JD NYABAMBA FARMS

VERTICALLY INTEGRATED MEAT AND DAIRY PROJECT

BUSINESS PLAN

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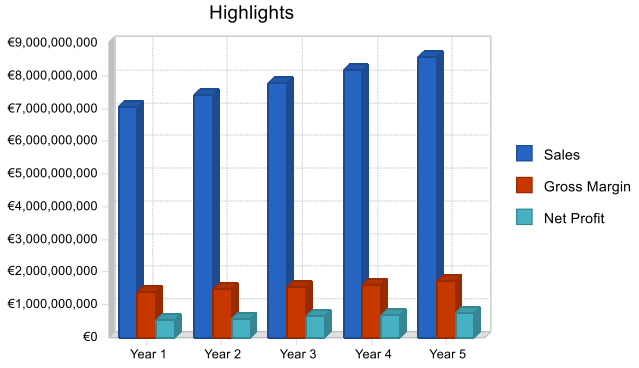
1.0 Executive Summary

JD NYABAMBA FARMS is a newly established agribusiness company intending to be engaged in the production of processed food. It intends to operate through the following segments: Chicken, Beef, Pork, Fish, and Dairy. The Chicken segment will be involved in domestic operations related to raising and processing live chickens into fresh, frozen, and value-added chicken products, as well as sales from allied products. The Beef segment will include operations related to breeding and processing live fed cattle, sheep and goats and fabricating dressed beef carcasses into primal and sub-primal meat cuts and case-ready products. The Pork segment will comprise of operations related to breeding, fattening and processing live market hogs and fabricating pork carcasses into primal and sub-primal cuts and case-ready products. The Fish segment will adopt the RAS technology to the cultivation and production of premium grade fish. The Dairy segment will fresh milk and related products.

Vertically integrated food production has been a dream of John Nyabamba's ever since he visited JBS Foods in 2019. John was impressed with the operations of JBS of controlling the production processes from breeding to processing, and vowed to establish a similar operation in Tanzania.

Chart: Highlights



1.1 Objectives

- Achieve annual sales of more than [illegible]
- Create jobs as we expand our operation
- Produce premium grade meats
- Develop a sustainable business, surviving off its own cash flow

1.2 Mission

The company aims at consistently producing world-class standard food products, not only in terms of their eating quality, but also with regard to the integrity of the supply chain which backs them up.

1.3 Keys to Success

- Purchasing good breeds of animals
- Receiving animals in a proper way
- Having excellent feed milling and storage facilities
- Giving the livestock high quality feed
- Efficient delivery of feed
- Providing the required medication and vaccination to livestock..
- Minimizing feed cost
- Good environmental management

2.0 Company Summary

JD NYABAMBA FARMS is a newly established agribusiness company focused on supplying consistent, safe, quality and wholesome meat products to various customers spread across the world. We intend to be East Africa's leading integrated meat producer focusing on breeding, backgrounding, feedlotting and processing of livestock.

At JD NYABAMBA FARMS we aspire to be Tanzania's trusted supplier of meat products and set the benchmark for excellence in the local meat industry. We strive to be recognized for our commitment to the highest standards of productivity, hygiene, housekeeping and general maintenance. Our heritage and future are firmly Tanzanian. Through the use of innovative farming and feeding techniques and good business practices, JD NYABAMBA FARMS remain committed to producing quality meat and grain commodities. Such practices will continue to fuel the growth of JD NYABAMBA FARMS.

Our focus is to consistently provide the finest meats to our valued customers and we will achieve this by owning and controlling each step of the production process. From our breeding and livestock selection programs to our vast livestock stations and backgrounding properties to our finishing and processing facilities, this control ensures the highest standards and level of care are maintained throughout, delivering consistent quality and flavour.

2.1 Company Ownership

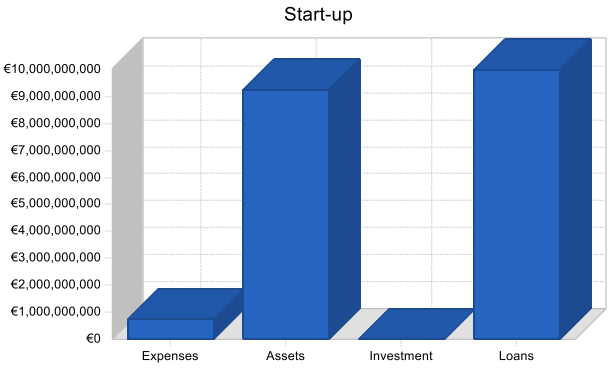
JD NYABAMBA FARMS is a privately owned company. It is owned and operated by John D Nyabamba and Derek Nyabamba.

2.2 Start-up Summary

The following table and chart illustratesprojected initial start-up costs for the firm.

Table: Start-up

Chart: Start-up



2.3 Company Locations and Facilities

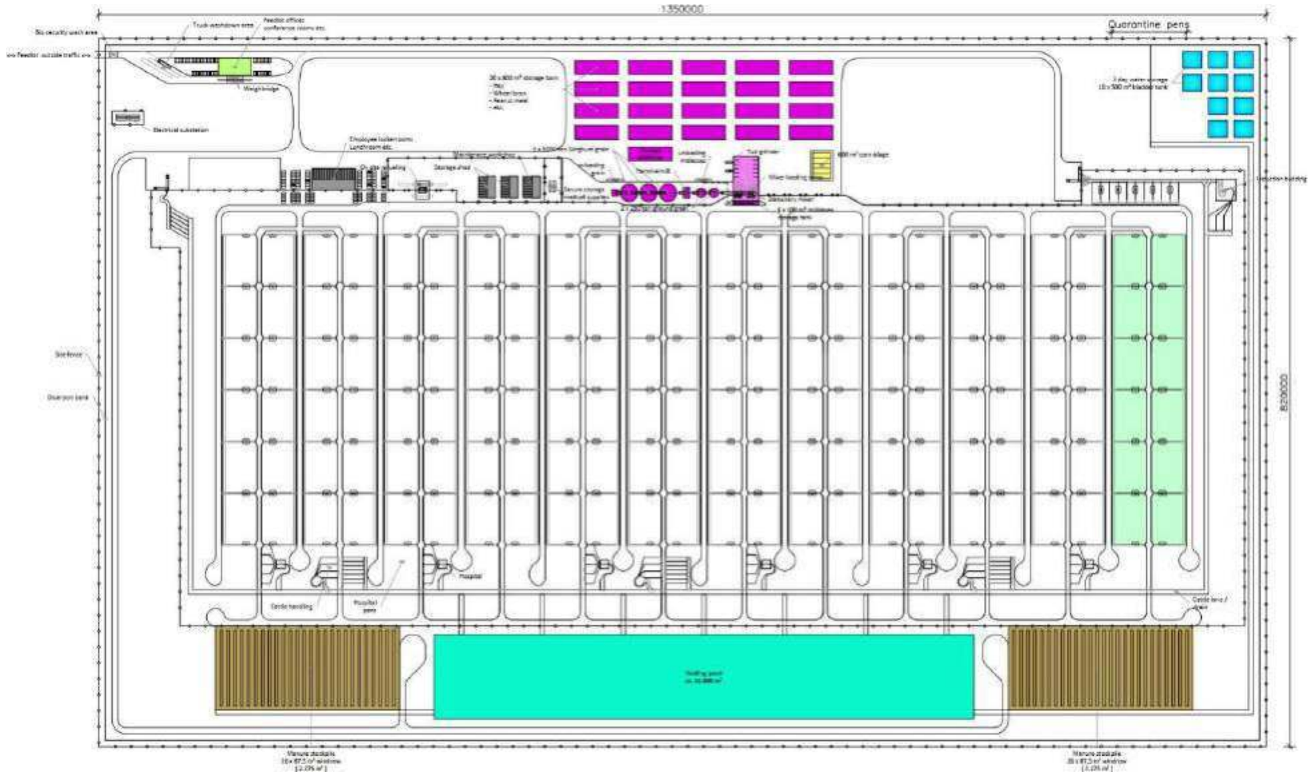
At present we are located in Arusha, Tanzania. Our offices are at Plot No. 225 Block C Njiro Arusha.

3.0 Industries

The company intends to be involved in the following industries: Hog production and processing, beef production and processing, broiler production and processing, sheep production and processing, and fish production and processing

JD NYABAMBA FARMS intends to be a national leader in animal protein production, with production facilities, sales offices, feedlots, distribution centers and transportation hubs. JD NYABAMBA FARMS will be a leading processor of beef, fish, pork, chicken and lamb in Tanzania.

