is based on the indicators used to measure the impact and how well the researcher is able to relate the findings to the indicators.

### 3.6 *Campbell*

Campbell was affected by The Native Lands Act, passed in 1913, which restricted the area where Africans could establish new farming operations to the

reserves and barred them from buying land from white people. While the Native Lands Act of 1913 did not affect the Coloured community, 37 years later the apartheid regime passed the Group Areas Act of 1950, which severely restricted the Coloured community's ability to gain access to land for productive purposes. The National Party, as of 1948 onwards, maintained and added to this discriminatory legislation, and it was not until the early 1990s that many of these laws were changed (Bradstock, 2005: 9).

Prior to 1994, white commercial farmers farmed on 8000 hectares of land in Campbell while "coloured" farmers farmed on only 780 hectares. After 1994, with the change in government the laws were revoked. The community has since lodged a land claim for the land. This claim has not been resolved yet, but the 8000 hectares was returned to the non-white community and many of the white farmers left the municipal area. The Siyancuma municipality now manages the land on behalf of the community.

### *3.7 Researcher's Role*

Participatory evaluation is also part of participatory action research where the researcher acts in the position of a change-agent. This means that the researcher has to conduct the research in a fully participatory fashion and that Co-operative members are part of the process. The process must be explained to the Co-operative members in order for them to understand. Since the study focuses on the narrative, it is important that all activities are conducted in the language of their choice. The process is normally slower than other methods of evaluation, as consensus should be reached as far as possible and the researcher should try to avoid aspects that will result in conflict. The researcher acts in the role of facilitator so that the members develop the ability to collect, analyze, and build on the information (Jackson and Kassam, 1998; 168)

In this study the researcher was always conscious of the fact that she was familiar with the topic being researched, was associated with some of the stakeholders and that she was a member of the service provider organization. Assurance was given to the members of the community that the information they provided would only be shared with the DALR once they gave their consent. The DALR would only receive recommendations that would be guided by the outcomes of the study. These recommendations would relate to what adjustments needed to be made, if any, in the training programme. Other aspects emerging from the study, which could assist with promoting goat farmers from an emerging farmer to commercial, will be shared with the DALR. The members of the co-operative granted the researcher permission to share the results of the study with the DALR.

In the case of the quantitative data (questionnaires), the role of the researcher is to analyze the data as recorded. The researcher should not at any stage alter the information provided to ensure that the result obtained reflects the ideas of the researcher.

With respect to the qualitative data acquisition the researcher had to ensure that even though she was knowledgeable on the topics discussed during the focus group discussions, that she remained neutral and that she did not bias the data in any way. The role of the researcher was to act only in the capacity of facilitator, and that members developed their own responses. Initially the researcher did some exercises with the participants in order to break the barrier between the researcher and participants, in order to get them to freely interact and share the information with each other and the researcher. The researcher ensured that in the groups, members of the group were not marginalized or scared to participate.

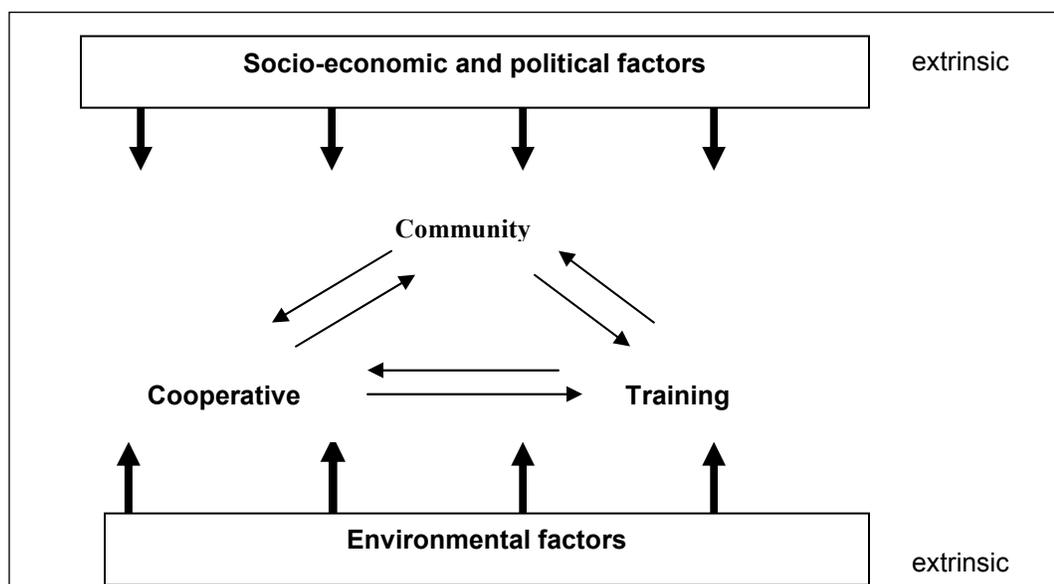
The advantage the researcher had was that she could conduct the workshop and interviews in the language (Afrikaans) of the interviewees and members of the co-operative who participated in the focus group workshops.

### 3.8 Research Methods

Participatory methodology was used with a case study approach where multiple methods were applied in order to obtain multiple sources of data (Babbie and Mouton, 2004: 282). In this study both quantitative (questionnaires) and qualitative methods (interviews and focus group meetings) were used. Within the focus group meetings, participatory methods such as mapping, timelines, Venn diagrams and seasonality charts were used.

In the absence of true baseline data, the researcher needed to keep in mind the fact that she was dealing with a social system and needed to apply a holistic systems approach to the methods in order to gather the appropriate data to obtain the necessary results. Figure 3, adapted from that of Mc Crindle, 2007 (unpublished lecture) gives a graphic representation of the system as the researcher perceived it.

**Figure 3. A representation of the community co-operative system and its components**



[adapted from: Mc Crindle, 2007 unpublished lecture presented at the NC Veterinary scientific meeting]

In the research, the agricultural co-operative was part of the Campbell community. Not all the members who received training were however still members of the co-operative, although they were members of the community. Not all the members of the Campbell community are members of the co-operative. These groups made up the triangle, namely, Campbell community, co-operative members and members who received training. This triangle was impacted upon by extrinsic factors, which could or did have an influence on it. Members of the Campbell community and co-operative are from different political and socio-economic backgrounds. With regard to the socio-economic position the 2001 census, estimated 31% of the community having no income, approximately 64% earning below R38400 and only 2% earning between R76000 -R153600 (Siyancuma IDP, 2005-6).

Questions therefore arise as to how these external influences impacted on the choice of members who received training.

The environment in which the training and subsequent transfer of information or knowledge occurred also had an impact on the triangle. This system can also be related to the CIPP model of evaluation as discussed in Chapter 2. Although these were not determining factors in the research study the awareness of this systems interaction was important.

### 3.9 *Research Process*

The following steps were followed in the research process.

1. A meeting was held with the trainer to source a suitable group, community or co-operative who consisted of individuals who received either skills or learnership training (Chapter 1). At this meeting it was decided that the Campbell Agricultural Co-operative Enterprises

organization would be the most suitable. This decision was based on language, accessibility in terms of distance and farming activities.

2. The researcher was introduced to the members of Campbell Agricultural Co-operative Enterprises organization.
3. Members were invited to a workshop where the study was described and to ask for permission to conduct the study in the community with members of the co-operative. Members agreed and the way forward was discussed.
4. Another workshop was held to gather background information of the farming activities and agricultural organisations active in the community. At this workshop it was discussed that questionnaires will be used and that the other information would be gathered in a workshop environment making use of focus groups and personal interviews. Since most members were illiterate, four younger schooled members of the community were chosen to assist with the administration of the questionnaires.
5. Once the questionnaires were developed and approved the interviewees were trained in the interview process.
6. Some members of the co-operative did not need to be interviewed but were comfortable filling the questionnaire without assistance.
7. Interviewers were counseled that if subjects were uncomfortable with responding to the financial questions, these questions could be skipped.

### *3.9.1 The Questionnaires*

Questionnaires are widely used in evaluation research as a data collection activity to gather information from a large number of people in a structured way (IFAD, Guide for project M&E, D-12). They should have clear instructions, be well constructed, tested and correctly and appropriately translated (Babbie and Mouton, 2004: 239-253). Interviewers should be trained and should be familiar

with the contents and expected responses in order to assist the candidate being interviewed. The interviewer should also be able to conduct the questionnaire in the language of the respondent (Babbie and mouton, 2004).

Two questionnaires were administered. The first questionnaire was made up of a mix of question types but the idea was to keep it as simple as possible (Appendix 4). The first section of the questionnaire dealt with biographical information. Members were assured at the community workshop and in a letter attached to the questionnaire that the information will be confidential and that it will only be used to gather data and to make general conclusions. The next section dealt with the type of training they received and questioned who the training provider was. A section was also included to establish their financial gains from their farming activities. The last section dealt with information regarding the way in which they farm, their livestock production practices and the types and numbers of animals they own.

The second, short questionnaire was administered in one of the workshops to establish what other methods of information acquisition complemented the farmers' knowledge of livestock production (Appendix 3). This questionnaire dealt with agricultural popular literature available as well as television programmes.

### *3.9.2 Focus Groups*

Not many people could attend the focus group workshops due to the nature of their work and the fact that many only returned home on weekends. All the members who attended the workshops were members of the co-operative and involved in the farming activities in Campbell. Twenty members of the co-operative attended the focus group workshops. Of this group, 3 members had received learnership training, while a few others had received the skills training.

