JORDAN
INVESTMENT COMMISSION
هيئة الاستثمار الأردن

Pre-Feasibility Study

Calves Fattening Project

Balqa

April 2017

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1. Executive Summary

This study aims to determine the pre-Feasibility for the establishment of a calves fattening farm in the Balqa Governorate. The project is located in a low plain area and characterized by the following features:

- Reasonable price of land that will not exceed 5,000 JD per dunum.
- Close to the public streets
- Close to public services, especially electricity.

In addition, the project can be implemented in all Jordanian Governorates, especially the Governorates of Zarqa, Madaba and Mafraq. The following table shows the initial indicators of the project.

Table 1: initial indicators of the Project

Project Name	Calves Fattening Project
Sector	Agriculture sector-Animal Production
Governorate	Balqa Governorate
Region	Dair Alla
Products / Services	• Local veal ages up to 6 months • Livestock waste
Project Description	A local calves fattening farm will be established in the District of Dair Alla, in the Balqa Governorate. The project will be constructed on a land with an area of 15,000 m^2, and contains hangars with an area of 5000 m^2, staff buildings with an area of 150 m^2, warehouses and water tanks with an area of 300 m^2. Project employees will be about 11 including a part-time veterinarian. The project will be based on fattening 500 local baby calves to reach up to 6 months old per cycle. There will be two cycles per year, bringing the total number of fattened calves in the first year to 1000 calves. The number will increase annually to reach up to 732 calves per cycle, which is equivalent to 1464 calves in the fifth year of the project. The veal production quantity in the first year of the project is estimated at 370 tons of gross meat per year, until the production reaches up to 542 tons of gross meat in the fifth year. The average selling price of gross meat will be about 2.9 JD per kg.

Target Market	• Butcheries spread all over the Kingdom. • Slaughterhouses. • Direct selling to citizens.
Investment cost	The project investment cost is 945 thousand JD.
The average return on investment	The average return on investment during the five years is about 28%
Internal Rate of Return	The internal rate of return of the project is 33%
Average added value of the project	The average added value of the project in five years is about 420 thousand JD.
Risk Assessment	The Sensitivity Analysis indicates a low risk in case of 10% increase in investment cost, or 10% increase in operating costs, or 10% decrease in revenues.
The project justifications	• Increased demand for this type of red meat and its high prices compared to other red meat types. • Replacing imported products with local products, therefore reducing foreign currency payments. • Ease of implementation of the project. • Low investment cost.
Partners/ Stakeholders	• Ministry of Agriculture • The concerned municipality (licenses). • The Ministry of Industry and Trade (Company Registration).

2. The Macroeconomic Environment

2.2 An Overview of the Hashemite Kingdom of Jordan

The Hashemite Kingdom of Jordan is a landlocked country surrounded by land except at its southern extremity at the port of Aqaba, where that area is the only sea exit area in Jordan. The Kingdom is bordered at its west side by Palestine and the Mediterranean Sea, at its south and east by the Kingdom of Saudi Arabia, at north east by Iraq and at north by Syria.

Figure1 : Map of the Hashemite Kingdom of Jordan

Jordan is marked by three climatic zones from west to east including the Jordan Valley, most of which lies below sea level and is considered subtropical, and upland areas to the east of the Jordan Valley, ranging in height from 100 to 1500 meters above sea level and this is one of the areas dominated by Mediterranean climate, and the desert areas stretching to the east of the highlands.

The total area of the Kingdom is approximately 89.3 thousand square kilometers, and the semi-desert conditions prevail in over 80% of this area where there are some wet lands settings like Azraq Basin.

The kingdom is divided administratively into twelve governorates distributed into three regions: the Northern Region (includes the governorates of Irbid, Mafraq, Jerash and Ajloun) while the Central Region (includes the governorates of the capital, Zarqa, Balqa, Madaba) and the Southern Region (includes the governorates of Karak, Tafila, Ma'an, Aqaba), and the major cities are Amman (the capital), Zarqa and Irbid.

