

https://dspace.org/

Beef Weaner Production for Abattoirs: Feedlot Business Enterprise

Mokobane, Mmaphuti Onismus

2018

https://hdl.handle.net/10539/31247

Downloaded from a DSpace repository. https://dspace.org/

Beef Weaner Production for Abattoirs: Feedlot Business Enterprise

Mmaphuti Onismus Mokobane

9400528E

A business venture proposal submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Business Administration

Johannesburg, 2018

DECLARATION

I, Mmaphuti Onismus Mokobane, declare that this business venture proposal project is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration in the Graduate School of Business Administration, University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

Mmaphuti Onismus Mokobane

Signed at Nelspruit Mpumalanga

On the 29 day of March 2018.

DEDICATION

I dedicate this to my late father Salthiel Kwena Mokobane who contributed to the formation of Onismus Mokobane Farming Enterprises cc.

ACKNOWLEDGEMENTS

I would like to thank my wife, Ofentse Mokobane and my three daughters; Reneilwe, Boipelo and Rami for supporting me and always being there.

My supervisor, Thabang Tsie for his guidance and valuable inputs into the research. Your prompt responses and calmness humbled me.

My social team; Simon Matsoso, Joshua Maroge, Ompie Tabile, Tsitsi Ngwerume and Thaloki Mmatloa, thanks for being there. Your friendship is much appreciated.

My mother, Rami Mokobane, you are the rock, thank you for always supporting me.

To my siblings Collen, Ntsewa, Evans, Kgadi and Eric, thanks for always encouraging me.

Many thanks to my cousin, Tlou Tshegofatso Ntsewa for the great advice and contributions in completing this report.

Mr. Farai Masendeke and Ms. Fadzai Masendeke, I appreciate your time in proof reading this report.

EXECUTIVE SUMMARY

The business, Feedlot Business Enterprise, is registered as a close corporation for farming operations and currently focuses on the free-range cattle farming and rain fed maize as a crop on seven hectares of a communal land. The owner, Onismus Mokobane is passionate and committed to production of healthy and quality commercial cattle for marketing at the livestock auctions in Polokwane. The maize is used as a supplementary feed for the cattle during winter when feed is scarce. This business venture proposal is developed for the expansion plans in the operation of the weaner feedlot division of the business. The business currently owns a total herd of 130 breeding cows including calves and four bulls. Other business assets include two tractors, hammer mill, silage cutter, baler, rake and maize harvester.

South Africa is the net importer of beef and Limpopo Province is falling behind its contribution to the beef production in the country. The world population is increasing, and food security planning cannot be overemphasised. The increasing trend of Chisa-nyamas (meat braai areas) and abattoir businesses in the country gives rise to the demand for beef. There is also business potential for the supply of dung for the manure to the crop farmers. The SA government has shown interest to partner and support emerging farmers' agricultural projects.

Feedlot Business Enterprise will focus on a large-scale supply particularly the corporate abattoirs, that procure in large quantities as compared to the individual consumers who buy meat for consumption only. The primary targets include the best regional abattoirs such as Potgietersrus Abattoir, Gaza Beef, Leeukuil Abattoir, Madikor 16, Phalaborwa Abattoir and Waterberg Abattoir. The business also targets the established feedlot businesses on a collaborative basis for their abattoir facilities, which service the international markets like the Middle East and North African countries which have growing demand for beef.

The main competition for the business emanates from six feedlot businesses in the Limpopo province. They supply local abattoirs and other established key players in the industry as substitutes products such as chicken, pork, egg, mutton and goat meat are perceived as the indirect competition for the business.

The focus of the enterprise will be on customer intimacy, thereby understanding the needs and preferences of the customers. Furthermore, adding value to the customer experience by ensuring that the transportation will be done by the business to ensure that packaging of the business products meets the compliance and quality standards.

The business will commit to employing highly competent workers. Continuous skills training and development will be emphasised and done regularly. The business will require a total of R 35 344 500.00 to fund its capital expenditure requirements for purchasing 3000 weaners, building feedlot infrastructure and operation costs. The current resource complement consisting of 130 cattle, plant and equipment will form part of the contribution by the owner in the business. The business owner will further invest his time in the business and be the general manager for day-to-day management.

Table of Contents

DEDICATION ..... **iii**

ACKNOWLEDGEMENTS ..... **iv**

EXECUTIVE SUMMARY **1**

1 INTRODUCTION **7**

2 BUSINESS SCOPE – INDUSTRY ANALYSIS **8**

2.1 MARKET ANALYSIS 10
2.2 BARRIERS TO THE FEEDLOT SECTOR 12
2.3 UNDERSERVED MARKET 13
2.4 CATTLE FARMERS 13
2.4.1 SOUTH AFRICAN INDIGENOUS CATTLE COMMERCIAL FARMERS 13
2.4.2 SUBSISTENCE COMMUNAL FARMERS 14
2.4.3 EMERGING BLACK FARMERS 14
2.4.4 INDUSTRY ROLE PLAYERS 15
2.5 ABATTOIRS – TARGET MARKET 16
2.6 EXPORTS TO MIDDLE EAST AND NORTH AFRICA 17
2.7 BEEF MARKET VALUE CHAIN 17

3 BACKGROUND INFORMATION: LITERATURE REVIEW . 19

3.1 INDUSTRY 19
3.2 BUSINESS ENVIRONMENT 20
3.2.1 PESTEL 21
3.2.2 PORTER'S FIVE FORCES 21
3.2.3 SWOT ANALYSIS 23
3.2.4 STAKEHOLDERS ANALYSIS 24
3.3 CATTLE PRODUCTION AND SLAUGHTERING 24
3.4 BEEF CONSUMPTION AND BEEF PRODUCTION 25
3.5 BEEF MARKET – EXPORT AND IMPORT 28
3.6 FOOD SECURITY AND CONSUMPTION 30
3.7 BEEF PRODUCTION RISKS 31
3.8 FACTORS AFFECTING BEEF PRICES 32
3.9 FOOD CHOICES 34
3.10 AVAILABILITY OF STOCK 35

3.11 Animal Health 35
3.12 Beef Quality 37
3.13 Environment 38

4 BUSINESS ANALYSES 38

4.1 External and Internal Environmental Factors 39
4.1.1 Political factors 39
4.1.2 Economic factors 40
4.1.3 Social factors 41
4.1.4 Technological factors 42
4.1.5 Environmental factors 42
4.1.6 Legislative factors 42
4.2 SWOT analysis 43
4.3 Porters' five forces 43
4.4 Stakeholder management 44

5 BUSINESS MARKET ANALYSIS 49

5.1 Individuals' Market Segment 49
5.2 Corporate Market Segment 49
5.3 Target Market 50
5.4 Competition 50
5.4.1 Direct competition 50
5.4.2 Indirect competition 51

6 INTERNAL ENVIRONMENTAL ANALYSIS 51

6.1 Organisational structure 51
6.2 Leadership style 51
6.3 Human resources requirements 52

7 SWOT ANALYSIS 53

8 BUSINESS VISION, MISSION AND VALUES 54

8.1 Vision 54
8.2 Mission 54
8.3 Values and principles 55

9 OPERATIONAL PLAN 56

9.1 THE STRUCTURE OF THE ORGANISATION 56
9.2 ROLES AND RESPONSIBILITIES 57
9.2.1 DIRECTOR 57
9.2.2 FINANCE & ADMINISTRATION 57
9.2.3 MARKETING & DISTRIBUTION 58
9.2.4 OPERATIONS & PRODUCTION 58
9.2.5 HUMAN RESOURCES 59
9.2.6 GENERAL WORKERS 59

10 MARKETING PLAN 59

10.1 SHORT TERM PERSPECTIVE 59
10.2 MEDIUM TERM PERSPECTIVE 61
10.3 LONG TERM PERSPECTIVE 62

11 RISK ANALYSIS 63

12 FINANCIAL PLAN 66

12.1 BUSINESS PROPOSAL ASSUMPTIONS 67
12.2 CASH FLOW PROJECTIONS 68

13 CONCLUSIONS 73

14 REFERENCES 75

15 APPENDICES 80

List of Tables

Table 1: Beef grading and classification……..8

Table 2: The role players market share……...11

Table 3: Industry role players……...17

Table 4: Animal protein food choices per population class……..38

Table 5: Stakeholders power / interest matrix……....52

Table 6: Stakeholder matrix analysis……...54

Table 7: SWOT analysis……....62

Table 8: Values and principles with expected outcome……....65

Table 9: Business short term perspective……....71

Table 10: Business medium term perspective……....74

Table 11: Business long term perspective……75

Table 12: Risk analysis……76

Table 13: Financial projection……86

Table 13a: Cash flow projection……88

List of Figures

Figure 1: Market share in the beef industry……13

Figure 2: South African Beef industry structure……..20

Figure 3: Beef slaughtering per province 2016…….....28

Figure 4: Beef production and consumption……29

Figure 5: Destinations for South African beef in 2016…….....31

Figure 6: South African beef imports in 2016……..33

Figure 7: Business Stakeholders……..50

Figure 8: Organisational structure……67

1 INTRODUCTION

The Department of Agriculture and Rural Development, Province of Kwa-Zulu Natal, (KZNDARD, 2017) outline the most common practices of feeding beef cattle in South Africa to include:

- Grazing on the veld until they are two years or older before a suitable carcass fat content is reached.

- Fattening and growing beef cattle on the planted pasture that is better than the veld.

- The Feedlot system - a process of putting the animals in a confined space and providing them with feed and water to achieve a slaughter weight (± 300 kg) within a shorter space of time, normally 90 to 120 days. The feedlot system can be:

    i. On the farm, where farmers fatten animals in pens or large paddocks, using mixed feed ration or natural feed (grass, Lucerne, etc.).

    ii. Commercial feedlots, where the feedlot owner buys animals for the feedlot. The ownership of the animals, and therefore the risk associated with feeding, are the responsibility of the feedlot owner.

In a natural process the beef animals reach the slaughter age at around two years when they are grazing. The feedlot facility keeps animals in a confined space that assists them in preserving the energy which is then converted into the fat and beef.

The beef weaners enter the feedlot facility at the age of 6 to 8 months. The feed provided to the animals is grass (at the beginning), gradually introducing the animal to high protein content feed ration. Maize forms large part of the feed ration ingredient.

To achieve the high beef productivity, animals are vaccinated and treated for diseases to ensure that they are healthy before entering the feedlot, and for optimum utilisation of the feedlot and weight gain.

Beef is categorised into four grades in accordance with the tenderness. Beef tenderness is influenced by the age of the animal. Table 1 below outlines the beef grading, tenderness and its identification:

Table 1: Beef grading and classification

Grade	Animal age	Tenderness	Identification
A	0 – 18 months	Most tender	Purple stamp
AB	18 – 24 months	Tender	Green stamp
B	36 – 48 months	Less tender	Brown stamp
C	48 – 50 months	Least tender	Red stamp

Sources: 'Classification of red meat: *A key to more effective marketing' methods of determining age of cattle, 2017*

The feedlot business will focus on the A grade beef.

2 BUSINESS SCOPE – INDUSTRY ANALYSIS

We propose a feedlot business enterprise, which is a zero-grazing beef production operation. The 6 to 8 months old beef weaners at a body weight of between 200kg

and 220kg would be brought to the feedlot facility and fed a high protein feed ration for a period of 90 to 120 days, to reach the slaughter weight of ± 300 kg.

The Feedlot business operation will be in Mokopane, Limpopo Province. The 20 acres of land identified is owned by Mr. Joshua Maroge and is situated between the National Road 1 (N1) and Regional Road 101 (R101) which provide road transport access to the Gauteng and Limpopo Provinces. The location is very easy to access and ideal for this type of business as transportation of feed and animal supply to and out of the facility will be a daily routine. The farm is also close to Polokwane, Mookgopong and Mokopane Vleissentraal auction facilities; these auctions take place three times a week and weaners can be procured from the auctions. The towns mentioned also have the greatest number of the abattoirs in the Limpopo Province.

In the weaner production system, cattle are sold from the age 9 months up to an age of 2 in the ox production system (Scholtz et al, 2017). Beef weaners will be acquired mainly from the local commercial farmers in Limpopo, Gauteng, Northwest, Mpumalanga. Only when local supply does not meet our needs, then the beef weaners will only be imported from Botswana and Namibia. The two neighbouring countries supply South Africa with live beef weaners, as they have the right quality and quantity of beef cattle.

The type of cows identified for this operation are the cross-animal breeds, but not discriminating the bos-indicus breeds (Afrikaner, Nguni, Drakensberger, etc). It is estimated that the facility's initial capacity will be 3000 live animals. The business will be expanded to a carrying capacity of 9000 live animals at any time in 5 years.

The feed will be mixed on the facility with the ingredients; maize silage from the farm, grass – from the farmers in Grobelsdal and Ermelo, and the high protein

content sourced from Molatek and or Voermol, depending on the prices and agreements.

Some of the leading Feedlot owners, Karan Beef Group which has 35% market share, in the industry, discriminates against the pure South African indigenous breeds, such as Nguni, Afrikaner, Drakensberger, etc, penalising the breeds with R2.00 to R5.00 (Dugmore, 2014). The indigenous breeds are paid R2.00 to R5.00 per kilogram less than the cross breeds or the European breeds such as simentalers, simbras, chianina. In response to this discrimination the Nguni breeders such as Marli Stegmann, the President of the Nguni Cattle Breeders Society introduced Simentalers (foreign breed) bulls to Nguni cows to produce heavier crossed weaners that are acceptable to feedlots.