At most it was the wives, some of the youth and a few men who attended the workshop. Depending on the types of questions the groups were either homogenous or heterogeneous. The groups were either divided into younger and older members, men and women, learnership versus skills trained. In these groups, aspects such as developing a map of the area farmed, institutional linkages with the community, the history of the project and what the production cycle of the goats are with respect to a climate chart were dealt with. Building on this knowledge the groups then dealt with broad questions such as, the changes brought about in the production practices since receiving training and the impact these changes were having on the livelihoods of the farmers. Each group appointed a scribe and responses were documented on flip-charts. The information gathered was then verified in a plenary session. During these workshops and focus group meetings different methods of data gathering was implemented such as mapping, time lines, seasonality charts etc.

#### 3.9.2.1 *Mapping*

The group was given paper and different colour pens. They were requested to identify two elders who were very familiar with the community, village and the “camps” and together requested to sketch a map of the area. This was used to assist with delineating the geographical area used for farming and the boundaries of their activities. Initially this was used as an ice-breaker and to get the members to relax and actively participate in sharing their knowledge. Many of the members who attended the workshop were illiterate. This exercise gave all the opportunity to participate.

After completion of the map, they chose a member to fill in the identified landmarks as the map was being discussed. This provided the researcher with a visual representation of the farming area (camps or communal farming area) in a

particular geographic context, based on their experience and knowledge (Appendix 5).

#### 3.9.2.2 *Institutional linkages (Venn Diagram)*

Members of each of the two groups were requested to identify all the institutions involved in agriculture that were active in Campbell. They were given paper to cut circles. The size of the circles indicated the size of the role the institution played in the co-operative in Campbell. This was done for the time periods, 1994 to 2003 and 2003 to present (Appendix 6). They were then requested to paste the representative circles in relation to the circle representing Campbell. The distance from the circle representing Campbell co-operative indicated their interaction with the co-operative (IFAD, D-37).

#### 3.9.2.3 *Time Lines*

Members were divided into two heterogeneous groups. Members were requested to cast their minds back in time and question the activities which have happened in Campbell since the establishment of the livestock projects. This was done to obtain a historical understanding of the changes that have happened not only in the lives of the members but also with respect to their farming activities. This was then used as a discussion point to see whether changes were seen as positive or negative (IFAD, D-30).

#### 3.9.2.4 *Seasonality Calendars*

Members of the group were requested to use the tools supplied to develop a seasonality chart. This was to record production information as it relates to the season and to indicate the changes they perceive that has happened over time. These charts depicted information on a monthly basis (IFAD, D-31)

#### 3.9.2.5 *Most significant changes*

The groups were requested to identify the significant changes that were brought about by receiving training or information transfer. They were requested to list aspects they felt impacted on their livelihoods, both positive and negative. This was used to track changes about the impact the training had on their livelihoods that were less quantifiable (IFAD, D-32)

#### 3.10 *Interviews*

Semi-structured interviews were held with five different members of the co-operative. One member of the co-operative who was interviewed was also the chairperson of the National African Farmers Union (NAFU). This was done using a series of questions which acted as a guide to the conversation in order to develop an in-depth understanding of the processes and activities relating to the training, the co-operative and the farming practices in the community (IFAD, D-14). These interviews were to complement the information gathered at the focus group workshops and from the questionnaires as well as to fill the gaps with regard to the background information. The interviews were done in the language of the respondent, namely Afrikaans.

Notes were taken during the interviews to capture the key ideas and main points. These notes were verified with the interviewees and then typed. The information was correlated to the information obtained during the workshops.

#### 3.11 *Ethics in research*

This is a topic that is receiving more and more attention in the scientific world. In some social science disciplines, like anthropology, codes of ethics have been

developed. Jackson and Kassam (1998: 41) report that Goldsmith proposed the following:

- “that, anthropologists’ primary responsibility was to the powerless who might be harmed by the research and publication, not just to prevent it but to empower the people against it.
- That they should publicly disseminate the results of their research, with the view of increasing public understanding and where possible respect for their research
- And where the first two are met they should act ethically in dealing with.... Power structures, such as funding agencies and governments”

Several key principles described by O’Sullivan (2004:11), Jackson and Kassam (1998: 42) and Remenyi (1998: 109) guided the researcher. These principles state that research will be conducted in a systematic way, ensuring honesty and integrity throughout the process and that the confidentiality of the respondents will be respected throughout.

As mentioned before, permission was requested from the farmers’ co-operative of Campbell, to use them as a case study in my research. The fact that it was research towards obtaining a degree was made clear to them from the onset of the research. The reason for this was that past experience made me aware of communities’ feelings towards being used as subjects of a research topic. Time was wasted in the past as communities did not co-operate, as they felt they were continuously being used as subjects but that few, if any researchers ever returned and shared the results of the research with them in a form that they could understand.

A letter was also written to the DALR, requesting permission to use information regarding the commercialization of goats’ project, and the training material of KKC® as part of the study. This permission was granted by the Head of the Department.

### *3.12 Methods of analysis*

The data gathered was not analyzed in any statistical way. Forty six questionnaires were distributed to the members of the Campbell co-operative and thirty nine were returned. The questionnaire data was analyzed to identify how many people received any form of training and whether the training was skills based or in the form of a learnership. The data was also further analyzed to indicate whether certain production practices were occurring which could indicate that the farmer was formally trained.

The workshop data was captured as narrative information as it was already verified by the group present. This data was gathered to complement the information obtained in the questionnaires and to establish indicators that would confirm whether the training had an impact on the livelihoods of the farmers.

Five of the six members who received learnership training were interviewed. One member of this group was also the chairman of the National African Farmers Union. An interview was also conducted with the trainer, who is also a member of the Campbell co-operative and a member of the community. The interviews were analysed according to different themes, to establish the effect the training had on the farmers' production and whether there was a difference in the training received.

### *3.14 Conclusion*

Participatory evaluation was done using both quantitative (questionnaires) and qualitative measures to establish a response to the questions posed in chapter one. The data gathered in this mixed or multi-method approach will be used to verify the hypothesis that the training received by members of the co-operative had an impact on their livelihoods. The results will be a detailed description of

the information as gathered using the questionnaires and the focus group discussions.

The information from the interviews were summarized and presented in narrative format in order for the readers to have a clear picture of all aspects of the research.

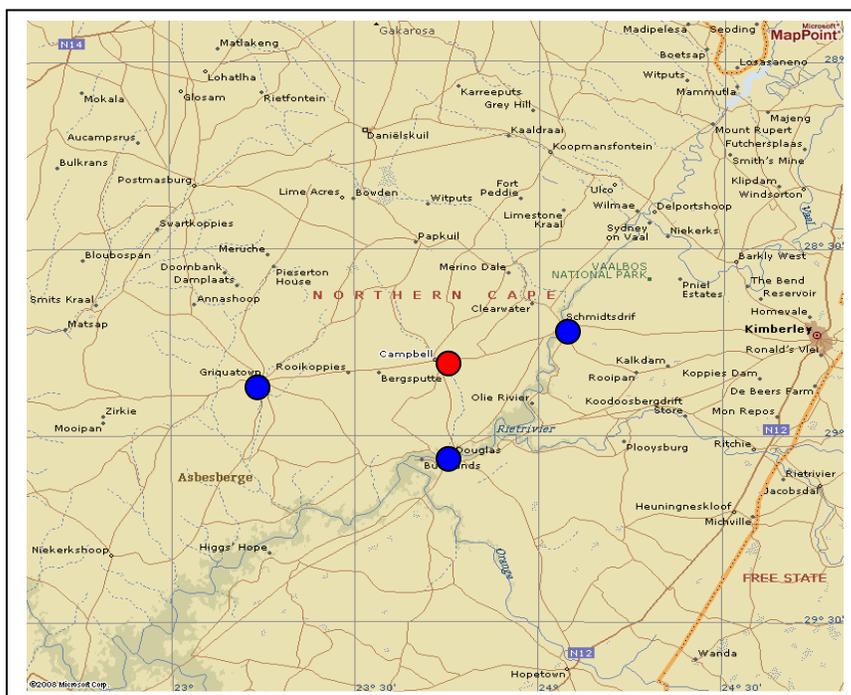
## Chapter 4: Results and Discussion

The results will be presented in three sections. The first section will deal with an analysis of the information acquired by means of the questionnaire. In the second section the information obtained using the different participatory rural appraisal techniques will be discussed in detail in narrative format. The third section of the results will be developed around the responses to the informal interviews held with the trainees who received learnership training and two members of the community who play an active role in agricultural activities. These results will be directly related to the questions posed in chapter 1.

### 4.1 Introduction

Campbell is a small village in the Northern Cape (Appendix 1), on the edge of the Ghaap Plateau, 104 km west of Kimberley along the N8 highway to Griquatad, and 30 km north of Douglas. The towns, Campbell, Douglas, Griquatad and Schmidtsdrif form part of the Siyancuma local municipality (based in Douglas) and the Pixley ka Seme District Municipality (based in De Aar).

**Figure 4: A section of the map of the Northern Cape showing the towns of the Siyancuma municipality.**



Campbell was established as one of the earliest centres of Christianity north of the Orange River. It was originally named Grootfontein or Knoffelvallei but was later renamed to honour the Reverend John Campbell, a traveler and missionary who visited the Cape stations of the London Missionary Society in 1813 ([www.northerncape.org.za](http://www.northerncape.org.za)).

The town has many fresh water springs and is renowned for its rock formations, Karee and Wild Olive trees and Griqua burial site. Campbell has a multifaceted history and has been home to San, Koranna and, later, Griqua who settled there. Today the population consists mostly of Griqua (“coloured people”).

