



GOAT MEAT PRODUCTION Feasibility Study



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PREPARED FOR:



**Lepelle-Nkumpi Local
Municipality**



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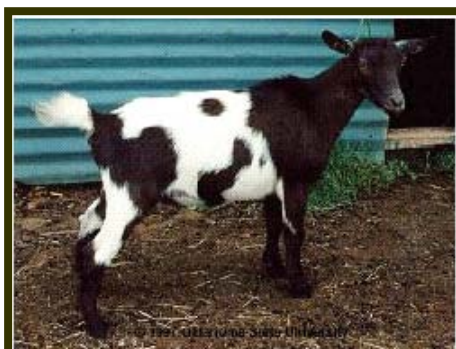


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1. INTRODUCTION

The agricultural sector of Lepelle-Nkumpi contributes approximately 2% to the overall GDP generated by the municipality, constituting a slightly larger proportion of the economy on a local level than for the District as a whole. The agricultural sector is however, a far large employer in the municipality, taking up almost 6% of the overall employment in the Municipality.

However, statistics and studies hide the importance of remittances and non-farm activities for rural households and the potential contribution of agricultural (and particularly livestock) income in providing self-driven livelihoods for the poor. The Agricultural sector thus remains an important industry in the economy of Lepelle-Nkumpi as large tracks of rural areas are mainly held for subsistence livestock farming.

Within the District the overwhelming majority of livestock are goats (44%), followed by cattle (38%), pigs (10%) and sheep (9%). Nearly all of the goats in the District (98%) are communally farmed. Existing livestock farming in Lepelle-Nkumpi also involves goats, cattle, sheep and poultry. As in the District, the farming of animals is one of the key sub-categories of agriculture in Lepelle-Nkumpi. Goat farming is the most popular form of livestock farming in Lepelle-Nkumpi and is mostly concentrated around the Mphahlele, Zebediela and Mafefe areas.

The Limpopo Provincial Growth and Development Strategy (PGDS) also makes provision for a red and white meat cluster, which covers all major corridors in all the Districts of the Province. The strategy seeks, through this cluster, to encourage current and emergent poultry and livestock production, animal-feed production, and to encourage public-private partnerships and skills development among emerging farmers.

The purpose of this project, in line with the PGDS, is to establish a small-scale goat-farming project in the Mphahlele area in the Lepelle-Nkumpi Local Municipality.

The remainder of this feasibility is comprised of the following Sections:

- Development Description
- Market analysis
- Risks, strengths and impact
- Management team
- Financial Plan
- Implementation Plan

2. DEVELOPMENT DESCRIPTION

2.1 Background to goat farming

According to NAMC (2005), “Indigenous goat” is the collective term used for all varieties of South African goat breeds. Special breed names are usually given according to the geographical area in which goats occur, or names of breeds and types are taken over from the nations or tribes that own them. Indigenous goats of South Africa can be classified into speckled goats, Loskop South indigenous goats, KwaZulu-Natal goats, Nguni goats and the Delfzijl goats (Roets, 2004). However, this classification system does not accommodate the thousands of indigenous goats found outside these specific locations throughout South Africa. The Indigenous goats of South Africa vary in horn and coat type, colour, ear length and size. They are mostly of medium size. Environmental extremes are mainly responsible for the variation in size between goat types. It is possible to find different variations in the same region and even in the same flock. Indigenous goats have never been subjected to any selection other than survival in nature. They have never received special care and the management practices involve being milked (by some cultures) and kraaled at night. They are known to be extremely hardy, and have survived centuries of periodic droughts and harsh temperature extremes. They also have the reputation of being resistant to the majority of tropical diseases and parasites.

However, an important aspect that prevents growth in the Indigenous goat industry is that goats are mainly “kept” by farmers and its commercial value is not optimized as could be found in a well-managed commercial farming system. The opinion in some circles is that black farmers do not see goats as a saleable commodity. They see them as animals for financial security and only old animals are sold, which led to the bad image of goat meat.

To commercialise the goat industry, farmers must see their goats as a source of income. In other words, black farmers must be convinced that they could make money from goats. The biggest advantage of the Indigenous goat is its resistance to diseases and its adaptability in unfavourable grazing circumstances. Because of their small size, adaptive feeding behaviour and low management, goats are a viable option in improving the household cash flow of rural people and resolve the issue of food security. Apart from cash income, goats could also be a valuable source of milk and meat for rural poor people. It is also much easier for small farmers with no land or only little land to farm with goats than with cattle, as 10 goats could be kept on the same portion of land as one cattle.

2.2 Overview of goat farming process – project description

Most of the indigenous goats in Lepelle-Nkumpi municipality roam freely on communal land scattered throughout the municipality (see below Diagram). As such goat farming mainly takes place on a subsistence level where a number of families produce milk and

meat from their backyards, mostly for ceremonial purposes. Due to the communal/subsistence nature of goat farming in Lepelle-Nkumpi, goat farming does not form part of the formal supply chain and as such does not currently generate income or employment.

The proposed project's primary focus will be on goat farming for meat production purposes in order to provide a constant supply of goats which can be supplied to nearby abattoirs (such as Putukwane in Aganang Municipality). Given sufficient and critical mass of goats, the project can be expanded into the development of a local abattoir (meat production), the development of hide production into finished products and the sale of excess milk and production of goat milk products.

The goat farming process (for meat production), envisioned as part of this study, is comprised of the following components (as described hereunder):

- Breeding program
- Kidding phase
- Selection process
- Diagnostics and veterinary activities
- Feeding program
- Housing of goats
- Marketing

STEP 1: GOAT BREEDING PROGRAM

Goats give birth at the beginning of the rainy season when food supply is good and mothers are able to provide plenty of milk for their offspring. One male can serve 30 to 40 females. The service should take place when you can tell the female is on heat – she will show signs of restlessness and will bleat and wag her tail. The heat cycle lasts 18 to 21 days and the rest period is 24 to 36 hours.

The expectant mother needs extra feed three to four weeks before kidding. The standard and traits (fertility, growth and longevity, etc.) are determined by the breeding strategy. There are various kinds of breeding, such as in breeding, line breeding, and cross breeding. The definitions of these are as follows:

- In breeding: Inbreeding can be randomly described as the mating of first-degree relatives (offspring and parents, or siblings).
- Line breeding: can be considered as the mating of related animals, but of less close relationship than first degree.
- Crossbreeding: is a philosophic and biological opposite to line breeding, and involves the mating of animals of two different breeds.

Each of the above mentioned are going to have different consequences for the herd, and wise producers will pick a strategy that fits their own philosophies and goals. No single strategy fits all situations, but each strategy is a wise choice for certain goals and production systems.

As previously mentioned each breeding strategy produces different results, which are tabulated as follows:

Table 2.1: Comparisons of inbreeding/line breeding and out breeding

Trait	Inbreeding/line breeding	Out breeding
Uniformity	Good	Poor
Fertility	Poor (to good with selection)	Good
Growth	Poor (to good with selection)	Good
Predictability	Good	Poor
Overall vigor	Poor (to good with selection)	Good
Longevity	Moderate	Good

The above Table shows the advantages of each breeding strategy. Each strategy will be advantageous according to every project goal. The goal of this project is to produce desirable meat goats and reproductive goats that will be utilised as replacement goats. The ideal meat goat producing system would be some sort of small, fertile, line female that could be mated to a large, meaty paternal line. All of the kids should be reasonably uniform, making an appealing lot for sale. While they may not in their own turn produce uniform offspring, they themselves are uniform and the clever breeder can take advantage of that.

STEP 2: KIDDING PHASE

This is the birth of young goats (or Kids). It takes 5 months for a goat to give birth after it has been served by a male. The general gestation time for goats is between 149 and 155 days. Does with multiple kids seem to kid earlier in the 149-155 day period, while does with fewer kids will be kidding later in the period. A doe generally needs to be at least 141 days into the pregnancy for the kids to have a decent chance of surviving. Does usually have between 1 and 2 kids, twice a year.

Pregnant does need to continue as much normal activity as possible. They need the strength to carry the extra weight during the last two months and go through the labour successfully. A doe should not come into pregnancy, or the first two months, too fat. The normal activity of walking around grazing should continue.

Nutrition is very important in the last two months of pregnancy. Approximately 70% of the weight of the kid(s) is developed from around day 100 to the birthing date. Under-nourishment during this period will result in the birth of smaller kids, increased mortality and slower growth rates. Therefore the quality of feed must be increased. High quality hay should be fed during this period. Goats that eat a lot of hay during pregnancy maintain that ability to ingest increased levels of roughage during lactation.

An appropriate type of shelter needs to be available for does to get out of the weather. This shelter could be from heat, rain, cold, etc. Once the signs of a doe getting close to labour appear, she needs to be isolated into a small pasture or pen area. The isolated area may have several does close to labour. The creation of small camps with sufficient food, shelter and shade, which are specially kept aside for the kidding season, is showing signs of becoming the accepted method for the future, especially in cases where farming with large numbers is practiced. In terms of this system, 10-20 ewes are placed in a small camp, where they are able to give birth in peace and remain with their kids until the latter are strong enough (2-3 weeks), after which they may be incorporated into larger flocks. Each ewe, which has given birth (along with her kids) receives the

same paint serial number. Different colours may be used for single kids, twins and triplets. All that the labourer has to do is to walk amongst the ewes three times per day and place kids correctly with their siblings, and ensure that the ewe allows each kid to drink. The worker may also sort the ewes into camps according to single or dual births once they have given birth, so that it is easier for the labourer to ascertain whether an ewe should have one or two kids.

STEP 3: GOAT SELECTION PROCESS

One concept, regardless of breeding strategy, is selection. Selection simply means using some goats for reproduction, and some for food. Selection assures that more desirable goats (and the definition of these varies with situation and philosophy) produce more offspring than less desirable goats. Selection is one aspect of the machinery of improvement.

The first selection of rams for breeding needs to be done at 2-4 weeks in which all kids with cull defects need to be castrated. Second selection should take place at 2-3 months in which case kids, which do not have potential, get castrated. High quality rams are retained and sold for breeding, the remaining is sold as slaughter stock.

In terms of the ewes, the first selection takes place at the first selling stage, up to the period before the ewes kid for the first time. Hereafter, they should be screened only on the basis of their offspring and their reproduction capacity. It is in fact necessary to select large ewe phenotypes, try not to place lactating ewes with dry ewes in the same group, as the ewes in lactation which have worked hard will create a poor impression, while dry ewes which are not productive at a given time will make a good impression.

The aim of the selection process is to improve the race and to increase the economic value of the meat goats.

STEP 4: DIAGNOSTICS AND VETERINARY ACTIVITIES

The Limpopo Province has a high incidence of hartwater disease, which requires special attention. Acclimatization of goats, including dosing and development of resistance to hartwater through transfusion and inoculation, is needed. The development of a herd that is genetically resistant to hartwater takes time (2-3 years).

Disease prevention also needs to be undertaken, such as de-worming does around one month prior to birthing.

STEP 5: GOAT FEEDING PROGRAM

The kid can either be taken from its mother at birth or allowed to suckle for a week. After this, the mother must be milked and the kid must be bucket fed three times a day. The kid will need half a litre (500ml) of milk per day, which should be increased to 1.25 litres after three weeks. From the third week, the kid should be given concentrates and some good hay. Kids also need to have clean water at all times.

The goat requires many minerals. Most can be obtained from good forage and a regular concentrate mixture. The major minerals of concern are calcium, phosphorus, and salt, which are usually added to the ration either in the grain mix or by free-choice feeding. Goats do not consume minerals free-choice according to their needs. It is, therefore,

recommended that minerals be force-fed through the grain mixture or mixed with a succulent feed like silage or greenchop, if possible. The ratio of calcium to phosphorus is important and should be kept around 2:1. If these minerals must be fed free-choice, such as to dry goats and yearlings, a good mixture is one containing equal parts of salt and dicalcium phosphate, or a similar commercial mix.

Vitamins are needed by the body in small amounts. Since all the B vitamins and vitamin K are produced in the rumen and vitamin C is manufactured in the body tissues, the only vitamins of concern in ruminant nutrition are vitamins A, D, and E. During the late spring, summer and early autumn the animals can get all they need from green pastures and plenty of sunshine. In addition, they can store a good supply of these vitamins to carry them into the winter months. Nevertheless, it is a good idea to add these vitamins at the rate of 6 million units of vitamin A and 3 million units of vitamin D to each ton of grain mix during the winter months as an added precaution, since they are not very expensive.

Taking the above into consideration, it would be important to have a mineral trough where the goats sleep. A one-foot square box is ideal for the purpose. A halved long ways plastic container nailed to a board, at least 1 foot wide can be useful.

During lactation, meat goats require roughage and concentrates in their daily rations. A general rule is that meat goats should receive one third of the weight of milk they produce as a concentrate and two thirds as roughage. In other words, average body **weight is 15 kg**, production of **milk is 150 ml per day (during lactation)**, **concentrate required is 50 grams and roughage required is 100 grams**. In other words, approximately 7 goats consume 1 kg (1000 grams) per day. The meat production goat is composed of **60% meat** and the rest goes to bone and muscle.

Due to the high requirement of food intake of meat and milk production goats during lactating stage, it is highly recommended that project owners purchase their own feed concentrate (supplement) for their goats. The Table below shows a typical goat ration.

Table 2.2: Example of a typical goat ration

Raw Material	Percentage	Price per 1000 kg	Price to produce 1000 kg
Lucerne meal	49.5%	R905.00	R447.98
Maize meal	29.7%	R1077.00	R319.87
Wheat bran	8.25%	R756.00	R62.37
Voermol Super 18	8.25%	R1029.25	R84.91
Carcass meal	2.48%	R1710.00	R42.41
Salt	0.99%	R540.60	R5.35
Sulphur	0.83%	R4871.80	R40.44
Total	100%		R1,003.33

Source: Hendricks, A. 2005. Limpopo Dipudi project

The above Table reveals that a typical goat ration of 1000 kg will cost approximately R1000, which will be able to provide feed for approximately 220 goats per month. It should however be noted that goats also eat many kinds of food that other livestock do not like. This makes them very valuable because they clear weeds and encroaching

brush and thornbushes. Goats are also capable of grazing in areas where other animals cannot reach. During the day they can graze well in rocky, mountainous terrain. If they cannot reach certain plants, they will stand on their hind legs to get to it. They will feed on plants that other animals do not eat such as wattle trees as well as vegetable scraps from the kitchen. Goats also eat plants that are poisonous to other animals, such as lantana.