3.1 Beef & Lamb Project



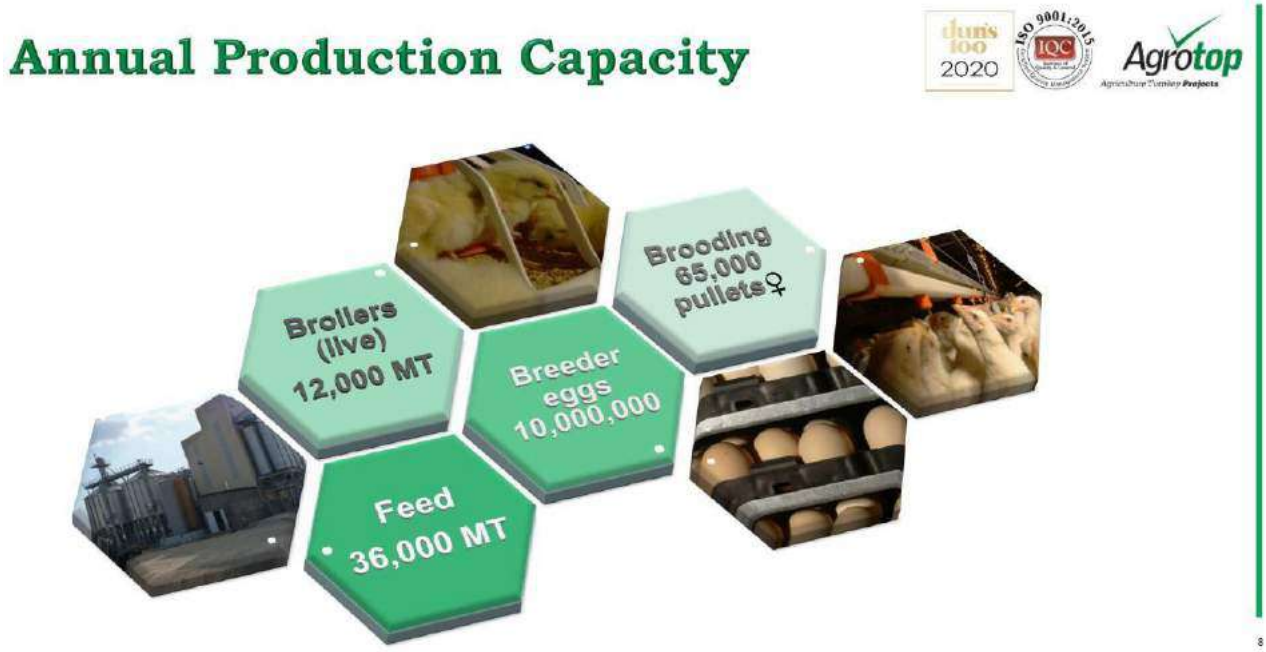
The project envisages establishing a vertically integrated meat project based on a production model which includes the highest quality and food safety standards, certified with a traceability system from the farm to the table, guaranteeing healthy and safe food, of the highest quality and produced with a low environmental impact. The project will include the following:

- Breed nucleus facilities for 36,000 key beef cattle breeds and lambing pens for 72,000 key goats and sheep breeds.
- Backgrounding facilities for 72,000 calves, bucklings, and lambs.
- A buying operation of quality local calves, sheep and goats from farmers throughout the country for fattening in our feedlots and eventual slaughter.
- A 1,250,000 cattle and 72,000 sheep and goats feedlot with a capacity to turn off 1,400,000 cattle and 3,540,000 goats and sheep a year to produce 14,000 tonnes of beef for domestic and export markets.

- A farming operation of 72,000 acres using centre pivots to produce maize, soya, lucerne and forage sorghum for either daily supply to the farm or as silage or hay
- A most modern livestock feed centre with a fully automated milling plant utilizing a bank of eight 24" x 56" steam flaking mills which will produce 240 tonnes per hour to efficiently process steam-cooked grain.
- A Halal certified abattoir with a capacity for processing 128,000 cattle and 192,000 goats and sheep per month.
- A beef grading centre, in accordance with EUROP standards to make sure that our beef will be competitive in the international beef markets.
- A rendering plant to process animal by-product materials for the production of tallow, grease and high-protein meat and bone meal.
- A Gasification System to convert manure from the feedlot into electricity, steam and biochar
- A water treatment plant to turn the wash down water into irrigation water for our pastures

Technology and management for the project will be sourced from USA, New Zealand and South Africa. By employing the latest available technology, the facility will be able to effectively compete with the best in the world by ensuring traceability from the farm of origin to the end user, carcass grading, and producing highly marbled and prized meat products.

3.2 Chicken Project

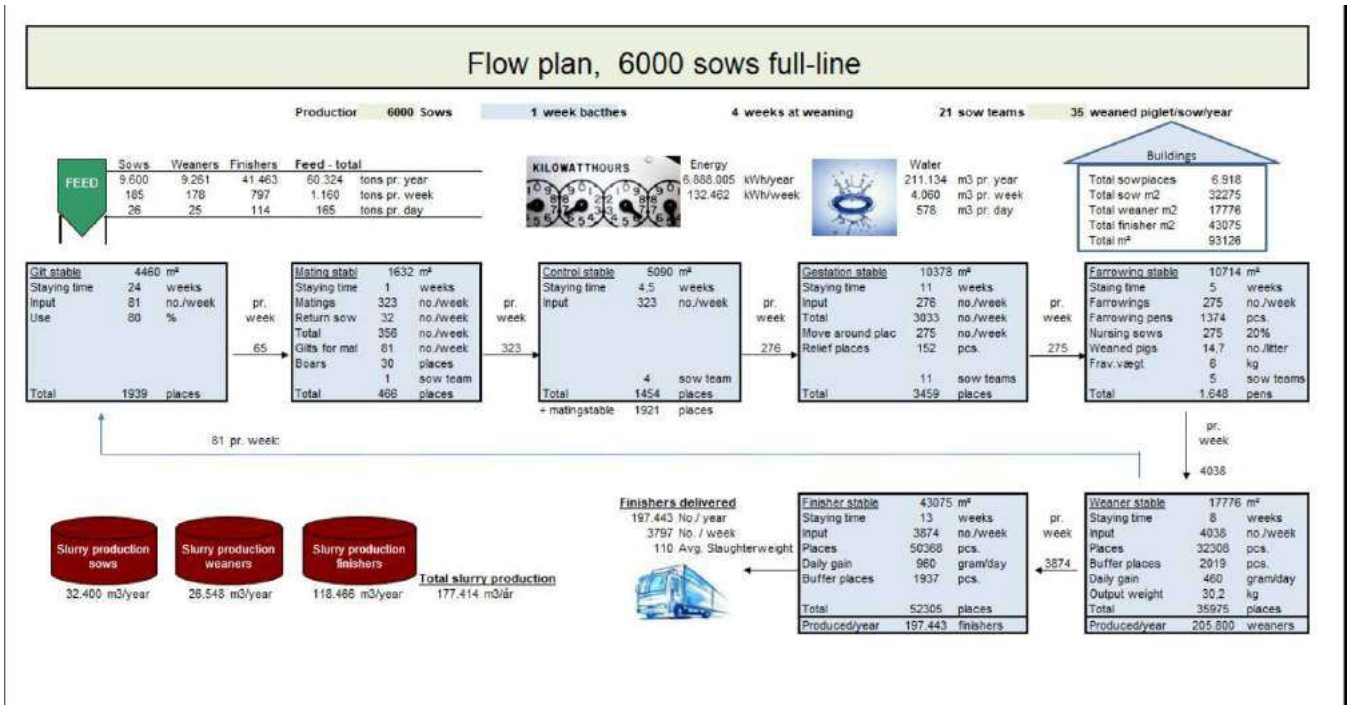


This will include the following:

- A [illegible] for 2,000 Day Old Chicks (DOC)
- A breeder farm for 25,000 female and 2,500 male breeders
- A broiler farm with a capacity for 3,600,000 broilers per annum.
- A hatchery with a capacity for 50,360,000 eggs
- A feed mill with a capacity of 20,000 metric tonnes
- A slaughterhouse with an annual capacity of 50,000 metric tonnes (25,000,000 birds)
- A chicken incinerator plant
- A wastewater treatment plant

For this project technology and management is sourced from Israel.

3.3 Pork Project



The project will consist of the following:

1. Facilities for 48,000 sows.
2. 1,2[illegible]0,000 finishers annually each 110kg.
3. Producing 320,000 tons of feed per year.
4. [illegible],504 Mating/Gestation units
5. 12,270 Farrowing pens
5. 9,728 weaner pens
7. 35,152 Finisher pens
8. Slaughtering facilities for 1,526,000 pigs annually.

