



BUSINESS PROPOSAL FOR NYAMA YETHU DEELFONTEIN PROJECT

Danie Terblanche

NYAMA YETHU HOLDINGS (PTY) LTD Deelfontein, Prieska



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NYAMA YETHU HOLDINGS (PTY) LTD – WATER APPLICATION FOR 300HA DESCRIPTION

BUSINESS PROPOSAL FOR ABSTRACTION OF WATER FOR 300HA OF HIGH POTENTIAL SOIL FROM THE LOWER ORANGE RIVER SCHEME

GOAL AND OBJECTIVE

SPECIFIC NEED TO EXPAND FEED PRODUCTION FOR FREE RANGE FARMING – TO CREATE SUSTAINABLE SUPPLY TO THE GROWING MARKET DEMAND FOR FREE RANGE MEAT IN THE SOUTH AFRICAN AND INTERNATIONAL RETAIL MARKET

Executive Summary:

1. Brief background information on the applicant.

NYAMA YETHU HOLDINGS is a black empowered company which will be involved in development of sufficient feed (lucerne, maize and triticums) production to supply lamb and beef cattle to the SAFAM (South African Farmer Assured Meat) Group, an integrated meat business. An extended beef and lamb finishing feedlot will be part of the development and Nyama Yethu will be a primary supplier to the SAFAM Group. SAFAM has been in the abattoir business for more than 20 years and the black shareholders will also become involved as equity partners in the SAFAM Group's Beaufort West and Robertson abattoirs. SAFAM is currently the biggest supplier of free-range meat in the South African retail market and with a growing demand, the opportunity for growth via backward integration (feed production) become essential because of ongoing drought in most of the traditional free-range production areas in South Africa and Namibia. A lot more background information is contained in this document.

2. Shareholding structure of the Applicant Entity

The Nyama Yethu shareholding is as follows:

Name	Shareholding %	
Sipho T Mahamba	40	Black Male
Hennie de Bod	40	White Male
Thoko Mncube	20	Black Male

3. What is required?

We as shareholders require adequate water for the irrigation of 300 ha of land to produce feed cultivars. The feed will be utilized to produce beef and lamb on a sustainable basis for free-range meat supply in the South African retail market. This is the ideal proposition where black shareholders become part of niche market production in the integrated food and value adding chain of the Agricultural Sector.

4. THE PEOPLE BEHIND NYAMA YETHU HOLDINGS - Details on the directors and key management that will be involved in the Nyama Yethu Holdings Pty Ltd

4.1 Siphon T Mahamba (Director /Chairman)

- Spent his early career on Wall Street as a corporate attorney and an investment banker.
- In Washington D.C., as an associate at the capital's largest law firm (Arnold & Porter), worked on regulatory matters in the following practice areas: banking, international trade, international commercial arbitration and anti-trust.
- While in Washington D.C., had stints in the academia and lectured at Georgetown and American universities.
- At the International Monetary Fund (IMF), principally advised African governments on the overhaul of their trade and investment regimes as well as on the restructuring of their fiscal regimes in order to expand their tax bases.
- Founded Kwezi Group with other partners and put in place joint venture (JV) partnerships with multinational companies, such as, Lucent Technologies, Rio Tinto which was Kwezi's JV partner on mining exploration and De Beers at Marsfontein.
- Was an investment banker at Deutsche Bank- specializing in project and export credit finance as well as privatizations. Corporate finance was secondary area of practice.
- Kwezi V3- was a director and shareholder of reference through Kwezi Group; spearheaded its expansion into other countries such as Libya, Sudan, Zambia, and so forth.
- A director and shareholder of Nyama Yethu (an entity with an abattoir and feedlot in its portfolio).
- Siphon will be an asset to the company in terms of his holistic view of business and corporate finance and financial background. He will be a key role player with business expansion and integration into the meat production chain with merging into the SAFAM Group

4.2 Hennie de Bod (Director)

Personal details

NAME: Hennie de Bod

Qualifications: Matric (Vereeniging Hoerskool)

Work Experience

- Office worker at Volkskas Bank
- SASKO, senior position in financial department
- Hennie started a BUTCHERY in the Worcester, Western Cape and eventually ran three successful butcheries. This was the start of his journey and career in the meat business.
- A self-employed business owner running a range of business including a bicycle shop, meat/fish trading business, tavern, restaurant, butchery and other trading business
- Business Leader of the Year – Boland Region outclassing big groups like Van Loveren.

Directorship and other positions held

- SAFAM
- GREAT KAROO MEAT SUPPLIERS
- ANIX TRADING

Hennie has got extensive knowledge in the abattoir and meat processing business and is currently the sole owner of the SAFAM Group

4.3 Thokozani Mncube (Director)

Residential 4 Spier Place, Hurlingham Ext 5, Sandton 2196

ACADEMIC DETAILS

- Baccalareus Degree (Chemical Engineering), Yale College, 1991
- MBA, Wits, 2000

EXPERIENCE

- Sasol, 1993-2000
 - **Process engineer at Sasolburg chemicals facility and Rosebank (Head Office)**
- Rand Merchant Bank, 2000-2011
 - **Corporate Finance and mergers & acquisitions**
 - **Business Development Director, responsible for management of certain key clients**
 - **Member of the Executive Board**

Thokozani will be be involved with business management and internal auditing of the Nyama Yethu business's crop production and finishing feedlot business

4.4 Danie Terblanche (Management)

PERSONAL DETAILS

Surname Terblanche
Name Daniël Burger
Residential 86 Jan van Riebeeck Road, Oudtshoorn 6625

ACADEMIC DETAILS

Matric Boland Agricultural High School, 1986

Baccalareus Degree (Agricultural Economics) Stellenbosch University, 1991-1994

EXPERIENCE

- Land and Agricultural bank of South Africa, 1994-1996
Agricultural Economist at Head Office, Pretoria
- Kalani Investments (Pty) Ltd, 1997-2004
Managing Director responsible for:
 - Themcor Meat Processing Factory and logistics – Oudtshoorn
 - Kalani Farms – mega diversified farming operational including production, marketing and export of live animals
 - Klipheuwel Quality Sands - crude and washed sand to construction industry and silica industry
- Klein Karoo International Ltd, 2004 -2018
Executive : International Leather and Feather Value Adding
Product development and marketing to major international brands

Executive Director: Meat Marketing and Logistic Operations
Local and international supply to the wholesale and retail market
- SAFAM Group 2018 – current
Business Development Manager
Strategic development and planning and market expansion

Danie will be responsible for procurement of animals for the Nyama Yethu operation as well as ongoing coordination between market requirements and farm production and expansion. His commercial and market experience will be valuable for the operation's future

4.5 Stander Terblanche (Management – Project Manager)

PERSONAL DETAILS

Surname Terblanche
Name Stefanus Stander
Residential Bontebokskloof Swellendam

ACADEMIC DETAILS

BSC Hon Agric (Animal Husbandry, Crop Production and Extension) Stellenbosch University, 1984-1989

EXPERIENCE

- Department of Agriculture , 1990-1994
Senior Specialist Extension Officer , Elsenburg and Oudtshoorn
- Saag Jonker Holdings (Pty) Ltd, 1994-1997
General Manager responsible for:
 - Animal Husbandry & Crop Production of 22 farms – Klein Karoo region
 - Mega diversified and fully integrated farming operation
 - Responsible for restructuring of business after deregulation
- Monteith Trust , 1998 -2003
General Manager
Restructuring of farming operations from fruit to animal husbandry and crop production
- *Joint Venture Partnership with Monteith Trust 2004 - 2018*
Managing Partner
Went into partnership with Monteith Trust and did crop production and animal husbandry for own account
Sold farming operation at a very strategic time when land prizes rocketed in the area
- *Current Responsibilities*
Directorships at: Klein Karoo Group (*vice chairman*)
Klein Karoo Seed (*chairman*)
Klein Karoo International
Consulting services to 3 Mega farms in the crop production and animal husbandry field

Stander will be responsible for management and development of the 300 ha land under centre pivot irrigation as well as the establishment of crop production for the finishing feedlots at Deelfontein Farm. The animal husbandry operation will also be under his management for ongoing development according to market requirements and expansion.

5. The SAFAM group and Nyama Yethu and their mutual vision for an integrated free-range farming and abattoir business

Who is SAFAM: The SAFAM group <http://safam.co.za/> has been in the abattoir business for more than 20 years servicing the wholesale and retail sectors in the meat trade. The business has got two export and FSSC graded abattoirs in Robertson and Beaufort West respectively. The Robertson abattoir includes a finishing feedlot with a capacity of 12000 lamb. Woolworths South Africa is one of the primary customers of the SAFAM business for 13 of the more than 20 years in existence. All free-range lamb and beef retail in Woolworths stores in the Southern and Coastal area of South Africa originate from the SAFAM Group

SAFAM currently slaughters between 3000 to 4000 lambs and 300 to 500 cattle per week through Robertson Abattoir. This services blue chip clients such as Excellent Meats in Cape Town and QK in Johannesburg whom they have been supplying carcasses for the past 18 years. Excellent Meat and QK Meats have extended an offtake agreement for additional meat carcasses which SAFAM is able to supply from their newly build abattoir in Beaufort West

SAFAM has got a highly skilled management team which achieve incredible standards in terms of production offset, hygiene, shelf life, quality, food safety and cold chain logistics to their final destinations. The “farm to fork” traceability on meat guaranteed by Woolworths is a standard system in practice at the SAFAM business. This knowledge has been accrued over many years and via implementation of superior systems. SAFAM has also employed an experienced technical expert to take charge of their technical and quality management in 2012. With previous senior positions in Marks & Spencer, UK and Woolworths, RSA. David Houghton has a Masters’ degree in British Food Law. He is a key contributor to the technical verification, traceability and food hygiene and quality control systems at SAFAM.