According to the Integrated Development Plan (IDP) of the Siyancuma municipality and the 2001 census, Campbell’s population was estimated to be 1766 inhabitants. It has the smallest number of inhabitants of the Siyancuma municipality, with the ethnic distribution at the time being 27% African, 63% Coloured (Griqua) and Whites 10%. At the time, Campbell’s population was classified as the poorest in the municipality, with 46% of the inhabitants unemployed. It is estimated that approximately 65% of the population is dependant on the governments’ social grant services. The key employment sectors in the village are agricultural entities, provincial and local government and education. To date very few small businesses exist in the village. Douglas is the nearest town and also regarded as the business centre by the people of Campbell (Siyancuma Municipality, IDP 2005-6).

Prior to 1994, the non-white members of the community lived on the outskirts of the town (in an area they commonly referred to as “boven” Campbell, situated to the right of the highway and the area above the main church) and “onder” Campbell, situated to the left of the road going to Griquastad. Many of the inhabitants still lived in homes built from mud bricks at the time, while the whites lived in the town. White farmers farmed on 8000 hectares which was municipal

commonage, while the non-white community was given 780 hectares to farm. This area of land surrounded the small town. As part of the municipal commonage it was divided into camps and rented to the farmers. At that stage the non-whites were only allowed to own a maximum of 8 animals per farmer (by municipal law). Only approximately 15 farmers (non-white members who owned animals) farmed on the municipal commonage at the time.

With the change in government in 1994, land ownership changed. The Campbell community lodged a claim for the land. This process has not been resolved to date, but in 2003 most of the white farmers left the town, and the commonage (8000 hectares) was returned to the Campbell community. Today, both emerging and commercial non-white farmers farm on the total 8780 hectares of municipal commonage. In most cases in the Northern Cape, “white” commercial farmers lost access to the commonage on which they farmed, due to the new land reform policy and as stipulated in the notarial deeds (Benseler, 2003).

Today, approximately 36 farmers farm on the commonage in Campbell, with this number changing as other members acquire animals. They farm the land on contract from the municipality. These contracts have however expired and are in the process of being renewed. The Department of Land Affairs has also acquired two additional farms (Vaalplaas and Belevue) for the community through the Land Reform and Agricultural Development (LRAD) grant (personal communication, Messelaar).

Table 5 represents the statistics with respect to the age and level of schooling, of the members of the community in Campbell, as reported in 2001. At that time the majority of people were between the ages of 20-65 years with about 47% having little or no schooling (Table 5.).

**Table 5: Statistics from the IDP 2005-6 document, showing the population, percentage unemployed and distribution of schooling**

Population		1766
Unemployment		44%
Level of education	No schooling	18%
	Some primary	29%
	Some secondary	37%
	Sec. completed	5%
	Tertiary	0

#### 4.2. *Campbell Co-operative*

The Campbell co-operative consists of approximately 46 members (farmers). Some are husband and wife teams who farm together, while in other cases both husband and wife are farmers in their own right with their own livestock. This distinction however did not come out clearly in the data.

The co-operative is known as Campbell Agricultural Co-operative Enterprises, and was established to manage among others, the goat project (the focus of this study) as developed by the DALR. This project assisted the co-operative by giving them a starter pack (consisting of different medicines, tagging equipment etc), 100 goat ewes and 3 rams as well as training in goat production (Chapter 1). It was established as part of the Kalahari Kid Co-operative initiative.

The Campbell co-operative members are in the fortunate position that they are situated close to some of the livestock agricultural hubs, such as the Griekwaland West Ko-operasie (GWK) auction pens in Griquastad and Kimberley and a “state of the art” abattoir in Groblershoop. They are also fortunate that the National African Farming Unions (NAFU), Northern Cape chairperson is a member of the farming co-operative. In terms of farming experience or knowledge, most of the farmers either worked for commercial livestock producers in the area, or knows someone who does, or has a family member employed on one of the farms. This

has made access to certain organisations, information or resources much easier and some members of the different organisations have even come forward in the past to assist the members of the farming co-operative.

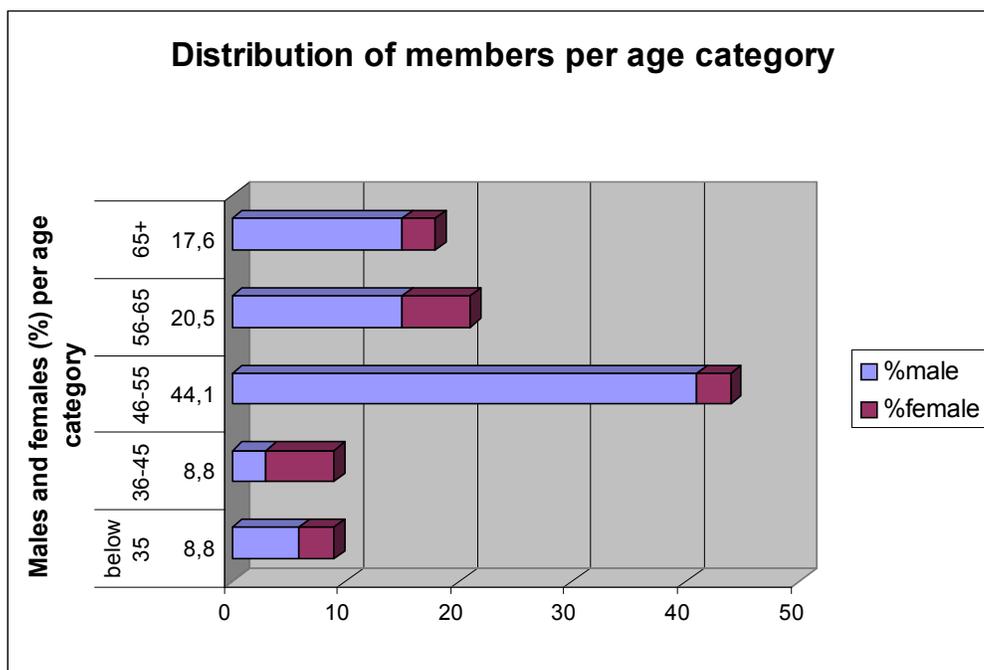
#### 4.3 Questionnaires

Two questionnaires were administered. As mentioned in the methodology, the first was to gather information about members while the second was to establish what agricultural literature and technology transfer methods members engage in. The findings of the questionnaires are summarized and discussed in the following sections.

##### 4.3.1 Questionnaire 1

Forty six questionnaires were distributed. The interviewers tried to interview all members of the co-operative, but not all reside in Campbell due to work obligations. Of the 46 questionnaires, 39 were completed and returned and could be used in the analysis. Of the interviewees, 30 were male and 11 female.

Figure 5: Age distribution of Campbell co-operative members.



In South Africa, youth is defined as people under the age of 35. With the exception of six interviewees who did not indicate their age, only 3 members of the co-operative can be regarded as youth (under 35yrs). The majority of the group falls into the age group of 46-55 years, with the average age of all interviewees 47.5 years, with 49 years being the most common age of the group (mode) and the median 53 years respectively.

This information is consistent with the findings of Catling (2008: 31) as reported in his book; *The Elusive Harvest*. His experiences are based on working with smallholder farmers in the Western, Southern and Northern Cape. He describes the profile of a farmer in the “coloured rural areas (CRA)” as being mostly middle-aged or elderly. Their study was based on interviewing 102 farmers at three areas, namely Richtersveld (Namaqualand, Northern Cape), Mamre (Western Cape and Suurbraak (Southern Cape). They found that most farmers were middle-aged or elderly with 42% of the farmers being between 41 and 60 years, 41% were over 60 years of age and only 2% were women. Of this group only 5% had received any kind of agricultural skills training.

Mahanjan and Cronje (2000: 150), report that, in their survey on goat farming in the Mgwalana District of the Eastern Cape, of the 100 households interviewed, 68% were male headed households where 66% were over the age of 50 years. Of the female - headed households, 54% were over the age of 50 years. The majority of these households had either been farming with goats for over 20 years or had only recently started (< 10 years). Most of them had no formal training in farming or agriculture.

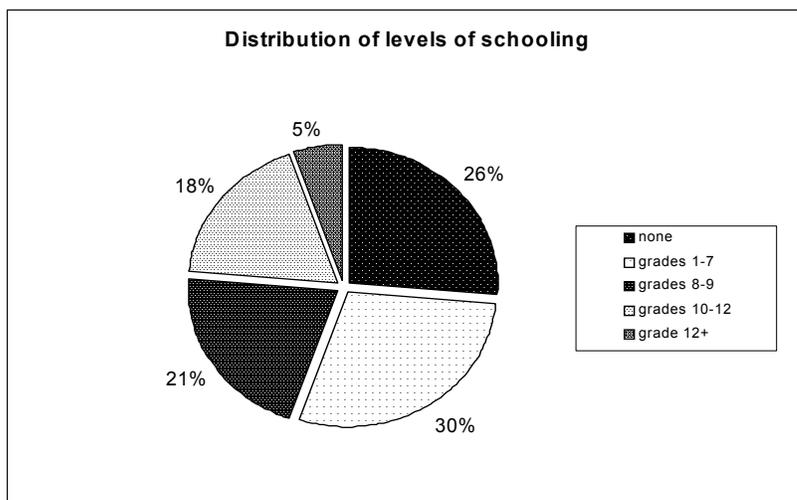
The information acquired from the questionnaires administered show that of the farmers in Campbell only 30%, had basic schooling, while 26% had no formal schooling at all (Figure 5). This is almost similar to the data of the 2001 census on Campbell, which reported that of the population 18% had no schooling, 29% some primary, 37% some secondary and 5% had completed their schooling

(Siyancuma, IDP 2005-6). This shows an almost similar trend to the information of Mahanjana and Cronje (2000), working in the Mgwalana District, Eastern Cape and Catling (2008) working in the Western, Southern and Northern Cape.