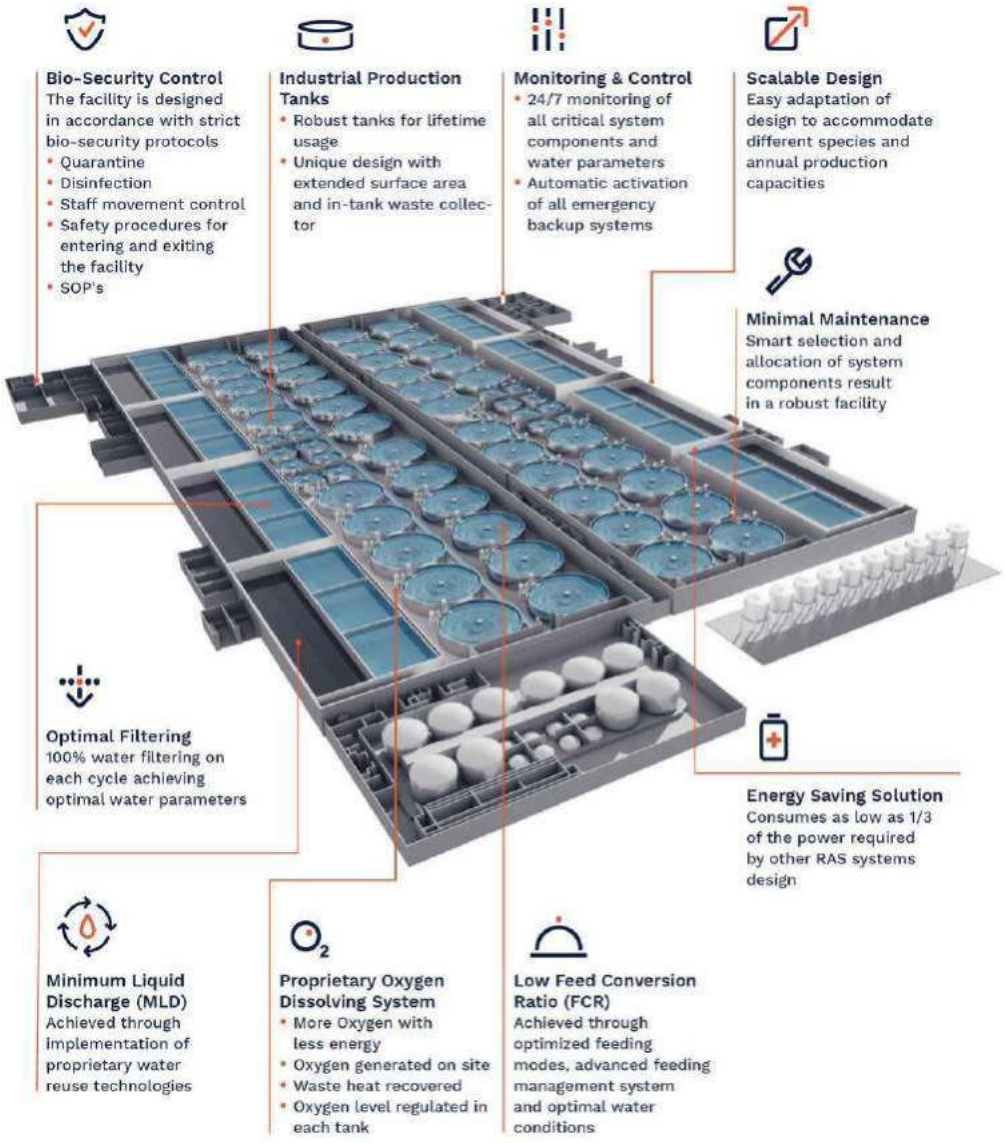
Technology and management for the project will be sourced from Denmark.

3.4 Dairy Project

To set up a modern, high-tech dairy farm of 100,000 cows and processing plant with a capacity of 2,500,000 litres per day to produce top-quality raw milk. Milk quality to comply with the highest standards.

Under the auspices of Israeli professionals to established the first institute for training farm managers in Tanzania, which is to be located close to the farm.

3.6 Fish Project



This project intends to deliver the following:

1. A complete land based commercial shrimp production from egg to harvest harvesting 6,000 tons per annum.
2. A complete land based commercial nile perch production from egg to harvest harvesting 10,000 tons per annum.
3. A complete land based commercial tilapia production from egg to harvest harvesting 10,000 tons per annum.

Technology will come from Israel

3.5 Competitive Comparison

Below are JD NYABAMBA FARMS' competitive advantages, all of which represent key strengths that are essential for enabling it to achieve its strategic goals .

Leading Position in Domestic Markets

This project will make JD NYABAMBA FARMS East Africa-largest company in terms of the production and sale of fresh beef, lamb, fish, poultry and pork and of prepared foods products based on animal proteins.

This leadership will allow the Company to take advantage of market opportunities, expand its business and increase its share in domestic and international markets. Furthermore, its brands recognition as symbols of quality in its markets in both East Africa and abroad, which allows the Company to expand its leadership.

Diversified, Vertically Integrated and Efficient Business Model

The business model of JD NYABAMBA FARMS combines controlling costs in the production of various value-added products on an integrated basis in strategically located production units.

- Constant control of production costs: the company's operational platform is located in Tanzania and offers access to a wide range of resources and significant gains in cost competitiveness in the agricultural chain, especially in the case of inputs for animal feed.
- Diversified product portfolio: an extensive line of value-added processed products made from beef, lamb, poultry, fish and pork gives JD NYABAMBA FARMS the flexibility to adapt its production to market demands and seasonality.
- Geographic distribution of production units: located in Tanzania, besides producing its own soybean and corn, JD Nyabamba Farms production units are generally near other soybean and corn producers, the main raw materials for this type of business, as well as being close to major consumer centers and logistics pathways for exports.

Distribution with a Global Reach

We have so far agreed with the companies below to represent us and market and sell our products in the United Arab Emirates (UAE) and Gulf Cooperation Countries (GCC) once products starts.

1. Global Foods LLC
2. Gobana International LLC

We are in negotiations with other reprsentatives in Europe, China & Asia. The Company's diversified sales and distribution network reduces its dependence on specific markets or clients and its exposure to risks and cycles, giving it greater flexibility to take advantage of growth vectors and trends.
To extend its global reach, JD NYABAMBA FARMS will adopt a strategy of strengthening and expanding its brands internationally and entering countries that it believes offer the possibility of profitable operations.

Integrated Meat Production System, with a Continuous Focus on Food Quality and Safety and Sustainability of the Production Chain

All productions by JD NYABAMBA FARMS is vertically integrated, meaning that the Company produces 100% of its parent pullets, calves, bucklings, lambs and hogs, which brings advantages such as:

- greater control over sanitary conditions, thereby reducing the risk of disease;
- greater control over the nutritional conditions of livestock, leading to gains in feed conversion , standardization of lots and lower mortality; and
- lower costs with livestock compared to rest of the industry.

JD NYABAMBA FARMS is permanently focused on maintaining the highest food safety and quality standards, which are essential for meeting client specifications, preventing contamination and reducing the risk of animal disease epidemics. As such, it employs modern tracking systems to quickly identify and isolate any farm that presents a cause for concern regarding quality or health. It also monitors the treatment of livestock during all stages of their lives and during the entire production process. In addition, the company is also concerned with structuring all stages of its production chain aiming to foster sustainable development.

Geographic Proximity to Key Consumer Markets: The Middle East imports 50% of its food and 90% of its beef. India, Pakistan, and Australia currently fulfil most of the region's beef demand, yet Tanzania has a geographic advantage, offering lower costs and longer shelf-life. Tanzanian meat can be on shelves only 5-7 days after production, boosting retailer margins versus Latin American or Asian products that can take 2-3 times as long. There is potential for Tanzania to capture market share.

Abundant Stock at Low Prices: Tanzania has the second largest livestock inventory in Africa and seventh-largest in the world, but its share in the global meat export market is barely 1% - presenting enormous scope for growth.

Tanzania also Provides a Key Advantage in Feed Production: Feed is a critical input to beef production, comprising 40-70% of the cost of raising cattle. In Tanzania, key inputs such as maize, sorghum, soybean oil cake, cottonseed oil cake, and others are locally available.

3.6 Technology

Technology for cattle farming and beef processing will come from South Africa, USA, and the Nerthelands. Whislt technology for pig farming ang pork processing will come from Denmark. Technology for fish and poultry production and processing will come from Israel.

4.0 Market Analysis Summary

Meat demand is projected to slowing down globally but better prospects in low and middle income countries. The shift in meat consumption from foodservice to home cooking that occurred during the COVID pandemic is expected to be short term and will revert to prior expenditure patterns as restrictions are lifted. In high income countries, however, where per capita consumption is already high, demand is anticipated to level off or trend lower given ageing populations and greater dietary concerns that seek more diversity in protein sources. In lower income countries, both population and income growth will spur higher overall consumption, albeit from a much lower per capita base level. Recovery in meat consumption in the People's Republic of China (hereafter "China"), which fell in per capita terms by over 11% in 2020 from its historical peak in 2018, is projected to return to its longer-term trend by 2023, as the impact on domestic pig meat prices of African Swine Fever (ASF) abates. Per capita global meat consumption, once China pork consumption recovers, is expected to stabilise around 35.6 kg/year in r.w.e. by 2031. The long-term shift in meat consumption toward poultry continues to strengthen. In high-income countries this trend is due to a rising preference for white meats that are more convenient to prepare, and which are perceived as a better food choice. In low- and middle-income countries, the upward trend is additionally due to the lower price of poultry compared to other meats. Globally, protein availability from poultry, pork, beef, and sheep meat is projected to grow 16%, 17%, 8%, and 16%, respectively, by. Poultry meat is projected to constitute 47% of the protein consumed from meat sources, followed by pig, sheep and bovine.