6. NYAMA YETHU / SAFAM natural grazing - forced change to intensive/extensive Free-Range principles

Besides the SAFAM abattoirs and feedlot there are the semi-arid Kalahari Farms (20000 ha in total) near Prieska where seasonal free-range beef and lamb grazing were done up till 2016. A severe national drought since then has brought an end to free-range grazing model without availability of additional feed. Besides own grazing that has been affected, regular supply from traditional supplying regions became under pressure due to the ongoing national drought in Namibia, Namaqualand, Northern Cape, Central, Southern and Little Karoo as well as Eastern Cape Midlands.

7. The need for additional feed production to maintain free-range protocol identified

It was when Mr Sipho Mahamba and Thoko Mncube via their interest to become involved in SAFAM visited to our Prieska farm early 2017, when the idea aroused to develop our own feed via crop production on high potential soil identified on the farm Deelfontein. To obtain water rights from the Lower Orange River Scheme was the only option to overcome the effects of a slump in rainfall now almost considered natural disaster (ongoing drought)

Thus, the main driver for sustainable supply of free-range lambs and beef hinges on the irrigation of maize, triticum feed cultivars and lucerne for additional feeding of the animals on the veld specifically during drought conditions. These feed sources will also be used to produce contract manufactured feed pellets at Orange River Feeds in Prieska for usage in finishing feedlots. South African supply of free range animals for the local and international market has run into a shortage and this additional strategic supply of feed via Nyama Yethu Holdings will provide sustainable supply to our key and strategic local retailers via the SAFAM abattoirs.

8. Water for Feed Crop Production in an Intensive/Extensive system is the answer

The availability of adequate water (300ha) for irrigation from the Orange River Water Scheme will secure Nyama Yethu and Safam to produce sufficient numbers of animals for the market within the strict requirements of free-range farming protocol. **An intensive analysis of various production systems and consumer behaviour research has indicated that the best model of cattle and lamb production should be intensive-extensive farming.** This system suits with the dryer South African conditions and forecasts for a trend towards more dryer conditions in the future in our natural free-range production areas. Additional feed and pasture production as and when needed support natural grazing and it still falls within the requirements of free-range farming. The system further provides a higher profitability via a premium price for the free-range farmer achieved by a higher price in the supermarket. The RSA and international market have a stable growth in environmental aware and concerned consumers who is prepared to pay a premium for products originating from sustainable farming practices done in environmentally friendly eco-systems. The following criteria were assessed:

1. **Animal Welfare;**
2. **Environmental Impact and Health Benefits of the Meat Produce**
3. **Investment;**
4. **Markets for Free Range Meat and Customer Awareness About Food;**
- 5.

It should be noted that the above criteria are often interlinked and should not be viewed in isolation.

8.1 ANIMAL WELFARE via the “FIVE FREEDOMS”

Whatever livestock farming system is used, animal welfare plays a very important part in the successful management of the operation. If the livestock is not kept in a healthy condition throughout their lives, the end product, in terms of both quality and value, is greatly reduced. It would be true to say that a well-managed feedlot could be better in terms of welfare than a poorly managed free-range operation. However, a well-managed free-range operation will always provide a higher welfare environment for animals than a well-managed feedlot. This is because a feedlot could never achieve the same levels of meeting the ‘FIVE FREEDOMS’ as a free-range operation could. Via the production of additional feed via crop production on the 300 ha of land identified at Deelfontein, the free range principles can still be implemented and achieved as the animals which we will procure will only spend a limited time (less than 80% of their lifetime) in conditions where they will get additional feed. This intensive/extensive system still falls within the requirements of local and international free-range protocol.

The Five Freedoms are:

1. **Freedom from Hunger and Thirst.**
2. **Freedom from Discomfort.**
3. **Freedom from Pain, Injury or Disease.**
4. **Freedom to express Normal Behaviour.**
5. **Freedom from Fear and Distress.**

A well-managed feedlot will be able to ensure compliance with the 1st freedom as it is very easy to manage and control the food and water supply to the cattle at all times. This is because they are in small enclosed pens with food available 24 hours a day. It can be argued that a feedlot can manage four of the five freedoms, but it would be unable to comply fully with the 4th freedom - the ability of the animals to express their normal behaviour.

Cattle and sheep are ruminants that graze on grasses and other available vegetation on a constant basis during the day. To do this they require a range of available grazing land to allow them to move from area to area as they graze back the grasses. If they are unable to have this natural behaviour, that in itself will cause the cattle/lamb to suffer discomfort (the 2nd Freedom) such as when they are confined to a landless, grassless feedlot system.

In a feedlot the animals are kept in confined areas without any grass under foot, and the pens often become very muddy in wet weather and exceptionally dusty in dry weather. This causes both feet and respiratory problems, which must be actively managed with the routine use of strong drugs such as antibiotics, antihistamines and other drugs. Without this drug use the animals will undoubtedly suffer from Pain, Injury and Disease, (3rd Freedom). In a feedlot system the high stocking density means that medication must be given in a prophylactic manner to prevent diseases occurring in the first place. A feedlot cannot take the risk of illness as this would spread rapidly to the entire farm. To achieve the same level of health and vitality does not require this intensive use of medication in a free-range system.

The 5 Freedoms are not automatically guaranteed in a free-range system and still require careful monitoring and management. Water rights will enable our operation to grow enough natural feed and fodder for an increased number of cattle and lamb. This will enable our livestock to feed directly on the natural grazing land or for fodder to be transported to the different fields where the herds are. Water supply will allow different feed crops to be grown seasonally and the nutritional requirements of the livestock to be met, (1st Freedom). The eventual intended feed crops will be a mixture of Maize and Lucerne. However, with the allocation of water, Nyama Yethu will establish grazing pastures that will work suitably and sustainable for winter-time and summer-time feeding for our livestock. These pastures as well as rotational crop production of Triticum Cultivars (barley and oats) and Maize (150ha) as well as Lucern (150ha) are central to long-term sustainable feeding for the livestock but can only realistically be grown when there is a larger allocation of water (300ha) to Nyama Yethu.

The management of the 3rd Freedom will always be necessary, however in a free-range system the prophylactic use of medication is not required. The animals only need to be treated when they start to show signs of injury or disease. Furthermore, it will also only be a particular family group, in a particular field or camp, that must be treated. This is unlike in a feedlot where all animals must be treated even if only one animal is showing signs of disease.

Animal welfare is a key value for Nyama Yethu and is what we stand for. We believe it sets us apart from the rest of the market. The diverse cultural and experiential backgrounds of our shareholders contribute significantly to the richness of our company values and our ability to differentiate ourselves from other players in the market.

8.2 ENVIRONMENTAL IMPACT AND HEALTH BENEFITS OF THE MEAT PRODUCED

There have been many studies carried out on the impact of different beef farming systems on the environment and, even though many of these are passed off as being Life Cycle Analysis, none have included all aspects of the operation that could either positively or negatively affect our environment. Currently, a notable environmental focus is the carbon footprint of beef / lamb (and dairy) production. This is because cattle and sheep produce large quantities of methane gas (CH₄) which is known to be a more potent greenhouse gas than carbon dioxide (CO₂).

Some studies show that feedlot animals produce less methane gas than free-range ones per kilogram (kg) of meat produced. However, these have been shown to have excluded the carbon footprint of critical aspects of the entire chain such as medication use, production and transport, removal of manure from site, protection of the water table and water sources on or near the farm's production and the use of fertilizers. It is clear what benefits a free-range system has over a feedlot on the environment, as detailed below.

As stated earlier, all cattle and sheep produce methane during the conversion of feed in their rumen to energy. However, in a free-range system, some of this carbon, in the form of methane, is sequestered into the pastures upon which the animals are grazing. The water and air quality on the farm remain high because free-range farming is less intensive. There is production of animal waste (urine and faecal matter or cow dung) which causes no problems. In fact, the land benefits from the cattle and sheep being present and walking / turning over the dung into the soil, which acts as fertilizer and returns nutrients back into the soil (carbon cycle).

Feedlot farming produces larger quantities of manure than can be absorbed by the feedlot's soil. This animal waste must be taken to a licensed composting facility, and such transportation can contribute to air pollution.

Such a facility requires a very specific set of management skills and knowledge so that it does not compromise the environment in the locality.

Free range grazing, on the other hand, helps to stabilize soils and to control undesirable weeds and invasive plants as the movement of cattle over the land, whilst grazing, helps to stimulate the growth of the grass ahead of bush encroachment. This also helps with the reduction of wildfires.

8.3 INVESTMENT

The investment required to run a successful feedlot is considerably more than that of a free-range farm. The current farms in Prieska has the infrastructure for free range beef and lamb farming. The only restriction on the number of animals is based on the availability of grazing land. Water rights will allow the operation to grow additional grazing space and provide water to cover the targeted number of livestock. These numbers will be finalised once the figures of allowable water are available.