The emerging farmers who are in the communal set-up are not exposed to the feedlot services. Their market is in the communities where meat is required household, weddings, cultural ceremonies and funeral services consumption. Adult cattle raised in the veld for a period of two or more years is mainly used by these farmers for this purpose although they hold mixed/cross breed cattle, which are attractive and suitable to the feedlot industry. They are not stud breeders, breeders that farming with animals that registered and certified under the Animal Improvement Act 1998 (Act 62 of 1998), but commercial farmers with cross-bred beef cattle.

2.1 Market Analysis

The feedlot business is competitive in South Africa (SA) and produces around 70 to 80% of beef in the formal sector (Niemand, 2013). There are approximately 39 feedlots in South Africa that are affiliated with the South African Feedlot Association, with the main players being Karan Beef Group, SIS, Chalmar Beef, Bull Brand, EAC Group, Sparta Beef, Beef Master and Beefcor. The eight players

supply 430 abattoirs in SA and have market share as per Table 2 and Figure 1 below. Table 2 and figure 1 highlights the eight main players in the industry, their location, the capacity of their feedlot facilities and their market share.

Table 2: The role players market share

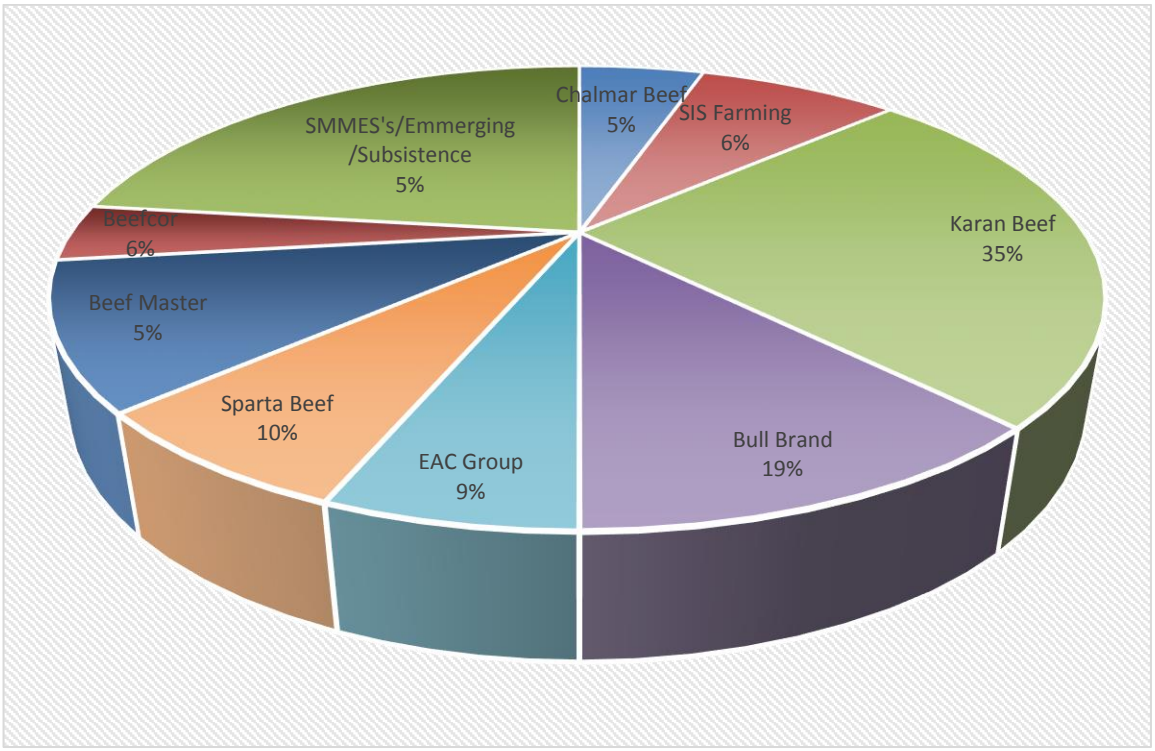
Name	Location	Province	Weaners at any time
Karan Beef Group	Heidelberg	Gauteng	150 000
SIS Farming	Bethal	Mpumalanga	22 000
Chalmar Beef	Bapsfontein	Gauteng	15 000
Bull Brand	Potchefstroom and Magaliesberg	North West	80 000
EAC Group	Betlehem	Free State	35 000
Sparta Beef	Marquard	Free State	40 000
Beefcor	Bronkhorstspruit	Gauteng	25 000
Beef Master	Christiana	North West	20 000

Source: South African Feedlot Association, 2017

As shown in Figure 1, Karan Beef Group has the biggest market share of 35% followed by Chalmar Beef and Beefmaster respectively with the least market share of 5%. The small players in the market, comprising of 31 feedlots hold 9.8% of the market share and are regarded as the emerging role players in the industry.

According to the South African Feedlot Association, at any point in time, it is estimated that the Feedlot sector has a standing capacity of 420 000 heads of cattle (Niemand, 2013).

Figure 1: Market share in the beef industry



Source: Red meat Levy Admin, DAFF 2017

2.2 Barriers to the Feedlot sector

The main barrier to penetrate the Feedlot business is its capital-intensive nature and high dependency on proper cash flows. A lot of capital is required to establish the feedlot operation and a lot required to maintain the operation.

Another barrier to the market is the limited availability for the second-hand feedlot material. Usually feedlots are sold as a going concern.

2.3 Underserved Market

The weaners will be sourced from farmers directly and at auctions. Almost every town in South Africa has a livestock auction facility operated by either Vleissentraal, Andre Kock & Sons or BKB auctioneers.

Limpopo province only contributes 7% of the beef produced in the country. The export records of beef from the Limpopo Province are irregular and there was no beef export recorded from the Province during the period from 2006 to 2008 (DAFF, 2017). To date, Limpopo Province does not have top beef producers that are competitive in the country.

The Feedlot sector in South Africa is not able to meet the demand of the abattoirs. South Africa has four hundred and thirty (430) abattoirs and sixty-eight (68) of these are in Limpopo Province, they are served by five (5) formal feedlot businesses (Doornbult Feedlot, Vencor Feedlot, MV Feeders, Windhoek Boerdery and Piet Warren Plase Feedlot). Vencor Feedlot has its own abattoir to serve and this means the abattoirs in the province are effectively serviced by four feedlots.

2.4 Cattle farmers

The Business Venture will focus on following sources of the beef weaners that are not served fully by the Feedlot industry:

2.4.1 South African Indigenous Cattle Commercial Farmers

The South African Indigenous cattle breeds are discriminated against by the leading feedlot businesses as they are believed to be performing poorer than the foreign cattle breeds in the feedlot set up. These are commercial farmers operating well-structured farming enterprises but do not have market for their weaner produce due

to competition from their European breed farmers. These farmers are currently selling weaners at the auctions and adult cattle to fellow farmers and to the emerging farmers for breeding stock.

According to the Department of Agriculture, Forestry and Fishery, the country has about 50 000 commercial cattle farmers, with 13.319 million cattle (DAFF, 2017)

2.4.2 Subsistence Communal farmers

According to the Department of Agriculture, Forestry and Fishery, the country has about 3 million communal cattle farmers (DAFF, 2017). This is a relatively large number of farmers who can make promote beef supply if their activities are improved. Lack of knowledge has led these communal farmers to raise their cattle in a conventional way, veld raised, which requires longer period to achieve the sale or slaughter weight of ± 300 kg. Marketing animals this way is not sustainable as animals die in the process of development (birth to selling age). These farmers have been farming for long but have limited information even though they have land and cattle. They are seen to operate in an unstructured environment, but the Government is aiming to train and support them with animal health care and management.

2.4.3 Emerging Black farmers

Emerging black farmers are farmers who are moving from the subsistence bracket into commercial farming. They operate as cooperatives and are affiliated to associations such as National Emergent Red Meat Producers' Organisation (NERPO) and African Farmers Association of South Africa (AFASA). These farmers are growing and have information and support from the government, with some being the beneficiaries of the land reform programmes. These farmers are selling

at auctions and are looking for feedlot owners who can buy at reasonable prices. South Africa has about 240 000 emerging farmers (DAFF, 2017).

2.4.4 Industry role players

There are currently six beef Feedlot business registered as members with the South African Feedlot Association (SAFA) in Limpopo Province with none of them located in Mokopane. Doornbult Feedlot, Windhoek Boerdery and Vencor Feedlot located in Polokwane, Madikor and MV Feeders located in Louis Trichardt and Piet Warren Plase Feedlot located in Gravellote (Tzaneen area). These are not the main players in the feedlot sector, they are regarded as emerging players with less than 5 000 beef weaners in their facilities. These six feedlots form part of the 5% market share.

The total number of Feedlot businesses registered with SAFA is thirty-nine (39), with only six (6) from Limpopo Province. Table 3 highlights six role players in the Limpopo province and the entire role players emerging feedlot businesses in the country that our business will be competing with are highlighted in Appendix A.

Table 3: Industry role players.

No.	Name	Description	Capacity
1	Doornbult Voerkrale (Pty) Ltd	Feedlot in Polokwane, Ladanna.	Not specified.
2	Madikor	Feedlot in Louis Trichardt, Limpopo.	Not specified.

No.	Name	Description	Capacity
3	MVB Feeders	Feedlot in Louis Trichardt, Limpopo.	Not specified.
4	Piet Warren Plase	Feedlot in Gravelotte, Limpopo.	Not specified.
5	Vencor	Feedlot with abattoir in Polokwane, Ladanna.	Not specified.
6	Windhoek Boerdery	Feedlot in Polokwane.	Not specified.

Source: SA Feedlot Association,2017

2.5 Abattoirs – Target market

There are thirty-nine (39) commercial feedlot business operations that serve the four hundred and thirty (430) abattoirs that are registered with the Department of Agriculture Fisheries and Forestry (DAFF) in South Africa to slaughter cattle. The main role players such as Karan Beef, have their own abattoirs. Current registered feedlot operators are not enough to serve the number of registered abattoirs in South Africa.

According to DAFF (2017), the beef industry produces around 1.1 million tons of meat and imports around 19.4 million kilograms while exporting 39 million kilograms. Per capita consumption is around 20.87 kg and number of consumers is around 48.6 million (DAFF, 2017). In terms of the supplied beef as compared to the demanded beef there is a shortfall. It appears that these beef imports/exports

agreements were made when the situation was different and should be reviewed in line with the current production and economic status.

The eight main players in the Feedlot sector operations have abattoirs as a division of their group of businesses. Their feedlot supplies their own abattoirs. We are targeting the abattoirs that are not part of the Feedlot group of companies. These abattoirs serve the butcheries and the Chisa-nyama outlets in the townships, taxi rank and the villages. There are sixty-eight (68) of these abattoirs in Limpopo Province, that need our support.

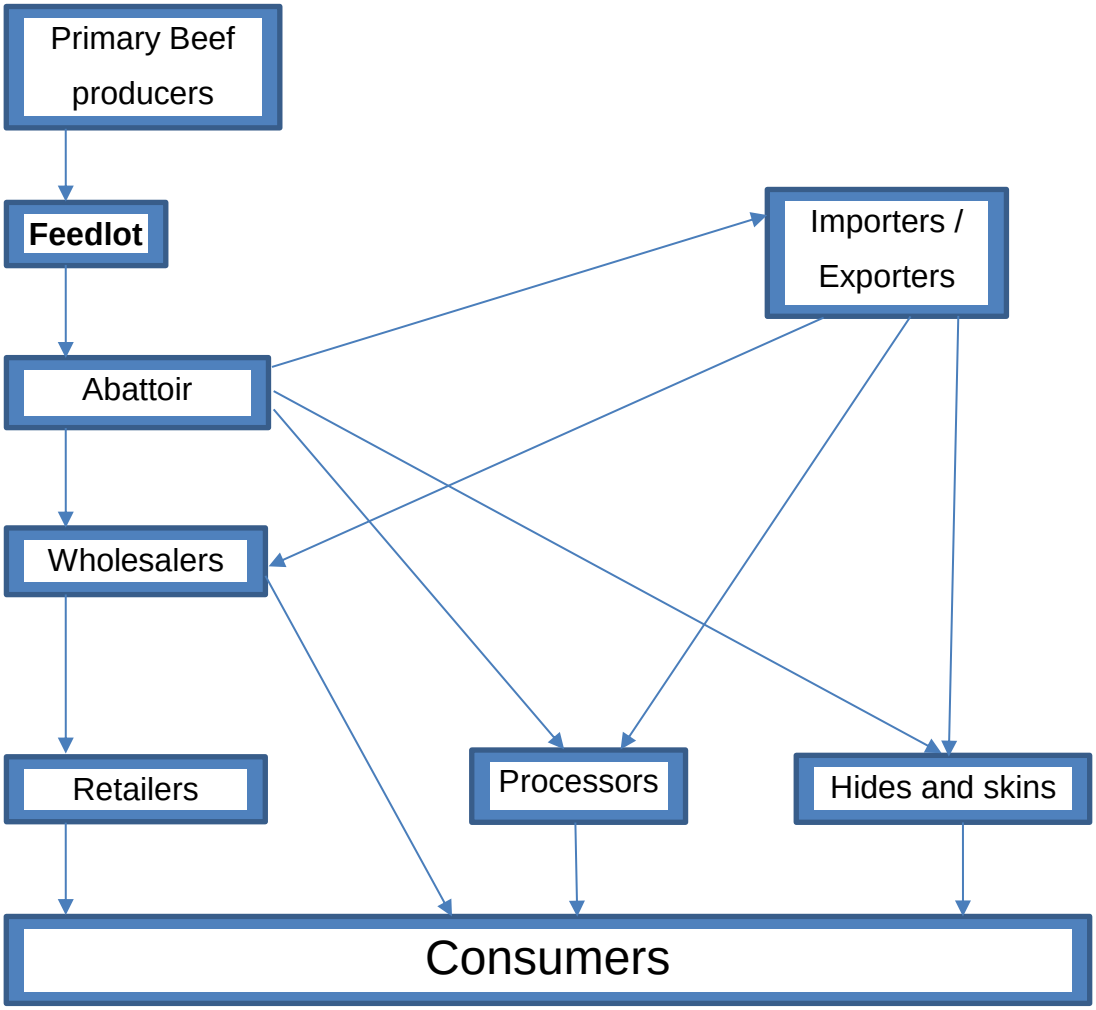
2.6 Exports to Middle East and North Africa

According to the International Beef Market Report by the South African Feedlot Association, South Africa has not been serving the Middle East and North Africa (MENA) as much as it should be and there is a growth potential for the beef import in these areas. South African beef is exported to China, India and United Arab Emirates and the Southern African Development Community (SADC). South Africa is part of SADC and BRICS hence exports to the two regions are growing whereas MENA is a different region with different political, environmental and economic arrangements. South Africa was also banned to export beef to the MENA countries due to the detection of foot and mouth disease in 2011, however the country is negotiating market access in these countries after clearance of foot and mouth disease. We would have to explore exporting more beef to this market as an alternative should the local market be saturated.