It is also relevant to note that the proposed Zebedeila juice extraction plant to be located in Lepelle-Nkumpi in Zebediela will produce pulp and peel by-products, which will be for sale for animal feed at R75 per ton. Orange pulp and peels are good for supplementary intake by goats.

STEP 6: HOUSING OF GOATS

Proper management is also very important because goats can cover a wide area in a day in search of food. They are also intelligent and can get through fences and into other people's vegetable gardens! It is proposed that the goats are to range free during the day and to keep them in kraals at night, in which case the aid of goatherds will be needed (see below Diagram).

Diagram 2.1 Goats roaming freely



STEP 7: MARKETING

The final step in the process entails the marketing of the goat meat. More attention, however, needs to be given to promoting the use of goat meat, milk and milk products, and the curing and processing of skins as value-added products.

Because goats are small it is easy to prepare and consume an entire carcass. This is ideal, especially when meat cannot be kept for long periods because there is no way to keep it cold. In a South African context, goat meat will always have to compete with beef, mutton, pork and poultry. However, goat meat contains less fat and cholesterol, and higher levels of protein and iron than most other types of meat. If these attributes could be promoted a huge marketing potential for goat meat could be created. After the

selection process goats will be marketed and others used as replacement stock. Goats will be marketed as slaughter animals based on their meat composition and fertility, thus those with the most meat composition and less breeding capacity will be used for slaughter and those with more breeding or reproductive capacity will be used as replacement goats and bred further. The **best time to market kids is 6-8 months after their birth**, prior to this period they will go through a kidding season. The kidding season may prove to be the most expensive part of the whole breeding process as goats require most care and nutrition for preparation for the market. This is usually the time of year when the most plentiful supply of food is available up to the period after weaning occurs; in other words, the period during which food will be available for up to 4 months in order to breed kids as well and as cheaply as possible. The period of 6-8 months enables the farmer to withhold only his replacement goats during the period of the year when food is scarcer. After 6-8 months, goats are ready for slaughter and selection takes place at this time. Selection of goats simply means using some goats for reproduction and some for food. Selection assures that more desirable goats (as defined per project goal) produce more offspring than less desirable goats.

Goats currently offer the biggest scope for improvement and development in the animal agriculture industry. This includes the commercialisation of the unimproved indigenous goat resources as well as the development of value-added traits and products.

According to the Department of Animal Science (date unknown), domestic and export markets could be set up especially in Sekhukune and Capricorn District. Co-operation with the institutions of higher learning in the Province, the Animal Nutrition and Animal Products Research Institute (ARC) (which has initiated similar programmes) and the Provincial Department of Agriculture would be crucial in this regard. The said Department also revealed that perusal of the list of abattoirs indicates that Grade F and unregistered abattoirs are found mostly in the communal areas (former Venda Republic and self-governing states of Lebowa and Gazankulu). A novel way must be found to upgrade and integrate these abattoirs in the formal slaughter and marketing system to ensure meat hygiene and food safety standards are met. The use of mobile meat inspection and grading teams from the Veterinary Services and/or construction of cold storage depots in the districts should be looked into.

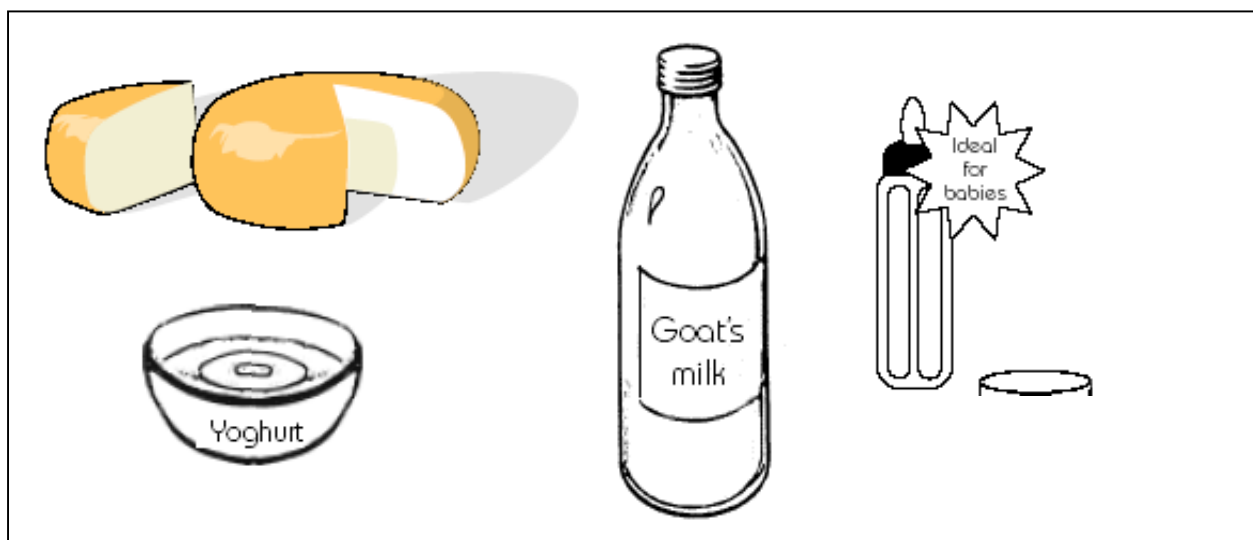
2.3 Secondary activities

Once a critical mass of goats exists, the project can be expanded into secondary activities/phases. The secondary activities refer to the activities that are not the core focus of the project and will only be initiated at later phases of the project. According to the ARC (undated), goats have many uses and can be kept for the following reasons:

- **Meat (abattoir):** As part of this project, goats will be bred for meat production purposes and will initially be sold to abattoirs. However, if sufficient scale of production warrants, a local abattoir could be set up in Lebowa kgomo.
- **Milk:** Goat's milk is very tasty and nutritious. It is also more digestible than cow's milk. It is often used for children who are allergic to cow's milk. Goat's milk can be used for making cheese or yoghurt (see below Diagram). Goats can also be milked as often as needed. However, a study from MEDUNSA has found that Indigenous goats give barely enough milk to provide for the needs of their kids. If milk production is considered as an additional phase to this project, crossbreeding will

be needed with Saanen goats. Meat production goats at lactation stage can produce up to 150ml of milk per day whilst milk production goats produce up to 1l of milk per day, thus this project will utilise meat goats only for meat production and could use the cross breeding strategy (indigenous and Saanen) to improve milk production.

Diagram 2.2 Goat milk, cheese and yoghurt



- **Hides:** The hide of a goat can be used to make articles such as shoes, handbags, etc. A paper at the International Conference on Goats in 1992 described how the leather industry had been developed in India to become the fourth largest export industry within a period of about ten years. Most of the skins used were from goats, and these skins had previously been thrown away (Rao & Rao, 1992). Although South Africa has far fewer goats than India, the potential for developing small-scale leather work is great. In South Africa, preparatory research into small-scale technologies to preserve and process skins has been another highly successful venture. A team-effort between the Leather Research Institute (LRI), the ARC ANPI and private individuals has led to the development of a home tanning training module and kit, and guidelines for the preservation of skins destined for more sophisticated tanning and processing (glove leather, fashion garments, book binding leather, tourist curios). Goats are readily slaughtered in the informal sector, and it is here that large quantities of skins are still going to waste, probably more than a million each year. Attention needs to be given to the promotion of correct skinning, preservation and storage of skins, as well as an effective collection system. This might require the establishment of collection centres where none exist and this should be linked to the possible development of service centres that provide training, information, genetic material, AI and natural breeding and marketing services. Sadly, the LRI has closed its doors. This is a severe blow for the goat leather industry in particular and it can only be hoped that a regional initiative to make better use of the Institute may lead to its reopening.
- **Hair:** Indigenous goats produce cashmere. These fibres are washed and spun and then woven or knitted into warm, lightweight clothing.
- **Other uses:** Goats can be used as pack animals. Their manure can be used to fertilise vegetable gardens and as a source of fuel. Goats are often used to clear weeds in forestry areas. They can also be used to combat bush encroachment, especially in the Limpopo and Northwest Province. When goats remove weeds and

unwanted plants, other plants that are of greater use (such as grasses) can grow in their place.

2.4 Project location

A variety of goat breeds exist and within Lepelle-Nkumpi indigenous goats are communally farmed (see below Diagram).

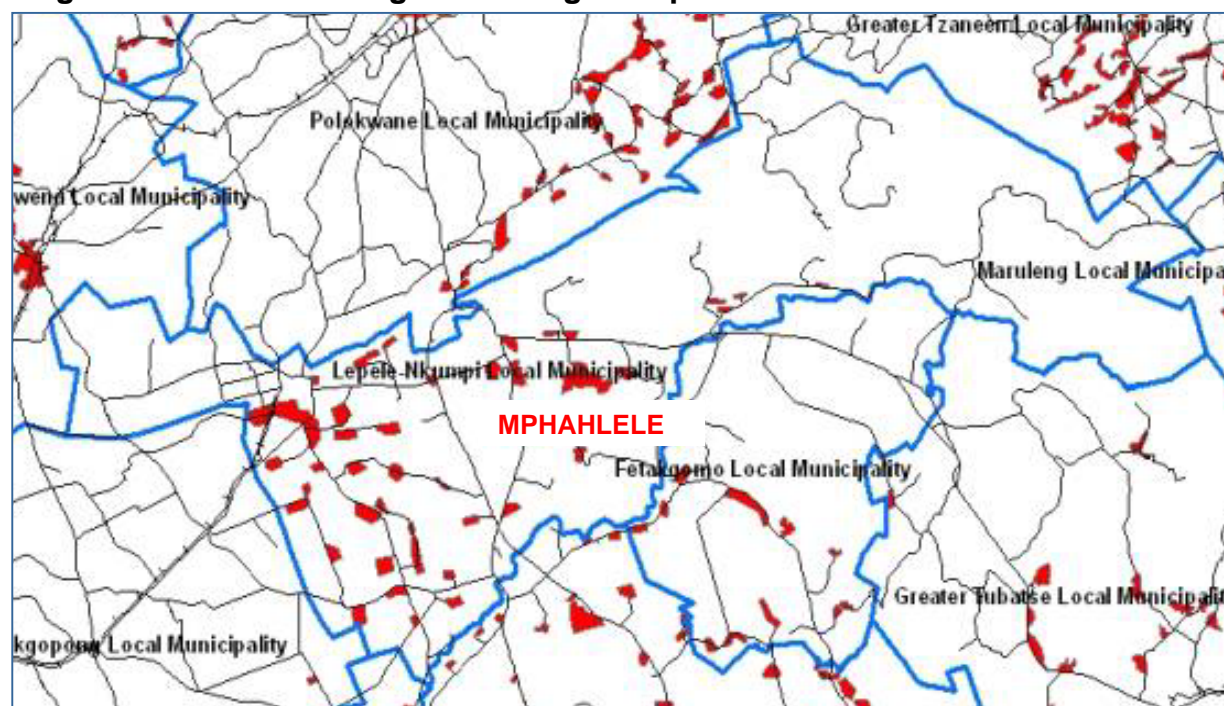
Diagram 2.3 Indigenous goats



Goats are scattered all over Lepelle-Nkumpi, but are reportedly more abundant in the Ga-Mphahlele, Zebediela and Mafefe areas.

The proposed location for the initial goat-farming project is in the Mphahlele area, where a greater abundance of emerging goat farmers is concentrated (see below Diagram).