Global meat supply will expand to meet rising demand over the projection period reaching 377Mt by 2031 but growing slower than the last decade. Global herd and flock expansion, especially in China, combined with continuous improvement in animal breeding, management, and technology will increase productivity, particularly in low- and middle-income countries, which will drive the growth in production. Higher prices for meat early in the projection period will induce a supply response, albeit restrained by higher costs for inputs, particularly for feed, energy, and transport. Bottlenecks in processing capacity witnessed during the height of the pandemic are expected to ease. China is projected to account for most of the total increase in meat production, followed by the United States, Brazil and India. By contrast, in the European Union meat production will decrease over the outlook period due to increasing domestic and environmental costs, and reduced export opportunities due to greater competition on global markets. The increase in global meat production is influenced mainly by growth

in poultry meat. Global growth in pig meat production will remain limited in the first years of the Outlook due to the ongoing recovery from the outbreaks of ASF in China, the Philippines and Viet Nam. The recovery process is assumed to be completed in China and Viet Nam by 2023 and in the Philippines by 2024. Government strategies in the latter two are based on the development of a commercially available vaccine to control the spread of ASF, which will be critical in reducing the risks of future ASF outbreaks. The current projection foresees a global increase in livestock inventories with cattle, pigs, poultry and sheep rising to 1.8, 1.0, 31.0 and 2.9 billion head, respectively. As a result, greenhouse gas (GHG) emissions by the meat sector are projected to increase by 9% by 2031. This increase is considerably less than the 15% increase in meat production given the rising share of poultry, and productivity increases that yield higher production of meat per animal, and thus a lower ratio of GHG emissions per unit of meat output. An important exception is in Africa where emissions will rise by 24% largely in parallel with its rise in production. International meat trade will expand in response to growing demand from high per-capita income growth in Asian countries and by high population growth in Sub-Saharan Africa. Import demand in middle and high-income Asian countries has been steadily increasing in recent years due to a shift toward diets that include higher shares of animal products. The expected decline in China's pork imports will put pressure on global pork markets as they re-adjust to a post-ASF situation. Trade in other meats will continue to grow, albeit at a slower pace than in the last decade. This Outlook projects that nominal meat prices are anticipated to remain high in 2022, as demand in some middle- and high-income countries continue to recover from the COVID-19 pandemic and underpin market demand, while supplies remain tight. Real prices of all meats are foreseen to return to their long-term downward trend levels over the Outlook period as supplies respond to price incentives, and productivity gains are realised. The projections assume that aside from demographic, income, and price factors, evolving consumer preferences will shape diets. Meat consumption patterns of consumers in some high-income countries have reached a turning point at which overall demand has started to stagnate and shifts will occur based on the type and the quality of the meat consumed. Dietary recommendations advising limited red meat consumption as well the changing consumer's preferences towards alternatives to conventional meat proteins over the past years are having a greater impact on consumer purchases.

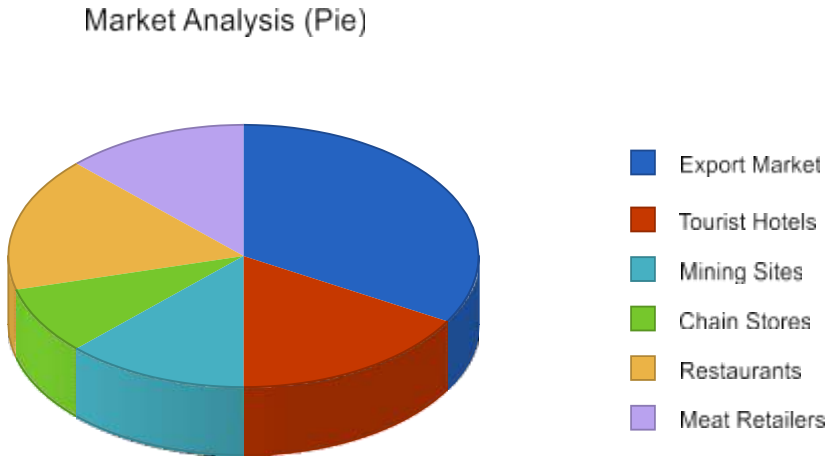
4.1 Market Segmentation

JD NYABAMBA FARMS will target the export market, tourist hotels, and quality-conscious consumers looking for specialty meats. Lastly, JD NYABAMBA FARMS will target larger retail grocery establishments where locally produced specialty products have been growing in popularity.

Table: Market Analysis

Market Analysis							
Potential Customers	Growth	Year 1	Year 2	Year 3	Year 4	Year 5	CAGR
Export Market	5%	200	210	221	232	244	5.10%
Tourist Hotels	5%	100	105	110	116	122	5.10%
Mining Sites	2%	75	77	79	81	83	2.57%
Chain Stores	3%	50	51	52	53	54	1.94%
Restaurants	2%	100	102	104	106	108	1.94%
Meat Retailers	2%	75	77	79	81	83	2.57%
Total	3.71%	600	622	645	669	694	3.71%

Chart: Market Analysis (Pie)



4.2 Target Market Segment Strategy

JD Nyabamba Farms primarily focuses on its target market, the export market, tourist hotels, mining sites, chain stores, restaurants, and meat retailers, through direct selling via its various relationship and referral networks. In addition, a significant amount of investment will be made in advertising to promote product awareness. Direct selling is far more effective in closing sales as well as in terms of sales and marketing costs.

JD Nyabamba Farms will use the tool of product demonstrations at its site to close sales. Potential clients' travel costs to JD Nyabamba Farms' site for product demonstrations will be covered by JD Nyabamba Farms. Product demonstrations are a critical step in the sales process. This is the opportunity to prove the capabilities of our products, educate the potential client, and establish a relationship.

4.2.1 Market Needs

Tourist Hotels and Local Retail Food Service Demand

- Tourist hotels and Local food retailers want highly prepared products. This means that any new business which wants to capture a significant proportion of this market must have butchery and processing facilities plus the related skills.
- These markets want year round supply of a consistent product. This is a major challenge for a meat supplier based on a local abattoir.
- Local product is attractive to local people, but there is price sensitivity.
- Tourists do want local meat products and this segment could grow with the expansion of the tourism business. However, the demand will be for well processed, packaged and presented products.

Export Demand

- To export high priced niche products will require excellent processing, marketing and distribution facilities and skills. An abattoir is secondary.
- To export into volume markets from an abattoir with minimal butchery facilities means competing on price with much bigger businesses.

4.2.2 Market Trends

Market prices rise despite higher supplies World meat production rose 5% in 2021 to an estimated 339 Mt, led by a large 34% increase in pig meat production in China following two years of precipitous decline induced by an outbreak of ASF. Supplies of

poultry, bovine and sheep meat rose only marginally as high feed prices reduced profitability. Bovine meat output in some countries was restrained by a variety of factors such as COVID-19 related disruptions, labour shortages, the on-going shrinkage of the dairy herd in the European Union, and the implementation of an export tax in Argentina. On the other hand, beef output increased 12% in India as slaughter numbers increased following the gradual reopening from the COVID-19 pandemic lockdown and in response to improving demand from overseas markets in the Middle East and Southeast Asia. World meat imports in 2021 are estimated to have reached 40 MT, led by poultry imports. Leading meat exporters – including Brazil, the European Union and the United States – supplied much of this higher import demand. International meat prices quoted in the Outlook trended upward in 2021, reflecting higher demand from economic recovery and higher marketing and transport costs. However, meat to feed price ratios fell significantly, putting pressure on sectoral profitability in intensive feed-grain livestock operations. This will cause markets to tighten further inducing higher prices early in the Outlook period.

4.2.3 Market Growth

Consumption Meat demand is weakening in high income countries, with a shift to white meat Population growth is a major driver of increased demand, and its projected global increase of 11% will underpin an estimated growth of 15% in global meat consumption by 2031, compared to the base period of this Outlook. As well as population growth, determinants of meat consumption are complex including income, prices, demographics, urbanisation, traditions and religious beliefs, as well as environmental, ethical/animal welfare and health concerns. The past several decades have witnessed considerable changes in the impact of each of these factors across a broad array of countries and regions. Economic growth is an important driver of meat consumption as it enables the purchase of meat, which is typically a more expensive source of calories and proteins. It is also accompanied by other structural changes such as greater urbanisation, higher labour participation, and away-from-home food service expenditures that additionally encourage higher meat purchases. However, the response of consumption to income growth is demonstrably higher at lower incomes, and less so at higher incomes where consumption is largely saturated, and consumers may be more sensitive to environmental, and ethical/animal welfare and health concerns. Recent analysis suggests that at a GDP per capita exceeding about USD 40 000, growth of GDP is no longer a driver of growth in meat consumption. Countries appear to be grouped into two clusters: one in which increases in GDP per capita matches increases in meat consumption (cluster 1); and a second one of nine countries (cluster 2) in which there is no association between per capita change in GDP and meat consumption (Figure 6.2). The empirical evidence on consumer behaviour

suggests that increases in income in low-income countries, where the share of food expenditure represent a high share of all expenditure, stimulate a higher consumption of lower valued foods, particularly carbohydrates. Beyond a certain threshold, higher valued foods such as animal proteins are preferred. For meat proteins the evidence suggests that the shift towards higher shares of meat protein in the diet have increased the most for upper middle-income countries, particularly China. However, after 2015 it appears that the dietary shift towards increasing amount of meat proteins as a share of total protein intake has slowed. These trends are not anticipated to change much over the next decade. Higher incomes may induce higher per capita protein consumption (including eating away from home), but not necessarily a higher share of meat protein in diets.