2.7 Beef market value chain

Beef industry is a formal sector, Figure 2 outlines the beef market value chain and where each subsector is located within the industry, highlighting the position of the Feedlot and how it is related to other segments.

Figure 2: South African Beef industry structure



Source: Adapted from ARC, Statistics & Economic Analysis, DAFF, Easy data, 2017

According to the Department of Agriculture, Forestry & Fishery (DAFF, 2017) it is estimated that, there is approximately 50 000 commercial farmers with 13 million cows. This includes producers that keep livestock as their main enterprise and those that keep livestock as a secondary enterprise. There are 240 000 small-scale farmers and 3 million subsistence farmers that own around 5.69 million beef cattle.

The beef supply chain has become increasingly vertically integrated. This integration is mainly fuelled by the feedlot industry where most of the large feedlots have their own abattoirs (Karan Beef Group in Gauteng), or at least have some business interest in certain abattoirs. In addition, some feedlots have integrated further down the value chain and sell directly to consumers through their own retail outlets. Some abattoirs have also started to integrate vertically towards the wholesale level.

Under the previous marketing regime (DAFF, 2017), wholesalers mostly bought carcasses through the auction system. Currently, many wholesalers' source live slaughter cows, not weaners directly from farmers or feedlots on a bid and offer basis, i.e. they take ownership of the animal before the animal is slaughtered. The cows are then slaughtered at an abattoir of the wholesaler's choice, where after the carcass is distributed to retailers. In some instances, the public can also buy carcasses directly from wholesalers.

As per DAFF (2017) report, the abattoir industry has expanded tremendously in number and in capacity. In this regard, it is important to note that this industry can be divided into those abattoirs that are (i) linked to the feedlot sector and the wholesale sector or are owned by municipalities and (ii) those that are mainly owned by farmers and SMME's. The former abattoirs are mainly class A and B abattoirs, whereas the latter are usually classified as C, D and E class abattoirs.

3 BACKGROUND INFORMATION: LITERATURE REVIEW

3.1 Industry

The Department of Agriculture, Forestry & Fisheries (DAFF, 2017) outlines the cattle livestock sector as follows; contributes 40% of global value of agricultural output and supports the livelihoods and food security of almost billion people. The

department highlights that, the three major groups of beef cattle farmers that co-exist in South Africa:

- The commercial beef producer– their production is relatively high and based on crossbreeding.
- The emerging beef cattle farmers, indigenous crossbred cattle on lease or own land.
- The communal beef cattle farmers with mostly indigenous cattle types on communal land.

According to DAFF, in 2015/2017 financial year, 70% of the cattle available in South Africa were owned by commercial farmers and 30% by emerging and communal farmers, (DAFF, 2017).

3.2 Business Environment

The business environment is not static and therefore continuous evaluation and assessment is vital to avoid losing value and shut down. There are internal and external business factors that need to be identified and analysed to estimate the impact on the business processes.

There are tools that can be used to analyse the business environment in terms of its competitiveness and whether it will make profit to sustain itself or not. Among the tools that can be used to analyse the business are: PESTEL, Porter's Five Forces, SWOT, and Stakeholder analysis. These tools will assist the management of the business in conducting the environmental scan and analysing business in relation to the environmental factors to productively advance the set goals of the business.

3.2.1 PESTEL

PESTEL framework is one of the several frameworks which categorises environmental factors into key types (Johnson *et al*, 2014). PESTEL, highlights six environmental factors in particular: political, economic, social, technological, environmental/ecological and legal. Johnson *et al* (2014) advises that rather than getting overwhelmed by a multitude of details, it is necessary to step back eventually to identify the key drivers for change. The key drivers for change are the environmental factors likely to have a high impact on the future success or failure of strategy.

It is very critical for the business to identify these six environmental factors and understand them as they are real and exists within businesses. The business needs to understand the world it operates in, to take advantage of the benefits/opportunities that are presented and be able to navigate the challenges that the business is faced with. Once the business is aware of the environment it will be easy to coordinate and work in harmony with the environment to realise its objectives.

3.2.2 Porter's Five Forces

According to Professor Michael E Porter, a specialist in industrial economics and business strategy, the nature and degree of competition in an industry hinges on five forces, the threat of new entrants, the bargaining power of customers, the bargaining power of suppliers, the threat of substitute products or services (where applicable), and the threat of new entry (Porter, 1979). The five forces as identified by Porter that make up the competitive environment, and which can erode the profitability are described as follows:

- Competitive Rivalry. This looks at number and strength of competitors. Where there are several competitors, customers have options to choose from, they can choose sellers that gives them good deal. Where there is less competition the business will likely have more strength and healthy profit.

- Supplier Power: This looks at the number of suppliers, choice of suppliers, their prices, products, alternative suppliers and products. If there are several suppliers, the likelihood is to choose the one supplier that appeals to the organization and prices may be lower with high quality service. However, fewer suppliers would lead to them having the power to even increase prices to impact their profit margins.

- Buyer Power: When the organisation deals with only few customers, they have more power, but power increases with the increase in number of customers.

- Threat of Substitution: Product substitutes such as chicken, mutton/lamb, pork and fish in the market competes with the product being offered by the business and can take a share of the customers.

- Threat of New Entrants: The ease entering a certain business industry remains a threat to existing businesses. If it is easy to enter a market and compete then rivals can easily enter the market and reduce existing participants' market share. Protectionism can be used to limit this threat.

Every industry is different, but the underlying drivers of profitably as given by Porter are the same in every industry (HBS, 2018). Analysing the Five Forces can help companies anticipate shifts in competition, shape how the industry structure evolves, and find better strategic position within the industry.

The business will encounter challenges from other businesses that operate within the same market. The five forces have awakened the business to realisation that there are businesses that exist and those that will attempt to enter the market to compete directly or indirectly. The customers will react to these activities from other businesses, they will have alternatives to choose from. It is therefore the responsibility of the business to identify those competitors and find ways to retain and win more customers within the business market.

3.2.3 SWOT Analysis

According Johnson et al (2014), SWOT provides a general summary of the Strengths and Weaknesses explored in an analysis of strategic capabilities, the Opportunities and Threats explored in an analysis of the environment. The analysis can also be useful as a basis for generating strategic options and assess future courses of action. The aim is to identify the extent to which strengths and weaknesses are relevant to, or capable of dealing with, the changes taking place in the business environment.

Valentin, (2005) says SWOT analysis entails portraying a business's internal context in terms of the strengths and weaknesses and scouring its external context for opportunities and threats. It is used widely in firms and classrooms; it is the centrepiece of situation assessment.

SWOT analysis assist in analysing the internal strengths and weaknesses, opportunities and the external threats that the organisation encounters (Harrison, 2010).

The business needs to identify itself and its capabilities so that it can work on the weaknesses and avoid the threats, whilst it exploits its opportunities and strengths to survive and prosper.

3.2.4 Stakeholders analysis

Stakeholder analysis is a process of systematically gathering and analysing qualitative information to determine whose interests should be considered when developing and/or implementing a policy or program (Schmeer, 2018).

According Eskerod (2014), in a stakeholder management, a key question is: How can an organisation under different contingencies apply strategies to develop the relationship with each stakeholder into a favourable one, seen from the focal organisational perspective?

3.3 Cattle production and slaughtering

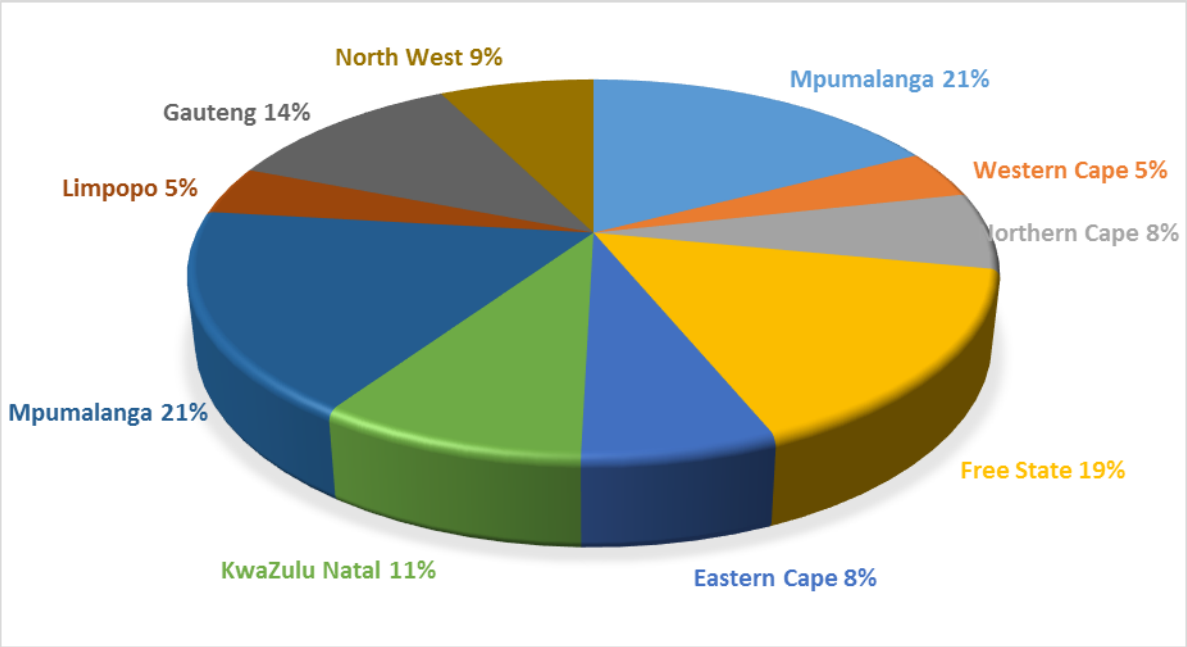
Southern Africa is a home to over 64 million cattle, of which 75% are raised on natural pasture in smallholder farming areas and commercial big farming areas (Chingala *et al*, 2017). Indigenous cattle breeds and their crosses with European and British breeds are the most dominant. They are mainly marketed through the informal market.

According to Chingala *et al* (2017), the commercial beef production is made up of extensive (ranching) and intensive (feedlot) systems, the feedlot operations prefer the British and European breeds and their crosses with indigenous cattle. Pure indigenous cattle breeds are shunned by feedlots because they often fail to meet the feedlot induction specifications for weight, fatness, age and frame score.

According to Chingala *et al* (2017), in South Africa, feedlot beef production accounts for over 80% of the national beef value chain, and weaner producers in general supply steers or bulls to feedlots at six to twelve months, with induction weights between 180 and 250 kg.

Figure 3 shows the beef production per province during the 2016 production year in South Africa (DAFF, 2015). Eastern Cape commands the greatest share of beef production in South Africa accounting for 24% of the beef produced in 2014 followed by the KwaZulu Natal, Free State, North West and Mpumalanga accounting for 20%, 17%, and 10% respectively.

Figure 3: Beef slaughtering per province 2016



Source: Red meat Levy Admin,2017

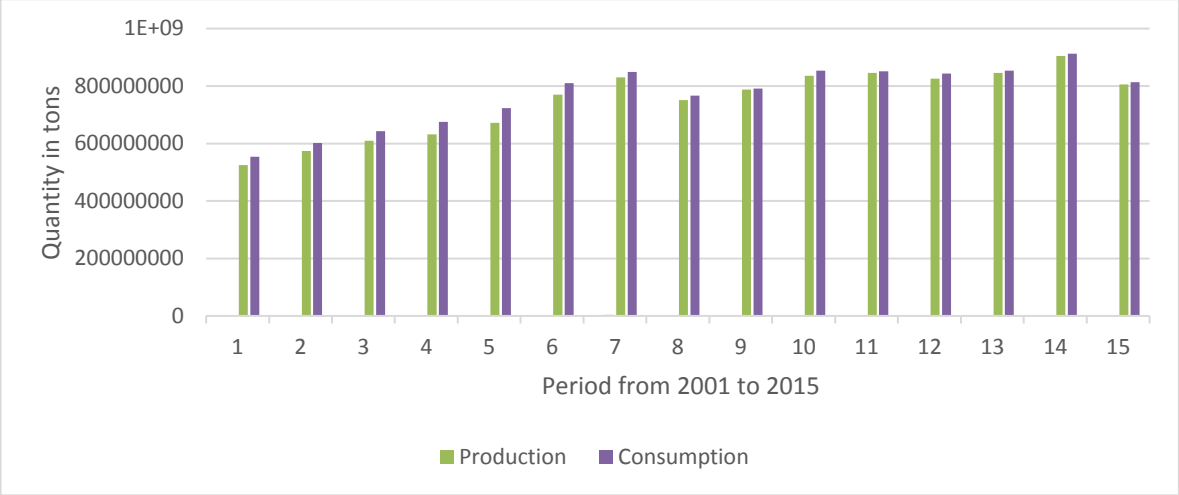
It is estimated that beef produced during the past ten years amounted to 9 million tons (DAFF, 2017).