Pre-construction, a feedlot requires a full site-plan and layout to be drawn up as well as ground surveys, soil samples, drainage channels, etc. This will then need to go through a full Environmental Impact Assessment. Concrete pens will need to be built in a specialized design in order to prevent injury to the cattle, ensure ease of movement, ease of treating sick and injured animals, while providing feed for 24 hours a day. Also required are weighing stations, feed mills and mixing equipment, secure medicine, feed additive storage (Zilpaterol, the main growth promoter used in a feedlot costs as much as R40,000 per kg), shade for the cattle, and casualty pens. Such a feedlot system and additional expenses can be estimated to cost double the nominal value for the same number of cattle as we plan to keep on our free-range farm. In comparison, the investment required for the free-range farm to get the field irrigation ready is estimated at half the price and will also cover additional feed storage and transportation which may be required. Complex feed mixing equipment will not be required as the farm will not be needing to mix growth stimulants such as Zilpaterol into every batch of feed.

8.4 MARKETS FOR FREE RANGE MEAT AND CUSTOMER AWARENESS ABOUT FOOD

The feedlot industry in South Africa is a highly competitive market which is dominated by approximately 5 major feedlots holding over 100 000 to 150 000 cattle, along with about 20 to 30 smaller feedlots which hold 5 000 to 50 000. In order to compete in this market, a feedlot must be able to provide a product that is different from the other role players. This can only be achieved on price. An A2 animal from one feedlot eats more or less the same quantity as an A2 animal from another feedlot. It also trades for the same price in the market. It would not be possible to compete on price with feedlots, which have efficient and mature systems designed to maximize the return per kg of beef or lamb produced per kg of feed intake. It is essentially a economies of scale based model where input/head and output/head determines yield and eventually profit.

There will always be a demand for feedlot beef, but any new feedlot operator would be trying to get their product into an already mature and stable market, with no or little ability of product differentiation. This is similar to launching a new fizzy drink to compete with Coca Cola and hoping to beat them at their own game that they have perfected with end-to-end efficiencies over the years! Your chances of becoming a dominant player against them in a free market are very limited.

Entering the industry can only be done by differentiating one from the feedlot industry. The feedlot industry's strength, which comes from size and economies of scale, is also its main weakness. Size makes them slow to change and to keep up with the end-consumers' ever changing requirements of how they want their meat. Customer preferences have been changing over the decades. Today's customer attitudes are very different from 10 years ago. The South African consumer has been spoiled by the cheap average price of beef which comes from the feedlot industry, however they have also become more aware of other aspects of food and farming. This is due to more information becoming available through the internet and many food television programmes which expose people to global practices, the impact of antibiotics on health e.g. allergies, nutritional effects of meat, and the impact that farming has on the environment, along with the welfare of farm animals.

Consumer research shows that most regular meat eaters are unaware what a feedlot looks like, or how the cattle are farmed. However, when they become aware of how animals are kept and treated and what they are fed prior to slaughtering they become exceptionally concerned. A major study carried out by a large South African retailer shows that what customers are becoming more concerned about when choosing their food are issues of animal welfare, routine antibiotic use in animals, growth promoters & hormones and the environment in general. All of these concerns are part and practices of the feedlot industry.

Because of this, there is an ever increasing demand for free range beef and lamb, but the farming industry is not set up to respond to this demand as yet. The feedlot industry cannot adjust to these market demands quickly enough, and therefore is leaving room for the likes of Nyama Yethu to enter the market with limited competition. In addition to the above, several studies have shown that grass fed, free-range beef and lamb has a healthier nutritional profile than intensive grain-fed animals in the feedlot. The fatty acid profile of free range animals contains more of the desirable fatty acids and less of the undesirable ones, with the reverse being true of feedlot animals. Nyama Yethu will finish its livestock in the field without any interference with the animal's normal feeding patterns in order to ensure that it supplies fully free range grown animals, as opposed to the feedlot system that uses grain for finishing.

Moreover, **Nyama Yethu has already secured the SAFAM partner abattoir that has capacity for an additional 400 free-range cattle and 2500 lamb per week at this time. Nyama Yethu has been assured of a secure market for all additional free-range beef and lamb and sustainable further growth based on availability of feed and pasture.** However, when considering available capacity in all the approved abattoirs for free range beef and lamb, Nyama Yethu will be spoiled for choice in this under-supplied market of free-range meat which is growing in leaps and bounds annually. Nyama Yethu will also access export markets right away, as SAFAM abattoirs already possesses the Department of Agriculture, Forestry and Fisheries (DAFF) certification for sourcing from free range farms that do not use growth promoters / hormones or routinely use antibiotics. This is attractive for supplying to strict overseas customers that require traceability of free-range meat to the source farm in order to ensure quality. (farm to fork traceability)

Currently, livestock is running at a shortage in SA due to ongoing droughts and demographic population growth. Consumers are furthermore prepared than ever to pay more for the right environmentally friendly product. Nyama Yethu seeks to become a dominant player in this market with the ability to sustainably supply free range beef and lamb and contribute significantly to South Africa's food security solution for healthy protein supply. Nyama Yethu will have a well-established market for its free-range beef and lamb via SAFAM as soon as it starts operating. Currently no supplier can guarantee sustainable free range cattle and lamb production, therefore with guaranteed water availability for crop production, Nyama Yethu will be in a position to guarantee the continuous supply of A grade, AB grade and B grade free range beef and lamb to SAFAM o its local and export markets.

9. AN OVERVIEW OF THE MEAT MARKET

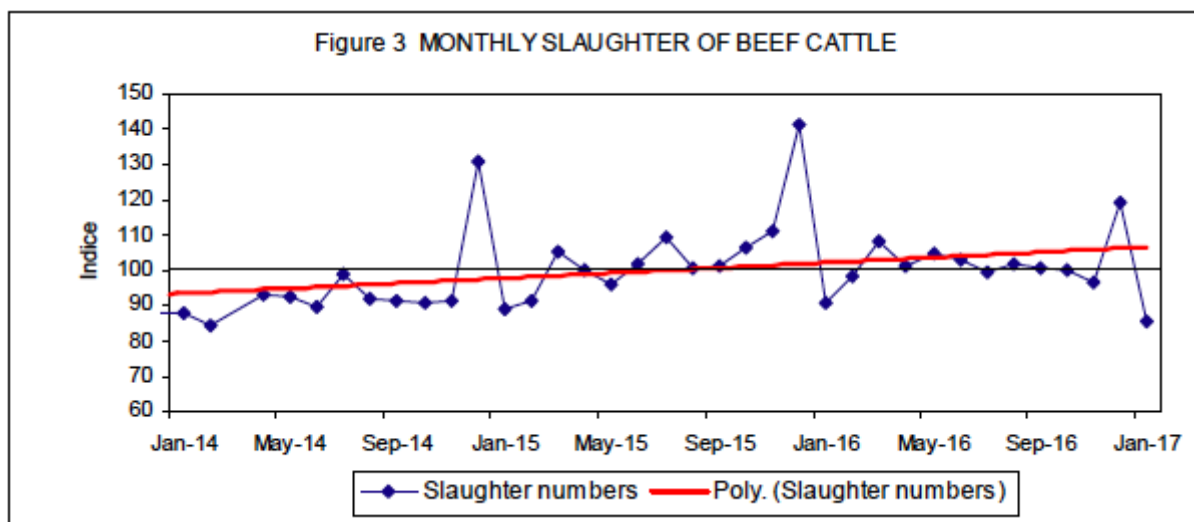
Nyama Yethu in its decision to get involved with the SAFAM Group to form an integrated agri - business has decided to do some market research to get a better understanding of the scope and opportunities that still consist in the South African red meat market. This has given us more peace of mind that the marketing of free-range products as a niche for the upper LSM consumer is the correct market segment to target and grow locally, but also with huge potential internationally. South Africa as a drought stricken country has featured in most literature and our Nyama Yethu's need for additional feed production to supply our niche consumer market is key for success.

9.1 Market Size

	<i>R, Value</i>	<i>10-year growth projections</i>
TOTAL Market Size pa (2016)	R37,6bn	
Beef	R30,6bn	24%
Lamb	R7bn	11%

Beef Consumption pa in 2016	1,1m tons
Red Meat Per Capita consumption	20,9 kg
Beef imports	19,4m kg
No. of abattoirs in SA	430 to 500
No. of Commercial Producers producing 13,3m cattle	50 000
Number of emerging cattle producers producing 3m cattle	240 000
Jobs created by Abattoirs and Hide processing facilities	20 000

Source: ARC, Stats Economic Analysis, DAFF, Easy Data



Red Meat demand peaks between October to December

- *South Africa has an estimated 500 abattoirs, slaughtering 2.3 million cattle, 2.4 million pigs and 5.5 million sheep annually.*
- *60% of South African cattle is produced by approximately 50,000 commercial (mostly white) farmers. 40% is produced by 240,000 emerging and 3 million communal farmers.*
- *Supply chains are mostly vertically integrated, most abattoirs owned by feedlots (some also linked to farmers and SMMEs). Some sell directly to consumers or wholesalers (rather than auction).*
- *South Africa is a net importer of beef (7 million kilograms imported, and 4.4 million kilograms exported). Per capita consumption: ~15.70 kg to 19kg, number of consumers: ~48.6 million.*
- *In 2013 Africa commanded the highest amount of South Africa's beef exports (primarily Mozambique at 46%), followed by Europe.*
- *In 2013, South Africa imported the most beef from Australia at 64%.*
- *Beef imports dropped 36% from 2012-2013, making the industry more self-sufficient. Likely due to Foot in Mouth Disease outbreak and the Global Economic Downturn.*
- *South Africa applies a 40% MFN (Most Favoured Nation) tariff to its major importers.*
- *South Africa's beef export destination countries generally apply preferential tariffs between 10-20%.*
- *Highest growing demand for South African beef is in Kuwait (annual growth 294%) and UAE (annual growth 194%).*