Diagram 2.4: Location of goat farming enterprise



Source: Kayamandi based on Survey and Mapping, 2006

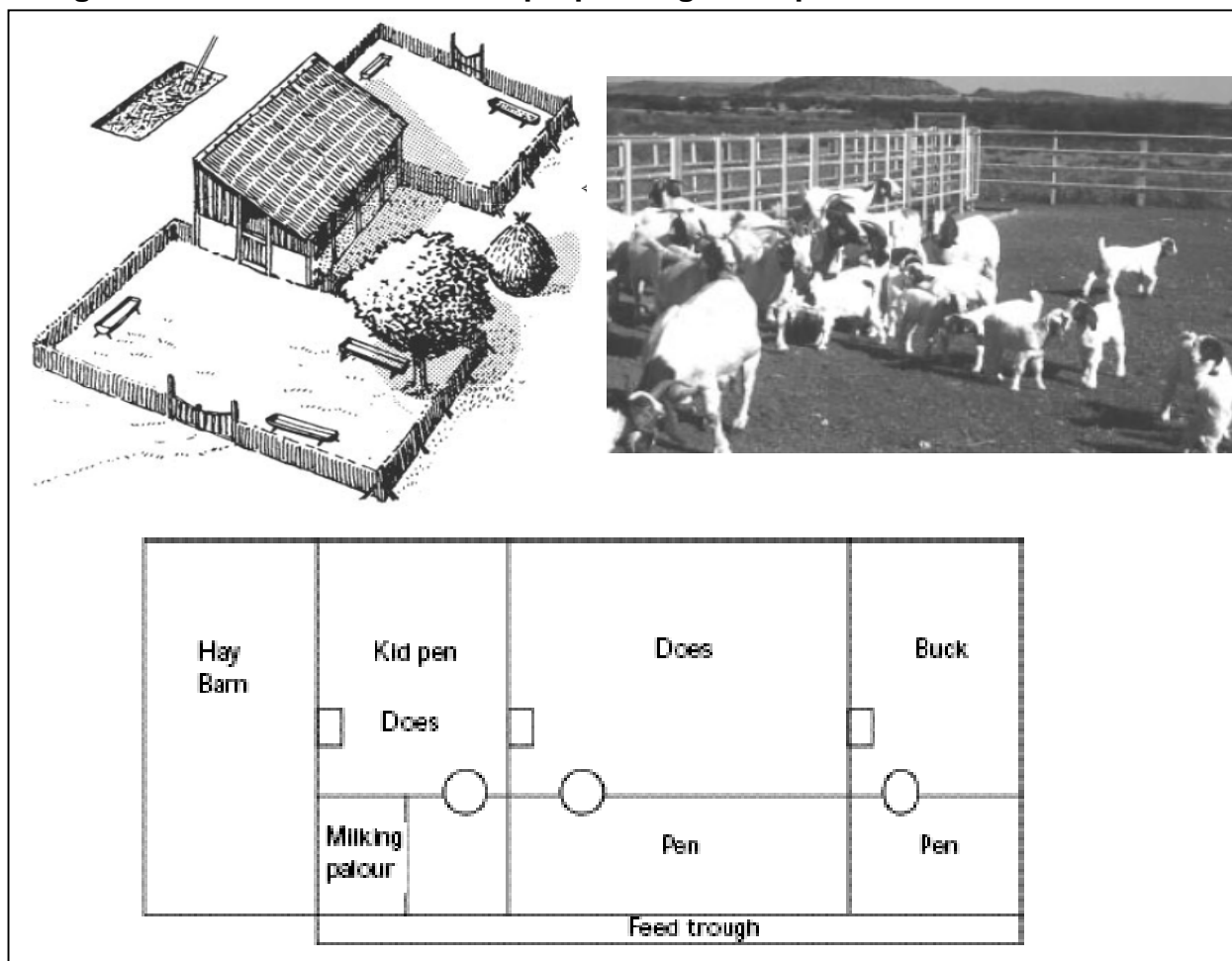
Meat goats originated from Europe where climate conditions are different to South Africa in general and in the Eastern Cape and Limpopo Province in particular. Typically, meat goats do well in high rainfall areas with abundant food and grazing.

Lepelle-Nkumpi is generally warm with an average annual rainfall of approximately 400mm, which is on par with the average rainfall of Limpopo. The grazing conditions of the region are good for goats, because the area has a good balance of grass and bushes.

In Mphahlele, the communal tenure arrangement is such that households share common grazing land. Maintenance of the land is non-existent and its use is disorganised, as seen in a lack of proper fencing, watering points and grazing rotation programmes. Part of the consequence of this is overgrazing and soil erosion. Institutions need to be set up to control the use of the grazing resources. Investments need to be made in maintenance of facilities on the grazing land. Extension officers could act as an important link between the government and rural communities and could also act to monitor the use of grazing land once proper investments have been made.

In the evenings goats need to be kept in kraals and sheds in a small yard with a hut for shelter and a feedlot (see below Diagram and Section 2.2).

Diagram 2.5 Goat shed/kraal and proposed ground plan



3. MARKET ANALYSIS

3.1 Supply analysis

According to the National Agricultural Marketing Council (NAMC, 2005), in 2004 the total goat stock numbers in the world reached 767 931 000 (as in FAOSTAT). According to FAOSTAT, approximately 96% of all goats were found in developing countries while only 4% of goat numbers were found in developed countries. The Far East possessed approximately 56% of all goats in the world. Among the leading goat producing countries of the world is China with 23%, India with 16% and Pakistan with 7% of total goat numbers. A snapshot of world goat numbers in 2001, is as follows (NAMC, 2005):

- China: 172 921 000
- India: 124 500 000
- Pakistan: 52 800 000
- Bangladesh: 34 500 000
- Iran: 26 000 000
- Europe: 18 511 000
- Africa: 223 466 000
- South America: 22 068 000
- North America: 1 230 000

In 2004 the total goat numbers in Africa stood at 223 466 000, which represents 29% of world goat numbers. The African countries with the highest goat populations are as follows (NAMC, 2005):

- Sudan: 40 000 000
- Nigeria: 27 000 000
- Tanzania: 12 556 000
- Mali: 11 464 000
- Kenya: 11 000 000
- South Africa: 6 850 000

South Africa is a small role-player in Africa when it comes to goat numbers. In 2003 South Africa possessed only 3% of Africa's goat numbers and less than 1% of the world's goat numbers.

According to NAMC (2005), goats are an asset for developing countries. Goat numbers are reportedly increasing much faster in developing countries than in developed countries. For example, goat numbers in the USA decreased by 53% from 1970 to 2003 while goat numbers in Africa increased by 97% over the same period. This may be explained by the ability of small ruminants to survive and produce in harsh environments on low-cost feeds; their particular adaptability to arid conditions; their suitability for the small, capital-scarce family farms in developing countries and smaller available land area per livestock owner. Goats are particularly valuable in developing countries, because of their ability to utilise scarce grazing and tolerate unfavourable climates.

Goat numbers have also increased much faster than other red meat species in the past three decades. In the past 33 years (from 1970 until 2003) world goat numbers

increased with 104%, world cattle numbers increased with 27%, sheep numbers decreased with 3% while pig numbers increased with 75%. This means that goat meat has become more popular than other red meat. On the contrary, world chicken numbers increased with 218% over the same period. Another important aspect is that approximately 96% of world goats are owned by the poor but if traded, are consumed by the developed countries due to its superior quality of goat meat and milk. If productivity in production systems could be improved in developing countries, goat production could be a major earner of foreign income. The future goat production looks bright due to the increase in goat numbers and the acceptance of goat products in developed countries due to its superior health qualities.

With regards to the current status of the South African Goat Industry, the Boer Goat, Savanna and Kalahari Red are currently recognized as commercial goat breeds for the production of meat and skins (NAMC, 2005). Commercial goat milk production is limited to the Saanen and Toggenburg, while the Angora goat produces mohair. Indigenous goats refer to various goat types that are in the hands of small-scale producers and contribute primarily to family needs for meat and skins and to a lesser extent for milk, depending on the prejudices of the community.

The goat population in South Africa is made up of Angora, Boer and indigenous goats. The following Table indicates the composition of the goat population in South Africa.

Table 3.1 Goat types and numbers per Province, 2002

Province	Angora goats	Boer Goats	Indigenous goats	TOTAL
Numbers ('000)				
Eastern Cape	886	433	1899	3218
Northern Cape	57	375	0	432
Western Cape	136	126	0	262
KwaZulu-Natal	0	113	710	823
North-West	0	84	531	615
Free State	0	62	9	71
Limpopo	0	51	890	941
Mpumalanga	26	7	48	81
Gauteng	0	13	0	13
TOTAL	1105	1264	4087	6456
Percentage	17%	20%	63%	100

Source: NAMC, 2002

It is evident that the Eastern Cape has the largest goat population as it contributes approximately 47% to the overall goat population of South Africa. Limpopo has the second largest population with a contribution of 15% to the overall goat population.

White commercial farmers mainly own Boer goats and Angora goats, while black farmers mainly own Indigenous goats in a communal farming system. Indigenous goats represent an important contributor towards the total goat population as it represents approximately 63% of the total goat population in South Africa. This is remarkable because commercial farmers occupying 86% of agricultural land and the remainder (14%) is occupied by small-scale and subsistence farmers. Most of the small-scale and subsistence (communal) farmers are found in the former homelands areas. These areas

are marginal for crop production as they are semi-arid to arid with only a small proportion of the land under some form of irrigation. Despite the aforementioned, the majority of the poor (72%) lives in these areas. The large number of goats on a small area of land explains to a great extent why Indigenous goats are “under-performing”. Indigenous goats constitute a valuable genetic resource because of their ability to adapt to harsh climatic conditions, better utilize the limited and often poor quality feed resources and their natural resistance to a range of diseases such as pulpy kidney, gall sickness and internal parasites. It is well established that goats can survive and indeed flourish in areas where cattle and sheep struggle to survive. Goats forage more widely and on a greater variety of foods and they have the ability to survive the seasonal droughts due to their ability to browse and are quite prolific under these extensive conditions.

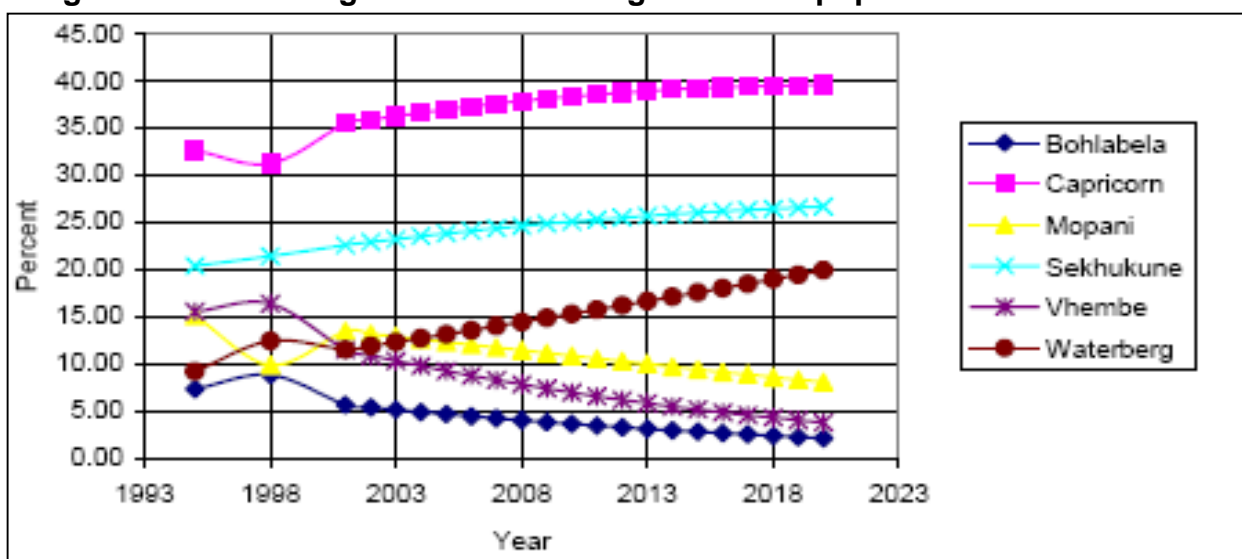
Although not always reflected by official statistics, it is probable that the number of goats kept by rural people has increased markedly in the last few years. The ownership of goats bestows prestige and they have a place in local custom and religion.

South Africa had approximately 6.850 million goats in 2004 and the provincial numbers are estimated as follows (NAMC, 2005):

- Eastern Cape 3 200 000 (46.7%)
- Limpopo 1 000 000 (14.6%)
- KwaZulu-Natal 900 000 (13.1%)
- North West 771 000 (11.3%)
- Northern Cape 513 000 (7.5%)
- Western Cape 256 000 (3.7%)
- Mpumalanga 100 000 (1.5%)
- Free State 90 000 (1.3%)
- Gauteng 9 000 (0.1%)

The Diagram below provides an indication of the percentage distribution of goats within the District of the Limpopo Province.

Diagram 3.1 Percentage distributions of goats in Limpopo Province



Source: Department of Animal Science

As can be seen from the above figure, the Capricorn district (in which Lepelle-Nkumpi Municipality is located) constitutes the largest goat percentage as compared to the other districts in the Limpopo Province.

The Table below indicates the distribution of livestock in the Capricorn District.

Table 3.2 Distribution of livestock in Capricorn District

YEAR	Cattle		Sheep		Goats		Pigs		Total
	%	No.	%	No.	%	No.	%	No.	
1995	36.3	216647	8.9	52886	48.1	286774	6.7	40079	100%
1998	41.7	232921	9.1	51127	42.0	235115	7.2	39989	100%
2001	37.6	209027	8.8	49176	43.6	242298	9.9	55238	100%

Source: Department of Animal science, 2002

It is evident from the above Table that within the Capricorn District the overwhelming majority of livestock are Goats (44%), followed by cattle (38%), pigs (10%) and sheep (9%).

The Table below provides an indication of the differences between commercial and communal goats in the District.

Table 3.3 Percentage communal and commercial livestock in Capricorn District

YEAR	Commercial	Communal	TOTAL
1995	0.7	99.3	100%
1998	1.8	97.2	100%
2001	1.6	98.4	100%

Source: Acheampong-Boateng et al, Livestock Production

From the Table above it is clear that the overwhelming majority of goats in the District are largely produced on communal level.

3.2 Demand analysis

The following Table provides an indication of the number of goats slaughtered in South Africa.

Table 3.4: Goats slaughtered as percentage of total goat population, 2007

Province	Number of Goats	Number of Slaughtered	Percentage
Western Cape	258 059	10381	4.02%
Northern Cape	446 925	656	0.15%
Free State	74815	3273	4.37%
Eastern Cape	3220618	20712	0.64%
KwaZuluNatal	833 129	871	0.10%
Mpumalanga	81 814	201	0.25%

Province	Number of Goats	Number of Slaughtered	Percentage
Limpopo	1017024	21	0.0%
Gauteng	13986	81	0.58%
North West	727 733	315	0.04%
Total	6 674 103	36511	0.55%

Source: NAMC 2005 as in Coetzee, 1998

According to NAMC (2005), goats slaughtered in the formal sector are largely Boer goats and surplus Angora goats, with very few unimproved goats. Effectively, only 0.55% of the total goat population was slaughtered and consumed by the formal sector. In 1997, gross income from slaughtered goats generated R 3578 443. The average carcass weight was 13.5 kg and the average selling price R 7.26 per kg (Information from the S.A. Meat Industry Company, as cited by Coetzee, 1998).