3.4 Beef Consumption and beef production

According to the analyses made by the Department of Agriculture, Forestry & Fishery (DAFF, 2017) South Africa is not self-sufficient because beef consumption

was higher than beef production. Figure 4 highlights the variation of the beef production and consumption.

Figure 4: Beef production and consumption



Source: Statistics and Economic Analysis, DAFF,2017

The world population is growing, and people need to be fed, meat is one of the protein sources, for human body needs and function. According to Elam (2004), by 2050 the world's population will reach 9.1 billion, 34 percent higher than today. Nearly all this population increase will occur in developing countries. Urbanisation will continue at an accelerated pace, and about 70 percent of the world's population will be urbanised (compared to 49 percent today). Income levels will have changed from what they are now. To feed this larger, more urban and richer population, food production (net food used for biofuels) must increase by at least 70 percent (FAO, 2011). The annual meat production will need to rise by over 200 million tonnes to reach 470 million tonnes.

The rapidly growing world population will be consuming two-thirds more animal protein by 2050 than it does today, according to Food and Agriculture Organisation

of the United Nations (FAO, 2011). By 2050, meat consumption is projected to increase almost 73%, particularly in the world's largest cities where population growth is occurring the most, will be satisfied by large-scale, intensive animal-rearing operations (Salvage, 2011).

According to the United Nations Population Estimates, from 2005 to 2050 global population is estimated to increase by 40.4%, well under half the increase of 1965-2005. The good news is that the rate of growth is slowing, the bad news is that even with a slower rate the absolute growth of 359.3 million tons of meat production is substantially more than we can produce today using essentially all our productive farmland (Elam, 2004).

Regardless of the improvements in beef consumption in South Africa and producers having responded to the demand, there is still a clear indication of a deficit in the local market, which has been sustained by imports (DAFF, 2017). In South Africa, meat is regarded as an important product as it provides a source of protein in individual diets as well as food security (DAFF, 2017).

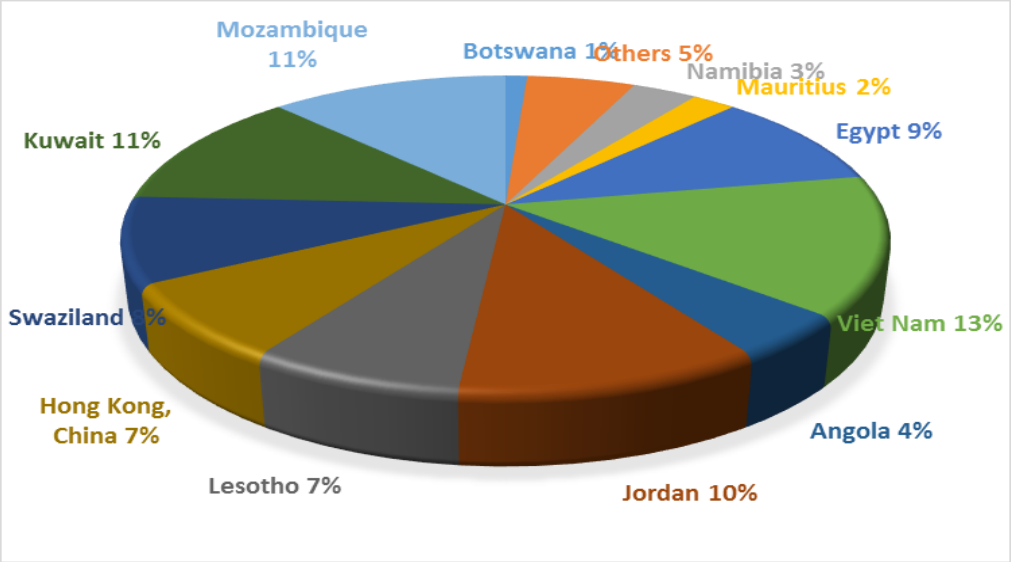
According to Labuschagne *et al (2010), "The South African consumer market is heterogeneous and consists of different races with different cultures and market segments with varying needs and preferences. Changes in the South African market are driven by a growing economy and population, as well as by the emerging black middle-class, or "black diamonds". The SA consumer market can be segmented through Living Standard Measure (LSM) categorisation. Studies indicated that the lower LSM groups spend a higher proportion of their disposable income on food than the higher income groups. The middle-income groups tend to expend more on meat in proportion to their disposable income. The emerging black consumers are moving from the lower LSM groups toward the middle and higher LSM groups. The growing black diamonds group is one of the major driving forces*

of the recent increase in per capita spending on beef. The high LSM groups are spending a lower proportion of their disposable cash income on food and meat".

3.5 Beef Market – Export and Import

It is reported (DAFF, 2017) that South Africa's imports of beef were higher than exports. The 10-year period of analysis indicates that demand exceeded supply. Figure 5 compares the volumes of imports and exports mainly to other parts of African continent, Asia and Europe in 2016.

Figure 5: Destinations for South African beef in 2016



Source: Trade Map, DAFF 2017

Beef farmers who are trying to produce beef in a more ethical and sustainable manner must ensure that consumers are aware of this. Change can only be achieved through effective and honest branding and marketing (Phillips, 2013).

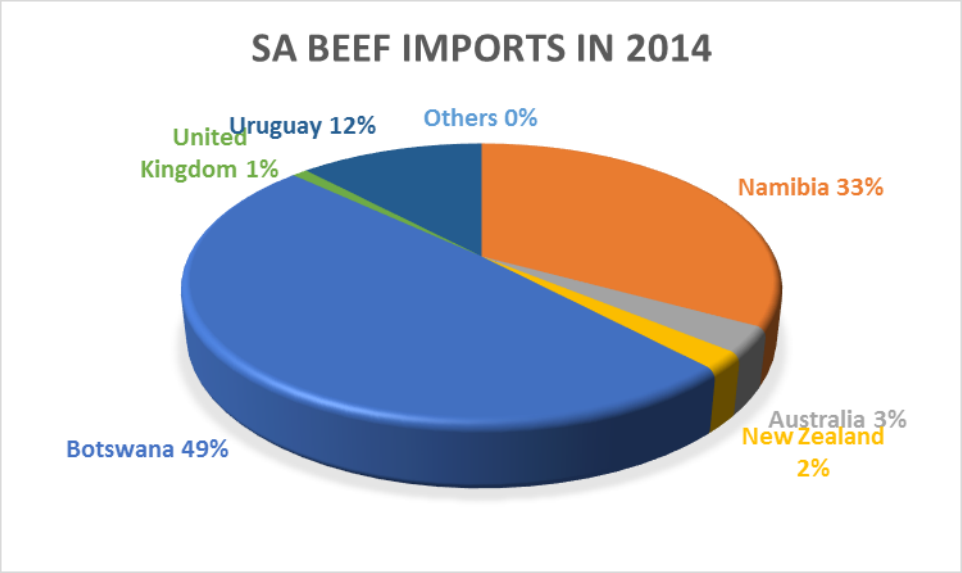
Dr. Michael Bradfield, the International Livestock Genetics consultant and CEO of AgriBSA, in 2016, stated that the global red meat export amounted to 9.44 million tons, Brazil led the way exporting 1.85 million tons, (19.6% of the total), SA ranked 15th at 60 000 tons (0.64% of the world total (Lombard *et al*, 2017).

It was noted by Lombard *et al* (2017), that between 2015 and 2016 there were 19% growth in value and 16% increase in the amount of exports. During the same period, 1414 tons of fresh and chilled beef were imported from Namibia (89.4% of total imports) and Botswana (10.6% of imports) to SA. The total value of exported frozen beef in 2016 was $64 million with a trade balance of $24.99 million. The amount of imports decreased by 33% and there was a 22% growth in value and a 59% growth in the amounts of the product exported, in 2016 (Lombard *et al*, 2017).

According to the International Beef Market the beef consumption in the Middle East North Africa (MENA) is at all-time high, especially the Middle East countries appears as the interesting export destination with high beef consumption as well as high Purchasing Power Parity (PPP) (SAFA, 2016).

During 2016 Botswana commanded 49% share of South Africa's import market of beef followed by Namibia commanding up to 33% while Uruguay was 12%, Australia, New Zealand and United Kingdom commanded 3%, 2% and 1% respectively (DAFF, 2017). The figure 6 shows the countries of origin for beef imports in 2014.

Figure 6: South African beef imports in 2016



Source: Trade Map, DAFF 2017

In 2016, South Africa produced a total of 3.3 million tons of meat, with the poultry consisting of 51.4% for chicken, 36% for beef, 7.3% for pork and 5.7% for mutton. The meat industry is running a production of 444 000 tons to meet consumer demand in the domestic market (DAFF, 2017).

One of the researchers from the Glen Agricultural Institute in Free State Province, Dr. Mias van der Westhuizen, states that South Africa is a net importer of beef due to the poor management of the grazing land (Coleman, 2018).

3.6 Food Security and consumption

The Survey conducted by the South African National Health and Nutrition Environment found that 28% of households were at risk of food security, while 26% risk going hungry (Erasmus, 2017).

According to Phillips (2013) while South Africa has what appears to be a thriving beef industry, its average productivity, compared with that of countries elsewhere, shows that it is not achieving its full potential. This is partly due to the low productivity of our informal beef farming sector. This problem needs to be remedied because the South African beef industry is ideally positioned to take advantage of Africa's increasing middle class expenditure and projected population growth from one billion to two billion people by 2050 – and their associated demand for red meat (Phillips, 2013). According to the former FNB agricultural advisor Jan de Jong the South African beef sector must improve production efficiencies to remain viable.

3.7 Beef production risks

The South African Agriculture faces the policy uncertainty on its country's land reform programme, and the pressure of significantly higher minimum wage for farm workers (Phillips, 2013).

Phillips, (2013) further points out that the Bureau for Food and Agricultural Policy estimates that South Africa's current annual average beef consumption of about 700 000 tons, second after chicken consumption of about 1,7 million tons, is likely to increase by about 25% in 2020. It is important to note that South Africa's annual formal beef production and supply projected as far as 2020 falls short of national demand by about 50 000 tons per annum.

The drought and poverty affect the prices of beef and contribute to the consumption patterns of the consumers. Experts estimate that almost half of South Africa's population is currently struggling to afford even the most basic food. Majority of the South African people will soon starve if the food security interventions strategies are not prioritised. (Trapido, 2016).

Drought or animal food shortage is one of the biggest threats to the beef production. The impact of the 2015/16 drought, the worst in South Africa since 1904, had far reaching consequences for producers and consumers alike. From a farm business perspective, the drought not only affect the current production season, but also has financial and debt implications for farm businesses. More than 1.2 million individuals were affected by the 2015/16 drought, which has had a significant impact on maize yields, giving rise to food insecurity and prices.

3.8 Factors affecting beef prices

The beef prices are dependent among other things, on the country's economic performance, drought, wild fires, which lead to mass sale of livestock thereby reducing the prices and holding of stock by farmers during good times (rainy seasons) which leads to higher prices as there is plenty of grazing for the livestock. It is like a demand and supply scenario. Rapidly rising maize prices are likely to have a knock-on effect on the cost of other food produces (Haden, 2016). The increase in the input costs such as feed costs leads to the increase in the beef price.

The former First National Bank agricultural advisor Jan de Jong, speaking at the Brangus Information Day in KwaZulu Natal, pointed out that beef prices have remained unchanged since 2007 to 2013 (Phillips, 2013). In addition, lightweight weaner prices were currently lower than carcass prices at 56% dressed out. This shows a negative meat margin, which means that any beef farmers slaughtering young cattle were currently losing money. A weaner calf should be about 62% to 62.5% of the price of an A carcass. A calf costed only 55% of the A carcass price, an indication that feedlots got their weaners at lower prices relative to the price of the meat they sold.

FNB Business Senior agricultural economist, Paul Makube warned that there will be shortage of meat supply as cattle farmers start re-building their herds after a

devastating drought in the SADC region. He further pointed out that the deteriorated economic outlook and high unemployment rate means a further rise in meat prices will be constraint by affordability, as consumers will simply switch to more affordable protein sources such as chicken if red meat becomes too expensive (Makube, 2017).

According to the Red Meat Producers Organisation (RPO), CEO, Lardus van Zyl, the consumer price of red meat will increase because of more expensive grain and feed prices and the impact of the lower supply of slaughter stock from farms. Grain and feed prices as well as input costs will dramatically increase (Wildenboer, 2016).

Kobus Buys, the facility manager at the Groblershoop GWK sheep abattoir said while December 2015 and January 2016 had seen an oversupply of animals, the animals were small and not really “slaughter ready” but farmers were slaughtering “out of depression” as grazing land was fast declining (Wildenboer, 2016).

Albert Grundlingh, from the GWK beef abattoir in Jan Kempdorp and the Tri-Star feedlot near Hartswater, said that a “definite red meat shortage” was looming, as it took 14 to 18 months for damaged herds to repair (Wildenboer, 2016).