Many of these farmers had very little schooling as they either attended the small farm schools on the farms on which their parents worked, during the sixties and seventies. These schools offered only the basic few years of schooling (grades 1-5). If the farmers attended the school in the village they had the opportunity, if their parents could afford it, to attend school up to grade 7 or 8 (std. 5 or 6). The nearest schools offering secondary education (high school) were located in Kimberly. **Schooling was the responsibility of the families with very little assistance, if any from the state.** With many parents working on livestock and irrigation farms in the area, many could not afford to send their children to high school. Of the older group (56 yrs+) some only received basic schooling or none at all. Judging from the above information, any form of training offered will be a challenge to the trainers. A trainer would have to be schooled in training older, illiterate people.

Today, however we report that 5% of the members of the co-operative have some form of tertiary education. Figure 6 further shows that 38% has high school education.

**Figure 6: Level of schooling of Campbell co-operative members**



**Table 5: Training profile of the co-operative members.**

<b>Training (from other service providers and KKC)</b>	<b>Number (n=39)</b>	<b>Percentage</b>
<b>Any type of training (FARM Africa, NGO's, KKC or other)</b>	16	41
<b>Skills training in agriculture (KKC) –practical (hands-on) training and demonstrations</b>	12	31
<b>Learnership training in agriculture (KKC) – formal + practical training</b>	5	13

Table 5 indicates that 41% of co-operative members received some form of training from one or another service provider, government organisation, non-government organisation (e.g. FARM Africa), or tertiary institute. This training was normally given as short courses or in the form of workshops and was related in some way to agriculture or agricultural business. Examples of the type of training received as mentioned by the members are, wire making, windmill repair or identifying anthrax or other disease symptoms in the animals, to mention a few.

With respect to the learnership training offered by KKC as described in chapter 1, as part of the commercialization of goats training, only 5 members or 13% of the co-operative members had attended. This training is made up of different unit standards in goat management, life skills, business and financial management. It consisted of classroom sessions (theory), practical assignments, demonstrations and visits to other goat related enterprises. The duration of the training was about one year.

In the case of the skills training, 12 members or 31% of the co-operative members received this form of training. This training is done in a practical way, through demonstrations and by allowing co-operative members to do the activities. This practical on-farm training was in topics such as how to tattoo the

animals, how to castrate ram – lambs, how to vaccinate or dose animals. (see chapter 1).

**In the cases of skills training as well as learnership training**, the training provider needs to take into consideration the ways in which adults learn. Most of what adults learn is what they see and hear and what they can experience, especially if they are illiterate or functionally illiterate. Green (2002: 10) also mentions that the trainer needs to ensure that the training material must be important to the adult learner. Adult learners must be given the freedom to learn in their own way and the timing of the training must suit the trainees as adult learners are more alert at the beginning of the day. The learners must not be concerned about other activities. It is also important that cultural aspects of the learners are considered and that the local knowledge be acknowledged. Personal experience also indicates that in terms of cultural aspects, the trainer needs to have prior knowledge of the trainees, their culture and environment so that the way the training is presented, and who is presenting, is acceptable.

The majority of the farmers belonging to the co-operative are over 46 years of age and have had limited schooling. Members of the co-operative would therefore benefit more from skills training than from the training, where classroom sessions are involved. In the skills training, the trainer needs to acknowledge the local knowledge, ensure training is experiential as well as create a positive environment for the training.

Most of the farmers of the co-operative are part-time farmers and are dependent on non-farm jobs outside of the village, or government grants to sustain their families. In Campbell, about 65% of the community is dependent on state grants (Siyancuma IDP). This is consistent with what Bradstock (2004:5) found in their study in other communities and towns of the Northern Cape. Very few members responded to the question relating to income from their farming

practices. The possible reason could be that they feared that they might lose the social grant if their income status was revealed. A few members indicated that they did not have any income due to theft or mortality of their animals while the others omitted the question.

**Table 6: Livestock types owned by different members of the Campbell co-operative.**

Type	No. of people having animal type	Total No. of animals
Sheep	22	930
Goats	22	774
Cattle	7	72
Pigs	2	52
Horses	1	4
Donkeys	2	4

From the data in table 6, we see that the majority of the co-operative members have either sheep or goats. Of the total number of goats, 100 ewes and 3 rams are communally owned by the co-operative, while the rest are owned by individual members of the co-operative. Five hundred and eighty eight (588) sheep of the total of 930 are owned by 4 members of the co-operative. Of the seven hundred and seventy four (774) goats, four hundred and fifty eight (458) are owned by 4 members of the co-operative. Comparing the number of livestock owned by members of the co-operative, we can deduce that five members can be classified as semi-commercial to commercial as they own between 100 – 200 small livestock each. The rest of the members own between 0 – 30 animals each and can be referred to as emerging or small scale farmers.

The FARM Africa project was a similar venture, as they also gave households animals and a small starter pack made up of basic equipment and some medication as a start up loan. The FARM Africa project which started in 2003, gave the most deserving and qualifying 5 families (project members) ten animals per family as a loan. Members of these families were also trained in goat production. The FARM Africa training however differed from the KKC training as

it was in the form of short courses (1 week) or workshops (1or 2 days). The members of this project were to return these animals with an interest of 3 or 4 animals extra after about 3 years (Herman and Joseph, 2007: 18). This is referred to as the livestock bank model (see Box 1) and the revolving credit project.

**Box 1. FARM Africa – livestock loan bank model**

Livestock loans vary between eight and ten ewes and the lender must immediately assume responsibility for the livestock on loan.

- \* Beneficiaries are given up to 30 months (covering four lambing seasons) after receiving the loan to repay an equivalent number of ewes received, plus between three and four extra (interest) animals (equivalent to an annual interest rate of about 15 per cent). The bank would normally sell these animals in order to strengthen its cash position (value).
- \* The ewes that are received under the loan scheme are given as new loans to the next beneficiary on the group's list (drawn up based on the wealth ranking exercise with poorer members given higher priority as "primary beneficiaries").

The scheme then repeats itself.

[source: Herman, F. and Joseph, I. (eds) 2007 FARM Africa working paper 5. Tracking the performance of livestock banks managed by land reform groups in the Northern Cape]

This project was initially managed by the Campbell co-operative. It was raised during the focus group discussions as training was also offered as part of this project. The type of training received and the management of the FARM Africa project became a point of discussion. One member of one of the focus groups raised the issue that this project was creating problems as there was dissatisfaction within the co-operative about the current management of the FARM Africa project. The dissatisfaction stems from the fact that FARM Africa has terminated their involvement in the project and the project is now managed by a committee within the co-operative. The member of the co-operative felt that

the project was putting more pressure on the existing land as more farmers were being created. As soon as there were animals available within the project, the new identified deserving family within the community, received their 10 - animals. These “farmers” then needed land to utilize as grazing for their animals.

Since it was not the topic of evaluation the researcher decided to cut the discussions short and not place too much emphasis on it. The researcher did not want to allow the negative feelings to disrupt the easy flow of information in the groups.

**Table 7: Represents who co-operative members sell their livestock to.**

<b>Sales: to whom</b>	<b>% no. of members</b>
Individuals / speculators	37
GWK (Griekweland West Ko-op.)	24
KKC (Kalahari Kid Co-op)	5
Auctions	41

Table seven shows that of the 39 respondents, 37% indicated that they still prefer to sell their animals to individuals or speculators who come to Campbell to purchase animals. Their reasons for selling to individuals or speculators were that they come and purchase at the farm gate, eliminating the element of transport and risk. Co-operative members indicated that they weigh their options (cost of taking animals to auction or abattoir) against the price offered and calculate whether it is cost effective to sell out of hand or to take their animals to a sale. Other factors contributing to co-operative members selling to individuals or speculators are the regulations and classification their animals have to adhere to on arrival at the abattoirs or auction pens. Without appropriate and reliable transport, animals can arrive at the auction or abattoir bruised and dehydrated resulting in a reduction in the quality and ultimately the price paid to the co-operative members. They also report that they prefer to sell to individuals or speculators because their livestock are still regarded as inferior by the abattoirs

or auctioneers as they (co-operative members) are still labeled as “emerging”. The co-operative members mentioned incidents where they arrived at the auctions and were told to offload their livestock in the back holding pens, almost like the apartheid years. Many feel that the label “emerging” prevents them from receiving the same treatment and privileges as the commercial farmers or even a small-scale white farmer.

Twenty four percent of the co-operative members sell to Griekwaland Wes Ko-operasie (GWK) as they have purchased GWK shares. These shares give them access to market information, such as when auctions will be held, as well as the opportunity to market their animals through the GWK co-operative at no extra cost with respect to transport. Transporting the animals to the auctions is arranged by GWK and animals are fetched from Campbell.

Only approximately 5% of the respondents indicated that they currently sell their animals to the Kalahari Kid Co-operative (KKC). The reason given for this is the competitive nature of prices received elsewhere (e.g. auctions and GWK).

The majority of the co-operative members (about 41%) denoted that they prefer to sell their animals at an auction when possible as they have the decision to accept the offered price or return their animals to the farm.

**Table 8: The frequency with which members sell animals.**

<b>Frequency</b>	<b>Members (%)</b>
Once every 6 months	17
Once per year	22
Irregularly	42

According to the above table, many farmers (42%) have irregular sales of animals. These co-operative members reported that they were unable to sell any livestock either due to mortality or theft, while some were still in the process of

using their animals for breeding purposes in order to increase their animal numbers. Twenty two (22%) sell livestock only once a year, while seventeen percent (17%) are in the position to sell animals every six months. The 17% of the members who sell every six months are the farmers who are farming more commercially, that is, **they farm** so that they have two production cycles and therefore have lambs to wean and sell.