However, in South Africa, goats are mostly slaughtered for religious or traditional purposes and on an informal basis (backyard slaughter). The result is that less than 0.5% of goats are slaughtered in registered abattoirs (as shown in the above Table). In other words, goats are slaughtered in a specific way for bridal ceremonies and the eating of the meat is restricted to certain persons according to the custom of the families. Goats are also important in burial rituals by Sangomas where they have to suck the blood and wear the gall bladder as a headdress. Furthermore, most Muslim faith requires that livestock is slaughtered according to strict Islamic laws and therefore they have to slaughter their own animals, which are not captured in official statistics. Indigenous goats are also normally traded through speculators and informally between families, relatives and other contacts in rural areas. A well-established informal trading system had been established in rural areas over many years. The demand for goats in rural areas is peaking during holidays when it is used for ceremonies.

According to NAMC (2005), the majority of goats marketed in South Africa are sold by private transactions in the informal market. It is estimated that the Black and Indian population groups consume 80% of goats traded. However, because Indians are involved in the goat trade, they are often perceived as the main consumers of goats. Although limited statistics are available, it is estimated that **approximately 1.8 million goats are marketed in South Africa annually**, of which only 0.5% go through abattoirs. Approximately 250 000 live goats are imported annually from Namibia. The live goat market is characterised by peak demand periods during Easter, December, and the winter months. The seasonal increases in demand are believed to be related to the consumption of goats during festive seasons and ceremonies. Auctions in the producing areas to sell goats have become less important.

According to NAMC (2005), in 2004 total world meat production was calculated at 253528 000 metric tons. A breakdown of meat production figures was as follows:

- Beef and veal: 58 922 239 Metric tons, 23%
- Mutton and lamb: 8 025 027 Metric tons, 3%
- Goat meat: 4 198 885 Metric tons, 2%
- Pork: 98 506 662 Metric tons, 39%
- Chicken meat: 65 014 504 Metric tons, 26%
- Other: 18 860 683 Metric tons, 7%

Virtually all of the world's major cultures have a historical association with goats and goat meat (Chevon). Goat meat is arguably the most widely accepted red meat in the world having none of the taboos associated with some other meat products, such as for instance, beef and pork have among the Hindu and Muslim faiths respectively. Instead, the goat meat industry is largely built around ethnic demand and social traditions for the product. For example, during the "Hajj", a Muslim feast in March each year, approximately 34 million sheep and goats are being slaughtered in Arabic countries. This number is slaughtered within six hours and are all being done outside an abattoir. They sacrifice these animals in remembrance of Abraham's readiness to sacrifice his son to God, as the Islamic world marked the first day of the Eid Al-Adha feast of sacrifice.

According to NAMC (2005), until recently, in Southern Africa there has been an official bias against the goat as a destroyer of vegetation. Because of this prejudice, efforts to exploit the full potential of this animal have been generally minimal, compared to efforts in sheep and cattle industries. Goats are described as the most versatile of all ruminants in terms of their feeding behaviour and they are well adapted to relatively harsh environments. It is however also indicated that goats, through the centuries, contributed to the expansion of desert areas in the Sahara and Middle East. Goats are opportunistic grazers and tend to select the most palatable and nutritious forage available. They could therefore contribute to overgrazing if not properly managed. Despite certain favourable carcass characteristics such as lower fat percentage compared to beef and mutton, as well as favourable meat to bone ratio, per capita goat meat consumption in South Africa is low compared to other red meat types. Goat meat seems to be preferred by a few specific communities in South Africa, but generally has a hard time competing for a market share. However, due to the demand for goats in the informal market and the shortage of animals, farmers are getting good prices for their animals.

According to NAMC (2005), South Africa currently imports approximately 250 000 live goats from Namibia on an annual basis. These goats are marketed in Kwazulu-Natal Province. This indicates that the local demand for goats exceeds the supply and that there is a potential to increase local production because the market already exists. The South African market demands a lighter goat with a carcass mass of approximately 15kg and not a 30 kg goat (a typical matured Boer goat). That is the reason why Boer goats are marketed at a very early age. Sometimes, the market also demands a specific colour, for example a white goat.

With regards to export markets for goat meat, the Middle East could be a good market for SA goats, because their goat meat consumption is approximately 100 million goats per year (NAMC, 2005). From November 2002, goat meat exports (in carcass form) started to the Middle East. Since then goat carcasses were exported to nine Middle East Countries. It was mainly indigenous goats (R7.50 – R8.50/kg live) that were exported because Boer goats (R9.50 – R12.50/kg live) were too expensive for these markets. The strong Rand resulted in exports to the Middle East being stopped.

NAMC (2005) reveals that one opinion is that South African goat meat could only be exported at commodity prices. That means goat meat must compete with other meat in an open market. Another opinion is that the South African goat industry should market its goat meat as a niche product and distinguish South African goat meat from other

goat meats available around the world. The niche for South African goat meat exports could be vested in value-adding products like sausages, cabanossi's, etc. Value adding to goat meat and to market these products in the Middle East, has huge potential, but the market still needs to be developed. In the process to promote goat meat in the export market, huge amounts of funds would be needed for the promotion campaign and the question is who would finance this expenditure. In the recent past the private sector paid the cost but the producer carried the burden (in the sense of lower prices for live goats). Considering the above-mentioned, the export potential for goat meat is not that good, because the export market is prepared to pay "market related prices" for South African goats. The market related prices in export markets are much lower than what could be realised on the local market (for example in Kwazulu-Natal). The Kalahari Kid (a local goat farm in KwaZulu Natal) made a loss in 2003 on the export market because they could only pay the South African producer R6/kg per live goat (also to make provision for their marketing costs) to be competitive in the export market.

Live goats are realising good prices in the informal market and that is why producers must consider supplying in our local demand before we should think of the export market. In other words, the demand for goats is on our doorsteps, provided that farmers could supply the goats. According to Mr Izak Voster, Chairperson of the South African Boer Goat Breeders Association, South Africa has not enough goats to justify an export marketing campaign based on volumes (NAMC, 2005).

It is also important to note that until recently, goat meat has not been sold commercially in South African retail stores. According to NAMC (2005), goat meat could only be bought in local stores from 2003. One of the reasons was the perception that goat meat is inferior to other domestic meats. This was because the younger goats in South Africa are slaughtered for ritual purposes, resulting in older, inferior animals being available for the commercial market. The fact that the meat is associated with the poor also contributes to this belief.

Another reason why goat meat is not on the shelves of South African supermarkets is the good prices for live goats. Speculators are paying an average price of **R380 per live** goat, or R12.50/kg per live goat. This realizes R29/kg per carcass weight while supermarkets must market chevon for R22/kg to create a demand for chevon. That is the reason why 95% of goats are marketed live in Kwazulu-Natal.

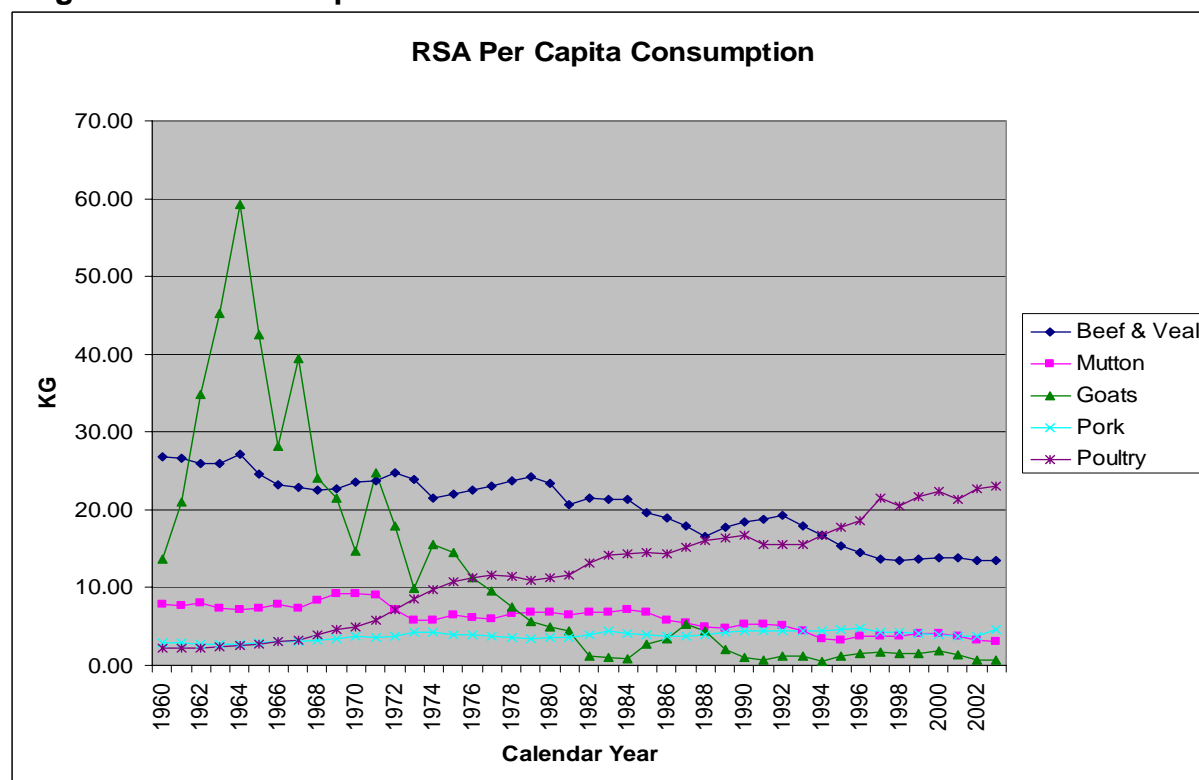
Farmers in the Limpopo Province have reported that the current goat demand exceeds supply as most of the goat population in Limpopo is not commercialised.

The consumption of meat per capita is shown in the following Table and Diagram.

Table 3.5: Per Capita Meat Consumption (Kg /annum) in South Africa.

	Beef & Veal	Mutton	Goats	Pork	Poultry
1964	27.10	7.13	59.19	2.80	2.51
1974	21.50	5.88	15.50	4.23	9.80
1984	21.38	7.22	0.86	4.16	14.36
1994	16.66	3.41	0.56	4.38	16.74
2003	13.54	3.11	0.64	4.60	23.13

Source: National Department of Agriculture

Diagram 3.2: Consumption of Meat in RSA

Source: National Department of Agriculture

Goat meat consumption was at its peak in 1964 going at 59.2 kg per capita and has decreased incredibly since then to 0.64 kg per capita in 2003. One of the factors that may contribute to the reduced goat meat consumption is the accessibility of other red meat at local retailers and wholesalers. As can be seen from the above Table, goat meat is the least consumed when compared to the other red meat, beef, mutton and pork, yet goats have the second largest population. One of the reasons could be that goat meat is less accessible in retail stores than the other meat and it is mostly slaughtered informally.

If the above-indicated demand (0.64kg per capita per annum) is used as an indication, then the **local demand for goat meat in Lepelle-Nkumpi** can be calculated at approximately 15,000 kg of goat meat (or **1000 goats per annum** at an average of 15kg per goat). However, the demand for goats are far higher as 0.5% of goats are sold as goat meat in retail (see above).

In order to increase the goat per capita consumption the nutritional information and other health benefits of goat meat has to be published. The following Table indicates the nutritional value of goat meat compared to other products.

Table 3.6: Nutritional value of goat meat in comparison to other livestock per 100g

Specie	Energy Kkal	Fat (%)	Protien (%)	Iron (mg)	Cholesterol (mg)
Goat	144	3.0	27.1	3.8	67
Beef	288	18.8	27.1	3.0	86
Pork	364	28.2	24.7	1.1	86
Lam	276	18.87	25.9	1.6	99

Specie	Energy Kkal	Fat (%)	Protien (%)	Iron (mg)	Cholesterol (mg)
Chicken	190	7.4	24.7	1.2	89
Turkey	170	5.0	29.3	1.8	76
Ostrich	142	2.8	26.9	3.2	83
Veal	158	3.2	30.2	4.5	112

Source: US Nutrient Database for Standard Reference Release 14 (July 2001)

As can be seen from the above Table, goat meat contains less fat and cholesterol than other types of meat. Goat meat also has higher iron content than beef, pork or lamb and yet nearly as much protein as the rest of the types of meat.

Furthermore, a study titled “Factors affecting goat production in a communal farming system” was done in 2000 in the Eastern Cape region of South Africa. The selected area was the Mgwaland district in the Eastern Cape and the reason for the study was to increase goat numbers as a means of controlling bush encroachment. The study revealed that in contrast to the commercial sector, goats have a specific role in communal livestock systems that are not necessarily related to the generation of cash income. The main reasons given for keeping goats were for slaughtering during traditional ceremonies (35%) and cash sales (23%). Sales took place mainly during the summer months and buyers used the goats mainly for traditional ceremonies, funerals and weddings. Goat sales took place on an informal basis, and no goats were sold by auction, or to abattoirs or butchers. The peak marketing months for goats are in April (Easter), June-July (puberty ceremonies) and December (Christmas). Respondents in the area were also asked to rank various types of meat, including fish, with regard to how frequently they would like to consume it. They indicated a preference for mutton and poultry, while fish and goat meat were the least popular choices. The reason for discriminating against goat meat was attributed to its taste and smell. The latter probably due to the slaughtering of bucks and old animals. Respondents were also asked about their preferred livestock enterprise. Sheep farming was the most preferred livestock enterprise, followed by dairy and beef. The preference for sheep farming may be attributed to the fact that sheep are more docile than goats and can be herded together with cattle. The lack of enthusiasm for investing in goats appears to originate from the perception that goats are difficult to manage. When farmers were asked to identify the major constraint pertaining to goat farming, the majority of replies related to managerial difficulties (goats were perceived as being hard to manage and were characterized as “naughty”, “wild”, “greedy” and “unmanageable”).

According to NAMC (2005), commercial farmers in Limpopo report that local demand for quality goat meat exceeds supply. Seasonal demand (December and April) results in high prices. Continuous demand throughout the year is driven by traditional, ceremonial and religious events. There is currently no goat meat sold through the retail sector due mainly to better prices being paid from informal markets and lack of availability from a constant quality supplier.