The prices of meat are also affected by the seasons in South Africa; rains, Christmas and Easter periods. Johan van Niekerk, general manager of Sparta Foods in Welkom, pointed out that good rains and low maize prices, resulted in farmers either grazing their own cattle or feeding them maize instead of selling them to feedlots, which were in short supply of especially calves (Marud, 2006). Johan further added that wholesalers in Cape Town were already buying beef sides for up to R18 per kg and hindquarters for between R18.80 per kg and R19.20 per kg. The Wholesaler adds his margin before selling to the retailer.

Reaaz Ahmed, a director of GoodHope Meat Hyper in Salt River indicates that the tenderised steak sold for R44 per kg and steak mince cost R37 per kg, and current trends indicated that beef prices will increase by R3 per kg to R5 per kg in Easter, noting that beef was R10 per kg cheaper a year ago, (Marud, 2006).

Fayyaaz Parker, co-owner of wholesalers Airport Meats, however expected the prices to come down as available calves in feedlots have reached the slaughter age (Marud, 2006).

According to Arnold Pretorius, Chief Executive of Karan Beef in Johannesburg, and chairman of the SA Feedlot Association, the prices are being held down as far as possible in the interest of the industry to increase the consumption of beef (Marud, 2006).

3.9 Food Choices

Beef features as a protein food source across the population in South Africa (BFAP, 2016). Table 4 below outlines the dominant animal protein food choices in South Africa per food group according to the population living standards.

Table 4: Animal protein food choices per population class

	POPULATION CLASS			
	Poorest 30%	**Lower Middle Class**	**Upper Middle Class**	**Wealthiest 20%**
Animal Protein Foods	Chicken	Chicken	Chicken	Chicken
	Beef	Beef	Beef	Beef
	Eggs	Eggs	Beef sausage	Mutton & lamb
	Canned pilchards	Beef sausage	Eggs	Beef sausage

Source: Adopted from Bureau for Food and Agricultural Policy Baseline – Agricultural Outlook 2016-2025.

Beef is an overall dominant food choice in South Africa.

3.10 Availability of stock

The cattle herd in South Africa is made from Commercial herd and the Stud breeding herd. The Stud breeders normally supply the commercial breeders with the bulls. It is estimated that about 95% of South African beef comes from feedlots and 5% of beef comes from the veld raised animals, which is 47% of the total herd in the country (Ncwadi, 2015). There is a growing trend of the emerging young farmers marketing their livestock in the auction pens, which also assist in creating a pool for the feedlot owners to source weaners from previously untapped market.

3.11 Animal Health

It is crucial that animals are kept healthy and do not spread sicknesses in the feedlot facilities. Any sick animal that goes in the feedlot can cause a major loss to the feedlot business, thus sick animals must be rejected at the feedlots. The study by

Alemayehu *et al* (2014) indicates that the FMD resulted in bull's rejection from international market which affect livelihood of actors in the value chain and have a major threat to national economies as they tend to affect the international trade. It is found that the foot and mouth disease is one of the most important transboundary animal diseases that causes severe losses due to high morbidity and export trade restrictions imposed on affected countries (Alemayehu *et al*, 2014).

According to Rani *et al* (2017), the meat trade in South Africa and other developing countries is divided into formal and informal sectors. The formal sector usually operates from abattoirs and has meat inspectors who legally approve the meat for consumption. The meat is then distributed to retailers for consumers to purchase. This sector is governed by the Meat Safety Act No. 40 of 2000, which regulates meat and meat product distribution. Meat inspectors who approve meat for consumption usually perform visual inspection. The handling of the animals and farming practice has a relation to the beef production. The growing consumer awareness about animal welfare has led to the assessment of the impact of common farming practices, such as physical castration, on animal well-being under production conditions (Needham *et al*, 2017). The cattle production contributes about 25 – 30 % to the total agriculture output per annum, however cattle productivity is declining due to diseases and parasites prevalence, lack of feed resources, and poor breeding and marketing management (Musemwa et al, 2008).

The International Animal Health Organisation declared South Africa free of foot and mouth decease in 2014, this has boosted the demand for SA beef (BFAP, 2016).

One of the trends is a general worldwide increase in customer concern regarding health, diets and food safety. Internationally, this relates to issues such as traceability, animal welfare, diseases and production processes, sustainable agricultural practices, and naturally- and organically-produced beef (Labuschagne *et al*,2010).

3.12 Beef Quality

Fresh meat colour critically influences consumer purchase decisions, and the annual revenue loss in the United States beef industry due to discolouration is estimated to be more than 1 billion USD (Needham *et al*, 2017).

Beef quality can be described as the attractiveness of beef to the consumers, the visual appearance of intramuscular fat content, commonly called marbling is the primary criterion for quality grading of beef in the United States and Canada. In the study by Lawrie and Ledward in Ustuner *et al*, 2017 the major parameters that are considered in the assessment of beef quality are appearance, juiciness, and tenderness.

Although red meat industry is emphasizing that a quality assurance system remains too expensive to be implemented in South Africa and that the quality measurement system should be sustained, there is still room for improvement. All predictions in this review indicate that the present system cannot satisfy all the needs of the current consumer. The system seems to be inclined towards meat tenderness, since it is value based and may not reflect the expectations and needs of consumers in terms of meat quality (Muchenje *et al*, 2017).

According to Rani *et al* (2017), global reports on illness and deaths related to food consumption continue to raise concern in most countries. This has led to more diligence in a bid to improve the way food is handled. Hygienic handling of carcasses after slaughter is critical in preventing contamination and ensuring meat safety in both formal and informal meat trading sectors.

According to Needham *et al* (2017), not only do male steroid hormone contribute to behavioural issues, it can contribute to unwanted flavours and aromas. In the production of lamb and beef, emphasis is on the finishing of livestock with a certain

degree of fatness, and economic value generally placed on carcass with a medium fat covering.

3.13 Environment

Global warming is upon us and therefore each organisation and individual should do their best to contribute to the reduction of pollution of the earth, by taking care of the environment. It is believed that gasses produced by cattle pollute the ozone layer. Methane and nitrous oxide are two important greenhouse gases that are emitted into the atmosphere by livestock during the process of enteric fermentation and manure management (Forabosco *et al*, 2017). It is estimated that at global level, livestock emits in the atmosphere 18% of the total anthropogenic emissions of greenhouse gasses.

It is important that farming practices are improved and geared towards the reduction of these harmful gases. The feed that is provided to the animals can be properly selected to assist in this regard. As per Forabosco *et al* (2017), when the digestibility of forage increases, enteric fermentation and manure production are reduced, and consequently the emissions of methane and nitrous oxide decrease. For example, when legume silage replaces grass in the diet, because of the lower fibre content and the presence of high digestible organic nitrogen, methane and nitrous oxide emissions are reduced.

4 BUSINESS ANALYSES

The business will have to consider the changes that take place in both the external and internal environments. The external changes include the political, economic, social, technological, environmental as well as the legal/legislative changes (PESTEL). The analysis and assessment of these changes are done with the perspective of outlining those that pose issues and challenges to the business. The

negative impact will be avoided whilst the positive impact will be explored and capitalised.

Some of the tools used in business analysis are SWOT, Porter's five forces, and Stakeholder management analysis.

4.1 External and Internal Environmental Factors

The PESTEL will be used as a tool to analyse and monitor the external marketing environmental factors that have an impact on the business. The analysis will assist in identifying the strengths, weaknesses, opportunities and threats to the success of the business. PESTEL is an acronym of the following: P – political factors, E – economic factors, S – Social factors, T – technological factors, E – environmental factors, and L – the legal factors, which impact on the business venture, directly or indirectly.

The analysis of the business in terms of the PESTEL factors identified and to be considered are as follows:

4.1.1 Political factors

- The constitution of the country guarantees:
    - Equality.
    - Prohibitions against discrimination.
    - Freedom of speech, religion, association and assembly.
    - Prohibition against slavery and forced labour.

- The land reform policy can be a threat for the business if expropriation of land without compensation process is not properly managed. It can also be an opportunity for the business to acquire the land that is subject to redistribution, given the ownership of the business.

4.1.2 Economic factors

- The AgriSETA is an opportunity for the business in the form of skills and training of the personnel.
- The regulation of the agricultural encourages fair competition.
- The BBBEE will be an opportunity for the business in areas of preferential procurement.
- The promotion of SMME development in South Africa is an opportunity for growth of the business.
- The business will need to employ the disabled, youth and women to benefit more on programmes with the NYDA and the DTI. This will benefit the business in terms of financial support and applications.
- The possible support of SEDA and institutions like IDC, LEDA is an opportunity for the business.
- Food Security concerns has led to the governments to support the Agricultural projects.
- The business is black owned.
- SA is ranked the second largest economy in Africa behind Nigeria.
- Advanced transportation system and network.
- High levels of unemployment, income inequality, growing public debt, reliable access to electricity.

- The possible increase in the electricity prices might lead to the increases in costs.
- The exchange rate impact; if the Rand is weaker that will impact on the cost of fuel, plant and equipment.
- The interest rate is relatively low at around 6.75% and this supports borrowing.
- Sophisticated financial markets and effective business tax rate.
- SA is a member of BRICS, SADC, and SACU which will assist with the expansion strategies in the long term.
- The inflation rate fluctuation will have an impact on fuel, feed and labour costs.
- The increase in the VAT will affect the prices in a short term.

4.1.3 Social factors

- SA has a population of 55 million people and this is a lucrative market for beef retailers. The growing number of middle income families increases the buying power and the need for beef products.
- The unemployment rate in the country reduces the buying power of the people and therefore threatens the business.
- The cuisine of SA is heavily meat-based and has spawned the distinct South African social gatherings known as braai or barbecue and chisa-nyamas.
- Poverty is the highest threat among the black population and the increase in crime impacts on s the security of any business.
- The business needs to spend money in educating and training the workers on the issues of animal diseases that can be transmitted to humans, for example food and mouth, anthrax and zooness.

4.1.4 Technological factors

- Technology will enable the business with management information systems, accounting information systems, inventory management systems, payment control and wages/salaries payment management systems.
- The online marketing and the website creation where customers and potential customers can get to know about the business.

Transport infrastructure is advanced, delivery trucks can be tracked and monitored with available top security management systems.

4.1.5 Environmental factors

- The first assessment to be done is the Environmental Impact Assessment (EIA), that will guide the business on how to work with the environment.
- South Africa is a water scarce country; Water usage is more than supply. There are environmentally friendly systems that can be implemented to manage water and power usage.
- The collection management of the dung and use of manure for other agricultural projects.
- Cattle manure contributes to air pollution.

4.1.6 Legislative factors

- The business will comply with the laws of the country and observe the constitution of the country. Some of the common acts to be observed are:

    - Companies Act (Act No. 71 of 2008) for registration of the business,

- Labour Relations Act (Act No. 42 of 1996) for matters relating to the labourers in the business,
- Income Tax Act (Act No. 58 of 1962) for the declaration of income to the SARS and collection of tax on revenues generated by the business,
- Competition Act (Act No. 89 of 1998) for regulation and control of competitive actions of businesses,
- Employment Equity Act (Act No. 55 of 1998) for promotion of equity and fairness in the workplace,
- Basic Conditions of Employment Act (Act No. 75 of 1997) for the treatment and engagement of the workers employed in the business,
- Animal Improvement Act (Act No. 62 of 1998) for identification and welfare of the animals, and
- Environmental Protection Act (Act No. 73 of 1989) for the care and protection of the environment.

4.2 SWOT analysis

SWOT analysis is described as the structured method of evaluating the strength, weakness, opportunities and the threat of the business venture. These four elements are identified in the PESTEL analyses tool.

4.3 Porters' five forces

The business venture will be competing with other players in the industry in one form or another. Michael Porter has identified five competitive forces that need to be considered when thinking or shaping the strategy of the business; customers, suppliers, substitute, new entrants, and existing rivals.

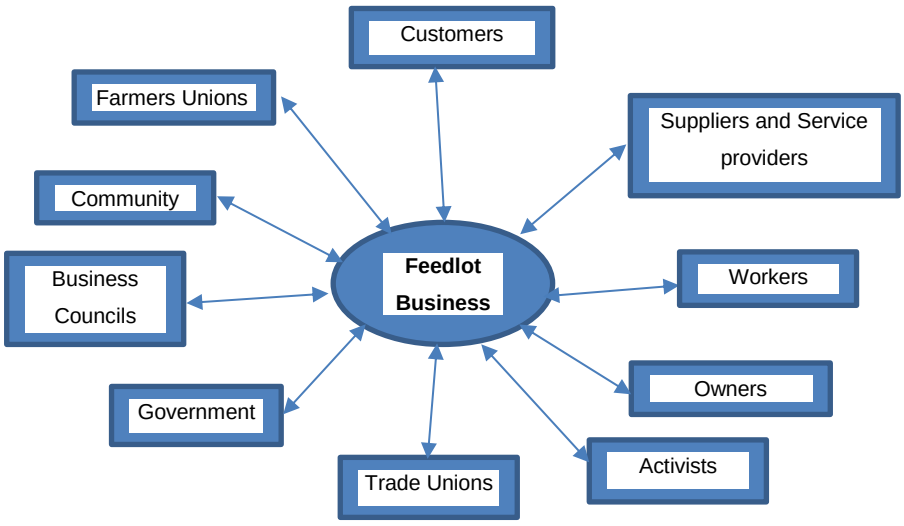
4.4 Stakeholder management

Stakeholders play an important role in the business, they can make or break the business. Johnson *et al* (2014) argues that, it should be clear by now that the managers' decisions about the purpose and strategy of their organisation are influenced by the expectations of stakeholders. According to Johnson *et al* (2014), stakeholders can be divided into four groups as per the nature of their relationship with the business and how they might affect the success or failure of a strategy:

- Economic stakeholders – suppliers, distributors, banks and shareholders.
- Social/political stakeholders – policy-makers, regulators and government agencies.
- Technological stakeholders – service providers (phones, internet, etc.).
- Community stakeholders – people living close to the business factory.