Source: South African Institute of International Affairs (SAIIA)

9.2 South African Meat Industry Trends and Analysis

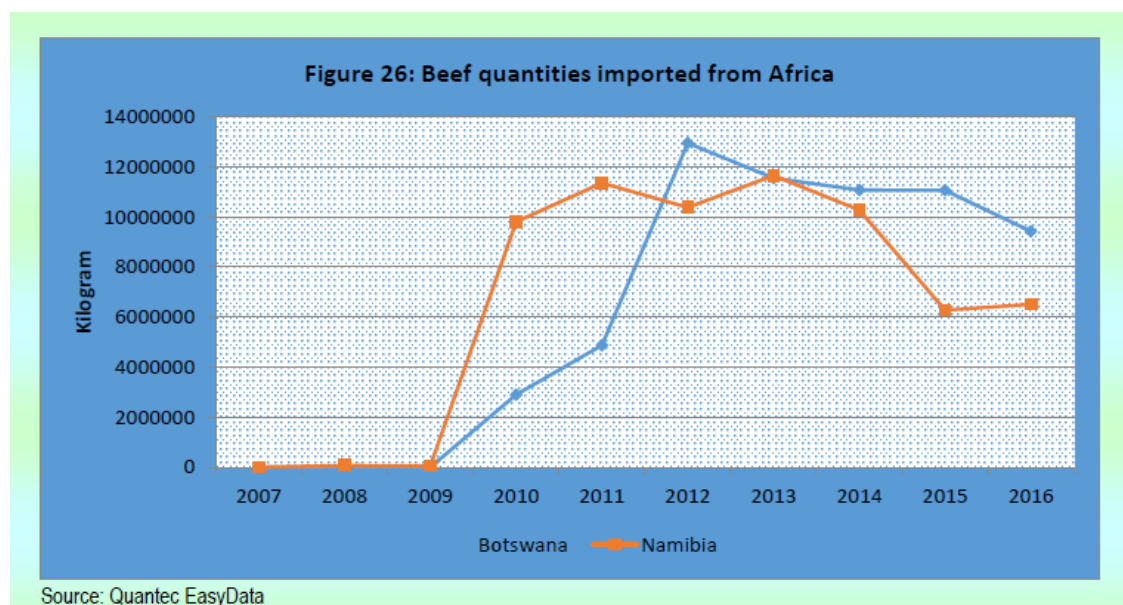
The continued growth of the domestic red meat consumption is mainly fuelled by the rising income levels in South Africa. The growth is also supported by increased export demand. The signing of the meat export protocol between South Africa and China in February 2017 is one of the factors that will contribute to increased demand for red meat. The meat industry will benefit from the higher demand by being able to refine processes, find cost savings, and work toward providing more organic options. Animal production has contributed above 45% of the gross value of agricultural production over the past five years, while the share of red meat has increased from 30% of the value of livestock production to above a third over this same period. Furthermore, approximately 70 percent of South Africa's total area of 1.2 million km² is only suitable for livestock production. As per capita incomes increase in South Africa, the diets of the emerging middle-class changes to incorporate more animal proteins, including poultry meat, eggs, red meat and dairy products – and red meat is the only one of these product categories whose share of total livestock production has increased over the past five years.

South Africa's R37.6bn red meat industry has been constrained by challenges such as drought and has been unable to meet growing local demand. Consequently, South Africa currently finds itself as a net importer of mutton and pork and had only managed to become a net exporter of beef in 2014. In 2018, the local meat industry came under pressure following recent incidents of listeriosis which resulted in several neighbouring export destinations banning the import of some meat products from South Africa.

From 2013 to 2016, South Africa overtook the United States, India, China and New Zealand to become the third largest source markets for fresh beef to Kuwait and the UAE.

The Middle East shows itself to be a prominent market with very high growth rates. This market should be targeted for further growth potential together with specific Asian markets such as China and Vietnam.

According to MAFS (Modernising African Food Systems) consortium, the population in Africa will grow 15% to 1,2 bn which will represent 25% of the world population. Food consumption on Southern and Eastern Africa will more than triple by 2040. This augurs well for the red meat export industry.



The largest source markets are Namibia (ZAR563m), Botswana (ZAR324m) and Australia (ZAR82m), with all three markets experiencing declining growth in 2014. Argentina was the only source market to experience positive growth of 132%, however this was from an extremely low base of less than ZAR200 000.

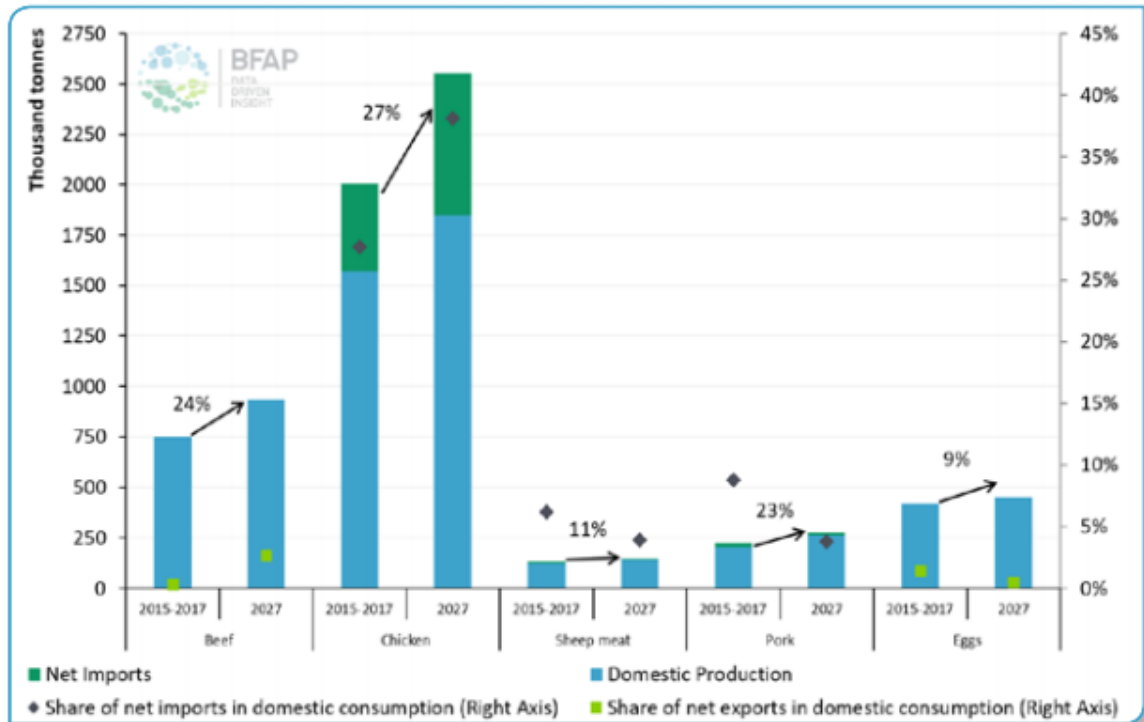


Figure 54: Meat consumption in South Africa: 2027 vs. 2015-2017

Source: Bureau of Food and Agricultural Policy

The above graph shows that sheep imports grew by approximately 11% while beef import grew 24%. There seems to be a good trend of growing exports of beef. There is still room to grow cattle ranching and expand grass-fed and sheep feedlot facilities to increase the population of animals available for slaughter. Our superior quality standards and monitoring processes compared to most countries on the African continent gives us an opportunity to become a significant player in the red meat export sector.

The Middle East countries present the biggest export opportunity for South Africa however the market in the African continent offers a good growth opportunity. The big population in China and the recent strengthening of trade relations between Africa and China could increase meat trade on the back of the protocol signed in February 2017.

9.3 The Meat Value Chain

The key industry players have developed various business models in the industry after realising the value of backward and vertical integration. There are abattoirs that produce their own animals, have feedlots, then put the animals through an abattoir, debone, pack into retail packs and then sell offal and by-products and sometimes even act as a meat distributor. This brings complexity into the business but helps to improve the margins. Below is an example of a typical meat value chain.



The red meat industry, which is a sub-sector of the agro-processing sector, includes the following activities:

- The operation of abattoirs;
- The dressing and packing of the meat of slaughtered animals;
- The production of fresh, chilled or frozen meat;
- The preservation and preparation of meat and meat products by processes such as drying, smoking, salting, quick-freezing; immersing in brine or canning;
- The production of sausages and the manufacture of natural sausage casings;
- The production of meat meals or meat offal, packed meat pies and biltong;
- The rendering and refining of lard or other edible animal fats; and
- The production of by-products such as raw hides and skins.