Research has found that the main motivations prompting consumers in higher income countries to shift towards a diet that excludes or reduces meat products and re-allocates among meat products (e.g. red vs white meat) are those relating to animal welfare and health. Consumer research has also examined attitudes and behaviour towards meat consumption in relation to environmental concerns. The results show that the number of consumers willing to stop or significantly reduce meat consumption for environmental reasons or who have already changed their meat intake for ecological concerns still represent a small minority of global consumers, which is however of growing significance among young Europeans who are adopting environmentally motivated meat curtailment.
Poultry meat consumption has risen in virtually all countries and regions. Consumers are attracted to poultry due to lower prices, product consistency and adaptability, and higher protein/lower fat content. Consumption of poultry meat is projected to increase globally to 154 Mt over the projection period, accounting for nearly half of the additional meat consumed. On a per capita basis, these robust growth rates in poultry consumption reflect the significant role it plays in the national diets of several populous developing countries, including China, India, Indonesia, Malaysia, Pakistan, Peru (which will surpass the United States to become the second largest per capita consumer), the Philippines and Viet Nam. Global pig meat consumption is projected to increase to 129 Mt over the next ten years and to account for a third of the total increase in meat consumption. However, on a per capita basis, global consumption is expected to stagnate over the outlook period. Pork will remain the meat most eaten in the European Union over the coming decade, even though it will remain stable in per capita terms as changes in diets will favour poultry as a cheaper and perceived better food choice. In most of Latin America favourable relative prices have positioned pork and poultry as the favoured meats to meet rising demand from the middle class. Several Asian countries which traditionally consume pork such as Korea and Viet Nam, are also projected to increase consumption on a per capita basis. Global beef

consumption is projected to increase to 76 Mt over the next ten years. However, per capita consumption has declined since 2007 and is projected to fall by a further 2% by 2031. Asia and the Pacific is the only region where per capita beef consumption is projected to increase over the outlook period, albeit from a low base. In China, the world's second largest consumer of beef in absolute terms, per capita consumption is projected to rise a further 10% by 2031, after having risen 50% in the last decade. But most countries that have high beef per capita consumption will see the level decline in favour of poultry meat. For example, in the Americas and Oceania, which is where preference for beef are among the highest in the world, per capita consumption will fall in Argentina(-5%) and Canada (-2%), Brazil (-2%), the United States (-4%), and, significantly (-15%), in Oceania. Global sheep meat consumption, a niche market in some countries and considered a premium component of diets in many others, is projected to increase to 18 Mt over the outlook period and to account for 5% of the additional meat consumed. Sheep meat consumption worldwide, on a per capita basis, is comparable in both developing and developed countries. In some Near Eastern and North African (NENA) countries, where sheep meat is traditionally consumed, per capita consumption is projected to continue its long-term decline despite increasing disposable income. 6.3.2. Production Poultry meat remains the primary driver of growth in meat production Global meat production is projected to reach 377 Mt based on increasing profitability in the early years of the outlook period as meat prices rebound post-COVID-19 and feed costs decline. Overall, most meat production growth will occur in developing regions. The market share of the Asia and Pacific regions will return to its historical level, after dipping during the ASF crisis, mainly due to developments in China which is the world's largest meat producer. The production share of the world's top five meat producers – China, the United States, the European Union, Brazil, and the Russian Federation (hereafter "Russia") – will gradually trend downwards from its current level. This downward trend reflects a decline in production from the European Union and an emerging broader base of global production. Globally, livestock expansion will be facilitated by the increasing size and consolidation of production units towards a more integrated systems, especially in emerging developing countries.

Poultry meat will continue to be the primary driver of meat production growth increasing 16% by 2031. With favourable meat-to-feed price ratios compared to other ruminants, together with a short production cycle, poultry producers can respond quickly to market signals while taking on board rapid improvements in genetics, animal health, and feeding practices. Production will expand from sustained productivity gains in Brazil, China, India, Indonesia, and the United States. Expansion is also foreseen in Asia as the shift away from pig meat triggered by several ASF outbreaks will benefit poultry in the medium term.

Pig meat output is projected to rise by 17% by 2031, up from an ASF-reduced base level 2019-2021 and benefiting from increasing specialisation of the sector and biosecurity measures. The ASF outbreak across Asia, starting in late 2018, will continue to affect many countries in the early years of the outlook period, with China, the Philippines and Viet Nam experiencing the greatest impact. It is projected that ASF outbreaks will continue to keep global pig meat output below previous peak levels until 2022, after which it is expected to steadily increase to 2031. Pig meat production in China is expected to continue to increase and attain pre-ASF (2017) levels by 2023. Most of the pig meat production increase in ASF-affected regions will be due to conversion from largely small-scale backyard holdings to large-scale commercial enterprises. Viet Nam, which has suffered from ASF-reduced output since 2019, is projected to become the sixth largest pig meat producer just below Brazil and Russia. Its domestic policy rests on vaccination to control the spread of ASF, and trials have proved to be safe and efficient. As a result, Vietnamese production is projected to recover to 2019 levels by 2023 and to grow further over the projection period. Pig meat production in the European Union is projected to decline as environmental and animal welfare concerns are expected to limit domestic demand while the decline in imports by China also weigh negatively on trade prospects. Brazil and US production are also expected to fall at the start of the Outlook in the face of the expected decline of Chinese import demand and high feed costs. On the other hand, their production will remain high given their strong competitive position in global markets. Beef production will grow to 76 Mt by 2031, with slow growth attributable to weak beef demand as consumers continue to shift preferences to poultry meat. In North America, the largest producing region, a modest herd expansion, is projected to increase beef production by 4% by 2031. Production in the European Union is projected to fall as inventories of dairy cows, responsible for approximately two-thirds of the beef supply, decrease following productivity gains in the milk sector. Other factors limiting the growth potential of this sector in the European Union are a reduction in suckler cowherds due to their low profitability, steep competition in export markets, and declining domestic demand. The beef sector is the main beneficiary of the European Union's voluntary coupled support programme, and a relatively good price outlook will dampen the downward trend of production in the European Union. Beef and carabeef1 production in India rebounded in 2021 after recording a large decline in 2020 in part due to COVID-19 lockdown and regulations on animal welfare in several Indian states. The largest historical increase in beef supply was recorded in 2021 as the Indian government implemented measures to facilitate processing and slaughtering of bovine and water buffaloes in particular. India's cattle production is expected continue to grow over the projection period with improvement in breeding, nutrition, and animal health. Pakistan is projected to have the strongest growth rate of any country at 26%, as calf and milkproducing cows are being slaughtered to meet the high demand of

meat protein from the Middle East. In Australia, which has faced a COVID-related shortage of labour, production is projected to increase due to greater cattle availability and the return of labour to processing plants. Overall, beef producers have greater ability to increase slaughter in the short term but have less flexibility to increase carcass weights with high feed prices. Therefore, in the early years of the Outlook beef production will be higher due to more slaughtering of lower weight animals. Growth in sheep meat production will mostly originate in Asia, led by China, India, and Pakistan but significant increases are also projected in Africa, particularly in the least developed countries of SubSaharan Africa. Despite limitations linked to urbanisation, desertification, and the availability of feed in some countries, sheep and goats are well adapted to the region with their extensive production systems. In Oceania, New Zealand sheep meat production is expected to remain stable due to competition for pastureland from the beef and dairy sectors and forestry. The larger availability of sheep meat in Australia will enable it to respond to growing global demand despite being constrained by its currently small sheep flock.

4.3 Industry Analysis

Tanzania counts with the third largest livestock population on the African continent and the livestock sector contributes to more than one tenth of the overall Gross Domestic Product (GDP). However, value added particularly from Cattle, Sheep and Goat – the red meat sector – is marginal depriving many people in rural areas, particularly traditional herders and small– scale farmers, but also urban dwellers from income opportunities related to improved animal production and value addition activities. Meanwhile, with the exception of a very small high–price quality meat segment, slaughtering and meat handling throughout the country is substandard and causes enormous food safety and health hazards to the majority of the population.

Primary production: The livestock population in the country both from traditional and commercial production is increasing as some farmers adopt improved production systems such as feedlotting, and commercial producers respond to the demand for quality meat by niche and export markets. However, the optimum potential of the sector is yet to be realized and this is coupled with underutilized existing genetic potential of the indigenous and exotic breeds, poor rangeland management, limited feeds resources and feeding technology, inadequate diseases control, poor financing, etc.