2.3 Population

Based on the General Census of Population and Housing in 2015, the population in the kingdom amounted to about 9.5 million people with a population density of 107.3 inhabitants per km^2, where the Capital City knocked off other governorates by population amounting to about 4 million people and a population density of 538.8 inhabitants per km2, mainly because Amman is the most attractive governorate for Jordanians and for those coming to Jordan from other countries, followed by Irbid Governorate with a population of 1.8 million people, and then Zarqa Governorate with a population of 1.4 million. Tafila Governorate which is considered to be the least populous governorate whose population is about 96 thousand people.

Table 2: Number of population and population density in the Kingdom for 2015

Governorate	Population (people)	Area (Km^2)	Population density (people/ km^2)
Central Region			
Capital	4007526	7,579	528.8
Zarqa	1364878	4761	286.7
Balqa	491709	1120	439.0
Madaba	189192	940	201.3
North Region			
Irbid	1770158	1572	1126.1
Mafraq	549948	26551	20.7
Jerash	237059	410	578.2
Ajloun	176080	420	419.2
Southern Region			
Karak	316629	3495	90.6
Tafeileh	96291	2209	43.6
Maan	144082	32832	4.4
Aqaba	188160	6905	27.2
Total of Kingdom	9531712	88793.5	107.3

Source: Department of Statistics, Jordan General Population and Housing Census, 2015

On the other hand, the population growth rate has reached about 3% in 2010 and increased to 9% during the years 2013 and 2014 and then dropped a little during 2015 to reach about 8%, according to demographic surveys for the Department of Statistics. The reason for the high growth rates is attributed to the influx of large numbers of refugees from Syria to the Kingdom which resulted in a marked decline in per capita real GDP index by 5.4% to JD 1,197.4, based on the Statements of the Central Bank of Jordan.

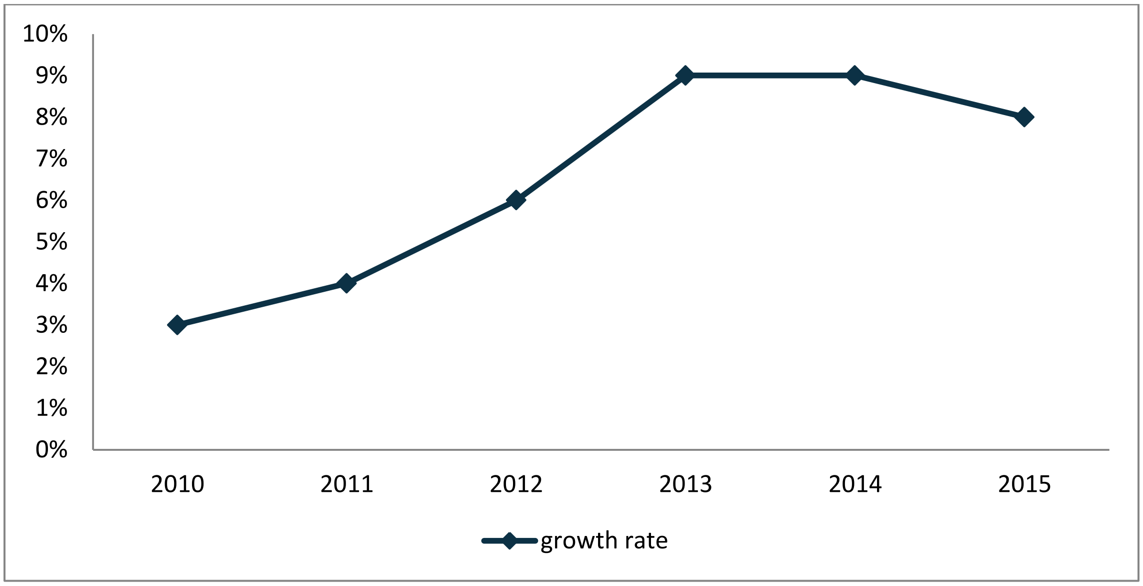
The unemployment rate among Jordanians also witnessed a rise by 1.1 percentage to reach to 13%, due to the structural imbalances that the labor market is suffering from and the acquisition of the low-paid foreign workers on a large number of new jobs in the economy, according to the Central Bank of Jordan.