Below is a list of some of the abattoir and meat processing facilities that are major players in South Africa:

Abattoir and or Meat processor facility	Average Daily Heads in feedlot
BeefCor	25 000
BeefMaster	20 000
Bull Brand	40 000
Cavalier	20 000
Chalmar Beef	15 000
EAC Group	35 000
Karan Beef	120 000
Sparta	40 000

Karan Beef is by far the most dominant player in the market primarily supplying grain fed feedlot beef. There are many marginal abattoirs in the country that are on the verge of closing because they are operating at a loss mainly due to low throughputs (below 250 animals per day).

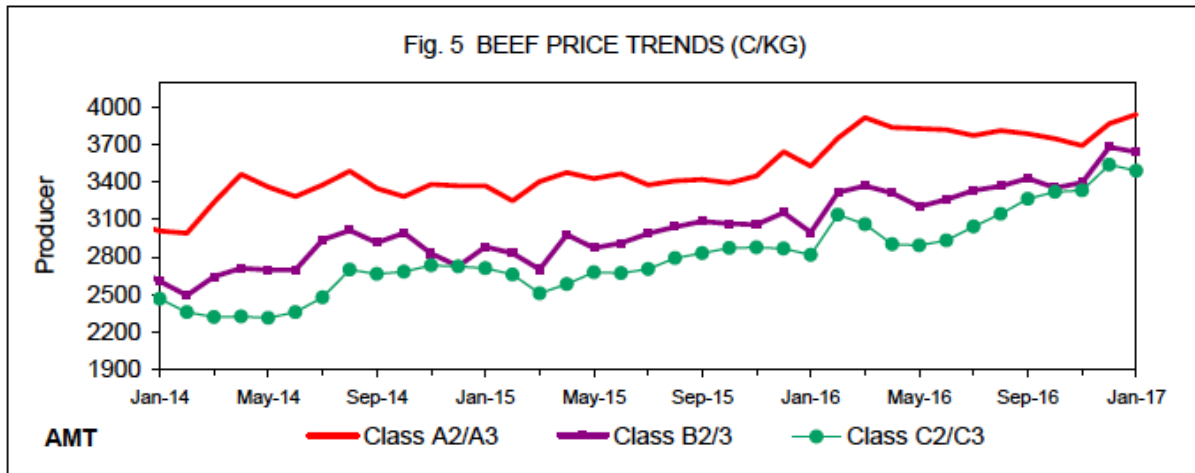
9.4 Our competitive edge for meat marketing via the SAFAM Group

The location of our Nyama Yethu Deelfontein farm with feed production via water from the Orange river put us in a strategic position to procure beef and lamb from traditional production areas in South Africa, but also from Namibia. From here Nyama Yethu will have the option to: a) market the livestock via Robertson which is supplying Woolworths, other retailers and wholesalers in the South: b) market animals via Beaufort West which is supplying Woolworths stores, other retailers and wholesalers in the North.

The other key factors to be considered as part of our competitive edge are listed below:

- *Hennie de Bod possess deep knowledge and experience in the industry gained over a period of more than 20 years as the owner of the SAFAM abattoir in Robertson and Beaufort West*
- *Nyama Yethu has got via SAFAM a hands-on team of shareholders and management that spends quality time understanding the supply side of the business by interacting with farmers and other key stakeholders in the industry.*
- *We are open to achieving a better BB-BEE accreditation which we believe will make us a preferred supplier and buyer of animals in the market.*
- *We have solid existing markets penetrated and developed by the Robertson and Beaufort West abattoirs over many years which is a significant advantage for any new business like Nyama Yethu entering the meat industry.*
- *The location of our free-range intensive/extensive system with crop production in Prieska is strategically located. From here we can supply the whole of South Africa with free-range animals and we are in the feed producing kitchen along the Orange River if we want to grow and expand our market.*
- *We have an existing well-developed Woolworths free-range market for beef and lamb via SAFAM which is growing and need our buy-in to grow with them*
- *In addition, we have new clients including Pick n Pay, Spar and Shoprite that are willing to support us and which we have already visited and informed about our project*
- *The opening of a SAFAM cutting plant at Beaufort West will also broaden our markets to include government institutions and catering companies. Here we have been approached by @SourceAfrica, a black owned company which already supply school feed schemes and various other government contracts.*
- *Supply agreements from the big South African suppliers such as BKB, OVK and Namibian suppliers will be a competitive advantage. By supplying a majority black-owned free range finishing feedlot, the large South African suppliers and farmers will help improve their BB-BEE scorecards.*
- *The establishment of a cutting plant allows us via SAFAM to access wholesale markets and not just confine ourselves to the bulk carcass supply markets.*
- *Our expertise in marketing meat via SAFAM to different segments of the market from offal and hides to premium cuts is also a major competitive advantage.*
- *Nyama Yethu's product will be endorsed by the South African Farm Assured (SAFAM) brand which makes it suitable for distribution into Woolworths and other national and international certified free-range markets. Both abattoirs at SAFAM will also meet the EU meat standards which opens markets to various*

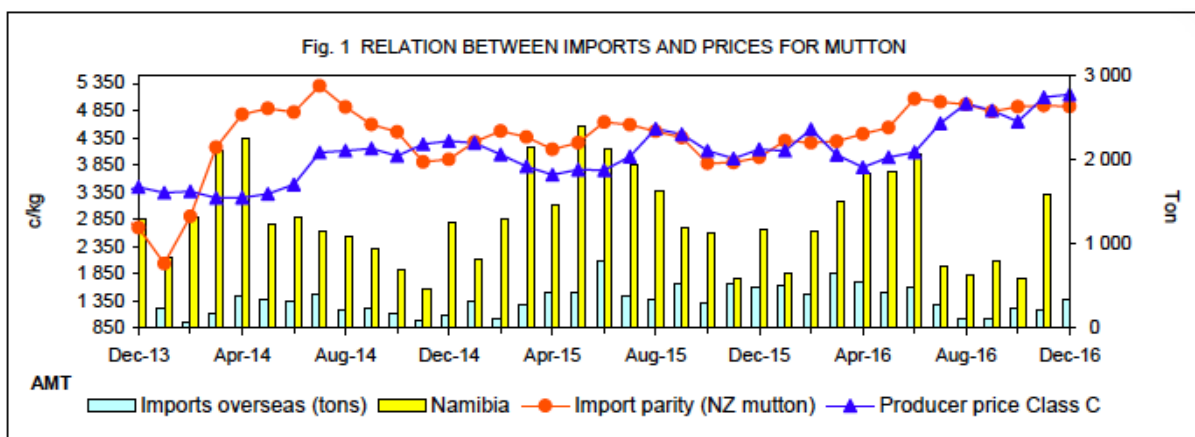
9.5 Beef Pricing Trends



In January 2017 year-to-year, the average producer prices of Class A2/A3, B2/B3 and C2/C3 beef increased in total by respectively 11,7%, 21,4% and 23,8%. The higher rate of increase in C grades illustrates the impact of the drought on keeping / feeding older animals for longer in addition to an increased demand for Free Range Beef from consumers. The price increase also reflects the effect of herd building of breeding material after losses incurred during the 2015/16 drought in the northern areas of RSA. In January 2017, the monthly price of the A2/A3's was 12,2% higher compared to the long-term average over the period January 2014 to January 2017.

9.6 Lamb and Mutton

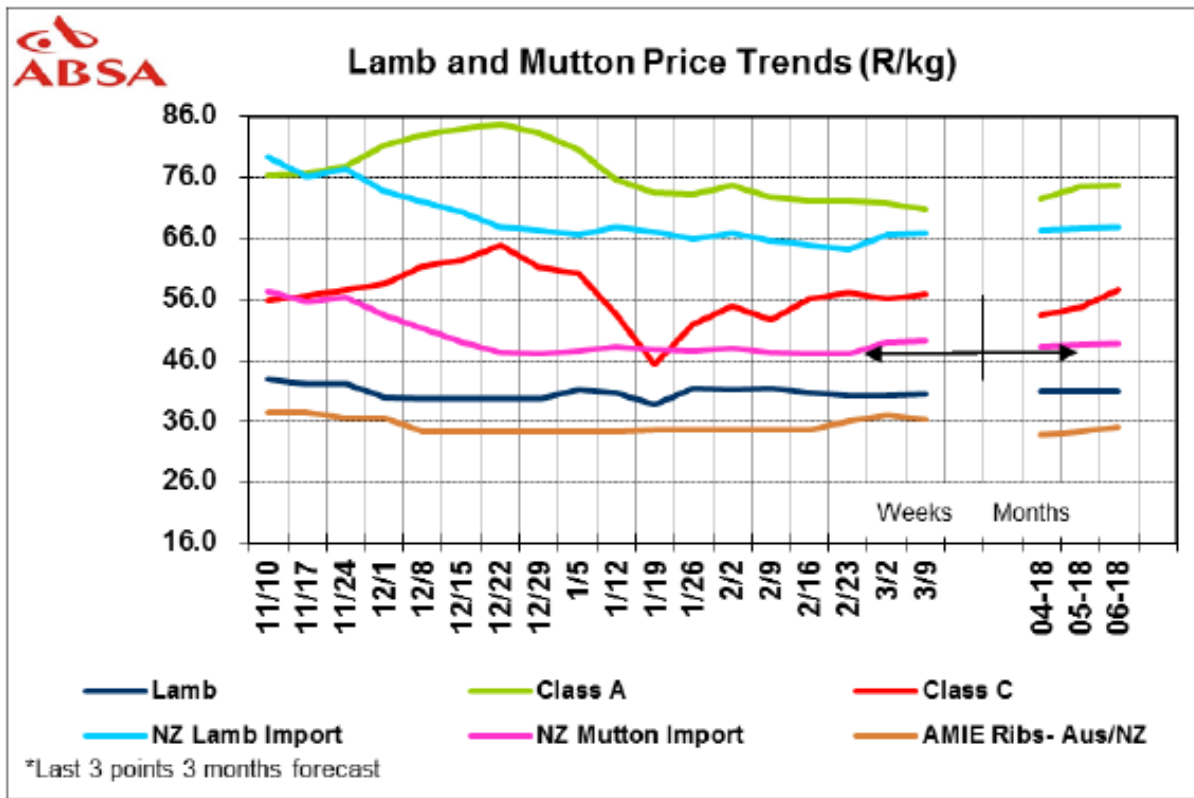
The domestic lamb and mutton markets are heavily influenced by imports of both live animals and carcasses, particularly from Namibia. The table below shows the relationship between imports and local prices.