In order to establish whether the training co-operative members received had made a difference in their production practices, the questionnaire included questions on record keeping, which is an integral part of a farming enterprise. Table 9 gives an indication of the results obtained.

**Table 9: Summary of records kept by members.**

<b>Record keeping</b>	<b>Individuals keeping records (%)</b>
<b>Are records kept?</b>	79
<b>Types of records</b>	
Production	53
Financial	58
Health	76

The results show that seventy nine percent of the members of the co-operative keep some form of records (Table 9). Not all of them record all the different types of information a livestock producer should keep. To the majority of the members, health records of their livestock seem to be the most important record to keep, followed by some form of financial records. The production records, although important to a livestock farmer, does not seem to carry the same weight as health and financial records. Only 53% of the members keep production records. These are records that would indicate to a farmer how many lambs were produced and which ewes were producing the lambs. If farmers keep these records they would know which of their ewes are productive and which would need to be culled. According to one of the farmers, he only gives an animal

mature enough to produce, two cycles of non productivity before it is culled. He does this in order to save on the production costs.

**Figure 7: The acquisition knowledge on record keeping.**

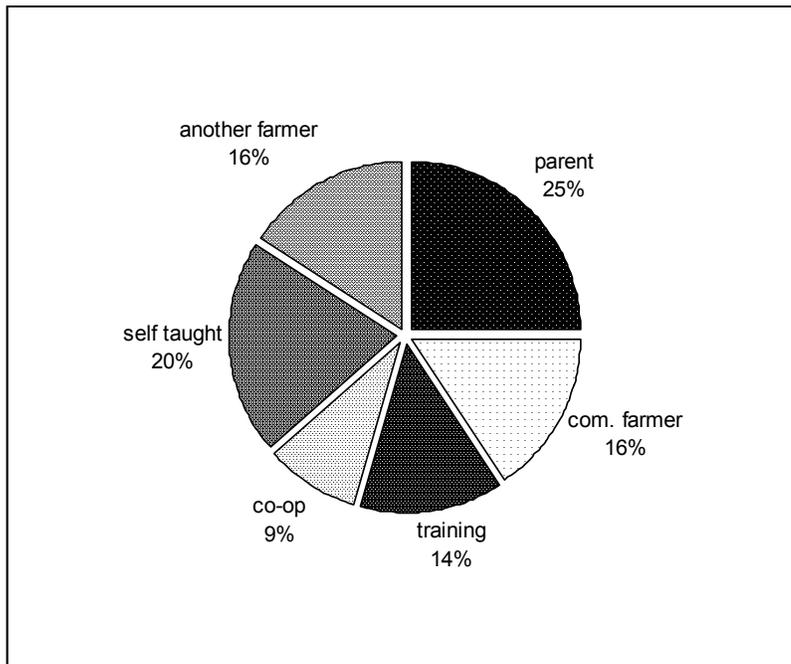


Figure 7 represents the responses to the question on where knowledge about record keeping was obtained. Twenty five percent (25%) indicated that they inherited the practice from parents or were taught by them. Only 14 % of the members reported that it was knowledge gained through formal **training**. The results also indicate that there is **farmer- to- farmer** transfer of knowledge taking place, both between emerging farmers and other emerging-farmers, and emerging-farmers and commercial farmers. Figure 7 shows that 16% of the farmers mentioned that they acquired their information from commercial farmers, while a further 16% acquired their knowledge via another small farmer. This **farmer-to-farmer** transfer of information is used by non government organisations like FARM Africa in other developing countries, as a method to share information among villagers or local farmers (Peacock, 2007: 9). Garforth, Morgan and

Kaberia (1985) reported that the FARM Africa, farmer-to-farmer extension model's actual impact was in increasing, the adoption of dairy goat management by other farmers, in the goat projects.

#### 4.3.2 Questionnaire 2

This questionnaire was developed to establish what other forms of information members of the co-operative accessed. This questionnaire was only administered to the 17 members who attended one of the workshops. The researcher assumed since the co-operative was fairly homogenous with respect to education, access to finances and the reading material, the results were fairly reliable and representative of the co-operative. Table 10 represents a summary of the information obtained.

**Table 10: A summary of the types of agricultural information accessed.**

	Yes	No
1. Member of a union?	100%	
2. Do you watch Agri-TV?	29.4	70.5
3. Do you read the Landbou weekblad of Farmer's weekly?	23.5	76.4
4. Do you receive and read the Kommuniek of GWK?	35.2	64.7
5. Do you receive and read the Nu Farmer newspaper?	23.5	76.4
6. Do you buy, receive and/ or read the Farming SA news?	11.7	88.2
7. Do you receive and read Agri-Farmer?	11.7	88.2
n=17		

All members indicated that they were members of the co-operative or farmers union (Table 10). Twenty nine percent of the members indicated that they watch agri-TV, an early morning television programme dealing with agricultural matters. With respect to popular agricultural journals, the Kommuniek of GWK was the one that was read the most. Thirty five percent (35%) of the members indicated

that they read it. The majority of these farmers receive this magazine as they are shareholders of GWK.

The results obtained above could be a reflection of the fact that the majority of the farmers are older than 47 years and do not have much formal schooling, are illiterate or functionally illiterate. Another reason could be that they do not have access to the literature and were not aware that the library in Campbell receives some of it. One can also then deduce that if farmers are not receiving their information through reading or watching the TV programme, then they must have acquired their knowledge on production practices either through training, or via some form of extension or from informal and formal interactions with other farmers.

Delving further into the aspect of knowledge acquisition the following questions then dealt with how often members had contact with DALR officials, or participated in workshops or discussion groups.

**Table 11: A summary of the frequency (%) of interactions between farmers, the Department of Agriculture and Land Reform officials and other farmers.**

	1 per week 1 per week	1 per month 1 per maand	1 per quarter 1 per kwartaal	1 per year 1 per jaar	Now and then Nou en dan
How often do you see the extension officer?	6	18	6		76
How often do you see the animal health technician?		12		6	82
How often do you see the vet?	6	6		6	82
How often do you attend workshops dealing with livestock production aspects?		6	12	18	65
How often do you meet as a farming union?	6	76			18
How often do you meet to share information about problems or other information?	12	76			12

The majority of the members indicated that they only interacted with the DALR officials now and again, where information regarding different agricultural information was exchanged. The animal health technician (AHT) and extension officers assigned to the district is expected to have a formal arrangement with the co-operative where he/she meets to discuss challenges experienced by the members. These challenges are then either addressed in the form of meetings, workshops or training which is arranged by the extension officer in conjunction with the co-operative. The above information indicates that this is not happening. The animal health technician (ATH) is expected to communicate to the state vet any serious livestock problems encountered by the members. Anthrax is an endemic livestock disease to the Campbell area and the animals should be monitored regularly, however many of the members were not even aware of who the ATH was.

Sixty seven percent (67%) of the members interviewed reported that they attended workshops on agriculture very irregularly, while approximately 6%, 12% and 18% attended some meeting or workshop relating to agriculture, either once a month, once a quarter or once a year respectively. It appears then that since the farmers are meeting fairly regularly, at least once a month for meetings that this might be the forum where information exchange is occurring. This form of information sharing between farmers should be nurtured and developed as a method of farmer-to-farmer extension of information.

#### *4.4 Focus groups*

During the focus group discussion, different methods were engaged to obtain information about different aspects of the farming practices, organizational influences on and in the community, history of the project and production

practices. Different questions were posed to solicit the responses by these questions. These responses are reported in a narrative format.

#### *4.4.1 Mapping*

Members of the co-operative attending the focus group workshops were requested to diagrammatically represent Campbell (Appendix 5). The map shows how the communal municipal land is divided into a number of different camps. These camps are rented to the farmers via the municipality. The number of animals the farmer possesses will inform whether he/she is allocated a camp to farm alone or share a larger portion with another farmer or two. The map also indicates where the main dams are which supply both the town and the camps with water, via boreholes or springs. Campbell is fortunate that it has a number of well supplied boreholes and springs. As mentioned before, of the camps, one section is used for communal grazing by members who only have a few animals.

The land is constantly under pressure with new beneficiaries acquiring animals and needing land for grazing (per comm., chairperson of co-operative). This they feel is as a result of the poverty alleviation project initiated by FARM Africa in 2003.

In order to understand all the different parties that were and are involved in the agricultural development process, members were requested to do a Venn diagram as described in the methods.

#### *4.4.2 Venn Diagram*

The Venn Diagram was divided into the period 1994-2003 and then 2003 to present (Appendix 6).

Shortly after 1994 there were organisations like DALR, FARM Africa, NAFU, GWK, Landbank, “Noordkaap Lewende hawe”, Agri-NC, ARC, Beyer, and KKC active in Campbell and its farming activities. Most of them were said to be offering training in some or other agricultural aspect. In the case of Beyer, a company trading in veterinary products and chemicals, the relationship initially consisted of their representatives offering training in the products which they sold. This relationship developed due to personal relationships with members of the co-operative. When the representative of Beyer resigned from his job, the relationship was lost, and Beyer no longer has that interest in the co-operative or community.

Other relationships which also involved training were, GWK, Landbank, ARC, FARM Africa and KKC. This hype around offering training soon died. After 2003, the only organisations having a close relationship with the co-operative were FARM Africa, KKC, DALR and GWK. The relationship with FARM Africa was formalized when a project was established with the community. This consisted of a revolving fund and livestock bank project. This project lasted from 2004 – 2007, when FARM Africa (a British NGO) culminated its activities in South Africa. The project included training its members and developing capacity in all relevant aspects of livestock production. Topics such as veld management, animal breeding and health, stocking rates, water management, control of predators, stock theft and marketing were dealt with in the training (Festus and Lazarus, 2007: 24). The co-operative acknowledges the role that FARM Africa played in offering training especially in veld management.