The Indigenous goat industry therefore has a reliable market for their produce. The South African goat industry is not in a position to supply in the local demand for goats, because approximately 250 000 goats are imported from Namibia on an annual basis to make up for the shortage that is experienced on the local market (NAMC, 2005).

It is also relevant to note that goats are used/demanded for the following:

- Traditionally as payment of dowry
- Goats are often eaten during land cases, parties, tribal meetings, etc.
- Goats are important in some rituals, they are used during circumcision ceremonies for example
- Goat horn and bone are used in the traditional craft industry

3.3 Demand for secondary activities

Due to the phases the project is envisioned to go through, it is also important to take note of the demand that exists for other goat products

Milk production is important as a component of primary health care, in the prevention of protein malnutrition in South Africa, thus there is a perceived need for milk although most of the need is satisfied from cattle. This occurs for the same reasons as the goat meat lack of access to goat milk and goat milk products and the lack of info on its nutritional and other health benefits. Up to now, mostly people who have intolerance to cattle milk have used goat milk. Therefore the same strategy has to be used in creating a market for goat milk, highlighting the health benefits of goat milk. The following Table indicates the nutritional information of goat milk versus cattle milk.

Table 3.7: Goat Milk Nutritional information

Nutritional Information	Goats	Cows
Energy	99	87
Protein	346	319
Fat	94	76
Calcium	419	372

Source: www.goatconnection.com

The above Table shows that goat milk has more calcium and protein than cow milk and goat milk is easier to digest (Haenlin, 2002), thus it can serve the same need as cow milk. Unfortunately goat milk is seasonal but goat milk can be frozen to meet all year goat milk demand. Currently in South Africa goat milk is imported to meet this demand out of season. Goat milk can be frozen to ensure a year round supply to the market. The problem is that South African goats do not produce an adequate volume of milk (does not have critical mass) to warrant the investment in freezing facilities. Currently, South Africa imports powdered goats' milk to meet the demand for goat milk out of season.

Due to the fact that there is a large informal goat industry, most goatskins lack value addition. According to the National Agricultural Marketing Council less than 10% of goat skins available in South Africa are processed. Currently goatskins are sold in their raw dried state to informal shoemakers. Skins are therefore scattered all over the country and should be collected in order to create a larger pool. The subsequent collection of such skins is not economically viable at this stage. Because the slaughtering is done in remote areas and in low numbers (the skins are also being damaged during the slaughtering process because "knipmesse" are used and not modern slaughtering methods), the prices these skins are fetching are very low. The price for dry skins is

approximately R4 per skin. The result is that a large percentage of skins are simply dumped. The monetary value of goatskins and its added value could be calculated as follows (NAMC, 2005):

- A goat skin, properly flayed and cured R4
- After tanning (at a cost of R25) its value increases to R40
- As finished leather craft items, the skin could be worth R400

A rough calculation indicated that the potential value of the goatskin industry (finished leather craft products) is about R280 million whilst only approximately R25 million is harvested currently (assumed that 10% of live goats being slaughtered per annum (700 000 goats x R400 per processed skin) (NAMC, 2005). Processed goat leather could be used for a number of products, including car seats and gloves.

3.4 Target market

An aggressive marketing campaign for goat meat is a prerequisite for the further development of the goat industry. The marketing of ostrich meat in developed countries is a good example in this regard. Both types of meat could be regarded as healthy meat and be promoted as such. For many years the promotion of ostrich meat on the local market was neglected due to the fact that more than 90% of ostrich meat was exported to developed countries. But since the international market for ostrich meat was temporarily closed due to the outbreak of bird flu, the ostrich industry started (in 2004) to promote their product locally with great success.

There are many factors in favour of goat meat, but it needs to be promoted. In doing this, the subjective opinion of potential customers should be changed. For example, goat meat is 50 – 65% lower in fat than similarly prepared beef, and hence a higher percentage of protein content. Goat meat is also lower in fat than chicken, even with its skin removed. These factors however need to be promoted. There are a number of reasons why goat meat was not previously promoted. The reasons could include the following (NAMC, 2005):

- **Insufficient supply:** The consumer demand for goat meat and milk may be increased through education, promotion and marketing programmes. But before one could do that we need consistency in supply and quantity. The biggest problem is that South Africa does not have sufficient supply of the raw product on a continuous basis. We eat it all and must import to satisfy local needs.
- **Out of hand sales on farms:** A further reason why promotion is not done is that almost all the goat sales are out of hand sales on farms. Farmers are realising good prices through out of hand sales. They could argue why should they spend money to market their product while they already have a market for their goats?
- **Insufficient information:** Another reason could be that there is not sufficient information available on the indigenous goat industry – what is the actual number of indigenous goats and where are the goats?
- **Animal keepers:** Another problem is that black producers regard their goats as financial security or wealth and therefore intend to keep their goats rather than sell it.

According to NAMC (2005), an extensive campaign to educate the consumer about goat meat was undertaken by a private company in 2004. Kalahari Kid succeeded by placing

goat meat on the shelves of a number of supermarkets in South Africa (Pick & Pay, Checkers, Hypermarket and Spar). Consumers are made aware of the excellent qualities of goat meat. Shoprite Checkers is marketing goat meat, branded CHEVON and finding that the consumer approves. Goat meat is booming in the Western Cape. One of the large supermarket groups market high quality goat meat as a new health meat. Kalahari Kid market goat meat as totally natural with no growth hormones being used. The animals roam and graze freely and are marketed as all-natural South African goat products.

In conclusion it can be said that goat products will always compete with other red meat products, therefore aggressive campaigning of the health benefits of these products need to be done. As there are many factors in favour of goat this may prove to be a challenging exercise as it includes not only promoting the products but also educating the consumer.

4. RISKS, STRENGTHS & IMPACT

The project SWOT analysis details the strengths, weaknesses, opportunities, and threats of the goat-farming project that will be implemented, as well as the potential impact of the project, which needs to be taken into consideration.

4.1 Weaknesses and threats

Weaknesses of the proposed goat-farming project include the following:

- Cost of building adequate facilities
- Co-operation amongst existing small-scale goat farmers needed
- Although goats are known to be highly resistant to diseases, other contamination by insects, mites and other parasites which could prove detrimental to the health of the goats
- Theft of goats while out for grazing
- Inadequate supply of reproductive goats
- Lack of sufficient knowledge of goat meat benefits and hence a lack of demand
- Goats can overgraze and damage the environment if not looked after properly
- Lack of fencing and infrastructure
- Lack of funding and limited capital
- Poor management practices

4.2 Strengths

The following strengths for the implementing the proposed goat farming project are identified:

- Indigenous goats are in abundance in Lepelle-Nkumpi and are ideal for meat production.
- Low level of skill requirements and expertise for the operations of a goat farming project
- Labour intensive procedures which entail the training and employment of a large number of local community members
- Large number of subsistence goat farming in the area
- Number of goats currently not being processed, which serves as the supply for goat farming project
- The absence of direct competitors that produce goat farming products in the Municipality and District
- Warm, semi-arid conditions of the area, which are conducive to goat farming
- Availability of open undeveloped land since it is a predominantly rural area
- Goats can produce well in different environments and are widely distributed in diverse habitats such as: desserts, mountains, grasslands, and lush tropics
- Goats can live even when there are: water shortages, food shortages, very hot and variable temperatures (changing from hot to cold), hard and rocky country, etc
- Goats have a short gestation period (only 5 months) and often give twins. The average kids per goat are thus 3 kids per annum.
- Breed by season in temperate zones and all year round in tropical zones

- Goats feed by grazing and browsing, feeds at different heights, stand on hind legs to reach food, climbing into trees
- Goats are well adapted to many environments
- Goats are a very good source of income and food if well managed
- Goat's milk has more calcium, phosphorous and chlorine than cow's milk. Goat's milk is better for the family as it has a "High Nutritional Content." This means it is a very high quality food and very good for young and old. Some people cannot drink cow's milk. They have an "allergy" to it. This is why some children are reared on goat's milk when cow's milk and all else has failed. Nobody is allergic to goat's milk! Higher prices for goat milk can be obtained.
- Goat's meat is very tasty and it is juicy and eaten often by many people
- More and more people are learning about how good goat's milk, cheese and yoghurt are so there is a growing market
- In the space and using the same feed you need to keep a cow you can keep 6 to 10 goats. Goats thus do not need big areas to graze like cattle.
- Goat farming uses small doses of medicine (drugs) which is cheap and easy to maintain
- Goat farming is good for people who do not have a lot of money to start with
- Goats make very good manure. Droppings are used to improve crop yields
- Goats require less labour and time per head compared to cattle
- Expansion of production of goat farming and breeding to other related products such as goat butter, cheese and soap exists
- Possibility of supplying product to markets outside of the selected target market (Lepelle-Nkumpi) and area and even export markets
- Possibility to establish value chain and participation of primary producers in hides, meat (abattoir), dairy, etc

4.3 Potential impact

The impact of the implementation of the proposed goat-farming project is assessable in terms of the socio-economic effect it will have on a local and even District level. Socio-economic effects can be determined by the following elements of a project:

- Labour intensiveness
- Permanent job placement
- Skills transfer
- Sustainability

The significance of the project lies within the large number of labourers, which will be able to take ownership of the goat farming enterprise. All processes involved in goat farming for meat production require manual labour. The process includes:

- Breeding of goats
- Mating process
- Herding
- Kidding process
- Selection of goats and
- Marketing, etc

Labour intensiveness leads to increased employment opportunities created in the local community. The project will create job opportunities, promote entrepreneurship and curb poverty through income generation and skills training of the labourers of the project.

This in turns leads to the bettering of the lives of project owners, their households and those of the community at large.

Furthermore, goat farming could lead to improved food security. Food security means the access of all people to enough food for a healthy and active life. In South Africa, with its skewed per capita income (about 5.8% of the population account for over 40% of total meat consumption), Indigenous goats are regarded as an important source of protein and income (NAMC, 2005). Since a significant section of the South African population does not have access to meat on a regular basis and due to the fact that approximately 63% of all goats (including Boer goats and Angora goats) are in black hands, the promotion of the Indigenous goat industry should lead to the promotion of food security. Goats are deeply embedded in almost every African culture and are true friends to the rural poor in particular. Goats can therefore play a vital role in ensuring food security of a household. Often it is the only asset possessed by a poor household. In time of trouble, such as crop failure or family illness, goats can be sold and food or medicine could be purchased.

Farming with goats could contribute to both the upliftment of impoverished rural communities and the improvement of those primary and secondary industries that rely on the goat farming enterprises. In the rural, economically deprived regions goats are a ready source of cash income and food and social security. Access to browse plants (shrubs and trees) provides necessary roughage in the diet in addition to shade. Loose housing, like a loafing shed, is acceptable as long as the animals have a dry, draft-free place to rest during the cold, inclement weather.

Examples of other similar entities in South Africa are provided in order to indicate local successes, impacts achieved and other initiatives aiming to establish marketing structures for goats farming. These are as follows (NAMC, 2005):

Podi-Boswa (Pty) Ltd has given much-needed hope to a North West province community traumatized by the closure of local platinum mines. Spearheaded by Grace Masuku, the Podi-Boswa - which means “goat, our inheritance” – makes up to R2 000 per goat from the animal's meat, milk and skin. With the support of the World Conservation Union (IUCN), the Agricultural Research Council and the Department of Trade and Industry's Community Public-Private Partnership Programme, Podi-Boswa combines the power of indigenous knowledge and the value of a natural resource to give a sustainable livelihood to over 1 000 people who had been living on the brink of despair. The project is a successful rural development project that could provide a good model for sustainable development in similar outlying areas in South Africa. The business model could also be used in other developing countries where subsistence agriculture and farming is common. Podi-Boswa started in 2000, and grew to the point where, currently, it involves almost 30 villages in the province, and trains young people to make goat leather handbags, belts and purses. These products are marketed to the South African tourism industry. Podi-Boswa is one of the eight Southern African enterprises being showcased at the World Summit on Sustainable Development in August as part of an initiative of the IUCN. The IUCN is profiling these eight entrepreneurs in the hope of showing the world that there is another way that works when it comes to sustainable development, and to provide much-needed exposure for these projects. This will enable community-based natural resource enterprises take their place in local and global economies and get their issues placed on policy agendas.

When asked what the Summit exposure would mean for the communities that are benefiting from Podi-Boswa, project leader Grace Masuku highlighted the things that the project needs for significant growth. These include an abattoir and a tannery - existing abattoirs are far from the villages - technical expertise, and research for better practices and product development.

The **Kalahari Kid Corporation** is a joint initiative between private sector, the Northern Cape Provincial Government and emerging farmers in the Northern and Eastern Cape and the North West Province of South Africa. This business facilitates the upliftment of communities and poverty alleviation through job creation. Kalahari Kid has contract growers (farmers who farm with goats, solely for resale to the Kalahari Kid Corporation). Extension officers are constantly monitoring the quality of animals. This is necessary in order to do proper planning to market the end product. The Corporation also sources the goats for slaughter, consolidates them in groups and sends them to one of three nominated abattoirs situated in Groblershoop, Colesburg and Port Elizabeth. It is important for the Corporation to get critical mass for its marketing campaign. Kalahari Kid Corporation is also marketing goat meat and value added products to both local and international markets.

Umzimvubu Goats: This goat project is the most advanced and started in September 2000. The Umzimvubu Goat Production and Processing facility entails the construction of infrastructure and the training and organisation of goat owners/farmers in the Alfred Nzo district of the Eastern Cape Province. The infrastructure will consist of a feedlot, abattoir, tannery, restaurant, curio shop and leather craft workshop. This infrastructure that produces a varied range of products, is aimed at the retail and tourism markets. All the raw products are sourced from goats owned by \pm 3 200 small-scale rural farmers in the Alfred Nzo District. These farmers are organised into 6 district co-operatives with the assistance of social facilities internal to this project. They facilitate group formation, and goat management training is provided with PAETA & MQA funding. The project is managed and directed by the LED Division of the Alfred Nzo District Municipality. The unit is situated in Mount Ayliff on land owned by the Umzimvubu Local Municipality, with access to existing water, electricity and road infrastructure. The facility started to operate in September 2004. Goat farmers are represented at all levels of the organizational structure. Funding was received through the Local Economic Development Fund and the Integrated Sustainable Rural Development Programme.