Table 3: Number of population and population growth in the Kingdom, thousand

	2010	2011	2012	2013	2014	2015
population	6698.0	6993.0	7427.0	8114.0	8804.0	9531.7
growth rate	%3	%4	%6	%9	%9	%8

Source: Department of Statistics

Figure2 : population growth rate in the Kingdom



2.4 Economic Indicators in the Kingdom [1]

Countries across the Middle East are still suffering from instability and closure or partial closure of borders; including the borders of important markets for the Kingdom's products. These factors led to a decline in the performance of many of the economic sectors, including the external sector, national exports, touristic income, and Foreign Direct Investment (FDI), and they contributed to a slowdown in the economic growth to about 2.4% in 2015, compared to 3.1% in 2014. The growth achieved in 2015 came from growth across several economic sectors, especially in the finance, insurance, and real estate services; the transport, storage, and communications services; the mining industry; the manufacturing industry; and the agriculture sector. These sectors contributed a combined 1.8 percentage points (or 75%) of the growth rate achieved during 2015, reflecting the diversity of the economic growth sources in the Kingdom.

Additionally, the general price level registered a decline in the prices of oil, commodities, and other related services in the global markets. Therefore, the general price level, measured by the relative change in the average consumer price index deflated by 0.9% in 2015, compared to the inflation of 2.9% in 2014.

The budget deficit, after aid, increased by 1.2% to a record 3.5% of GDP, compared with 2.3% in the previous year. In addition, the Balance of Payments' Current Account recorded a deficit of 8.9% of GDP, compared with 7.3% in 2014. At the end of 2015, the net public debt amounted to 22,847.5 million Jordanian Dinars (85.8% of the GDP), with an increase of 5.0% of the GDP. However, the total public debt reached 24,876.5 million Jordanian Dinars (93.4% of GDP). This increase resulted from financing both the general budget deficit and the guarantees for loans for the National Electricity Company and the Water Authority, as well as the slowdown of economic growth during 2015. The indebtedness of the National Electricity Company and the Water Authority recorded 6.7 billion Jordanian Dinars at the end of 2015.

On the monetary and banking front, most monetary indicators experienced positive development in performance in 2015, primarily in the Central Bank's foreign reserves, which maintained comfortable levels that amounted to about $14.2 billion. The dollarisation rate decreased, which reflected positive demand for Jordanian Dinars in comparison to other major foreign currencies. With regards to the activities of licensed banks, the outstanding balance of credit increased by 9.5%, to reach 21,103.5 million Jordanian Dinars at the end of 2015. The total deposits registered with licensed banks increased by 7.7%, to reach 32,598.5 million Jordanian Dinars at the end of 2015. The increase in deposits came as a result of the high dinar deposits, which increased by 2,001.4 million Jordanian Dinars (8.3%), and higher foreign currency deposits, which increased by 336.1 million Jordanian Dinars (5.4%).

[1] The Central Bank of Jordan

Furthermore, many of the external sector indicators registered a drop in performance in 2015 due to the deepening instability in the region and almost full closure of the borders with Iraq and Syria. However, the drop in oil prices in the global markets contributed to the decline in the Kingdom's imports bill for energy, as it dropped by 40.6%, which in turn contributed to a decline in total imports and the trade deficit by 11.4% and 14.0%, respectively. Thus, the Current Account, excluding aid, declined to 11.9% of GDP, compared to 12.4% in 2014.

The Current Account deficit increased after aid, to reach 2,365.6 million Jordanian Dinars (8.9% of GDP) in 2015, compared with a deficit of 1,851.7 million Jordanian Dinars (7.3% of GDP) in 2014. This decline is due mainly to the decline in total exports by 6.6% and the decline in surplus in the services account by 27.7%, as touristic income decreased by 7.1%, and the decline in the surplus in the current transfers account decreased as a result of reduced foreign aid.

Capital and financial accounts resulted in a net inflow of 1,593.7 million Jordanian Dinars in 2015, compared to 909.0 million Jordanian Dinars in 2014; this was due to the Kingdom's higher net obligations towards the outside world. Foreign Direct Investment registered a net inflow of 909.4 million Jordanian Dinars, and the reserved investment registered an inflow of 918.4 million Jordanian Dinars due to the Kingdom issuing Eurobonds that are worth $2.0 billion in the global markets. The withdrawal of bank loans on behalf of the Central Bank increased the use of funds from the International and Arab Monetary Funds by 543.3 million Jordanian Dinars. This led to the registration of a surplus in the overall Balance of Payments of 328.7 million Jordanian Dinars during 2015, compared to a surplus of 1,550.7 million Jordanian Dinars during 2014.