#### *4.4.3 Time Lines*

This exercise requested members of the two focus groups to develop a time line of the co-operative from the time it was registered (Appendix 7). The Campbell

Agricultural Co-operative Enterprises was registered with the assistance of the DALR and KKC in 2003. The co-operative members also received its first training from KKC during that year. Another important event which happened that year was that the livestock received their first vaccination against anthrax (miltsiekte). This year also saw the official handing over of the communal municipal area to the community (8000 hectares). In 2004, the FARM Africa project was launched and members of this project, received sheep (see Box 1). As part of the project, training was given to members. In 2005, the revolving fund was established by FARM Africa. This however, does not form part of the co-operative. Sixteen members of the co-operative also purchases shares in GWK. At the end of 2005, FARM Africa started their exit strategy from Campbell. In 2006, the first farm was purchased for the farmers by the Department of Land Affairs, via the LRAD grant scheme. The co-operative also receives their animals from the Department of Agriculture and Land Reform (DARL) and KKC as part of the commercialization of goats' project. The co-operative received 100 ewes and 3 rams as seed-stock towards developing commercial goat farmers with the co-operative. KKC also implemented its first production training with the co-operative. An additional project (Nguni project) was started with the co-operative by DALR during this year. This meant that as part of this project, a loan of 10 Nguni cows and 2 bulls were given to the co-operative as part of the Nguni Development Initiative of DALR. The first training in Nguni production was conducted with the farmers as part of this initiative as well.

Farmers were also encouraged to register their individual tattoo markings with the National Department of Agriculture (NDA) and a traceability system was launched. This includes each animal being tagged with a plastic digitally marked tag in its ear and these tag numbers are then registered on a provincial database. This was done not only to assist the co-operative members and farmers but to assist DALR with animal census in the province. During 2006, the co-operative is challenged by severe weather and a number of animals are killed

by lightning. Co-operative members and their production practices were tested when they had to deal with an outbreak of Anthrax.

In 2008, the co-operative members confirmed cases of animals dying from Anthrax. Training on the identification of the symptoms of the disease, and how to deal with the disease, was given to the farmers, as Anthrax is endemic to the Campbell area.

The beginning of 2009, member attended a workshop in Schmidtsdrif, NC the neighbouring village, where the topics of discussion were veld management, Information about indigenous and invader plant species, and how to identify, the causes of soil erosion and the dangers of Anthrax (since it is a zoonotic disease, meaning that it can affect humans as well

The National Department of Agriculture discussed to the development of other projects with the co-operative. Discussions about the possible implementation of an ostrich production project, was initiated.

During the interrogation of the information contained in the time-line, some members were positive about the FARM Africa project, while others felt that it was causing problems. They feel that it was not introduced as an agricultural project but rather as a poverty alleviation project (social service). Some members felt that if a project has anything to do with agriculture, then it should be approached as an agricultural enterprise and provision should be made for it in that sector. If the projects are for social services then people should rather be given food parcels or social grants. Members who are farmers are complaining that more animals are being brought into the system, even though there is a shortage of land. Some co-operative members also felt that new farmers were being created out of people who were not really interested in farming. They also felt that these new farmers could pose a threat to their enterprises as they were not serious about farming so they were not applying the same amount interest in

aspects such as disease control. Members also felt that this project was now creating conflict because committees were being created within committees. FARM Africa has now exited and the organisation no longer works in South Africa, so the co-operative now has to find solutions to the problems that were created, in order to avoid major conflict among members and in the community.

#### *4.4.4 Seasonality chart*

Members worked together and developed a seasonality chart for Campbell and its goat production. The calendar was divided into months of the year and the rainfall for the area was depicted making use of beans. The months that received the most rain were allocated the most beans. On this chart the times when rams were placed with ewes, and when the lambing season started was shown. They also highlighted at what time of the year the most diseases were encountered among the animals and why the need arose to vaccinate the animals. After developing the seasonality chart a discussion about the numerous deaths due to predators arose. A suggestion was made that we try to superimpose the production cycle for the predatory animals onto the goat production cycle of the co-operative. This made members realize that they might have to adapt their farming practices, as they were presenting the predators with enough food to raise their young. Predators no longer had to go in search of food, as it was easily available since the domestic livestock were no longer returned to the kraal at night and shepherds were not always able to protect them.

With the development of the seasonality chart, even the ladies who had only recently become active farmers joined in the discussion. They indicated that it was as a result of the training they received that they were now able to share in the farming activities and understand the processes.

## 4.5 Interviews

As mentioned in the methodology, co-operative members participated in semi-structured interviews. Of the members interviewed, five had received learnership training. One member also held the portfolio of being the chairperson of NAFU, Northern Cape. One of the members interviewed an employee of DALR and KKC (to administer the skills and learnership training) is a member of the co-operative and Campbell community. The two latter members were specifically chosen as the researcher felt that they held different views about the progress of the project as they were in constant contact with other farmers' organisations by virtue of their portfolios. Semi-structured questions guided the interviews (Appendix 4).

### 4.5.1 Responses to questions 1-9

Two members of the co-operative were interviewed with respect to questions 1-9. Here are their responses.

When questioned about whom the organisations were that offered training in the village, the first respondent indicated that since 1994, numerous organisations offered training to community members in different aspects, not necessarily agriculture. The second respondent could not recall as he only returns home on weekends. The training sessions / workshops, were normally held in Campbell, but since becoming part of the Siyancuma municipality, these training sessions are rotated between the different towns. The members who have access to transport normally attend the training sessions in the different towns. Many farmers from Campbell attend the training when it held locally. When held in other towns, it depends on whether the co-operative members receive assistance with transport in the form of a bus or taxi, whether members will be able to attend. "When we receive assistance, about 20 members normally attend".

When questioned about organisations that offered structured training, the first respondent shared with the interviewee that besides the training organisations already mentioned, an organisation from Upington offer business training in Campbell. “I think the organisation was affiliated to the Boskop training unit, I am not sure.” The second respondent’s response was that, members from the Grootfontein Agricultural Development Institute (GADI), was recruited, normally by FA, to offer skills training to the community. “I believe the first training offered in Campbell was as early as 1996.” When questioned on the frequency with which farmers attend training, the first respondent suggested that most farmers attend a farmers’ day at least once a quarter. The second respondent replied that if it was in the interest of the farmer, they made an effort to attend the training.

To the question about whether farmers benefit from the training or farmers days, the response was that most farmers benefit from the farmers’ days. “We request that the presenters share the information at the level that farmers will understand. Yes, I believe farmers benefit as I can see changes in their production practices. When I offer training the farmers also have many questions and want practical demonstration where applicable.”

Are farmers ever questioned about their needs with respect to training or information transfer? They responded that in the past farmers’ needs were not addressed as “we were not part of the discussion about what topics should be dealt with. This has changed and we now discuss what topics we would like more information on.” The respondents felt that the trainers had to be able to speak the local language and share the information at the level of understanding of the farmers. They mentioned that in the past many farmers attended but did not understand as the information shared was too technical and in a language unfamiliar to the farmers.

Does sharing of knowledge occur among the farmers? “Yes, sharing of knowledge among the farmers takes place. Some of us meet once a week on the farm where we work together with the animals of the co-operative. We always discuss amongst ourselves what we have learnt.” It was also mentioned that at the regular co-operative meetings members are requested to share what they learnt so others can benefit from the interaction. “When we meet each other on weekends we also share our problems and concerns about the farming and seek advice where necessary”.

When questioned about the most pressing needs of the farmers the respondents replied that, “Our most pressing need as a co-operative is to receive proper extension assistance from an extension officer who is knowledgeable. We need to teach our farmers that the emphasis should not be on the number of animals you own but on the quality. Most of the farmers still require training in basic business skills, in a manner which they can understand and comprehend”.

The second respondent felt that there are still gaps in the knowledge and that training is needed. “When training is arranged I feel the portfolio of the farmers should be considered, such as age, literacy and language. We should also not treat the farmers as though they have no knowledge, we must respect the local knowledge and build on it”.

When questioned about whether the training is impacting on farmers’ livelihoods the response was, “yes, I believe it is making a difference. People are more enthusiastic about farming than before. Even those who are not benefiting yet are seeing that farming can make a difference.” It was felt that people are engaged in farming at a different level as the questions posed are more scientific.

What support do co-operative members require other than land and money? The first respondent felt “The price paid for animals by KKC should be addressed. It should be more competitive than that of the market. We also need assistance

with establishing businesses that are part of the livestock agribusiness value-chain. We also need assistance to change the attitudes of business, that just because we are regarded as “emerging farmers” we have animals of a lower quality. Finally I believe we still need assistance with proper market access”.

The response of the second respondent was, “In my opinion, we need research on better control of predators, as well as to reduce the mortality levels during lambing. We also need information on what animals to use when cross-breeding, for example, which indigenous goats to breed with Boer goats”.

The responses by the two interviewees with respect to other aspects regarding the farming, the cooperative and DALR projects were as follows: “I would like to touch on the goat project. When we received the animals they were very young and we had to invest money to get them to adulthood. This puts a strain on our resources, as it is almost 15 months before we can generate an income from that animal. This was not the case with the Nguni cattle. Here the cows were pregnant or had calved, so we were on our feet running, not in the starting blocks. We need to work closer with the department in terms of the farmers’ organisations. A network should be established. I am not sure how we breakdown the “racial” barriers that still exist in the market especially for the unschooled farmer, otherwise we will remain marginalized. As mentioned before, we also need research assistance regarding mortality and predators. We also need to engage more with respect to sustainable farming practices. The women especially should also receive more training for things other than just the production practices.