The import of mutton from overseas in the month of December 2016 increased by 64,0% compared to the previous month and was 29,5% less than the same month in 2015. The import of mutton from Namibia in the month of November 2016 was 172,0% more compared to the previous month and 170,6% more year-on-year. It seems that import parity price was the main driver in the volume mutton imported from overseas in the period January 2001 to December 2016, with a correlation value of $r = -0,6666$ followed by the producer price of Class C2/C3 with a correlation of $-0,6199$. In December 2016 year-on-year, the import parity price of Australian mutton increased in total by 24,0% and was 3,2% higher compared to the average price of Class C2/C3.

According to weather forecasts, the probability for rain over the central to western parts of the country remains low. Favourable rains are needed to improve soil moisture levels, veldt conditions and dam levels ahead of winter.

As mentioned earlier in the document and confirmed in the above, the rainfall situation in the Western Areas of South Africa and Namibia, traditional free-range production areas become disastrous, and without making provision for our own production of free-range animals, Nyama Yethu will run short on production. The current situation in the above-mentioned areas mean lucrative opportunity for us to procure animals from these areas at competitive prices.



9.7 Hides and Skins prices

Hides and skins are an important income stream for any abattoir, they form part of the '5th quarter'. The price fluctuations are like any other industry and are based mainly on the supply and demand ratio. In this instance the demand originates from industries outside of the meat sector and varies from the car industry, fashion industry, leather industry in general.

In February 2017 year on year, the average price of Dorper skins declined in total by 39,3% and Merino skins increased by 0,4%. Interestingly the prices paid are for units / piece; this means that a hide from a smaller sheep often fetches the same price as a larger sheep. This means that the skin can be used to off-set or subsidise the carcass price to a greater degree for a smaller carcass.

Merino Skins is valued at R70/ unit depending on Wool Coverage

For a 20kg lamb = R5 off-set

For a 16kg lamb = R6.25 off-set

Dorper Skins are selling at R35-R40

Cattle hides are currently selling for R75 each. Prices are currently very low due to low demand from China tanneries.

Although prices reflected from the market above is low, SAFAM abattoirs do extremely well in adding value with own exports of skins and wool. There is also value adding to the offal and produce casings for the sausage and biltong markets. This value adding will put Nyama Yethu in a position to earn better on the fifth quarter of beef and lamb production.

9.8 Tariffs imposed on our Red Meat

The highest tariff imposed on South African fresh beef by countries that we currently export to is 71.4% for exports to France. The highest tariff imposed on frozen beef by countries that we currently export to is 50% for exports to Thailand. Ireland, Italy and the United Kingdom impose a 92.3% tariff on frozen beef, and subsequently we export a negligible amount to these regions. However, it remains to be seen what impact the UK leaving the EU has on future trade deals, as the UK currently import a significant amount of beef from EU member states.

Seasonality of Meat Production

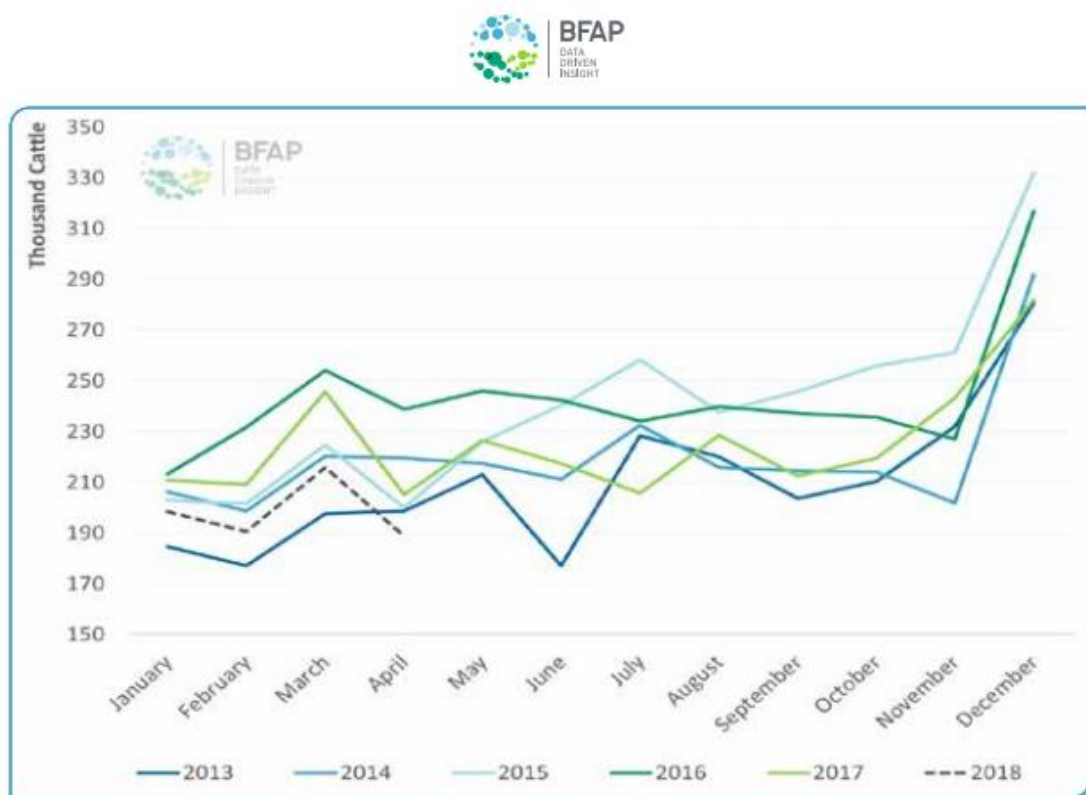


Figure 53: Beef slaughter volumes: 2013 - 2018
Source: South African levy administrator, 2018

The above graph shows the seasonality of the red meat industry. Most of the slaughtering tends to be towards the warmer months of the year (from October to December). The winter months are generally off-peak periods where consumption shifts to soups and stew-type meals as opposed to braai and general prime cut meat dining that is more prevalent during the period October to December.

Part of our strategy (which we will overcome in receiving 300ha water rights for additional crop production at Nyama Yethu) is to break the seasonality of production via additional feeding to sustain our delivery right through the year and to have better carcass conformation and quality livestock into the market.

9.9 Barriers to Entry and Risks

Below are some of the barriers to entry in the market:

- The procurement of animals during low end seasonality. This requires solid and well-established relationships and the ability to source products outside the borders of South Africa. **This includes the development of our own supply through alternative production strategies such as the intensive/extensive production model with additional feeding which will be used by Nyama Yethu at Deelfontein farm.**
- Insufficient knowledge of the sector and the technical aspects of the business could be a risk to the success of the business.
- Lack of accreditation by the various government and other certification bodies that enable the abattoir/cutting plant to service blue chip clients and export markets is always a barrier. Getting an abattoir export-ready is expensive and amount up to R5m, even for a small abattoir.
- The inability to derive maximum value from what is commonly known as the 5th quarter business (offal, hides and skins) because of lack of skills and knowledge.
- Poor marketing skills especially in the Business-to-Business (B2B) sector.

We as Nyama Yethu is confident that SAFAM with an experienced team in Robertson and Beaufort Wes abattoirs as well as industry experts on executive level should easily address and manage these barriers. Risks factors and ways to mitigate are as follows:

RISK FACTORS	MITIGATING THE RISK FACTORS
1. Lack of supply of animals due to diseases and drought	<ul style="list-style-type: none"> - Ensure there is broader supply strategy that extends into Namibia and Botswana and across different regions within South Africa - Develop a strong network of animal suppliers across the country and neighbouring countries.
2. Poor Meat Quality	<ul style="list-style-type: none"> - Enforce high quality standards at all times (from sourcing to final product) - Always be prepared to pay a premium for premium meat - Strengthen relationships with suppliers of good quality carcasses - Continue to work towards improving traceability and proper grading.
3. Market Crash	<ul style="list-style-type: none"> - This is a very low risk given the projected growth. However, we are able to switch to the export market - If we attain a string BB-BEE position, we are likely to benefit from preferential procurement policies.
4. Price volatility	<ul style="list-style-type: none"> - We don't plan to be a price leader. We'll be priced in line with the market and the value we are perceived to deliver by our customers. Pricing negotiations with our trade customers will always be the final determinant of our pricing strategy.
5. Electricity cuts/load shedding	<ul style="list-style-type: none"> - Provision has been made for two standby generators to be used when there is no electricity. Solar power is part of our sustainable resources program to be implemented.