Processing capacity: The red meat value chain is considered to produce various

products and by-products that need to be recovered and processed into valuable products in order to generate higher value, better prices for producers and reduce environmental pollution. The potentials which the livestock rearing and meat production sector offers have only been utilized marginally. The existing custom service slaughtering facilities operate below 50% of installed capacities because most traders and butchers prefer using traditional lower cost facilities. The reason for this are limited access to premium markets, lack of entrepreneurial dynamism by the operators, inadequate enforcement of meat quality legislations, technology used and limited consumers' knowledge about quality meat. In consequence, quality and food safety standards are not complied with and the health risks at the various slaughter and meat selling points are peculiar. Also there is limited capacity to handle wastes generated from meat processing facilities. It is crucial to revitalize the existing slaughter facilities, establishing new facilities especially at strategic production and market points and instituting the use of appropriate technologies.

Market and trade: Marketing of livestock in the country is carried out at various levels of livestock markets, where pricing is through negotiation, grading and weighing normally based on visual estimation. The existing marketing infrastructures are dilapidated with limited essential infrastructure such as weighing bridges to facilitate efficient marketing. Auctioning of livestock at the markets is often the method of marketing. Meat, meat product and by-products are mostly marketed by individual businesses retailers and meat processing companies while exportation of hides and skins are undertaken by specialized exporters. The retailing of meat is mostly done through privately owned butcheries located all over the country. The butchers face serious shortage of appropriate tools and equipment used in meat handling and cutting. Marketing information on red meat value chain, which include different marketing channel for animals and meat and meat products is limited. The demand for quality meat, processed meat products and by-products in domestic and export market is growing. The domestic demand of meat is met by imported products including premium meat cuts, sausages and canned beef. The domestic processing is considered to be insignificant. Still more than 95% of the domestic demand is for warm "mixed meat" (locally known as Nyama Kawaida). Marketing and consumer information campaigns are necessary to raise the awareness of consumers' vis-à-vis quality and safety issues and also raising the demand for value added meat products.

Value chain governance: The red meat value chain is dominated by traders and butchers – few of them actually are of considerable sized and financially endowed with access to credit – who are able to exercise market power vis-à-vis a large number of

small-scale livestock farmers and traditional herders. The public ranching company – NARCO and a number of emerging private commercial ranchers dominate the system of commercial ranching, although the production capacity and influence of these commercial producers on the value chain is limited. Feedlotting is emerging as a valuable input in the livestock production systems and caters primarily for quality meat supply to niche and export markets. Meat retailing also is dominated by individual businesses operating in rich urban areas. In general, vertical integration of livestock farmers, meat processors and traders is limited and efforts for more strategic action steps to be taken by the Tanzania Meat Board are required to bring together stakeholders who can articulate their needs and jointly get to build solid business relationships and a better organization of the chain.

Sustainable production and energy use: The consideration of efficiency in energy utilization for both the traditional and commercial systems is minimal, as animal wastes which are generated across the value chain could be utilized. Dung waste, for example, is the most suitable feedstock for biogas production. The solid and liquid waste produced from slaughter facilities could also be used in the production of biogas to power automated slaughter facilities, cold chain storage and processing operations. The discharged waste from biogas production is a good manure stock for crop and pasture production. In most instances the wastes are piled up in pits and heaps, which cause air, water and environmental pollution. However, for the utilization of the solid and liquid wastes there is limited technology available and investment costs are rather high.

Value chain finance: Finance is insufficient in each and every segment of the red meat value chain. Formal finance from banks and finance institutions is constrained due to limited understanding of livestock rearing, feedlotting, trading, butchering and processing businesses and the inadequate conditions that are applied to the granting of loans. Informal finance through individual, family andfor friends and through delayed and advanced payment in the value chain are prominent. To reduce the credit access difficulties in red meat value chain special credit and guarantee schemes both by the banking and micro- finance sector and the government agencies are required.

Business environment and socio-political context: Though the business environment in the country has improved substantially over the last years in the red meat value chain, conditions are determined by customary rules with much inefficiency. The country has instituted laws and legislations that govern the processing and marketing

of meat and meat products. The Tanzania Bureau of Standards (TBS) has set the meat standard. The Tanzania Food and Drug Authority (TFDA) in collaboravtion with Tanzania Bureau of Standards (TBS) regulates the processing and marketing of meat and meat products, including the inspection and certification of processing establishments, packaging, labelling and compliance of products to consumer safety and hygiene standards. The Ministry of Livestock Development and Fisheries tries to oversee the industry through its network of local government authorities and the newly formed Tanzania Meat Board and the associated annual Meat Council. However none of these regulators is able to enforce the regulations and in large part of the country animals and meat are handled inappropriately. Government extension and research services are struggling with lack of funds and skills and are not able to reach out to the large number of livestock farmers and other actors in trading, slaughtering and processing. Overall, there exist a large potential to improve productivity, augment production of cattle, sheep and goats which can provide more income and improved livelihoods to a very large part of the population. This potential is matched with a significant potential to market meat to export markets and higher value added products to domestic niche markets. However, this requires concerted efforts not only on the level of animal husbandry, genetic improvement and feeding but also on the subsequent segments of the value chain including feedlotting (for the fattening of animals), trade, transport, slaughtering, butchering and further processing. Isolated interventions in one of these segments will not be satisfactory. Improvements go vertically across the chain starting with animals of improved genetics, which are raised profitably and then get fattened before slaughtering. Only meat from such animals is able to enter the higher-value market where it needs to be properly cut, transported and packed under very high hygienic conditions. The development of the Tanzanian red meat value chain requires concerted efforts from a wide range of public and private actors.

4.3.1 Industry Participants

In the past, many cultures considered meat a luxury that could only be enjoyed on special occasions or certain days of the week, while today it is a staple that can be found in nearly all restaurants and many kitchens all over the world. The market value of the meat industry is expected to rise from 897.5 billion U.S. dollars in 2021 to over 1.3 trillion dollars by 2027. In 2021, the United States saw the highest revenue from meat products and sausages, nearly twice as much as the second largest meat market in the world, Germany with a created revenue of over 28 billion U.S. dollars. Russia,

France, and Brazil are finishing the top five countries with the biggest revenue from processed meats.

4.3.2 Competition and Buying Patterns

There are a couple of fairly competent competitors for stock in Tanzania. To their disadvantage, these competitors don't have commercial farms and therefore cannot compete with us on matters quality.

Quality Requirements: Quality criteria for meat include sanitary, palatability, tenderness, juiciness and fat content. Good quality meat that fetches premium prices can only be derived from animals of appropriate genetics and well fattened. Presently less than 5% of all animals slaughtered meet these criteria.

Grading of livestock, meat and meat products is an important factor to increase marketing efficiency that would facilitate negotiations of similar products between buyers and sellers. In practice this system is not applied, when used properly it will stimulate the production of quality animals. The Government in collaboration with the Tanzania Meat Board introduced a grading system with four grades that applies to traditionally raised animals as well as to better quality animals. However, the system is yet to be put into practice.

The current meat exporters have standard requirements for the meat but this does not have much influence on production of quality animals. In most cases goat and sheep meat is exported chilled in halves without further processing. In most case, consumers are not in a position to demand for quality meat and meat products, this is because they are not aware of the quality criteria, hygiene and safety issues. However, urban consumers are starting to become more conscious about meat quality. Extending this consciousness to all sectors of the society may be a gradual process and certainly will cause tremendous changes in the entire value chain.

4.3.3 Main Competitors

JD Nyabamba Farms is forming its own market. While there are a few companies that do process meats, ours is the only one that is truly designed to **be vertically integrated.**

5.0 Strategy and Implementation Summary

Target customers: Export market, local tourist hotels, local supermarkets, local food chains, and local residents

5.2 Marketing Strategy

Internet Marketing: The company's website will be a dynamic marketing tool for the company. The website will provide information about our products for target customers.

5.2.1 Pricing Strategy

We are quite aware that one of the easiest means of penetrating the market and acquiring loads of customers for all our produce is to sell them at competitive prices hence we will do all we can to ensure that the prices of our processed and packaged products are going to be what other competitors would look towards beating. We will try and minimize our production costs so that we can offer a more competitive price on the market

5.2.2 Promotion Strategy

We will develop a 3-year promotion campaign of our products, with the aim of positioning our products in the export market as products of the hi¬ghest quality, guaranteeing reliability and safety, as well as to showcase the wide range of our processed products, both in consolidated and emerging markets. This plan will include promotional activities in countries such as Europe,Hong Kong, China, Vietnam, Saudi Arabia, United Arab Emirates, Oman, Bahrain, Kuwait, Qatar, Jordan, Iraq and North Africa. Participating in Major Industry Events: We will also participate in major industry events, including both national and international shows.

5.2.3 Distribution Strategy

Our ability to consistently deliver world-class services to our clients is as important as providing delicious meat products. All JD NYABAMBA FARMS products will be distributed directly from our processing plants to our customers.

We will practise extensive control processes throughout all our operations. Our

principle of efficient control will make it possible for us to satisfy the requirements of even the most demanding clients.

5.3 Sales Strategy

Our strategy focuses first on maintaining the identity with the high-end buyer who appreciates the best available quality, but is also very demanding regarding meat products. We've been able to find these customers using a combination of direct mail catalogs and direct sales to distributors.