The second respondent indicated that there was a need for proper infrastructural support within the training sector. More practical methods of training should be investigated and proper training equipment should be procured to make the training more visual. Most farmers are senior citizens and do not want to be in a classroom where they are dealing with manuals consisting of written words. It

was also felt that the members recruited for training should be committed to farming and not just because they are looking for something to do.

#### *4.5.2 Responses to questions 10-23*

The remaining questions, namely 10 -23 were posed to the four members of the co-operative who received learnership training. All four the respondents, although interviewed separately had similar responses to the questions.

##### **a) *What training and from whom?***

All four members received the KKC learnership training. Some of them also received some of the training offered by FARM Africa (FA). Three of the members interviewed were recipients of animals from the FA livestock bank project. The fourth recipient was not an active farmer, but was interested in becoming a livestock farmer. He received the training as he was a member of the co-operative, an influential member of the community and showed an interest in the livestock projects. Besides receiving the KKC training, he also received training in bee keeping, as he is a bee farmer.

All members received the KKC training in 2003, with different forms of training offered via FA extending from 2003 -2006.

##### **b) *How did it differ?***

The training received from KKC was on different modules of goat production, financial management, record keeping, and skills development. The training was both theoretical and practical and lasted for a year. The theoretical training was in the form of lectures, while the practical aspect was demonstrations and visits

to different farmers and livestock agribusinesses where different aspects of goat production and goat products were demonstrated.

The training differed from other training received in that trainees were paid a monthly stipend by the DALR and KKC. This was to sustain the trainees as they were to remain trainees for the year. The training was developed so that one week trainees received theory (classroom format) and the next three weeks they worked on the farm. “The KKC training also differed from the other training, in that we received a manual of the training and we were given practical assignments. We had to complete the practical assignment at the end of each module. This was one of the major differences between the KKC and FA training.”

“Most of the FA training was in the form of short courses (one or two days) or workshops”.

Members reported that the KKC training, was suppose to last for the entire year, however towards the end of that year (2003) the DALR experienced problems with the finances of the project and it ended rather abruptly. “The training also differed in that we received the certificate for National certificate in Animal Production (goat management)”. This is certificate is accredited by the AgriSETA and is equal to 120 credits.

Interviewees who received some of the FA training indicated that sometimes they received certificates of attendance. In the case of training arranged through an institute such as GADI, the training was accredited, and members received a certificate for those credits (module) if they were assessed as competent.

One of the respondents indicated that he received a certificate for the module “junior Dorper course” which he attended at GADI, which was arranged by FA.

**c) Did you benefit?**

When members were questioned on whether they benefited from the training their response was unanimous. “Yes, we benefited tremendously from the training as we were exposed to the theory of goat production but also the practical aspects. Included in the training were excursions to different aspects of the goat business like visiting commercial farmers and such as stud producers. Included in the training was a visit to the abattoir to experience how quality is measured and meat standards and the grading system was demonstrated. We were also taken to visit auctions and different agricultural shows”.

**d) Would you pay for the training?**

All four members interviewed indicated that they would attend the training again if it was offered. They also displayed a willingness to pay for the training, if it was the same type of training and they had prior knowledge of its contents and format, in other words if it was structured the way the KKC training was.

**e) Can the training be improved?**

“Yes, the training can be improved. In our case, the training ended abruptly and we an assessment for the last module was not done even though we received our certificates. This lack of assessment concerned them as they feel that there should be consistency and continuity, even when trainers leave.

**f) Did you share your knowledge?**

Members indicated that the other members of the co-operative encouraged them to share the knowledge they acquired with their fellow farmers and co-operative

members at the co-operative meetings. Two members felt that initially the older farmers were not keen to listen to them as they felt that the younger trainees could not teach them anything that they did not know already. This changed when farmers witnessed the implementation of what was learnt. The farmers then requested that the members who had received training demonstrate to them how certain production practices needed to be implemented. The trainees mentioned that the older farmers were not keen to sit and listen to lectures. The topics they were particularly interested in were the diseases which affected their animals. "They were curious about identifying the symptoms of the diseases and what products to use".

**g) Can others benefit?**

Again all four respondents were adamant that the other farmers could benefit from the training. Comments from them included the following: "many things have changed from the way we use to farm, for example, we never treated the animals against parasites or vaccinated them in the past. The training will however have to be adapted as the majority of farmers are older and do not want to sit in a classroom all day. The training is applicable, as it is not based solely on literate people". There was a feeling that members could benefit from the training in animal health, the use of natural resources, and managing the farming as a business. Almost all the respondents felt that they could still benefit from additional business management, record keeping and basic accounting training.

All the members felt that the training should be in the form of groups. The age of the trainees should however be considered when developing the training. Members preferred a mixed group when being trained that is, older mixed with younger and a mix of gender. They felt that the group situation allowed them to compete while others felt they were able to learn from each other and from the experiences of the older members. The only aspect they had a problem with was

training women to castrate animals. Their feelings and bias to this they felt had to change though as they felt it was modern times in which they are living. Women were now farmers in their own right and they needed this knowledge and skill. The fact that women were not allowed to do castrations was a cultural thing and that it needed to change with the times.

Only one member interviewed, was active in something other than the agricultural projects in the community. He also felt that he was still too young, immature and was still prepared to learn from the others before taking up a more leadership role in the co-operative. He however felt that if he was requested to train his peers, he would be willing to do so. Initially, he was only farming part-time, but was becoming more involved in his farming enterprise. The two ladies interviewed, were the chairperson and secretary of their organisations, and felt they were in leadership roles. When given the opportunity there was sharing of knowledge, either formal or informally. .

#### 4.6 *Most significant changes*

Responses to the questionnaires and even the interviews did not highlight the difference between how farmers use to farm and what has changed since receiving training. A focus group workshop was arranged. Members of the two groups were asked to explain how the training had changed their farming practices.

Members recorded that before receiving training they would use traditional medicines when animals became ill. After receiving the training they were now able to identify some of the symptoms of certain diseases and knew what veterinary product to administer or what to request from a vet or animal health technician. They reported that another important change the training has brought about was that they no longer slaughter and eat an animal that has died,

as they know this poses a serious risk to their own health. They have learnt that certain diseases an animal has are transferable to humans (such as anthrax). They now burn, or bury these animals.

The fact that members indicated that in the past they did not keep records of their production practices so they were never sure how old their animals were. This had an impact on when they weaned the animals and when they sold them. This has now changed, especially for the farmers with larger numbers of animals. Record keeping has assisted them with predicting when they would have animals ready for the market. This gave them a form of security on a possible income from sales. They also knew where to access information about the market and this, also assisted with predicting their income and budgeting for their household needs. They gained knowledge on how to judge the quality of their animals and they were able to assist their animals with additional feed in order to acquire the needed quality for the market.

“We as farmers now also have bargaining powers for better prices for our animals as we can evaluate the quality of the animal and only sell them when they are healthy and fat, and of a better quality. We are also able to bargain for better prices for medication and other products including feed and different feed supplements. The training has also taught us about registering trademarks (tattoos) and tagging our animals. This has led to a reduction in animal theft to a certain degree as we can now prove that an animal is ours. We have also moved away from traditional farming practices of naming animals and then not being able to sell or slaughter them as they had become personalized or more like pets”.

Members also reported that the training had taught them about rotational grazing and protecting the natural resources. “We now have a better understanding about the livestock production practices, such as when the ram must be put to

the ewes, when the animals will lamb/kid/calf as well as when these animals must be weaned. The rams no longer walk with the ewes, which resulted in unscheduled lambing. We now also keep records so that we know exactly how old our animals are and this assists with knowing more or less when animals are ready to be sold. Not keeping records had an impact on when we weaned the animals and when we sold them. The keeping of records assists us to predict when we will have animals for the market. It gives us a form of security on a possible income from sales”.

The veld is now managed by means of its carrying capacity, and not over utilized because it is a ready resource of food. We now know why animals have to receive additional feed and what we have to supplement the animals with, when we can afford it. There is also a better understanding about vaccinations and when to administer them. Training has also taught us to understand what “withholding periods” mean (that is, an animal cannot be slaughtered within a certain period of time after being vaccinated or dosed for parasites)”.

The participants also commented on how they have improved their livestock management practices. “In the past, many animals were lost during the lambing seasons as a result of problems they encountered but we now know how to assist them. We also feel that we can request the assistance of a vet or animal health technician, as we understand the role they play in our business. We can now see that our animals are in a better condition than before. The training has also taught us as women that we can become farmers in our own right. In the past we saw it only as a business for a man”.

#### *4.7 Impacts of the training*

Very few members indicated any information regarding what kind of income they were receiving from their farming practices. In order to find some way of

measuring whether the training had an impact, members of the two focus groups were asked to reflect on the question: Has training had an impact on your livelihoods and how?

Members in the groups reported that due to the training their farming practices were improved and that their animals were of a better quality and they were receiving better prices. A member in one of the groups mentioned that knowing that you had the opportunity of selling an animal at a better price offered them a safety net in times of an unexpected death. Owning animals also meant that they could slaughter an animal, rather than having to purchase meat, if challenged by such a situation of an unexpected death. "We are now also able to assist other family members, with the assistance of our farming practice". Members also indicated that with the income they were receiving they were able to assist their children with their schooling. "We also now have a choice as to which schools we would like our kids to attend, and some are even attending the agricultural high school". Members discussed that the training, and ultimately their businesses had changed their life styles. "We are no longer living in the mud houses". A few of the members commented that they were able to improve the houses they received from government or even build our own. One group reported that they were able to increase their farming operations and have a different view of agriculture".