Kgalagadi Dipudi Cross-border Project (meaning goats in Sotho) in the Northern Cape and North West Province. The facilitation of this project started in December 2001. The Kgalagadi Dipudi Project involves the formation of Goat Interest Groups, and the training and facilitation of these groups by a group of extension officers from the Northern Cape and North West Province and officers of the Northern Cape Office of the Status of Women known as Metswedi (the fountain). Leather crafting groups have been identified, and have undergone training in leather crafting; training in goat management is ongoing. There are currently 43 goat interest groups and they have successfully organised themselves into a cooperative known as the Kgalagadi Dipudi Enterprise (KDE). Of the 400 farmers, 7 have been elected onto the KDE board, with 200 elected council members. To date, council and board members have undergone a 2-day business plan development workshop, where they were able to give their inputs regarding the planning and execution of the project.

5. MANAGEMENT TEAM

5.1 Ownership and management

According to NAMC (2005), in 1998 the South African Meat Industry Company (SAMIC), a section 21 company was established to perform some of the functions that were previously performed by the former Meat Board. SAMIC regards itself as the custodian for the South African red meat industry (with a focus on cattle, sheep, goats and pigs). Apart from SAMIC (the umbrella organisation for the South African red meat industry), each sector of the different types of goats has its own structures to perform the functions that are deemed necessary for that particular group of farmers. With regards to the Indigenous goat structures, the working group could not find any representative structures in the Indigenous goat industry. However, the report revealed that this does not imply that the industry is completely unorganised. Through the years a well-developed marketing system had been established with the assistance of speculators / traders. There are however several initiatives occurring in the Eastern Cape, Limpopo, North West and Northern Cape Provinces that aim to provide the organisational, institutional and infrastructural framework within which emerging farmers will more readily be able to market their goats in an organised manner.

The proposed ownership and management is the formation of cooperatives at village and local municipal level. Farmers form groups (goat interest groups) with neighbors in their villages. These groups need to be assisted by Regional Officers and the Institutional Development Division of the National Department of Agriculture to develop co-operatives. Goat farmers in various villages thus need to be assisted in developing their own co-operative names, membership, constitution, and elected leadership. Structures like co-operatives could play an important role to promote collective buying in order to create critical mass. All goat producers and goat product processors are eligible for shares in these initiatives and through these may earn dividends based on profit-sharing to the value-adding done throughout the organisation. Once formed, the co-operatives at village level can be organised into one regional grouping, and village co-operatives can become members of these regional co-operatives. Umzimvubu Goats, Picardy goats and the Oliver Tambo Projects (all in the Eastern Cape), are organised along these lines, and are being assisted with collection and transport infrastructure to allow for collection of goats from village-level farmer co-operatives (NAMC, 2005).

This system allows for traceability in all the product lines and a planned and organised acquisition of goats and goat products from emerging farmers and processing entrepreneurs. A requirement for traceability is a comprehensive system and infrastructure for individual identification and movement of animals. Traceability must allow for ear-tagging per village, cooperative branding per village and members with membership cards and numbers per village, etc.

It is important to implement such a representative structure in the Indigenous goat industry to enable the industry to grow, to realize its full income potential and to put the industry on the path of commercialisation. The commercialisation of indigenous goats

must be seen as an opportunity to create jobs and to increase income in the rural areas in Lepelle-Nkumpi.

The specific rural community in which the goat-farming project is established will hold ownership of the project, including the land and structures to be erected. This therefore implies that all persons involved in the project will share profit and liabilities. The goat farming project's legal entity will thus be in the form of an Agricultural Co-operative. In general, a co-operative is a form of business undertaking, which has manifested itself throughout the world – from third world countries to the highly developed industrialised countries. It is therefore a worldwide phenomenon, which does not conform to any particular political system. Co-operatives usually originate from an economic need, which arises from the hardship or suffering of people.

Co-operation may be regarded as the working together of a group of people, on a voluntary basis, in order to achieve a common purpose. A co-operative is defined as: "A business undertaking whereby a group of individuals strive on a voluntary basis to meet their mutual economic and social needs in such a way that the economic advantages derived there from are greater than that which the individual could achieve on his/her own".

This proposed organisational structure is based on the formation of cooperatives at village and/or regional level. Farmers form groups (goat interest groups) with neighbours in their areas. These groups are assisted by Regional Officers and the Institutional Development Division of the National Department of Agriculture to develop co-operatives. Goat farmers are assisted in developing their own co-operative names, membership, constitution, and elected leadership. Structures like co-operatives could play an important role to promote collective buying in order to create critical mass.

The following universal principles for co-operatives apply:

- Democratic control: the highest authority in a co-operative is vested in the members in a general meeting.
- Distribution of profits based on patronage: The patronage or the value of business done by a member with his co-operative is the basis on which the co-operative distributes its profits and not by way of dividends on shares.
- Financing the co-operatives: The primary aim of taking up shares in a co-operative is to obtain membership and to participate in the rights and privileges of membership.
- Open and voluntary membership: by open membership is meant that everyone who fulfils the requirements for membership (e.g. only farmers may become members of a primary agricultural co-operative) and who can contribute and can obtain an advantage from the activities undertaking by the co-operatives should be entitled to become members of the co-operative on a voluntary basis. Discrimination on whatever basis therefore has no place in a co-operative.
- Business with members only: A co-operative is established by its members to service the mutual needs of its members.
- Autonomy: Co-operatives are autonomous undertakings, which are controlled and owned by their members.

The Internal Co-operatives Alliance, which is an international organisation which propagates co-operatives on a world wide basis and which regards itself as the final definer of co-operatives, determined the following additional principles:

- Education: In terms of this principle co-operatives have the responsibility to present education and training programmes to their members leaders and employees on a continuous basis in which they can, inter alia, learn more about their respective roles.
- Co-operative among co-operatives: In order to best serve the interests of their members and their communities, co-operatives should actively co-operative in every practical way with other co-operatives locally, regionally and internationally.
- Communities: Co-operatives are concerned about the communities in which they exist. While focusing on member needs, they strive for the sustainable development of these communities through policies that are respectful of the environment.

The affairs of the co-operative shall be managed and controlled by a board consisting of directors. The directors shall, subject to the provisions of the Act, exercise the powers and duties of the co-operative. The number of directors shall subject to the approval of members at the next general meeting, be determined by the board from time to time. The board may appoint non-members to the board in order to obtain expertise on the board: Provided that the total number of directors appointed by the board from non-members shall not exceed the number of directors elected from members.

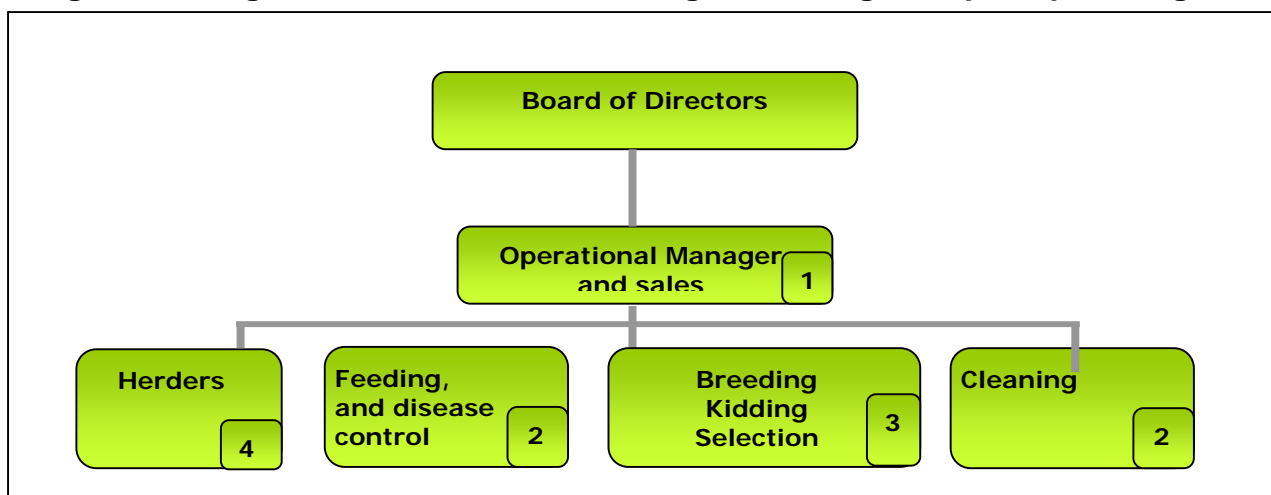
The objectives of the goat farm agricultural co-operatives are:

- To breed and produce meat-bearing goats, which will ultimately be marketed for slaughter/rituals/ceremonies.
- To better the lives of members and their families and those of the community at large through generation of income.
- To render services to members jointly in order to reduce costs.
- To obtain professional assistance and/or advice for members, e.g. modern farming methods and systems
- To take any other measures to promote the interest and standards of living of its members as may be agreed upon and as may be approved by the Registrar of Co-operatives
- To create jobs and entrepreneurship
- To combat poverty and hunger
- To generate income and ultimately increase the local revenue base
- To provide a skills training base
- To propagate other co-operatives for the benefit of the community.

5.2 Organisational structure

The goat farming enterprise will create a number of employment opportunities. The positions to be filled include among others managers, secretaries, supervisors, herders, cleaners, etc.

The following organogram illustrates the proposed organisational structure of the goat farming enterprise.

Diagram 5.1 Organisational structure of the goat farming enterprise per village

From the Diagram above it is evident that a total of 12 persons can be employed by the implementation of goat farming enterprise per village. Scope exists for 5 such co-operatives in 5 different villages in Lepelle-Nkumpi and thus a potential of 60 employment opportunities. The co-operatives thus have scope of being owned by 12 village members willing to form a part of the co-operative. The 12 labourers/owners are suggested to be the co-operative members themselves and should all receive equal profit sharing (based on their contribution to the co-operative undertaking). Within a specific division the members may rotate tasks with the permission and supervision of the relevant operational manager.

The structure can be described as follows:

- Board of 6 Directors, including: 2 Managers: 1 Overall Manager and 1 Deputy Manager, and 4 Supervisors: 1 Treasurer, 1 Deputy Treasurer, 1 Secretary and 1 Deputy Secretary. The board of directors are elected from the labourers.
- A manager and a floor supervisor
- A administration clerk and a receptionist
- 3 security personnel
- 2 sales persons
- 2 cleaners

Board of directors are elected to executive positions during the organisation's Annual General Meeting and all members have the right to vote. Six persons are elected into executive leadership of the organisation who fulfil the following responsibilities:

- The Chairperson
- Deputy Chairperson
- The Secretary
- Deputy Secretary
- The Treasurer
- Deputy Treasurer

The role of the **Chairperson** is to chair meetings and act as the public leader of the organisation. In most organisations, the Chairperson performs the following tasks:

- Convenes and chairs meetings of the Executive Committee
- Chairs the general meetings of the membership.

- Speaks at other meetings and events on behalf of the organisation.
- Represents the organisation on other structures and with other organisations, authorities, founders and the public.
- Deals with the media in liaison with officer for media or publicity
- Deals with disciplinary issues and problems members may have with the organisation.
- Spends time on strategising and planning as well as monitoring progress of the organisation.

The **Deputy Chairperson** has the same role and plays it when the chair is not available. The Deputy Chairperson could for example be responsible for sub-committees on projects, or could represent the organisation on the development forum.

The role of the **Secretary** is to act as an administrator. The **Deputy Secretary** will assist the Secretary and take over any functions as needed. In terms of administering an organisation the Secretary is usually responsible for the following tasks:

- Letting people know about meetings
- Drawing up agendas for meetings.
- Taking minutes of the Executive meetings and of the general meetings.
- Following up all tasks and decisions that come out of meetings to make sure they are implemented
- Receiving and responding to correspondence
- Keeping all records and a good filing system
- Dealing with incoming calls (telephones) and placing advertisements in newspapers.
- Managing the office.

The **Treasurer** and the **Deputy Treasurer** is responsible for managing the money of the organisation. S/he has to account for all funds raised and spent on a monthly and annual basis. The tasks of the Treasurer(s) include:

- Opening bank accounts
- Keeping the cheque book
- Drawing up a budget
- Keeping record of incoming and outgoing finances.
- Paying all the bills for the organisation within the budget
- Keeping both the Executive and membership up to date about the financial status of the organisation.
- Making sure that the organisation is audited and the annual financial reports are done and presented to the AGM.

6. FINANCIAL PLAN

6.1 Goat Herd

The proposed goat herd is shown in the below Table.

Table 6.1 Proposed goat herd

	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
Ewes for kidding	600	750	750	750	750
Kids	600	938	938	938	938
Rams	15	19	19	19	19
Sale Stock	300	619	938	938	938

The following aspects need to be noted from the above Table:

- Each co-operative member should 'buy' into the co-operative through providing 50 ewes, 1 ram and R1000 (so that one or two good quality stud rams can be purchased and a stock pen and shelter can be erected). Some members who are willing to become co-operative members can also entice their neighbours, etc. to jointly hold membership (and hence share in 'input' costs, namely the goats and the capital, but also in the profit).
- 1 ram serves between 30/40 ewes
- Each ewe kids twice a year and is likely to have twins. The average kid per ewe is thus 2 per annum. A conservative number of 1 kid per ewe is taken in year one and thereafter 1.25 kids in order to account for deaths, infertility, etc.
- A ratio of 1:1 males/female kids are born.
- The best time to market kids is 6-8 months after their birth. Thus, in each year half of the kids can be sold within a given year and the other half from the previous year once sufficient stock numbers have been attained (from year three onwards).