The figure 7 below outline the identified stakeholders of the feedlot business.

Figure 7: Business Stakeholders



Source: Adopted from R.E. Freeman, Strategic Management: A Stakeholder Approach, Pitman, 1984.

The feedlot business in South Africa is a formal commercial industry operating within the guidelines provided by the South Africa Feedlot Association (SAFA). The industry supplies about the 95% of beef in South Africa. The following stakeholders, as outlined in figure 3 above, are critical to the effective and efficient business operation:

- **Community** – The feedlot business operation requires labour from the communities.
- **Trade Unions** – It will be a futile exercise not to consider the involvement of the Trade Unions in the business operating in the democratic South Africa, given that labour is a critical resource in this kind of business.
- **Government (Regulations and Laws)** – As a business the involvement of the government is key from, Occupational Health & Safety, Trade Industry, Environment, Tax, Transport, Animal Health, Police, Education, Agriculture and business enterprises. The government develops regulations and legislation of the feedlot business operations.
- **Customers (Abattoirs, Supermarkets, Butcheries, etc.)** – The food chain stores are the client of the feedlot business.
- **Suppliers/Farmers** – The farmers provide the feedlot with the stock/inventory in the form of the weaners and the feed.
- **Consumers** – The consumers are the end-users of the feedlot product (beef) and therefore should be considered when designing and operating the feedlot business. They decide whether to buy or not.
- **Workers –** The workers are the pillar of the business they drive the production and therefore contribute to the generation of the revenue.
- **Activists –** The activists are a group of people who will act on issues of safety of the animals, people and the earth/environment and can brand the business negatively if deemed necessary.

- **Business Councils –** The business councils regulate the conduct of the business whilst pursuing its vision. They set rules and regulations that promotes ethics that will guide the business.

Stakeholders can be mapped in table 5 below according to the power/interest matrix:

Table 5: Stakeholders power / interest matrix

Low Interest/Low Power: Minimal Effort	**High Interest/Low Power: Keep informed**
• Business Councils	•
High Power/Low Interest: Keep satisfied	**High Power/High Interest: Key players**
• Community • Activists • Farmers Unions	• Owners • Suppliers and Service Providers • Customers • Government • Workers

Source: Adopted from A. Mendelow, Proceedings of the Second International Conference on Information Systems, Cambridge, MA, 1986

The stakeholder will be analysed in the stakeholder analysis matrix below in Table 6. The table illustrates the stakeholder, its impact, influence, importance, contribution, and the strategy stakeholder engagement in the business. The *High* indicates critical and *Low* not critical, the business can do without it.

Table 6: Stakeholder matrix analysis

Stakeholders	**Impact**	**Influence**	**What is important to the stakeholder?**	**How could the stakeholder contribute to the project?**	**How could the stakeholder block the project**	**Strategy for engaging the stakeholder.**
Customers	High	High	quality product at affordable price.	Maintaining constant demand.	Decision not to buy.	Periodic visits to their facilities.
Suppliers and Service Providers	High	High	Constant supply and on time payments.	Maintaining the supply.	Poor supply.	Visits to their farms.
Workers	High	High	Welfare and being valued.	Putting effort into their work.	Going on strike.	Daily Production meetings
Owners	High	High	Profitability.	Maintaining valuable support and provision of direction.	Decision not to invest.	Monthly meetings

Stakeholders	Impact	Influence	What is important to the stakeholder?	How could the stakeholder contribute to the project?	How could the stakeholder block the project	Strategy for engaging the stakeholder.
Activists	Low	Low	Welfare of the environment and the animals.	Improvement of operation practices.	Rejection of the business if not engaged	
Trade Unions	Low	Low	N/A	N/A	N/A	N/A
Government	Low	Low	N/A	N/A	N/A	N/A
Business Councils	Low	Low	N/A	N/A	N/A	N/A
Community	Low	Low	N/A	N/A	N/A	N/A
Farmers Union	Low	Low	N/A	N/A	N/A	N/A

Source: Adopted from tools4dev.

5 BUSINESS MARKET ANALYSIS

It is important for the business to focus on a segment of the market to ensure better understanding of the customers within the target population. This will ensure that the business will better deal with the competition through high quality services and products.

5.1 Individuals' Market Segment

The individual market segment is mainly made up of consumers in the domestic market consisting of low, medium and high-income earners. The business will not focus on this market segment as it will be producing to abattoirs in bulk. This market segment will be serviced by our corporate market segment after our product has been processed into a beef products or meat parcels.

5.2 Corporate Market Segment

The corporate market segment is mainly made up of businesses that belong to the small, medium and micro enterprises SMME category, large corporate entities, cooperatives and private entities.

Corporate market segment procures live weaners in large quantities. The market segment processes the live weaner into beef that is sold to retailers or final consumers, who are in the individual market segment.

Corporate entities prefer to procure the products using contracts where terms and conditions are agreed beforehand, they often influence the production phase of what they procure; for example, age of animals and feed intake. Corporate entities do not often use the cash sale approach and may not pay on delivery, payments

often take place after the delivery through predetermined payment agreements. To us as a business this can create cash flow gaps that will have a negative effect.

5.3 Target Market

The business will focus on corporate entities only. The market will include local abattoirs and butcheries. The choice of this target market was based on considerations such as the capacity of the business, the ease of doing business, security, price negotiations with customers, profitability and growth potential. The business shall strive to position itself as the preferred supplier of quality weaners.

5.4 Competition

The business will co-exist with other businesses in the same market, and there is bound to be competition, directly and indirectly. The business will experience competition from existing businesses and there will also be competition from new start-ups in the market.

5.4.1 Direct competition

There are a few farmers that sell weaners in large quantities but not to the abattoirs, but to feedlot operators at auction facilities or straight from the farm. The benefit of selling from the farm is to cut on transport cost to the auction facilities, whereas auction facilities provides for competitive prices.

The business faces competition from six established feedlot operators in the Limpopo area that target a similar market. These competitors produce weaners for their own abattoir facilities and market their processed beef products to retailers and individual consumers. They do not cater for the stand-alone abattoirs; they are also potential customers. They are more of potential customers than competitors.

There is a potential for collaboration deals that need to be explored, with these existing businesses

5.4.2 Indirect competition

There are alternatives/substitutes to beef products such as chicken, pork, eggs, mutton and goat meat. Most consumers regard beef as expensive and more luxury source of protein relative to chicken.

6 INTERNAL ENVIRONMENTAL ANALYSIS

The business is an organisation that has internal environmental behaviour. This is the way that we do our business processes and includes the organisational structure, objectives of the business, leadership style of the owner, culture or the natural human behaviour.

6.1 Organisational structure

The business needs to operate effectively and efficiently, therefore there needs to be a structure that will ensure coordinated business operations. The business needs to employ suitable personnel in the management; finance, marketing, operations/production and human resources functions.

6.2 Leadership style

The leadership style of the general manager will influence the operations of the business either positively or negatively. It is preferable to apply a democratic leadership style if the personnel in the business are qualified, motivated and understand the objectives of the business. Participation of all personnel in the business will be encouraged as this will give them a sense of importance and

ownership of the business. The leader will need to communicate clearly, the vision, mission and objective of the business so that all agree and travel the same path.

6.3 Human resources requirements

The business is specialised and contribute to the human body development as the product, beef, is a source of protein. Any challenge in the process of the operation influences the product, visible (low production) or invisible (unhealthy products that can harm human development). It is therefore important for the business to employ a highly competent team to advance the business idea and concept successfully.

The business will continually engage and train the team to enhance their skills levels and competencies. It is important to inculcate the culture of teamwork, shared values and principle, commitment and dedication in the team.

7 SWOT ANALYSIS

Table 7: **SWOT analysis**

As a business, we have come up with our SWOT analysis which is shown in the table below.

Strength	**Weaknesses**
• The passion of the owner in the farming sector. • The Business degree of the owner. • The knowledge and the experience of beef cattle farming business of the owner. • Business Network created by the owner in the Farming industry.	• Access to funds – start-up costs too high. • Land or space ownership. • The current team needs formal training.
Opportunities	**Threats**
• Government support an agricultural project. • Available financial and non-financial support for Small, Medium and Micro Enterprises. • Broad Based Black Economic Empowerment in terms of the ownership. The business is black owned. • Availability of institutions to train work force in the country.	• High crime – livestock theft in the country. • Direct competition. • Rising campaigns from anti feedlot beef products – Grass Fed Association of SA. • Availability of beef substitutes – pork, fish, mutton, chickens, etc. • Animal related diseases – Food and Mouth, anthrax, etc. • Shortage of water in the country.

• Advanced ICT and transport infrastructure in the country. • Willingness for the experienced farmers to mentor and train emerging farmers in the Country. • Availability of mentors.	• Environmental concerns due to cattle contributing to methane gasses emission, pollutes the atmosphere. • Proposed increments in electricity prices. • Increasing animal feed prices. • Changes to government regulations, policies and acts – Labour Act, OHS Act, Livestock Improvement Act, etc.

8 BUSINESS VISION, MISSION AND VALUES

As a business, we are guided by principles that promote ethical standards in everything we do.

8.1 Vision

To become the prominent and best producer of healthy beef weaner for slaughter in the Limpopo Province by 2025.

8.2 Mission

To contribute to the health and wellness of the customers and weaners, as well as adding value to other investors/owners of the business.

8.3 Values and principles

The actions and behaviour of the team will be guided by the following values and principles; commitment, team work, reliability, quality, perseverance, customer intimacy, dedication, high care, education, efficiency and effectiveness.

Table 8: Values and principles with expected outcome

Values and principles	Description	Expected outcome
Commitment	The business is committed to meet its objectives and realising its vision.	Meeting set targets and remaining relevant.
Teamwork	The business will ensure that the team effort is rewarded, and team work becomes a culture.	Unity and cohesion among colleagues. The family spirit.
Perseverance	Consistency in the path taken.	Realising set objectives and vision.
Customer intimacy	Customer oriented and considering the needs of the customer in all the actions being taken.	Better understanding of the Customers and increased sales.
Efficiency and Effectiveness	Focusing on doing things right and on time.	Minimal wastage.
Reliability	Striving to be reliable in terms of the orders and specifications of the customers.	Trusted supplier to customers and business stakeholders.

Values and principles	Description	Expected outcome
Quality	Upholding quality control procedures and assurance.	Customers satisfaction

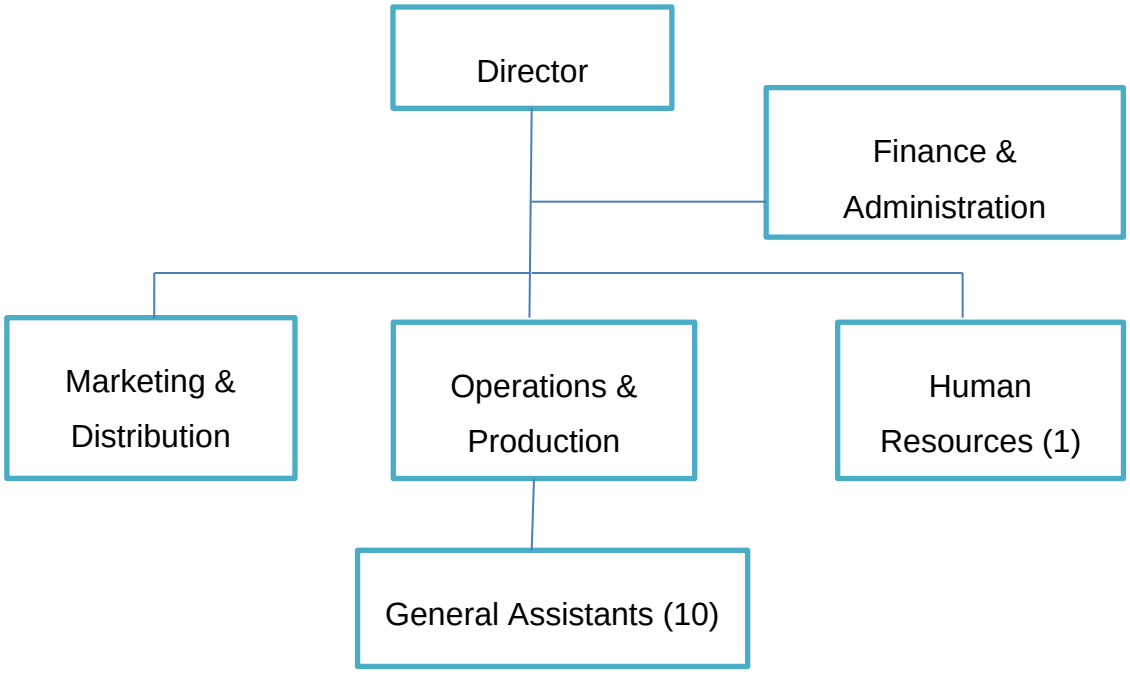
Source: Adopted from OS Template, Sheep Farming Business/ Executive Summary.

9 OPERATIONAL PLAN

9.1 The Structure of the Organisation

The proposed structure for the organisation is outlined in figure 4 below:

Figure 8: Organisational structure



9.2 Roles and Responsibilities

The specialist service providers such as legal, veterinary, environmentalist, animal nutritionist, etc, will be consulted when the need arises.

The organisational structure will grow as the business expands and diversify, adding new roles and responsibilities.