The second group reported that some members were very negative initially because they did not see any changes in their lives but since the training their production practices has become more scientific. This has brought about visible changes in the quality of our animals. At the reporting session, mention was made that since members are able to sell their animals for better prices and at different markets, the results were visible as there are changes in their life style.

Another aspect reported by the group was, "in the past we farmed from the hand to the mouth, but now we are able to plan and manage our businesses and

finances. The training has also taught us to save and this has had an impact on our lives”.

Members also indicated that they were skeptical about forming a co-operative as they did not know why they needed to group themselves and what the benefits would be. Since receiving the training they now have a better understanding. “In terms of the co-operative, we now have a better understanding about the business, how a co-operative functions, and we are able to manage conflict.”

#### 4.8 *Summary*

This section describes briefly how the results of the case study, relates to the objectives of the study.

In answer to the first two questions posed, the outcome from the different data collected indicates that in terms of formal agricultural training seventeen (17) members of the Campbell Agricultural Co-operative Enterprises were trained (skills and learnership). With a membership of 46 this makes up less than 50%. We further learnt that KKC and DALR were not the only providers of agricultural training but that members received different training in different agriculturally related topics from as early as 1996. What is clear however is that the training received from other service provider did not include all the different aspects of goat production as the KKC training, and that it did not include theoretical and practical aspects of goat production. KKC structured their training to last for a full year and culminate in a qualification. Members of the co-operative felt that this is what made the training different from the rest. The training also allowed for interaction with other farmers, different aspects of the goat agri-business value chain and was very practically orientated. This made it very different from what was previously experienced in training programmes. Members of the co-

operative applauded the training received from KKC, especially mentioning the fact that they have the manuals to refer when needed.

What is clearly lacking is a formalized system documenting who received training. An observation from the discussion was that there were a number of initiatives through the years, where members received training but it appeared to be the same members receiving the training. In some cases, the training was the same or similar, just different service providers.

In response to has, the training made a difference in the farmers' goat production practices, the different methods of data gathering indicates that indeed the training has made a difference. A number of indicators support this deduction, namely,

- 1) sales: Farmers report that the prices they are receiving for their animals is better, as they are able to deliver better quality animals to the market,
- 2) markets: Members indicated that they now receive and know where to access information about the different livestock markets e.g. auctions, abattoir information and market prices,
- 3) animal quality: There is a better understanding about the necessity to vaccinate or dose their animals. They also know that they have to assist their animals with addition feed at different times of the year in order to get the best quality animal.
- 4) diseases: Farmers are now able to recognize certain symptoms of diseases and act accordingly.
- 5) tattoos: by marking their animals, farmers are able to identify their stock especially since they farm together in the same camp. This assists farmers with better record keeping and has assisted, to a degree with stock theft.
- 6) veld management: farmers are aware of the need to farm scientifically (i.e. according to stocking rates) to conserve the veld. They try to implement a farm/veld management plan, as best they can, within the limitations (lack of fencing infrastructure).

In response to the question dealing with knowledge acquisition the data indicates that farmers receive their information from a number of sources. Only a few members of the co-operative were formally trained yet all were involved in the more “modern” farming practices. The older farmers indicated that they acquired their knowledge through a farmer-to-farmer type extension process. The co-operative has also been instrumental in encouraging this process by ensuring that members who have received training share their knowledge at meetings. Farmer’s days are another forum where an exchange and acquisition of information occurs.

With reference to the last question members indicated that, whether they were formally trained or whether the information was received via a different forum, the knowledge has made a difference in their production practices and ultimately the livelihoods. They made mention of the fact that their perception of farming as a business has changed. They are now able to receive better prices for their animals and this has resulted in them being able to adjust their lifestyles accordingly.

## **Chapter 5: Conclusion and recommendations**

This section will highlight the outcomes of the study and make recommendations to the Department of Agriculture and Land Reform and share some of the challenges with the research

### *5.1 Conclusion and recommendations*

The commercialization of goats is an anchor project within the Provincial Growth and Development Strategy of the Northern Cape Province. It is also a key project within the DALR. The learnership and skills training offered by the KKC is one of the key components of the project. Campbell co-operative was used as a case study to evaluate whether the training given to members by the KKC has made a difference in the production practices and ultimately their livelihoods.

In response to the hypothesis, has the training of farmers in goat management practices made a difference and ultimately have an impact on the livelihoods of the farmers?

The research findings indicates without a doubt that the training was effective, that it did make a difference to the production practices of the Campbell co-operative farmers and that for some it has made a difference to their livelihoods. The data was collected using three different methods. The findings of all three methods point to the fact that many aspects of the farmers' production changed after receiving training. Whether the KKC training was instrumental in bringing about these changes is a bit difficult to ascertain, as the farmers received different forms of training and information transfer from as early as 1996.

What is clear is that the co-operative members prefer the KKC type training and merit it with some changes in their production practices. The reasons they preferred the training were, that it was a structured course (i.e. it was theoretical

and practical), it exposed them to other aspects of the goat agribusiness, they received a manual with the training information, which they could refer to when needed and it culminated in a qualification.

The members who attended the skills training also applauded it. They felt it suited their needs. The training was regarded as effective because it was “hands-on”, they were practically trained and received demonstrations on aspects of the production practices. They were also exposed to some of the aspects of the goat agribusiness. Many farmers who had never been to school treasured their certificates of attendance.

Farmers who own larger numbers of animals have experienced the impact the training has had to their livelihoods directly, while for the smaller and emerging farmer there are still many challenges. The larger farmers now have animals to sell twice a year, and they are receiving better prices for their animals. They also indicated that they had a choice of market for their produce.

The success of the training and the dissemination of information in the case of the Campbell co-operative can be attributed to the fact that they have a fairly well organized co-operative. The initial chairperson of the co-operative is also the chairperson of National African Farmers Union (NAFU). This union caters mostly for the non-white emerging farmers. The development of the co-operative appears to be well structured even though it is dynamic, meaning that it is constantly changing. New members join while others leave. The co-operative however ensures that, members who are trained return and share the information or knowledge gained with the other members. This farmer-to-farmer extension is important and it is a form of information and knowledge sharing which NGOs nurture and adopt in other developing countries. Peacock (2005; 12) found that many of the farmers acquired knowledge about production systems from schools, churches and other farmers. Project managers and facilitators should be aware of the fact that in small villages there are many routes of information

dissemination and try to use these platforms to spread the information and share knowledge.

Like the smaller farmers there are however still many challenges they face before they can call themselves truly commercialized. These challenges include, appropriate infrastructure on the farms, reliable animal transport or access to reliable animal transport, access to financial assistance, research in problems experienced with production activities (e.g. high mortality of lambs) and the research into adequate predator control, assistance with stock theft.

The above are also challenges the small emerging farmers' faces but if not part of the co-operative, they have additional challenges. These include the expensiveness of certain inputs (ear tags and medicines cost more for smaller packages), management tools are expensive (dosing guns, ear tattoo machines, and ear tag applicators) and holding pens.

If the ultimate goal of the DALR is to commercialise the goat industry then based on the information obtained from the case study, the farmers are still in need of a lot of assistance and it is not training.

It has been almost six years since the Campbell co-operative was established, and that their first members received training from KKC. Although one of the objective of the anchor project has been reached with the Campbell co-operative, that is a change in their production practices through training, the lack of access to a market through KKC still needs to be addressed. Farmers, were promised that this venture would lead to better market opportunities for them but this has not materialized. One therefore can conclude that training in production practices is not the only intervention "emerging" farmers require. In order to move from emerging to commercial farmers need other assistance from government to meet the other challenges as well.

Campbell farmers access to a suitable market or to commercialise their goats was not only due to a lack of production knowledge but also a lack of access to the market. Most farmers lack transport. This means that the farmers are either dependent on members in the community who have transport to assist them, or they are still at the mercy of speculators who come to the village to purchase animals. The LRAD farms purchased for the farmers are also quite a distance away from where they live. This has resulted in farmers only visiting the farms a few times a week. Farmers are therefore unable to monitor the activities on the farm on a daily basis and may only discover a problem a day or two later. This has resulted in the loss of animals in the past. As much as government does not assist the co-operatives with purchasing vehicles, it should facilitate access to financial support in order for farmers or co-operatives to acquire the necessary transport, proper physical infrastructure on the farms and agricultural inputs.

The above is consistent with the findings of Peacock (2005: 15). Peacock (2005) reports that there are many marketing opportunities, including international markets, that could be exploited by goat farmers, such as processing of hides into quality leather and leather products, sale and processing of cashmere, and export of carcasses into Middle Eastern markets. However, the collection, handling, processing and marketing of goats and their products are poorly developed, in many developing countries, severely constraining the more 'market-orientated' goat farmer.

Co-operative members also felt that their research needs were not being addresses. The DALR should assist with directing research into finding a solution to the high mortality rates of kids. Another area of research needing serious attention is adequate predator control.

This case study of Campbell, the effect and impact of the training received by members of the co-operative, which is the subject of the report, provides some information to both DALR and KKC on the outcomes of some of the objects of

the anchor project – commercialization of goats- and hi-lights what some of the challenges still are.

## 5.2 *Challenges experienced and recommendations.*

There is no proper monitoring and evaluation system within the DALR to evaluate whether the projects implemented are having the desired outcome or impact. There was no base line data (background information on co-operative) or real project information within the DALR one could research to get a basic understanding of what conditions were like before the intervention and why the project was initiated in Campbell.

It is important that the DALR develop a monitoring system to assist with keeping track with what is happening in projects implemented by them.

It is recommended that the other co-operatives established by the DALR and KKC are also evaluated in order to establish whether the results obtained in the Campbell case study is consistent. It would be interesting to determine whether the successes experienced by Campbell, is purely due to the training they received and not the role the co-operative organization plays in assuring the sharing of information.