6.2 Operational income and expenditure

The projected income and expenditure of the goat farming co-operative is indicated below.

Table 6.2 Net profit

	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
INCOME	R105,000	R216,563	R328,125	R328,125	R328,125
Feed expenses	R18,900	R38,981	R59,063	R59,063	R59,063
Veterinary expenses	R12,600	R25,988	R39,375	R39,375	R39,375
Maintenance, Overheads, Capital improvements, Marketing	R10,500	R21,656	R32,813	R32,813	R32,813
NET PROFIT	R63,000	R129,938	R19,6875	R19,6875	R19,6875

The following aspects need to be noted from the above Table:

- The average goat-trading price utilised is R380 per goat
- At times of low goat supply more than R1000 is offered by Sangomas for goats for ritual purposes, etc.
- Goat trading prices are expected to increase in the foreseeable future due to the active marketing undertaken by TIL, DOA, etc, which entails improving the awareness of nutritional value of goat meat (similar to that done for Ostrich meat).
- The project income could thus increase in the foreseeable future
- The ratio of profit and expenses per goat sold is: 18% feed (R63 per goat); 12% veterinary (R42 per goat); 10% maintenance, overheads, capital, improvements, and marketing (R35 per goat); 60% profit (R210 per goat)
- No rental is calculated as the operation will be undertaken on communal land or on land held by the tribal authority
- Membership is 12 persons

It is also important to note that in the first two years, half of the stock is retained in order to increase the stock. Only high quality rams and ewes should be retained for breeding (or oversupply sold for breeding purposes), all of the remaining stock should be sold as slaughter stock. It will be important to constantly ensure, through selection processes, that the best quality stock of rams and ewes are obtained and to improve upon the stock with outside purchases (from time to time) as sufficient income is attained. This will ensure that higher quality and number of kids can be produced and ultimately enable higher income generation.

No initial capital expenditure and outside funding and loans need to be obtained as each willing co-operative member needs to provide 50 ewes, one ram and R1000 to get the goat farming operation running. The capital obtained from each person will be utilised to purchase the initial high quality rams, as well as to purchase wood in order to self erect a kraal and shelter. Thereafter, more than R30,000 is available per annum to purchase additional equipment, build additional shelters, undertake maintenance, marketing, etc.

The below Table provides an indication of the expected monthly income per co-operative member.

Table 6.3: Expected monthly income per member

	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
Monthly income	R438	R902	R1367	R1367	R1367

The following aspects need to be noted from the above Table:

- The initial monthly income is low, although it is important to note that the operation is self-funding, thus income initially needs to be kept low in order to increase the farming operation
- Once fully operational, from year three onwards, each co-operative member is likely to obtain R1367 per month. This could substantially improve as higher prices for goat meat are fetched in the retail markets
- The ratio of labourers (and members) to goats is approximately 1:140. In other words, each labourer is responsible for up to 140 goats, although on a daily basis more than half of the stock roam freely in the communal land and only the ewes for kidding and the very young kids need to be attended to at all times.

If five such similar operations are set-up and a critical mass of goat quality and reliable supply of goats in the area is produced, it will be possible (given improved demands for goat meat), to undertake secondary phases (as described in this feasibility). Such phases include a goat meat abattoir, goat hide production into leather articles and crossbreeding for milk goats and the production of goat milk products. The co-operatives can thus jointly own shares in the abattoir, dairy and hide processor and be able to increase their income and operations substantially.

7. IMPLEMENTATION PLAN

7.1 Training and support

Each co-operative member and/or worker will be required to register for a goat management-training course offered by the Agricultural Research Council of South Africa. A manual for goat owners was compiled by the ARC-ANPI Goat Programme, and is intended as a practical manual for beginner farmers and small-holders. The details of the training will be as follows:

- Introduction to goats
- Introduction to diseases
- Introduction to internal parasites
- Introduction to nutrition: managing and feeding of goat kids, nutritional requirements of lactating ewes, feeding meat goats, introduction to wounds, abscesses and injuries
- Goat Handling
- Kidding management practices
- Post mortems
- Toxic plants

Most of this training course is practical and will thus allow the members and workers to gain the necessary knowledge and experience in goat handling.

The course requires 7-9 weeks intensive full time training and a further 5 months part-time training.

The Department of Trade and Industry (TIL) has an ambitious initiative to raise one million goats a year to supply meat to the Middle East. The initiative will also produce goat's milk, cheese, kefir -- a yoghurt-like health food -- offal, and hides for processing into leather for manufacturing of crafted products such as wallets. Products will be marketed under a brand to be known as Limpopo Kid. Trade & Investment Limpopo is supporting these projects by playing a vital facilitating role in their implementation. It will thus be essential for this establishment to link into this initiative from TIL.

According to the Department of Animal Sciences (date unknown), feedlots may improve take off of animals in communal areas and government participation would be crucial. On the other hand individuals could be assisted by the government in this regard e.g. for instance through land provision and infrastructure support. The Department also revealed that government animal improvement schemes should be extended to ensure that rams of appropriate breeds are made available to communal farmers. It is also important that an assessment of the degree of overstocking in each District be undertaken. Traditional and local authorities could then assist extension staff in controlling livestock numbers. Effective carrying capacity must also be determined. Different models of grazing management could be developed and discussed with communities and the most appropriate adopted for each area. It is also suggested that partnerships be developed with higher institutions of learning in research. This would include:

- Ruminant nutrition research; the efficient biological and economic utilisation of low quality roughage, animal wastes and horticultural by-products;
- Grazing development and utilisation. Establishment of herbage availability, intakes and mineral profiles in order to give recommendations for use of supplements in winter and inclement climates. Drought feeding and survival feeding research is also crucial;
- Assessment of degree of overstocking and determination of effective carrying capacities in the different areas;
- Selection and breed improvement;
- Frequency of drinking, water availability and water quality research;
- Goat research and extension aimed at diversifying the genetic material and products from goats must be given priority.

According to Ramsay and Donkin (date unknown), South Africa has a well-developed commercial and industrial sector, with the capability of supporting many development projects with expertise and technology. However, there are also feed suppliers, equipment suppliers, veterinary and pharmaceutical companies, consultants, and many others. In addition, there are professional associations, such as the South African Society of Animal Science and the South African Veterinary Association, whose members have areas of expertise that may be relevant. Both of these organisations publish scientific journals.

The following Table provides an indication of the Limpopo Provincial Goat Research and Development Facilities.

Table 7.1 Limpopo Province Goat Research and Development Facilities

Facility/institute	Production environment	Current activities	Contact person
Messina ADC	Arid Sweet bushveld	Mixed production systems Bush control	JJ Jordaan Towoomba ADC P/Bag X1615 Warmbaths 0480 012 736 2250
Mara ADC	Arid Sweet bushveld	Comparison of boer and unimproved goats Integrated production systems Bush control	
Delftzyl ADC	Mixed sweet/sour bushveld	Integrated production systems Flouride tolerance with MEDUNSA Selection preferences	
Towoomba ADC	Sourish mixed bushveld	Bush Control Integrated systems Selection preferences	

Facility/institute	Production environment	Current activities	Contact person
University of Venda		Farm systems research	A.E Nesamvuni Dept. of Animal Science P/Bag X5050 Thohoyandou 0950
University of the North		Farming systems research Socio economic aspects	L R Ndlovu Dept. of Animal Production Faculty of Agriculture P/Bag X1106 Sovenga 0727

Source: Ramsay and Donkin (date unknown)

The following institutional arrangements and roles can be identified:

- Department of Finance and Economic Development: responsible for leadership, possible initial investment
- Department of Agriculture: responsible for technical expertise and identification of land availability and carrying capacity
- Trade and Investment Limpopo: responsible for leadership in marketing
- LIMDEV: responsible for establishment and monitoring
- LIBSA: responsible for establishment of co-operatives
- Other Partners: ARC, Commercial farmers, Umsobomvu Youth Fund, etc

7.2 Potential funding sources

The following institutions (focussing on assisting community based partnerships) serve as possible sources in terms of financial assistance and/or loans for the community based agricultural co-operation (See Annexure 1 for contact details pertaining each of the mentioned institutions):

- | | |
|---|--|
| - BMW South Africa | - LITET Anglo American |
| - BP South Africa | - Murray and Roberts |
| - British Council | - National Development Agency |
| - Charles Steward Mott Foundation in South Africa | - Roche Products (Pty)Ltd |
| - Development Bank of Southern Africa | - SANGONET |
| - DG Murray Trust | - Sappi Ltd |
| - Equal Opportunity Foundation | - Social Change Assistance Trust |
| - European Union | - South African Breweries International |
| - Franklin Electric South Africa | - Unilever SA (Pty) Ltd |
| - International Finance Corporation | - United States Agency for International Development |
| - Kagiso Trust | - LIMDEV |
| - Independent Development Corporation | - |

7.3 Actions necessary to start implementation

There are many things that need to be done in developing a goat business, but a few are critical. Some of the critical success factors are:

- Buy some high quality rams to start off with
- Sell the majority of the goats from the farm rather than through consignment sales
- Reinvest money from goat sales back into growing the herd and not worry about overall profitability for the first two years
- Purchase a light delivery vehicle and trailer with capability of carrying 10-15 goats

It is also relevant to note that of all the farm animal genetic resources in South Africa, it is the goat that has the biggest potential for development. This includes value-added products, product development, market development and the development of a goat meat and milk consumption culture. One of the most important lessons to be learnt from past development initiatives is to ensure that they should be “needs driven”, and that they are supported by the stakeholders/clients from the outset. Too many projects in the developing animal agriculture sector have failed because of insufficient consultation, breed and production environment evaluation and market research. Although there are areas where additional research and development is needed, there is a wealth of information already available. This information needs to be consolidated and converted into a format that will enable all levels of producers and owners to use it effectively. The establishment of a regional network amongst village co-operative will further enhance the capacity for information on farm systems and development initiatives that have been successful and key issues of mutual importance and interest.

A breakdown of tasks, milestones, project initiation and co-ordination of the development process, which needs to be achieved for the realisation of the project, are as follows:

- **Appoint implementer:**
- In order to implement the project successfully, a dedicated person needs to take responsibility for the implementation. This can either be done in-house if sufficient capacity and know-how exists, or can be put out on tender for development facilitators. In order to ensure that the implementation and management of the project is driven successfully, the implementer must ensure that the project produces the required deliverables to the required standard of quality and facilitate handover of the successfully implemented project. Consequently, the implementer must be appropriately empowered and provided with sufficient decision-making authority to fulfill his or her responsibilities.
- The project implementer needs to meet regularly with the community/potential owners (whom are to become the owners) of the project as well as with the LED manager on a weekly basis to ensure that the learning process is shared with all members and to effectively evaluate the progress of the project.
- The implementer must take responsibility for the following: liaison with the municipality, project programming and execution, monitor overall performance of members, undertake accounting administration of project, time frame management, setting up implementing user agreements, monitor and manage risks, establish and enhance reporting mechanism, conduct regular team meetings, monitor quality assurance and deliverable acceptance, monitoring construction phase and skills training phase, monthly progress reports and status reports in order to ensure that the study is in line with the required outputs, timeframe and budget.

- **Finalise ownership:**
- Identify local people interested in becoming involved in the goat farming enterprise
- Identify local communities and roleplayers/stakeholders (such as relevant Tribal authority, Department of Agriculture, TIL, etc) that need to be involved in planning and decision making process
- Undertake strategic workshops to engage with relevant project stakeholders. This includes obtaining local business interests with regards to the projects and to obtain community-based interests. It is essential that this participation be fostered, as the acceptance of the outputs of the projects needs to be in line with business and community desires. The purpose of these workshops will also be to ascertain stakeholder visions for the project, so that key issues not previously attained can be taken into consideration. It is essential to attain such input from the start of the study.
- Undertake negotiations with the community, the relevant tribal authority, etc. to finalise ownership.
- Hold introductory meetings with existing (or proposed beneficiaries) of the proposed project. The purpose of this introductory meeting will be to explain the purpose of the project to the beneficiaries, so that they are able to make informed decisions regarding the projects at a later stage in the study.
- **Obtain funding (ongoing):**
- There are numerous funding sources through which the Municipality can secure financial assistance or loans to support the implementation of the goat farming enterprise. These sources include both private sector establishments and public sector resources. The following potential funding sources that could be approached for the implementation of the project include: Municipal and Special Municipal Infrastructure Grants, BP South Africa, Development Bank of South Africa, National Development Agency, European Union, and W.K. Kellogg Foundation Grants. Consult Annexure A for a complete list of potential funding institutions and contact details.
- Find ways to obtain and secure capital
- Determine how much money the owners have, how much the owners are willing to risk, how much they are going to invest, etc.
- Determine how many ewes each potential co-operative member is willing and able to provide for the initial take off of the enterprise
- Determine whether or not the owner is going to obtain a loan, make use of investors or all of the aforementioned?
- Contact all funding sources and programmes and obtain buy-in and support
- Utilise feasibility study to market the business to potential funders
- Submit applications for funding, such as to the Department of Provincial and Local Government's LED Fund. Funding of development is often one of the most constraining issues faced during the implementation of projects. Development funds is a scarce resource and all sources should be mobilised with due care.
- Align with council policies in order to get funding.
- Government support mechanism for the SMMEs also need to be obtained, as well as other support mechanisms. These programmes aim to assist people to apply for new projects (e.g. close corporation), expansion of an existing project and skills support programmes such as ARC (see above).