9.2.1 Director

The director is the owner and overseer, managing every aspect of the organisation and setting the strategy in alignment with the mission and vision. He will be responsible for the implementation of the business plan through leading, organising, controlling and coordinating the organisation.

9.2.2 Finance & Administration

The Finance and Administration office will deal with matters relating finance and administration including but not limited to:

- Payments to suppliers;
- Administration of taxes,
- Payments of salaries and wages,
- Administration of petty cash,
- Management of cash flow statements and budgets,
- Administration of the CIPC annual registration.
- Drafting of the contracts in consultation with the lawyers,
- Interpretation of the regulations; and
- Representation in case of litigation process.

The office will administer legal matters in consultation with the legal consultant who will be compensated for the services rendered from time to time.

9.2.3 Marketing & Distribution

The role involves the promotion of the brand to the clients, customers and other stakeholders. This department will also be responsible for the sourcing of the new and maintenance of the old suppliers. The role further involves the procurement of products and inventories.

9.2.4 Operations & Production

The role and responsibilities of this function will be as follows:

- Management of the feedlot yards,
- Management of the animal feed,
- Quality control procedures,
- Health and safety of the animals and the people/workers.
- Vaccination of animals,
- Treatment of the sick animals,
- Administration on the overall animal health matters.
- Inventory management.

The animal and human health matters will be dealt with in consultation with the Veterinary and the medical practitioners.

9.2.5 Human Resources

The human resources will assist with the recruitment of the workers, motivation and overall welfare of the workers.

9.2.6 General Workers

The general workers will be responsible as follows:

- Looking after the animals in terms of feeding and ensuring that they are well,
- Loading, offloading and transporting of animals to the market and from suppliers.
- General maintenance of the facility.

10 MARKETING PLAN

The business marketing plan will be analysed into three perspectives: the short term, medium term and the long-term perspective.

10.1 Short term perspective

Objective: To introduce the business brand and further penetrate the market within the first 6 months of operations.

Table 9: Business short term perspective

Strategies	Focus Area	Business Initiatives
Produce valuable, healthy and quality weaners for the target market.	Product	Striving for healthy and quality weaners and thereby contributing to creation of value to our customers' beef products. The weaners will be cared for, vaccinated and fed quality nutritional feed.
Adopt a competitive market price.	Price	The prices of the weaners will be market related. The efficient management of the weaner production cost (feed, medicine, etc.) will assist in determining profitability of the weaner.
Promotion and brand development.	Promotion	The use of the ICT (website), brochures, letterheads, billboards and supports of local and regional recreational (school sports) centres will enhance promotions. Our facilities and vehicles will be branded. Sponsoring farmer's events.
Ensure a value-based distribution channel.	Location	The location of the business is easily accessible by road transport, in between two major roads in SA; R101 and N1.
Presentation of the products to customers.	Packaging	The transportation of the weaners will be in a proper manner and as per the livestock improvement act. To ensure appropriate handling of weaners the

Strategies	Focus Area	Business Initiatives
		loading, transport and offloading will be done by our trained workers.
Continuous improvement of the skills and competencies of the personnel.	People	The personnel interfacing with the customer's/target market segment will receive training in marketing and communication.
Improvement of the internal process of the feedlot facilities.	Process	The monthly evaluation of the business campaigns will be standard and marketing specialists will be contracted to assist with the marketing strategy.

Source: Adopted from OS Template, Sheep Farming Business/ Executive Summary.

10.2 Medium term perspective

Objective: To enhance the competitiveness and cement position in the market.

Table 10: Business medium term perspective

Strategies	Focus Area	Business Initiatives
Improve the competitiveness and sustainability of the business.	Value creation	Focusing on providing value to the corporate entities target market.
	Customer intimacy	Paying attention to the needs and preference of the customers.
	Process Efficiency	Developing operational systems and procedures that will ensure high productivity for the business.

Source: Adopted from OS Template, Sheep Farming Business/ Executive Summary.

10.3 Long term perspective

Objective: To grow and expand the capacity to cover greater market and explore the market to diversify the products.

Table 11: Business long term perspective

Strategies	Focus Area	Business Initiatives
Grow the market share of the business.	• Market Development.	Identification of new market segments through market research.
Diversify the service base of the business.	• Research and Development	Diversification into cattle farming to produce own weaners by acquiring farm lands, establishment of abattoir facility, compose production from cattle manure, production of feed, and branding of beef products in the retail space.
Establish relationship with strategic alliances.	Networking	Formation of strategic relationships with key associations within the industry; NERPO, AFASA, SEDA, etc.

Source: Adopted from OS Template, Sheep Farming Business/ Executive Summary.

11 RISK ANALYSIS

In any organisation, business risk is something that is unavoidable. It is therefore important to implement an effective risk management structure within the business that can identify all types of risks, manage those risks and reduce the possibilities of economic losses on the business. Table 11 below outlines the risk, possible causes and the management action.

Table 12: Risk analysis

Risk	Description	Mitigating Efforts
Risk of disease outbreak	Animals will be purchased from different sources with known and unknown health status, and the viruses can easily spread through the entire herd. Food and Mouth, Zoonesses, etc, diseases can easily spread and lead to mortalities and thereby financial losses.	• Workshops and training of the workers. • Adherence to the Vaccination program • Buying from reputable farmers with records of animal health care programs. • Monitoring animals. • Maintaining healthy diet. • Deworming and dipping of animals at the point of entry to the feedlot. • Quarantine facilities.
Competition	• The organisation will face competition from the existing feedlot business and new entrants in the region. • There are also substitute to beef products such as mutton, pork, chicken, grass-fed beef, fish and other protein food products.	• Market research and development. • Focus on a specific market segment and striving to understand the customers better than competition. • Associations with organisations such as SAFA, AFASA, NERPO, etc.
Funding	• The business requires a lot of capital and the contribution from the owner will be less compared to that of the investors. •	• Appointment of the financial auditors and advisors to plan and monitor the business finances. • Adherence to the financial planning and good governance.
Human resources	• The loss of key critical personnel will affect	• Recruitment of qualified personnel.

Risk	Description	Mitigating Efforts
	the business adversely. • Shortage of qualified personnel. • Labour Strikes.	• Proper employment contracts and employee engagement programs. • Cultivating a culture of teamwork, information and knowledge sharing among personnel. • On the job training and motivation session. • Introduction of wellness and team building sessions. • Association and partnerships with learning institutions; universities, FETs, etc, for knowledge sharing. • Compliance with the labour relations act and the constitution of the RSA.
Economy	• Interest rates hikes. • Unemployment rates meaning fewer people will buy beef (diminishing buying power) • Inflation rates causing high prices in beef animals, vaccines and feeds • Drought resulting in high weaner prices in the market. • Rates fluctuations. • Electricity (Eskom) price hikes.	• Energy saving systems - solar power. • Production of own feeds. • Expansion and Diversification of business products. • Investment in the animal health and management. • Education for the workers. • Environmental and Occupational Health & Safety management.

Source: Adopted from OS Template, Sheep Farming Business/ Executive Summary.

12 FINANCIAL PLAN

According to the Department of Agriculture & Rural Development the size of the feedlot must be 3000 to 4000 head of cattle in the feedlot at any time, for the business to start making profit (KZNDARD, 2017). The profit margin is a function of price margin, feed margin and other expenses. Animals in the feedlot need to be fed to gain the slaughter weight within the prescribed time to attain the balance between weight and price. The price margin is directly proportional to the animal weight and the selling price excluding the costs. The higher the animal weight and the selling price, the higher the price margin. Feed margin is directly proportional to the live gain mass gain and the selling price excluding the costs incurred during feeding. The higher the average daily gain and selling price the higher the feed margin. It must be noted that the selling price must be higher than the cost of sales to make profit. The formulae below assist in calculating the price and feed margins.

Formula 1

Pm =Im x (Sp – Cp/kg), Fm =Mg X (Sp – Cg), and the other expenses incurred by the feedlot include the following where; Pm – Price margin, Im – Initial live mass, Sp – Sale price/kg, Cp – Cost price/kg, Fm – Feed margin, Mg – Live mass gain, Sp – Sale price, Cg – Cost /kg gained.

There are expenses that contribute to the success of the feedlot business operation. The following are common costing factors that require adequate management:

- Agents commission,
- Slaughtering costs,
- Carcass condemnations,
- Transport,
- Interest on capital (Borrowings),

- Salaries of management and labour/Labour costs,
- Plant and Machinery costs, and
- Mortalities and veterinary costs (disease control, medicines, vaccinations) and pre-treatment (growth stimulants, dipping, dosing, vaccination).

According Firer *et al*, 2012, the possible financial goals for the business are to; survive, avoid financial distress and bankruptcy, competitive advantage, maximize profits. The goal of financial management is to create value for the owners of the business.

To analyse the net return, and attractiveness of an investment project the Net Present Value (NPV), Internal Rate of Return (IRR) and Return on Investment (ROI) calculations, among others, are used (Firer, 2012). The NPV is the difference between an investment's market value and its cost. If the NPV amount is positive, then the projected investment or a project is profitable. The IRR is the interest rate at which the NPV of all the cash flows (both positive and negative) from a project or investment equal zero. Based on the IRR rule, an investment is acceptable if the IRR exceeds the required return. The ROI is usually expressed as a percentage and typically used for personal financial decisions, to compare a company's profitability or to compare the efficiency of different investments.

12.1 Business Proposal Assumptions

- Prime rate - 11.5%
- Loan Amount required – R 35 344 500.00
- Term loan period – 5 years
- Interest rate – 10.25%
- Inflation rate – 6%
- Debtors collection period – 30 days
- Creditors payment period – 90 days

- Tax rate – 28%
- Vat rate - 15%
- Business days per week – 5 days
- Animals (inventory) – 3 000 in the feedlot at any given time.
- Plant and Equipment – R 1 755 000.
- Land lease – R 150 000 per month.
- Electricity and Water – R 25 000 per month.
- Agent commission – R 15 000 per month.
- Salaries and wages – R 200 000 per month with 6% annual increase.
- Sales: ±R 35/kg
- Sales Projections:

    - 1st month – 0 animals
    - 2nd month – 0 animals
    - 3rd month – 1 000 animals
    - 4th month – 2 000 animals
    - 5th month – 3 000 animals
    - 6th month – 3 000 animals.

- Feedlot infrastructure – R 600 000.
- Live slaughter weight – ±300 kg.
- Feed daily intake – 3.33% x 200 kg – 6.66 kg.
- No. of days in a feedlot – 3 months
- Veterinary costs – R 375 000 for 3 000 animals for 3 months.
- Transport – R 200 000.

12.2 Cash Flow Projections

The business venture requires an initial capital injection of R 35 344 500, and a positive return on investment is expected on the 6th month from commencement of

the business as that is the month which sales are expected to have covered costs and starting to yield returns. Table 12 below presents a cash flow projection for a 5-year period of the business. As indicated on the cash flow projection, NPV is positive and therefore the business will be profitable yielding returns. A significant IRR is observable thus a positive outlook on the rate of return of the venture. Return on initial investment of the venture will also realise an increasing trend as the years go by thus investor outlook is positive considering all the rates reflected by the forecast.

Table 12 below highlight the capital budgeting technique is used to determine and indicate the lucrative nature of the business. Capital budgeting is a process used to determine whether an organization's long-term investments such as new machinery, replacement of machinery, new plants, new products, and research development projects are worth the funding of cash through the firm's capitalization structure.

Table 13: Financial calculations

		Year1 figures based on above assumptions								
Sales Price per animal slaughtered		10,500		R35/kg*300kg (Slaughter weight)						
Cost of sales										
- Feed		7,960,032	Annual figure	Feed 900kg @R750						
				Thus R0.83 per kg *6.66kg/day (per animal)*120days*3000 animals at a point in time						
				Giving us R1 990 008 in a period of 3 months						
- Stock		60,000,000		R5000 cost per animal purchased*3000 animals*4quarters						
-Health		(1,500,000)		R375 000 Vetinary cost once for 3000 animals at 4 quarters						
Operating Costs										
Land Lease				R150 000 per month*12months						
Insurance				R3000 per month *12 months						
Water & Electricity				R25 000 per month*1.14 (VAT effect)*12months						
Agent's Commission				R15 000 per month*12 months						
Salaries & wages				R 200 000 per month*12 months						
Tax Expense @28%		58,594,331	90,205,572	95,625,819	101,371,281	99,061,470				
Taxable Income		209,736,468	322,633,756	341,991,781	362,511,288	354,261,966				
Capital Allowances @20% of capital investment		(471,000)	(471,000)	(471,000)	(471,000)	(471,000)				

Initial Capital Investment (Capital Required) will cover operating costs for the first 3 months as only expenditure will be incurred, before planned sales during the 4th month. Owner's contribution is included initial cost of stock being R1 000 000.

Table 13 below highlights the 5-year cash flow projections.

The profitability of the feedlot business is highly sensitive to the two factors; economic and management. The economic factors are uncontrollable inputs such as the price of the weaner and that of feed, and the price of the output (A grade beef). The decrease in feed price results in the increase in the profit per the weaner. The management is a controllable factor; the procurement of good quality animals i.e. healthy animals with good feed conversion will result in shorter weight gains and thereby less feed and shorter weight gain period. Management needs to be efficient in the selection of animals to be brought to the feedlot, and feed management.