For the next year we continue to focus on growing presence in the high-end direct mail catalog that finds our specialty customer.

5.3.1 Sales Forecast

The following chart and table show our present sales forecast. We have assumed working on one 8-hour shift per day for 5 days per week.

Table: Sales Forecast

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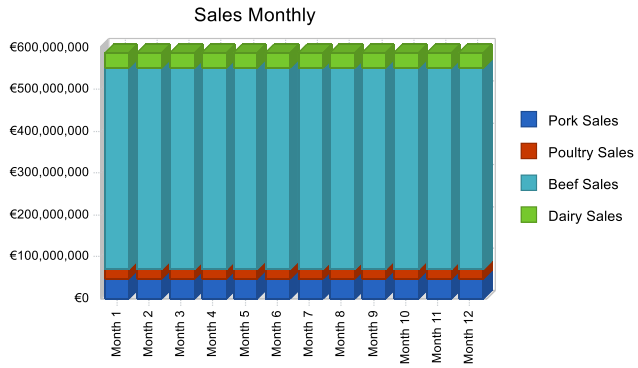
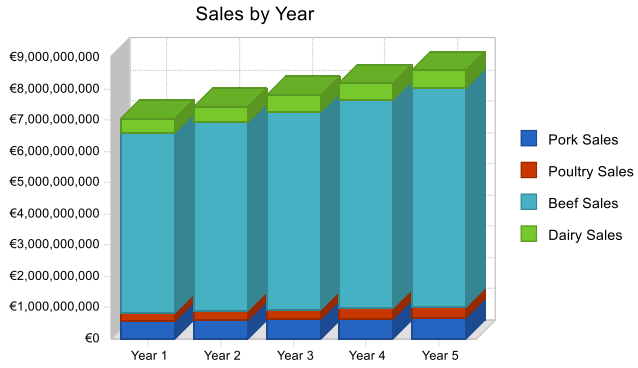




5.4 Strategic Alliances

We have entered into strategic alliance with RFID EXPERTS AFRICA, ACO FUNKI, AGROTOP, AFIMILK and AQUAMAOF for this project.

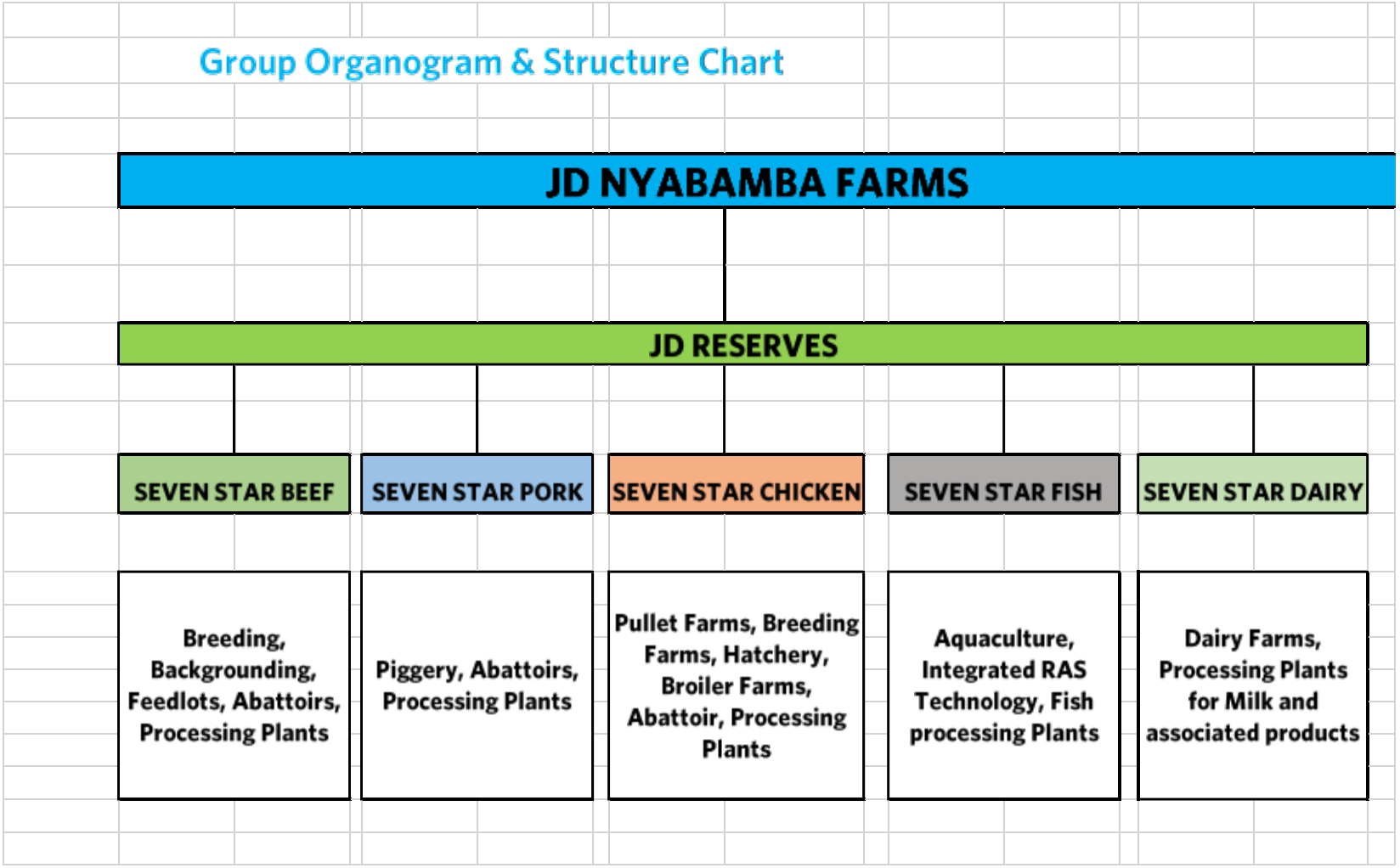
6.0 Management Summary

Our success can be assured by the many different people who are employed at JD NYABAMBA FARMS in this project. Our in-house teams encompass the spectrum of experience and expertise – all of which will combine to enable us to provide exceptional service throughout.

Our staff are skilled and knowledgeable in a variety of different fields, including animal sciences, human resources, administration, maintenance and training, and we are able to draw on all the skills needed for the production of delicious beef products from within the JD NYABAMBA FARMS ranks.

6.1 Organizational Structure

Org. Chart: Organizational Chart



6.3 Personnel Plan

Our ongoing success can be directly attributed to the many different people within NYABAMBA FARMS. Our in-house teams encompass the spectrum of experience and expertise – all of which combine to enable us to provide exceptional service throughout.

Our staff are skilled and knowledgeable in a variety of different fields, including animal sciences, human resources, administration, maintenance and training, and we are able to draw on all the skills needed for the production of delicious beef products from within the JD NYABAMBA FARMS ranks.

From our dedicated team of research and development scientists to the teams of drivers who keep our organisation moving, the JD NYABAMBA FARMS family stays dedicated to our belief in ' consistency through control' and

Table: Personnel

7.0 Financial Plan

We want to finance growth through a combination of long-term debt and cash flow. Start-up will require debt financing.

7.1 Start-up Funding

JD NYABAMBA FARMS start-up costs are detailed above, in the Start-up Table. The following table shows how these start-up costs will be funded by owner and loan capital.

JD NYABAMBA FARMS' start-up funds are summarized in the following table:

- €10,000,000,000.00 loan
- Loan term is proposed to be 20 years with three years repayment moratorium.

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7.2 Important Assumptions

JD NYABAMBA FARMS' Financial Plan relies on several important assumptions - most of which are shown in the following table.

The key assumptions are:

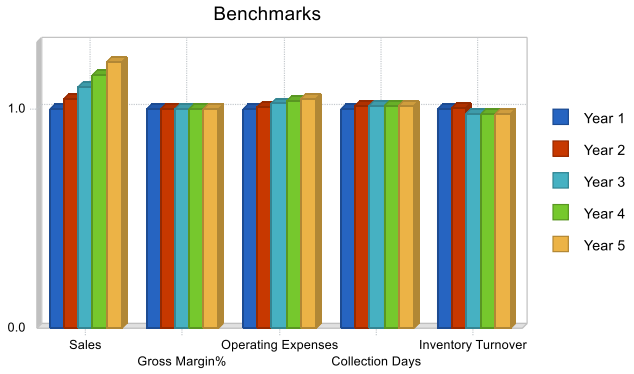
- Sufficient access to capital.
- Steady economy without a major recession.
- No unforeseen drastic consumer changes.