10. AN OVERVIEW OF OUR MEAT MARKETING STRATEGY

OFF-TAKE ARRANGEMENTS FOR NYAMA YETHU VIA THE SAFAM GROUP:

We have a solid off-take arrangement with Excellent Meat (South) and QK Meats (North) cutting plant facilities that services Woolworths. We recently approached Pick n Pay, Checkers and Spar. They have expressed a willingness to do business while PnP offered to re-introduce free-range lamb on their shelves if SAFAM guarantee consistent supply. We had similar discussions with Morgan Beef who service various retailers in Gauteng with commercial beef products. They are willing to take our lamb products into the stores that they service currently. This will solve logistics challenges into the Northern Retail Stores which are not serviced through DC's, but on drop shipment basis

The 4 P's of Marketing and the benefit to penetrate the market via SAFAM

Below is an analysis of the 4 P's of Marketing in relation to SAFAM who will facilitate the abattoir and meat production and marketing of Nyama Yethu's free range certified livestock. The endorsement of the SAFAM brand is a key ingredient to the image and equity of Nyama Yethu free-range meat supply

business.

<p>PRODUCT</p>	<ul style="list-style-type: none"> - Our grass-fed South African Farm Assured Meat brand equity will be used to build the image of quality around our meat. Our product mix will be predominantly dominated by lamb (in terms of number of lambs) as the driver of value/profitability. - The sourcing of quality animals will help differentiate us from the rest of products in the market. - The addition of a beef feedlot will make us very competitive. During the dry seasons, we'll be able to buy animals at a low price and add value at the finishing feedlot on Deelfontein farm - The ability to add value to our carcasses by processing them into primal cuts will give us an added edge. - The quality of our meat is largely dependent on the selection of animals purchased. We boast one of the best hides and skinning making processes in the industry. We will also use the process of manual cleaning of sausage casings to produce the best quality casings.
<p>PROMOTION</p>	<ul style="list-style-type: none"> - The SAFAM brand is a well-known brand in the market. We will ride on the strong equity of our brand and what it stands for. - A customer-centric Customer Experience program focusing on enhancing relationships will be introduced. We will ensure a consistent customer experience across multiple touchpoints through which our customers may decide to interact with us. When customers have queries and complaints these are to be handled swiftly. We will always strive to delight our customers and turn them into ambassadors of our brand. We will maintain a view that treats both our suppliers and sellers as our customers. - Advertising will be very limited because we are mainly dealing with B2B customers. We believe the Word of Mouth generated from a good customer experience will go a long way in keeping and attracting customers.

<p>PRICE</p>	<ul style="list-style-type: none"> - <i>We will maintain a parity or slight premium pricing policy. We believe the quality of meat and consistency of supply we sell will allow us to avoid being a low-priced producer of meat. Our prices will follow the general seasonality of the market, but with the benefit of sustainable supply during the low end of the season when supply will be guaranteed of numbers supplied by Nyama Yethu additional feed free range production model. Cost-reduction and efficiencies will be the cornerstone of our operations.</i>
<p>PLACE</p>	<ul style="list-style-type: none"> - <i>Our meat will be distributed to Meat Cutting facilities such as Excellent and QK who then prepare and package it for retailers. We will have a national distribution network to retailers and wholesalers via the SAFAM Group</i> - <i>When the primal cutting plant in Beaufort West is operational, we will be able to cut meat and send it to retailers such Pick n Pay and to hospitals, prisons and other government institutions.</i> - <i>To maintain the cold chain during the distribution of our meat to wholesalers and some retailers, SAFAM will use our fleet of refrigerated trucks. There will be a few occasions where we will be forced to hire trucks from other logistics companies</i>

11. MEAT QUALITY AND COMPLIANCE TO INDUSTRY STANDARDS

SAFAM continuously strives to achieve the highest quality standards which will directly contribute to the ethos and internal standards of the Nyama Yethu project. They will adhere to the rules and codes of conduct prescribed by various government authorities, industry bodies and their clients. The SAFAM company has got a very positive public image and therefore needs to be sensitive to the demands placed by pressure groups. Below are some of the institutions which SAFAM collaborate with to ensure compliance and quality:

- Department of Agriculture, Forestry and Fisheries (DAFF)
- Department of Health (DOH)
- Department of Trade and Industry (DTI)
- Local and Regional Municipality
- Woolworths quality standards and "GOOD BUSINESS JOURNEY"
- The South African Meat Industry Company (SAMIC) - a quality assurance company which was created by the Red Meat Industry of South Africa to ensure the quality and safety of meat in South Africa. SAMIC is assigned by the National Department of Agriculture Forestry & Fisheries to audit Quality Indication Marks on behalf of them. The two outstanding characteristics of Quality Indication Marks are the uniqueness of it against the norm, and that it is always traceable. SAMIC audits Quality Indication Marks at Farms, Abattoirs, Feedlots, Deboning Plants and Outlets.

SAFAM quality standards will be underpinned by the following certifications and regulations which will be implemented and adhere to from start to finish:

- ISO certification, for production processes with live animals (integrating the ISO 9001 (quality), ISO 14001 (environmental), ISO 22000 (food safety) and OHSAS 18001 (non-ISO) operational health and safety standards.
- FSSC 22000 Certification for both their Robertson and Beaufort West plants.
- Compliance to the Meat Safety Act (Act 40 of 2000), adherence to Good Manufacturing Practices (GMP's) and Good Hygiene Practice (GHP) in all sectors of the plant.
- The ISO system implemented at the lamb feeding operation is strictly adhered to, ensuring that the raw product sent to the meat plant is safe and of a high standard.
- The above will also be applicable with finishing feedlots at the Nyama Yethu project
- SAFAM utilise external meat inspection and classification services (IMQAS), as well as a local veterinarian to visually inspect livestock before and during the slaughter process.
- Quarterly visits from a South African Meat Industry Company (SAMIC) coordinator continually updates classifiers on regulations as set by the Department of Agriculture.
- Humane handling procedures are practised and maintained at every stage of the slaughter process. Safety and quality procedures continue to be monitored throughout the process until delivery to our customers.
- Regular training from the Red Meat Abattoir Association (RMAA) ensures that SAFAM abattoirs stay up to date with the latest slaughter techniques.
- SAFAM is affiliated to the South African Halal Authority (SANHA) for Halal slaughtering and the National Independent Halal Trust (NIHT) for Halal meat product produce.
- The SAFAM cattle and lamb feeding operation undergoes continuous maintenance throughout the year. Activities to ensure clean water and highly palatable and nutritious feed to livestock, are undertaken several times a day.
- SAFAM comply with the strict guidelines concerning feed additives and veterinary health products established by the South African Department of Agriculture. Inspections and audits are done on a regular basis to ensure legislative compliance.
- **Nyama Yethu will enjoy direct and indirect advantages via their relationship and integration with the SAFAM Group. To do your daily management and production procedures according to industry and international grading and certification standards, needs professional workmanship and perseverance from top to bottom.**

12. CROP PRODUCTION OUTLOOK AND ASSUMPTIONS

12.1 The Utilization of the High Potential Soil at Deelfontein

Executive Summary by Soil Analyst

A soil suitability survey was conducted on the farm Bultfontein near Prieska to assess the soils' suitability for irrigation in support of an application for a ploughing certificate to allow the irrigation on the land. **Most of the area is occupied by deep sandy Hutton soils**, with some shallow Glenrosa and Mispah soils scattered in between. In the south the Plooysburg soil form occurs, which has an impermeable hardpan carbonate layer. The laboratory analysis shows that the soils are **most suitable for irrigation** as it possesses **adequate drainage and a low salt and sodium contents**. The texture measured is less than 10%, and the pH is acidic with a highest value measured of 6.1. The salt and sodium contents are low (highest EC_e and ESP values measured are 72 mS.m⁻¹ and 2.25% respectively). **Areas with a drainable depth deeper than 1000 mm is considered to be suitable for irrigation. This covers a total area of 376 ha of which more than 70% is deeper than 1500mm.** There is 106 ha area which is slightly shallower than 1500 mm, which should be used to accommodate centre pivots. Forty-five hectares of shallow soils occur, which is mostly the Plooysburg soil form which occurs to the south of the site. Shallow areas within the area marked suitable should be avoided.

12.2 In Dept discussions with soil experts and feed crop growers

The Nyama Yethu directors and management have done a thorough investigation into crop farm production and visited at least 4 farms on our own to have interviews with owners to exchange knowledge on local conditions and risk factors.