	Table 13: Cash flow projections						
			Year1	Year2	Year3	Year4	Year5
	Tipper Trailer	(50,000)					
	Flat Bed Trailer	(50,000)					
	Feed Mixer	(625,000)					
	Tractor Loader B	(800,000)					
	89kW Trailer	(185,000)					
	Forklift	(45,000)					
	Feed Infrustructure	(600,000)					
	Sales		283,500,000	400,680,000	424,720,800	450,204,048	477,216,291
	Cash Cost of Sales						
	- Feed		(7,960,032)	(8,437,634)	(8,943,892)	(9,480,525)	(10,049,357)
	- Stock	(30,000,000)	(60,000,000)	(63,600,000)	(67,416,000)	(71,460,960)	(105,748,618)
	-Health		(1,500,000)	(1,590,000)	(1,685,400)	(1,786,524)	(1,893,715)
Gross Cash Income		(30,000,000)	**214,039,968**	**327,052,366**	**346,675,508**	**367,476,039**	**359,524,601**
Operating Expenses							
	Land Lease	(450,000)	(1,350,000)	(1,431,000)	(1,516,860)	(1,607,872)	(1,704,344)
	Insurance	(9,000)	(27,000)	(28,620)	(30,337)	(32,157)	(34,087)
	Water & Electricity	(85,500)	(256,500)	(271,890)	(288,203)	(305,496)	(323,825)
	Salaries & wages	(2,400,000)	(2,400,000)	(2,544,000)	(2,696,640)	(2,858,438)	(3,029,944)
	Agent's Commission	(45,000)	(135,000)	(143,100)	(151,686)	(160,787)	(170,434)
Net Cash Income (Taxable)		(32,989,500)	**209,871,468**	**322,633,756**	**341,991,781**	**362,511,288**	**354,261,966**
Tax Expense @28%			(58,594,331)	(90,205,572)	(95,625,819)	(101,371,281)	(99,061,470)
Net Cashflow		**(35,344,500)**	**151,277,137**	**232,428,184**	**246,365,963**	**261,140,008**	**255,200,496**
NPV @ 6.75%		R841,260,378					
IRR (Internal Rate of Return)		470%					
ROI (Return on Investment)							
Initial Capital required		**35,344,500**					

13 CONCLUSIONS

The proposed business has positive returns for the investors and the product is in demand. The investors will have positive return within the first year of the initial investment. There is a positive outlook on both the local and international markets for projects in food production since food security globally continues to be a growing problem.

The business capital intensive and incurs high costs for operations. It is important to ensure efficient cost management to minimize business operating costs. The beef market prices are market determined, and this reduces the bargaining power of the producers. The crucial and basic formula for calculating the profitability of one weaner is:

Profit = (*Price paid by client) – (cost of production x total kilogram of product produced*)

The weight of a weaner is a key determinant in the revenue from a single sale, the more the weight the more the revenue. The quicker the weight gain the quicker attainment of the slaughter weight and therefore shorter production cycle/cost. The feed is the cost driver in the feedlot business, better management of feed will lead a profitable business enterprise.

Competition is tough in the beef market, with direct and indirect competition existent. We need to produce a strong brand that is focused on quality products and services to our clients, this to be achieved through an aggressive marketing in the first months of the business.

There is also a high risk rising from the animal health point of view. Cows can transfer some infectious diseases among themselves and this can lead to a loss from death and condemnation of some stock. For example, one sick weaner can

transmit the disease to the entire crop of weaners in the facility leading to negative brand image, rejection of weaners from the facility by the abattoirs and therefore loses. It is important to ensure proper health facilities are in place, together with good management practices always.

The challenge of funding can be a limiting factor for the business if inefficient financial models are not put in place. It is therefore important to continually have measure that permit for transparent and efficient financial management, including the hiring of farm finance experts, regular audits and open communication with creditors and debtors.

Based on the cash flow projections and other considerations, the business promises to perform well.

14 REFERENCES

1. Alemayehu, G. Z. Zewdw, G., Admassu, B. (2014). Seroprevalence of foot and mouth disease (FMD) and associated economic impact on Central Ethiopian cattle feedlots. *Journal of Veterinary Medicine and Animal Health*, Vol. 6(5), pp. 154-158.

2. BFAP. (2016). Bureau for Food and Agricultural Policy. Agricultural Outlook 2016 -2025.

3. Chingala, G. Raffrenato, E. Dzama, K. Hoffman, L.C, & Mapiye, C. (2017). Towards a regional beef carcass classification system for Southern Africa. *South African Journal of Animal Science 2017*, 47 (No. 4).

4. Coleman, A. (2018). Environment-friendly grazing yields long-term benefits. *Farmer's weekly*, pp. 48 - 50.

5. DAFF. (2017). *A profile of the South African beef market value chain.* Arcadia, Pretoria: Department of Agriculture, Forestry & Fisheries - Directorate Marketing.

6. Dugmore, H. (2014). *Nguni weaner crisis - where to from here?* Retrieved from http://heatherdugmore.co.za/

7. Elam, D. T. (2004). *Projections of Global Meat Production Through 2050*. Retrieved from http://faostat.fao.org/

8. Erasmus, D. (2017). *How important is the informal sector in urban food security*? Retrieved from https://www.farmersweekly.co.za/

9. Eskerod, P. (2014). Stakeholder Management Strategies and Practices During a Project Course. *Project Management Journal Webster Vienna Private University*, 45 (5).

10. Firer, C., Ross, S. A., Westterfield, W.R., & Jordan, D.B. (2012). *Fundamentals of Corporate Finance 5th South African Edition.* Berkshire: McGraw Hill.

11. Forabosco, F. Chitcchyan, Z. C. & Mantovani, R. (2017). Methane, nitrous oxide emissions and mitigation strategies for livestock in developing countries: A review. *South African Journal of Animal Science 2017*, 47 (No. 3).

12. Haden, A. (2016). *Food shortages could soon become a reality in South Africa*. Retrieved from https://www.thesouthafrican.com/

13. Harrison, J. P. (2010). *Essentials of Strategic Planning in Healthcare 2nd Edition.* Washington DC: Health Administration Press.

14. HBS. (2018). *The Harvard Business School*. Retrieved from The Five Forces - Institute for Strategy and Competitiveness: https://www.isc.hbs.edu/strategy/business-strategy/pages/the-five-forces.aspx

15. Johnson, G. Whittington, R. Scholes, K. Angwin, D., & Regner, P. (2014). *Exploring Strategy Text and Cases 10th Edition.* Edinburgh Gate: Pearson Education Limited.

16. KZNDARD. (2017). *Feedlotting Cattle - Beef production*. Retrieved from www.kzndard.gov.za/

17. Labuschagne, A., Louw, A., & Ndanga, L. (2010). *A Consumer - Orientated Study of the South African beef value chain.* Cape Town: African Association of Agricultural Economists (AAAE).

18. Lombard, W. A., & Van Rooyen, F. M. (2017). *Stockfarm*. Retrieved from https://www.stockfarm.co.za/

19. Makube, P. (2017). *Economist Cautions on Meat Shortage and Higher Prices Post by Banks Advertisement*. Retrieved from https://buzzsouthafrica.com/

20. Marud, M. (2006). *Beef shortage heralds Easter price shock*. Retrieved from https://www.iol.co.za/

21. Muchenje, Z., & Soji, V. (2017). Should the South African red meat classification system be revised or maintained? *South African Journal of Animal Science 2017, 47 (No. 5)*, 47 (No. 5).

22. Musemwa, L. Mushunje, A. Chimonyo, M. Fraser, G. Mapiye, C., & Muchenje, V. (2008). Nguni cattle marketing constraints and opportunities in the communal areas of South Africa: Review. *African Journal of Agricultural Research Vol. 3 (4),* pp. 239-245.

23. Ncwadi, M. (2015). 95% of SA's beef comes from feedlots - find out what happens at these lots here. (J. Sukhdeo-Raath, Interviewer)

24. Needham, T. Lambrechts, H., & Hoffman, L.C. (2017). Castration of male livestock and the potential of immunocapturing to improve animal welfare and production traits: Invited Review. *South African Journal of Animal Science 2017*, 47 (No. 6).

25. Niemand, M. (2013). *Feedlot performance of the Drakensberger in comparison with other cattle breeds: A meta-analysis.* Pretoria: University of Pretoria.

26. OS Templates, (2018, February 28). *Business plan*. Retrieved from Comprehensive Business Plan Guide: http://www.business-plan.co.za

27. Phillips, L. (2013). *South Africa's beef industry: what does the future hold?* Retrieved from https://www.farmersweekly.co.za/

28. Porter, M. E. (1979). How Competitive Forces Shape Strategy. *Harvard Business Review 21 (38)*, 21 - 38.

29. Rani, Z. T. Hugo, A. Hugo, C. Vimiso, P., & Muchenje, V. (2017). Effect of post-slaughter handling during distribution on microbiological quality and safety of meat in the formal and informal sectors of South Africa: A review. *South African Journal of Animal Science 2017*, 47 (No. 3).

30. SAFA (2016). *International Beef Market*. Retrieved from http://www.safeedlot.co.za/.

31. Salvage, B. (2011). Global meat consumption to rise 73% by 2050: Food and Agriculture Organisation (FAO). Retrieved from http://www.meatpoultry.com.

32. Schmeer, K. (2018). Stakeholder Analysis Guidelines - World Health Organisation. Retrieved from World Health Organisation: http://www.who.int/workforcealliance/knowledge/toolkit/33

33. Scholtz, M. M., & Mpayipheli, M. (2017). Evaluation of Communal beef production systems at different levels and systems. Bloemfontein: ARC - Animal Production Institute.

34. Tools4dev. (2018, 02 26). Stakeholder Analysis Matrix. Retrieved from Tools4dev: http://www.tools4dev.org/resource/stakeholder-analysis-matrix-template/

35. Trapido, A. (2016). Where is the Beef? Retrieved from http://businessmediamags.co.za/.

36. Ustuner, H. Yalcintan, H. Orman, A. Ardicli, S. Ekiz, B., & Gencoglu, H. (2017). Effects of initial fattening age on carcass characteristics and meat quality in Simmental bulls imported from Austria to Turkey. South African Journal of Animal Science 2017, 47 (No.2).

37. Valentin, E. K. (2005). Away with SWOT Analysis: Use Defensive/Offensive Evaluation Instead. The Journal of Applied Business Research - Spring, Volume 21 Number 2.

38. Wildenboer, N. (2016). Meat crisis a growing reality. Retrieved from https://www.iol.co.za/.

39. Willig, C. (2008). Introducing Qualitative Research in Psychology. New York: McGraw-Hill.

15 APPENDICES

Appendix 1: The Industry role players – South African Feedlot Association

No.	Name	Description	Capacity
1	Austin Evans Feedlot	Feedlot in Somerset East.	Not specified.
2	Adam Agri	Feedlot in Colesberg.	Not specified.
3	Beefcor	Feedlot and own meat processing abattoir.	25 000 beef animals at any time.
4	Beefmaster	Feedlot in Christiana.	20 000 beef animals at any time.
5	Bull Brand	Feedlots, fresh meat production process-abattoir, deboning, added value and canning.	40 000 beef animals at any time.
6	Braams Voerkrale BK	Feedlot in Durbanville	Not specified.
7	CB Feedlot	Feedlot in Reitz.	Not specified.
8	Chalmar Beef	Feedlot with own abattoir.	15 000 beef animals at any time.
9	D C Louw Feedlot	Feedlot in Adelaide.	Not specified.
10	Doornbult Voerkrale (Pty) Ltd	Feedlot in Polokwane, Ladanna.	Not specified.
11	EAC Group	Feedlot with own abattoirs.	35 000 beef animals at any time.
12	Fortress Bonsmaras	Feedlot and farming operation.	Not specified.

No.	Name	Description	Capacity
13	Kameeldrift Voerkraal	Feedlot in Kameeldrift East.	Not specified.
14	Kanhym Estates Ltd	Feedlot in Middelburg.	Not specified.
15	Karan Beef	Feedlot, feed mill, abattoir and meat processing.	150 000 beef animals at any time.
16	Kellerman Boerdery	Feedlot in Koringberg.	Not specified.
17	Kleynfaan Feedlot	Feedlot in Vryheid.	Not specified.
18	Koodoolake	Feedlot in Stella.	Not specified.
19	Korem Farm	Feedlot in Pretoria.	Not specified.
20	Liebenbergstroom Voerkraal Bpk	Feedlot in Edenville.	Not specified.
21	Manjoh Ranch	Feedlot in Nigel.	Not specified.
22	Madikor	Feedlot in Louis Trichardt, Limpopo.	Not specified.
23	Mikron Boerdery	Feedlot in Bultfontein.	Not specified.
24	Mleki's Beef	Feedlot in Isando.	Not specified.
25	Mushlendow	Feedlot in Koster.	Not specified.
26	MVB Feeders	Feedlot in Louis Trichardt, Limpopo.	Not specified.
27	Piet Warren Plase	Feedlot in Gravelotte, Limpopo.	Not specified.
28	Poppieland Trust	Feedlot in Bultfontein.	Not specified.
29	Ranch Estates	Feedlot in Delmas.	Not specified.
30	SIS Farming	Feedlot with own abattoir in Witbank.	22 000 beef animals at any time.

No.	Name	Description	Capacity
31	SKS Boerdery	Feedlot in Middelburg.	Not specified.
32	Sparta Beef	Feedlot and farming concern with own abattoirs.	40 000 beef animals at any time.
33	Taaiboschbult	Owned by Bull Brand	Not specified.
34	Theron Boerdery	Feedlot in Pretoria.	Not specified.
35	Triple C Feedlot	Feedlot in Dundee.	Not specified.
36	Vencor	Feedlot with abattoir in Polokwane, Ladanna.	Not specified.
37	Vercuiel	Feedlot in Stella.	Not specified.
38	Windhoek Boerdery	Feedlot in Polokwane.	Not specified.
39	Vergezight Feedlot	Feedlot in Heilbron.	Not specified.