Table: General Assumptions

General Assumptions					
	Year 1	Year 2	Year 3	Year 4	Year 5
Plan Month	1	2	3	4	5
Current Interest Rate	1.00%	1.00%	1.00%	1.00%	1.00%
Long-term Interest Rate	1.00%	1.00%	1.00%	1.00%	1.00%
Tax Rate	30.00%	30.00%	30.00%	30.00%	30.00%

7.3 Key Financial Indicators

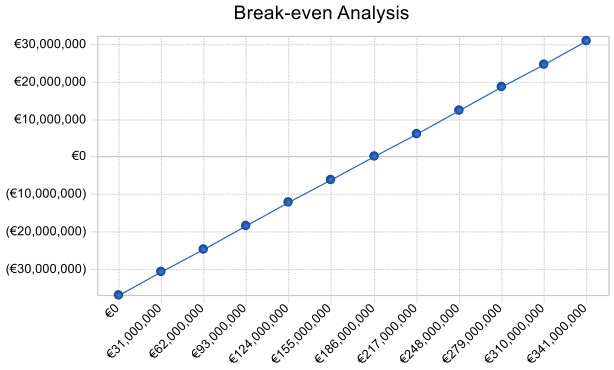
- Keeping average collection days at 30 days or below is very important as this could become a major cause of cash flow problems for the first year.
- Gross margins must remain above 45%.



7.4 Break-even Analysis

The Break-even Analysis chart and table show that if the costs stay at the current, or relatively stable, JD NYABAMBA FARMS' will be able to make an increased profit by the second year.

Table: Break-even Analysis



7.5 Projected Profit and Loss

As the profit and loss table shows, JD NYABAMBA FARMS expects to continue its steady growth in profitability over the next ten years of operations.

Table: Profit and Loss

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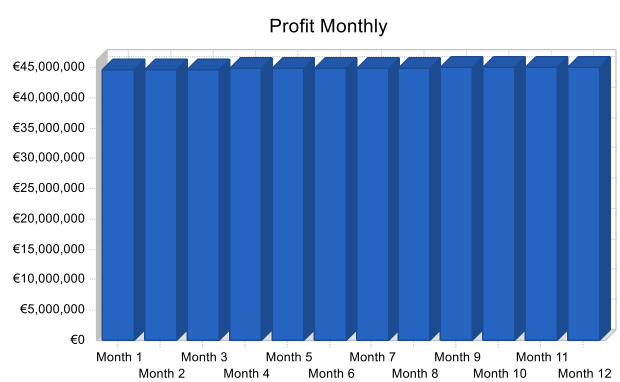
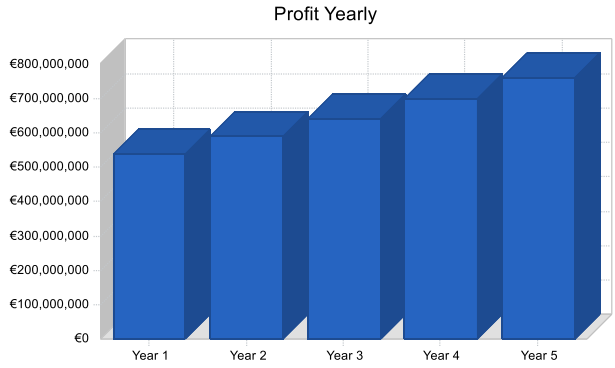
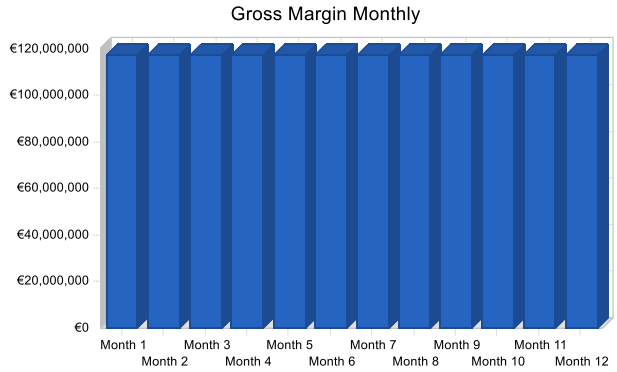



Profit Yearly
€800,000,000
€700,000,000
€600,000,000
€500,000,000
€400,000,000
€300,000,000
€200,000,000
€100,000,000
€0
Year 1
Year 2
Year 3
Year 4
Year 5


Gross Margin Monthly
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€100,000,000
€80,000,000
€60,000,000
€40,000,000
€20,000,000
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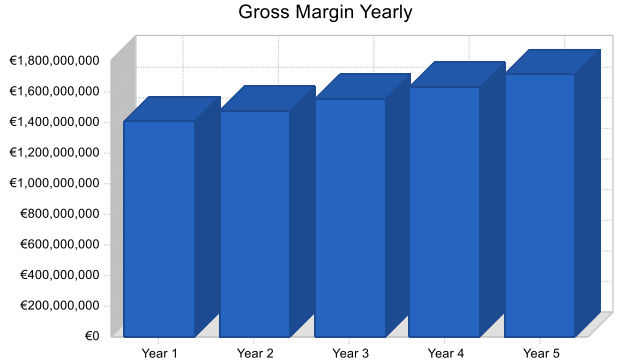
Gross Margin Yearly
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€1,200,000,000
€1,000,000,000
€800,000,000
€600,000,000
€400,000,000
€200,000,000
€0
Year 1
Year 2
Year 3
Year 4
Year 5

7.6 Projected Cash Flow

The following chart and table show the Projected Cash Flow for JD NYABAMBA FARMS project.

Table: Cash Flow

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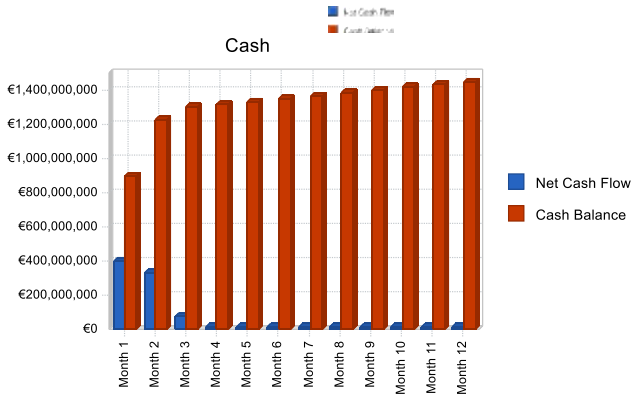
Chart: Cash


Cash
€1,400,000,000
€1,200,000,000
€1,000,000,000
€800,000,000
€600,000,000
€400,000,000
€200,000,000
€0
Month 1
Month 2
Month 3
Month 4
Month 5
Month 6
Month 7
Month 8
Month 9
Month 10
Month 11
Month 12
Net Cash Flow
Cash Balance

7.7 Projected Balance Sheet

JD NYABAMBA FARMS' projected company balance sheet follows.

Table: Balance Sheet

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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Net Worth	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

[illegible]													
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[illegible] Personnel

[illegible]												
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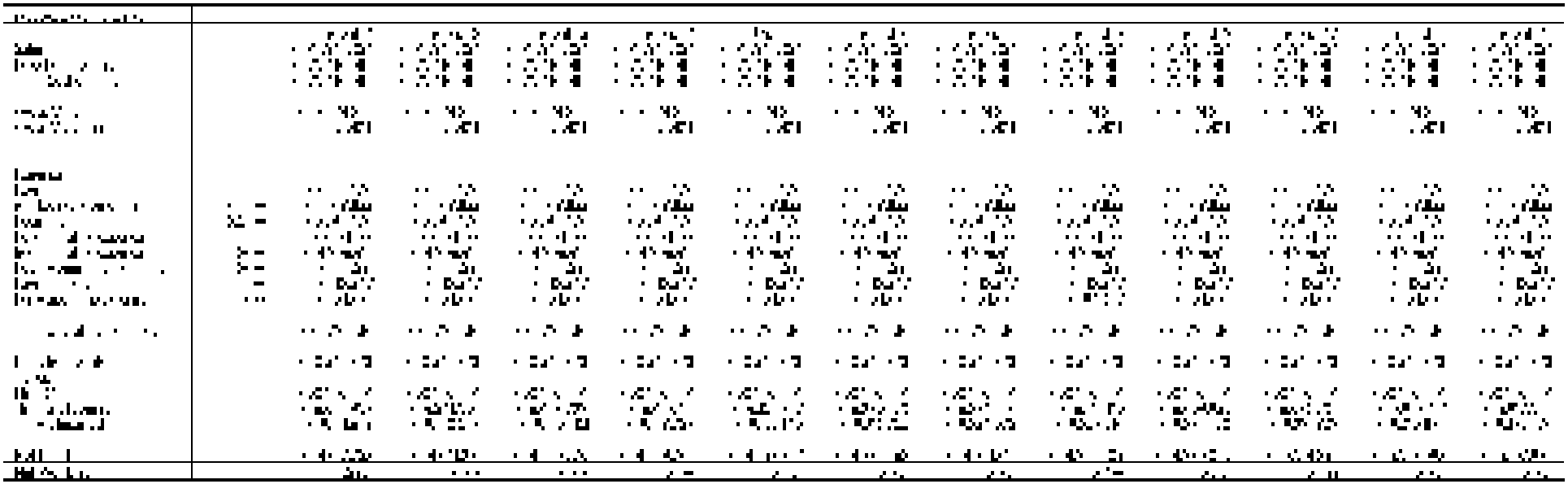

[illegible] Cash Flow

[illegible]												
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