Besides the farm visits, we also had site visits with Mr. Johan Sounes to study group farms and our own identified land at Deelfontein. Mr Sounes is a team leader on crop production at GWK. He specializes and is an expert on study group experience in the lower Orange River area below Douglas. We received hands-on information regarding the following key performance and success factors in crop farm production which include:

- Soil preparation methods
- How to decide on Irrigation type
- Newest technology in Centre Pivot Irrigation
- Irrigation methodology
- Pesticides management and control
- Soil analysis and what indicators provide/explain
- Fertilizer inclusion rates for different crops
- Water soluble fertilizer and Foliar Feeding via irrigation
- Mechanisation equipment required per ha of land
- Production ratios and yields/ha for different feed crops

12.3 Crop farm expert visit and feed mill fully balanced rations negotiated.

We have also visited Mr. Johan Botha, the owner of Orange River Feed Mill, a commercial feed mill and national supplier to Agri-Coop's and feedlot farmers. On Mr. Botha's advice we decided to utilize our available land for lucern, barley, oats and maize production. Mr. Botha farms for more than 45 years with feed crops and has started his Feed Mill about 35 years ago. His knowledge and experience about crop production and feeding schemes for lamb and cattle is excellent and impressed us. His business has got their own finishing feedlot and Nyama Yethu and SAFAM will greatly benefit from our association with this company. SAFAM has already send their finishing feedlot manager for training and to gain experience from this expertise.

We have made a preliminary arrangement to supply most of our feed crop harvests to Orange River Feed Mill for production of balanced feed rations. These rations will be utilized as additional feed for our intensive/extensive free-range farm model.

The farm visits and exchange of knowledge with farmers and experts in the feed crop industry was an invaluable experience for the directors and newly identified management. The amount of knowledge which is available in the area is definitely a bonus to Nyama Yethu. During our visits we could also determine and justify the knowledge of the Project Manager which we have identified for the planning, erecting, development and establishment of the Nyama Yethu Deelfontein. This include the crop production unit with centre pivot irrigation as well as the intensive/extensive farming model and finishing feedlots.

12.4 Physical Utilization of Land for Crop Farm Activity @ Nyama Yethu

Activity:

Initial and Preferred Activity in total
 Crop Production Continuous
 Rotational/Crop/Production 2harvests/year

Size of the activity:

300HA
150ha Lucerne
150ha Maize/Triticums

The farm visits and exchange of knowledge with industry experts has taught us that we need to utilize 50% of the land for perennial roughage production in the form of lucern. The roughage is a very important feed ingredient as we are going to farm with ruminant livestock. The benefit of lucern above all other perennial roughage crops is that it has quite a high protein content.

In terms of crop production for energy and protein, the experts has converted us to crop rotation between maize during the hot season (November to April) and triticum cultivars including barley and oats during the colder dry winter season (May to October).

12.5 Management Programs for Lucern, Maize and Tricum Ciltivars

With the engagement with with study groups and the GWK Agricultural team we were fortunate to obtain all the best management practices for the crops we want to produce. This include comprehensive information with regards to:

Soil type needed, planting dates, seed and dormancy, cultivar decision making, preparation of soil, planting density/spread & depth, irrigation, planting diseases, insects/pests, harvest methods

Full management programs attached for your perusal

13. NYAMA YETHU PROJECT PLANNING AND IMPLIMENTATION

The timing for the implementation of various components of the project and planning and staging thereof will be discussed and agreed upon as soon as the water rights have been approved and funding at DTI/Landbank has been finalized.

At this stage, we can split the entire project into three definite phases. The project implementation and tasks that need to be completed in Phase1 and Phase 2 are listed below:

PHASE 1: Cleaning of Land and preparation and installation of Irrigation Systems

- Cleaning and levelling of Deelfontein land identified for irrigation
- Rehabilitation of riverbeds and construction of contours for redirection of stormwater
- Installation of steel pipeline from Orange River to Deelfontein arable land
- Structuring and laying of irrigation piping network
- Installation of multiple centre pivots
- Installation of floating (river) and staging pumps
- Starting, testing and activation of irrigation network

PHASE 2: Preparation of Soil and planting of crops

- Deep ploughing of land and removal of excess and organic material
- Creating of seedbed for planting and cultivation of crops Fertilizer spread and placement according to soil analysis
- Planting of crops and start of first irrigation cycles

PHASE 3: Building of finishing feedlots

- Procurement of poles and fencing for erecting of finishing beef and lamb feedlots
- Construction of finishing feedlots
- Provision for required "Five Freedoms" in the finishing feedlots

The procurement of animals for the Nyama Yethu project will only start when the first harvest of crops is in sight. This will give the project management adequate time to start with trials with smaller number of animals to test practical aspects which needs upgrade or better construction for larger numbers of livestock.

14. ECONOMIC BENEFITS

Criteria	Benefits for Local and National Economy	
Employment	The project and multiplier effect will help create approximately 500 stable jobs in the Western Cape and Northern Cape area. These are jobs that could have been lost if we didn't start with the Nyama Yethu project.	
Market Share	The SAFAM Market share will increase in line with the growth in the with our growth of the Nyama Yethu project . This will help reduce the country's reliance on imports from Argentina and other countries and will create sustainable supply of free range beef and lamb	
Quality Improvement	Our grass-fed lamb and beef are always seen as good quality meat and we believe this will contribute to the overall healthy eating lifestyle. The process used in producing our skins, hides and casings are exemplary and meet the highest standards. Nyama Yethu via SAFAM will be making our product available to Woolworths who are known for maintaining high quality standards.	
Green Technology and Resource Efficiency Improvements	Nyama Yethu also plan to introduce solar energy technology and take advantage of the abundant sunlight available in the Northern Cape area as part of our longer term strategy. SAFAM also plan to explore new technologies that can help to recycle water which is fast becoming a scarce resource.	
Localisation	Our project adds towards the production and processing of Red Meat locally instead of shipping live animals to overseas markets where they are processed. This helps us create jobs locally. Adding a primal cutting plant at Beaufort West via our SAFAM integration will increase the volume of products that are exported in semi-processed state as opposed to the sending of whole or half carcasses that have not been beneficiated.	
Regional Spread	Our project are located in small rural farming towns with unemployment rates of 25% and above. The positive spin-offs of the project will be felt by local sheep farmers in the area. We will give them reason to increase their production which helps improve employment and food security.	
Personal Risk	SAFAM has invested in improving productivity and introduce new lines such compost from abattoir offal and blood to increase the profitability of the abattoir.	
Empowerment	This is an area that we are willing to improve on as part of this transaction and by getting adequate water for development	

15. SOCIO ECONOMIC BENEFITS – AREA BENEFICIATION VIA NYAMA YETHU

(300 HA crop production as well as free range beef and lamb production)

Livestock project based on 1000 weaners per month and 4000 lambs per month

What is the expected annual income to be generated from crop production?	R120 M
What is the expected annual income to be generated from animal husbandry?	R220 M
New skilled employment opportunities created in the construction phase of the project	Number: 150
New skilled employment opportunities created in the operational phase of the project	Number:100
New un-skilled employment opportunities created in the construction phase of the project	Number:50
New un-skilled employment opportunities created in the operational phase of the project	Number:50
Downstream job opportunities affected	Number: 300
What percentage of this value that will accrue to previously disadvantaged individuals?	%:75-80 WITH BBBEE of 60%
Current rate of unemployment in the Northern Cape region	27,5% and growing

16. Nyama Yethu Project – Summary & Financials

- The financial and profitability calculations for the livestock segment of the project have been done by SAFAM and industry related data has been used. The current SAFAM model has been in the calculations
- The financial data used in the calculation of profitability for crop production has been collected from industry experts and study group information for the 2018 season
- Conservative data has been used in general to provide for risk
- Cash Flow Projections and income statement for profitability analysis has been provided by GWK crop production specialist Johan Sounes and agro-economist JC Jordaan

Financial and profitability analysis will be provided as soon as water application approval procedures has been finalised. Nyama Yethu need the final allocation of water right to Deelfontein to determine:

- **Final costs for pipeline and sizes of pumps needed to abstract the water**
- **Number of centre pivots to be installed for irrigation needs**
- **Number of tractors implements and equipment needed to cultivate the land**
- **Which crops we will produce with the volume of water that will be allocated**
- **The limitation in the number of animals we can manage with the additional feed**

As soon as we have more surety on the water allocation for Nyama Yethu, we will be able to provide full and detailed financial information for our financial institutions (Landbank and IDC) as well as to the department of water and sanitation.

17. Water conservation with production methods and best technological advanced irrigation

We as Nyama Yethu via SAFAM are already involved in the farming community and well informed about the current drought in our country, specifically on the Western side of our country. The area under discussion is located within a disaster drought stricken in the Northern Cape.

We have done all the necessary research with regards to irrigation methods available for the crops we have to produce and harvest. Based on best and latest research for this area the use of centre pivot irrigation is still considered the most suitable, efficient and technically sound way of production.

As a counter to daily evaporation and lost of moisture **minimum tillage production methods** will be used with the triticum cultivars to limit the moisture losses.

We are currently investigating the **use of drip lines on the centre pivots** to further prevent the loss of moisture during the process of irrigation. This research is still a project in its infancy, but we will stay updated and will ensure the department that we will use the best available technology to use water effectively and to conserve this invaluable resource.

18. Water allocation for crop production as per DW787 (no possible savings calculated)

We have done the necessary follow up on possible net water savings we can cumulate with regards to the crops we will produce. To determine this, we have analysed the water needed as per study group data as well as GWK agricultural team prescribed extension on water utilization per hectare.

We have concluded that considering better production practises as well as the use of better technology (possibility of drip lines on centre pivots) the proposed allocated water per ha will be barely enough for the 300 ha.

Reasoning for this conclusion: With the current weather changes to the Northern Cape and ongoing drought there is more and prevailing and extensive winds which is drying out (leaching) topsoil and has a burning effect on crops. These leaching conditions demand higher irrigation precipitation which can be as much as 25% more than proposed in the DW787.