- **Develop detailed business plan:**
- Once the body responsible for implementation has been identified, such a person needs to develop a detailed action plan (as part of the business plan), which consists of: project scope and work breakdown structure, programme and milestones, agenda's and minutes of meetings, correspondence, progress reports, communication schedule, coordination of parties involved, time frame management, working capital, liaison with end users, ongoing monitoring plan, facilitation and final handover, etc
- The action plan needs to identify: whether each action really required for reaching the vision? Will these actions allow you to reach all of the defined objectives? Will these actions remove all of the identified issues? Will these actions allow you to reach the identified critical success factors? Can you do these actions for the expected investment?
- Identify goat manuals and magazines that need to be obtained on a monthly basis
- Determine what type of record keeping will be required
- Identify goat associations that need to be joined
- Determine the price to pay or set for the goats
- Determine income and expenditure flows over a three-year period providing an indication of the monthly profit/loss, when the project will break even and the sustainability of the project
- The business plan should contain the following guidelines and actions to facilitate the implementation: project description, vital issues that need to be addressed before the business can be started, economic impact, key roleplayers that need to take responsibility for the development, nature and possible sources of additional financing for the business, facilitation plan (what needs to be done to ensure successful implementation), implementation timeframe and phasing, institutional arrangements (Legal form of company and registration details, shareholding and responsibilities, strategic partners, organisational structure, internal monitoring mechanisms), Operating plan, actuals, forecasts and timeframes, financial requirements, income creation, final capital costs, operating costs, outputs and outcomes, resource requirements, budget, cash flow, funding sources, investment opportunities, returns, income/expenditure and revenue stream, balance sheet, etc
- Business plan assessment and refinement is also needed. This entails: ensuring attainable vision, goals, strategies and objectives; detailed outcomes and project indicators exist, ensuring alignment to policy frameworks; obtain detailed understanding of risks and identifying risk ameliorations; verify timeframe for implementation; revise financial plans and resource requirements; ensure effectiveness – to ensure it contains all investors need to know, etc
- **Location and facilities:**
- Ensure sufficient fencing to keep goats in and predators out
- Determine cross-fencing needs to separate animals during kidding, etc
- Ensure there is sufficient shelter for the animals during bad weather
- Ensure space for penning up sick animals
- Determine best means of transporting animals
- Determine best plan for supplementing grazing with grain/hay/orange pulp, etc
- Determine where to purchase goats
- Determine where goats will be sold
- Determine where you will advertise goats for sale

- Determine how close the organisation needs to be involved with monitoring and participation in birthing
- Draft a maintenance program for the goats
- Determine type of medical supplies needed and where this will be obtained
- Finalise position and location of farm in village
- Determine requirements in terms of location such as identifying local authority regulations and permits needed for business in the area
- Insure acceptance of location by those involved
- Determine detailed costs of the building required in terms of size, parameters, and rental requirements.
- Provide assistance with regards to preparations of the sites, buildings to accommodate the project, and the purchase of equipment, tools that are needed
- The construction processes also needs to be monitored to ensure that all the aspects of the final product are implemented successfully.
- Obtain quotes for costs and discuss with owners
- **Management team:**
- Finalise exact legal requirements for agricultural cooperative
- Determine membership fee and number of ewes to be provided by each member
- Finalise involvement of community
- Contact institute involved and obtain required and updated membership forms, stamps, etc for the registration of the company.
- Assist in setting up the co-operative, selection of most appropriate candidates, selection of board members, registration of co-operative, etc
- The personality, professional and social competence, and motivation of the team also need to be evaluated so as to ensure successful implementation. Someone who cannot quickly get a group of people enthusiastic about working may have problems in getting customers enthusiastic about the product.
- **Staffing:**
- Assist with identification of the manager from the willing co-operative members. This position is extremely important, as the manager will drive the enterprise.
- Ensure that adequately skilled and willing goat farmers form a part of the co-operative
- Developed job descriptions with roles and responsibilities
- **Human resource development:**
- Identify needs through research, meetings, seminars and workshops with the members', in order to put idea in working
- Undertake this identification of training and technical needs of members in collaboration with relevant and interested organizations
- Identify cost of training required. The training required should include providing access to technical training in order to operate the machinery
- Identify sources of training
- Assist (financially and technically) those interested to become involved in obtaining the required skills and training
- To initiate and provide access to training for the relevant candidates necessary to run the business in the long term
- Contact and rope in relevant SETA's and submit applications to obtain learnerships
- Monitor the training programmes to meet these needs

- Ensure team have: complementary skills and strengths, shared vision, flexible approach to problems, sticks together – especially in difficult situations, relevant experience, etc
- Train and capacitate communal farmers to become commercial over the years
- **Marketing plan:**
- Draw up a detailed marketing plan that identifies the nature of the product, the price, the place and promotions
- Determine the customers that make up the target segment and determine how large the market is, how it can be developed, who the competitors are, what substitutes exist for the product, how the market share and sales volume will develop, what distribution channels will be used, how much will advertising cost, etc
- Interpret the information for the stakeholder or investor in terms of potential for market penetration in order to undertake targeted marketing thus selling the product as a viable investment
- Assist in marketing and negotiating sales
- In other words active marketing of the goats needs to be undertaken to ensure that the business starts earning an operating budget.
- **Financial and accounting system**
- Profitable small businesses often face cash crises and even bankruptcy. Managing this at the onset is critical.
- Efficient management of working capital includes the following: reducing the duration of the working capital shortage (and hence reducing the cost of the product due to lower interest expense), selecting the best option available for financing any working capital shortfall, ensuring that the time required to bring the product to the market is not underestimated, ensuring that market acceptance is not overestimate – realistic goals are required, the need for increased working capital must be taken into consideration as turnover rises, not to use short-term finance for long-term requirements, make allowance for peak cash requirements just prior to month end, make allowance for monthly salary deductions, determining how large the companies' capital requirements will be until break-even, etc. How much cash will be needed in the worst case? Determining where the capital will come from, what returns investors can expect, determining how profits can be realized, etc
- The financial and accounting system needs to be implemented.
- **Monitoring and evaluation and final handover**
- The defined objectives need to be reviewed on a regular basis to see if you are on track. This can be an annual event where you evaluate how you have done with the objectives and refine your plan for the next 12 months. If you discover that you have not reached your objectives, you should consider if the plan was not sufficient, you did not execute the plan correctly, or the objectives were set too high. Then adjust according to your findings.
- The final step in the implementation process includes the progress and performance monitoring of the project and the final handover.
- Establish indicators/proxies for monitoring the development by the co-operative. An indicator can be defined as a generally acceptable expression that is seen as being representative (quantitatively and qualitatively) of the aspects that need to be addressed.

- Once the requirements are met with, the projects will be handed over. However, ongoing support needs to be provided in terms of: providing key focus areas for future intervention, intervention priorities that will require implementation in the event of pre-identified risks transpiring, sustainability guidelines, likely future growth forecasts, the priority future needs of the business, realistic general performance indicators, etc, important milestones will be identified as well as timeframes
- Furthermore mentoring needs to be continuously provided after handover. This implies that continuous monitoring needs to occur and as soon as any problems are noted, key specialists need to be appointed to attend to the specific problem within their field of specialisation. This will ensure that problems are identified and rectified as soon as possible before serious problems are encountered.
- Norm the process by providing constant support for the new entrepreneurs in order to ensure the success of the establishment
- Ensure long-term viability of the business by revisiting the initial concept

It is also suggested that the co-operative start with a smaller herd, because the first kidding season can be quite a learning experience. It will be depressing and financially devastating to lose a lot of kids all at once. Starting out with a smaller herd will give the co-operative a chance to find out whether they really have their act together for kidding. However, most does on a healthy diet kid fine without intervention. The devastating losses generally occur after kidding, due to internal parasites and the various diseases goat kids are susceptible too. It is thus better to test out how well the facilities and management strategies hold up to these threats while the herd is still small, and the risk is more manageable.

Even if the co-operative has plenty of livestock experience, is it important to remember that the co-operative is trying out new facilities and/or locations. If the co-operative must start out initially with a large herd (for example, if their bank loan is contingent on getting maximum production from year one) then it is important to commit to four things. First, let the co-operative start out with the smallest sized herd it can rationalize. Secondly, make arrangements with an experienced goat producer to garnish all the hands-on experience before the co-operatives own does start to kid. Thirdly, let the co-operative avoid kidding in the winter during the first year. Instead, the co-operative should try to kid in the milder months. Newborn kids in frigid weather often need fast intervention by experienced producers to get them off to a good start. Lastly, plan on continuing the education during the first years by assisting the co-operative to network with other producers and attending educational workshops and training.

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National Department of Agriculture

US Nutrient Database for Standard Reference Release 14 (July 2001)

ANNEXURE A: FUNDING INSTITUTIONS

Name of the Institution	Physical Address	Tel	Fax
Absa foundation	2nd floor, Absa towers East, 170 Main str	011 350 6207	011 350 4964
Africa Project development	Ground floor, Victoria Gate West, Hyde park	011 325 0720	011 325 0729
Amb private equity partners limited	Forum Building, Cnr 5th & Maude Street, Sandton	011 215 2100/011 215 2023	011 215 2023
Aquila Growth limited	13 Sloan Road, Epsom Downs Office Park	011 706 6318	011 706 8928
ARTPAC	35 Rissik str, Surrey hse, 2nd floor	011 838 3730	011 838 7220
Ashoka innovators for the public	5th Floor, 23 Jorison str, Braamfontein, 2017	011 880 5592	011 880 8950
Australian High commission-AUSAID	4th Floor, Fedsure Towers, 13 Friedman Drive	012 342 3740	012 342 8442
Belgium Consul General	Leyds 625, Muckleneuk. Pretoria, 0002	012 460 7555	012 346 8063
Billiton	6 Hollard str, JHB Central	011 376 3360	011 376 3362
BKS Pty Ltd	Oakhurst 11 State andrews road, Parktown	011 481 0300/ 012 430 9965	011 481 0301
BMW (SA)	1 Bavaria ave, Randjes Park Ext 7, Midrand	012 522 3167	012 522 2689
BOE Equity partners	187 Rivonia Road, Morningside. JHB	011 302 1302	011 302 1303
BOE investment partners	90 Ordance Road, Durban, 4001	031 364 1567	031 364 2936
BP South Africa	Forsdick, Roodekop	011 488 5111	011 488 5288
Brait Private Equity Limited	9 Fricke Road, Illovo Boulevard, Sandton, 2196, JHB	011 507 1000	011 507 1001
British Consulate General	275 Jan Smuts, Denkeld West, JHB, 2196	011 537 7206	011 537 7238
British development division of SA		011 718 4300	086 010 3525
Business Bank	5 Bellingham str, 1 highveld, Centurion	012 665 9083	
Business partners: venture managers (pty) ltd	5 Wellington Road, parktown, 2193	011 480 8700/012 664 3397	011 484 2035
Caltex oil	21 keys ave, Rosebank,	011 280 2000	011 880 1945
Canadian consular and diplomatic missions abroad	1104 arcadia, Hatfield, 142 Long street, Cape Town	012 422 3000	012 422 3054
Cape gateway		086 014 2142	
Catholic religious orders	140 visagie street, Pretoria	012 323 6458	012 326 6218
CDC Capital Partners	Cradock Heights, 1st floor cnr Cradock and tyrwhitt ave, Rosebank	011 778 5900	011 327 7407
Charles Stewart mott foundation in south Africa		011 403 6934	011 403 7566
Development Bank of Southern Africa		011 313 3004	011 313 3629
DTI	not available	086 184 3384/012 394 9500	086 184 3888

Name of the Institution	Physical Address	Tel	Fax
Edward L Bateman		011 899 9111	not in use t
Equal opportunity foundation	1 Wynderower Rd, Claremont, 7735	021 671 9055	021 671 9225
Eskom	Megawattpark,Maxwell, Sunninghill X3, Sandton	011 800 8111/0118003312	011 800 429!
Estee Lauder Group	6 kylami blvd, kylami business park, kylami, 1685	011 516 3000	011 516 3200
Ethos private equity ltd	35 Fricker Road, Illovo, Sandton, 2196	011 328 7400	011 328 7410
European Union	2 Greenbock Street, 27 GeorgeStorrar Road, Groenkliff, Pretoria	012 460 4319	012 460 4923
Finish fund for industrial cooperation	628 Leyds str,Muckleneuk, Pretoria	012 343 0275	012 343 3095
Ford Foundation		011 403 5912/011 2761200	011 276 1248
Franklin electric SA	not available	011 796 5800	011 792 6698
Get ahead financial services	101 du toit str, Tomkor South Building	012 323 1459	012 323 1511
Greenwich venture partners (pty) Ltd	not available	011 883 6996	011 884 0225
HBD Venture Capital	not available	021 970 1000	021 970 1001
Horizon Equity Partners	52 Wierda Road West, West Valley , Sandton	011 269 4040	011 269 4098
I Capital Fund Managers	Ground Floor, Block F , Rochester Place, 173 Rivonia road Morningside	011 784 2230	011 784 7013
IBM	70 Rivonia Road, Sandhurst, 2146	011 302 9111	011 302 6141
International Finance Corporation	14 Fricker Road, Illovo, JHB	011 731 3000	011 325 0729
Irish Aid	1st floor,Southern life plaza, 1059 Schoeman street, CNr Festival, Arcadia 0083, Pretoria	012 342 5062	012 342 4752
Japan International Cooperation Agency:Embassy	1st Floor Bank Forum Building, Fehrsen and Veale str, New Muckleneuk, Pretoria	012 346 4493	012 316 4966
Joint Education Trust	23 Jorrison Road, 3rd Floor Braamfontein	011 403 6401	011 339 7844
Kagiso Trust	8th Floor , Braamfontein centre, 23 Jorissen str, JHB,2001	011 403 6319	011 403 1884
Khula Enterprise Finance Limited: Business Loans for Retail	use postal adress	012 394 5560	012 394 6560
LED Fund	87 Hamilton stree, Arcadia, Pretoria,	012 334 0600/012 334 0705	012 334 0603
National Development Agency	5th Floor Jorissen place,Jorissen Street, Braamfontein	011 403 6650	011 403 2514/5
Special Municipal Infrastructure Fund (SMIF)	John Vorster Drive, SITA Building,	012 672 2867/ 012 672 2855	012 672 1321
W.K. Kellogg Foundation Grants		012 431 0900	012 342 3612