According to the Central Bank of Jordan, the increased international investment at the end of 2015 showed an increase in the external net liabilities of the Kingdom, which reached 24,357.5 million Jordanian Dinars, compared with 22,578.8 million Jordanian Dinars at the end of 2014. This was due to an increase in the external balance of assets and financial liabilities for all of the economic sectors in the Kingdom, which reached to 18,657.9 million Jordanian Dinars and 43,015.5 million Jordanian Dinars, respectively, during 2015.

Table 4: main economic indicators 2011 to 2015 in millions of dinars

	2011	2012	2013	2014	2015
Population (millions)	6.993	7.427	8.114	8.804	9.532
Unemployment rate	12.9	12.2	12.6	11.9	13.0
Production and Prices					
GNP at current market prices	20,288.8	21,690.0	23,611.2	25,141.2	26,289.6
GDP at current market prices	20,476.6	21,965.5	23,851.6	25,437.1	26,637.4
The rate of growth in GDP at constant market prices (%)	2.6	2.7	2.8	3.1	2.4
The total national disposable income at current prices	23,743.5	24,774.9	28,424.5	30,302.1	30,234.7
The rate of growth in gross national disposable income at current prices (%)	4.7	–0.2	8.6	3.1	–2.4
Change in the index of consumer prices (%)	4.2	4.5	4.8	2.9	–0.9
The change in the GDP deflator (%)	6.4	4.5	5.6	3.4	2.3
Money and Banking					
Exchange rate of the Jordanian dinar to the US dollar	1.410	1.410	1.410	1.410	1.410
Money supply (P2)	24,118.9	24,945.2	27,363.4	29,240.4	31,605.5
Net foreign assets of the banking system	9,370.1	6,665.5	6,923.4	7,932.3	8,137.3
Net domestic assets of the banking system	14,748.8	18,279.7	20,440.0	21,308.1	23,468.2
Net debt of the government	6,701.4	9,461.3	10,494.8	10,473.9	11,386.4
Private sector debts (Residents)	14,925.0	15,953.6	17,222.5	17,852.8	18,704.5
Other factors (1)	–6,877.6	–7,135.2	–7,277.3	–7,018.5	–6,622.7
Deposits in dinars at licensed banks	19,119.1	17,711.1	21,003.0	24,013.1	26,014.5
Foreign currency deposits at licensed banks	5,258.8	7,258.6	6,590.2	6,247.9	6,584.0
Rediscount rate (%)	4.50	5.00	4.50	4.25	3.75
Treasury bills interest rate for 6 months (%)	3.232	3.788	-	-	-
Public Finance					
Total revenue and foreign aid	5,413.9	5,054.2	5,758.9	7,267.6	6,796.4
Ratio to GDP (%)	26.4	23.0	24.1	28.6	25.5
Total spending	6,796	6,878.2	7,077.1	7,851.1	7,722.9
Ratio to GDP (%)	33.2	31.3	29.7	30.9	29.0
Overall deficit/savings (on an accrual basis)	–1,382.7	–1,824.0	–1,318.2	–583.5	–926.5
Ratio to GDP (%)	–6.8	–8.3	–5.5	–2.3	–3.5
Net outstanding balance of the domestic public debt	8,915.0	11,648.0	11,863.0	12,525.0	13,457.0
Ratio to GDP (%)	43.5	53.0	49.7	49.2	50.5
Outstanding external public debt (2)	4,486.8	4,932.4	7,234.5	8,030.1	9,390.5
Ratio to GDP (%)	21.9	22.5	30.3	31.6	35.3
Foreign Trade and Balance of Payments					
Current account	–2,098.8	-3,344.9	-2,487.7	-1,851.7	-2,365.6
Ratio to GDP (%)	–10.2	–15.2	–10.4	–7.3	–8.9

	2011	2012	2013	2014	2015
Trade balance (Deficit)	–6,261.7	–7,486.6	–8,270.1	–8,495.6	–7,249.3
Ratio to GDP (%)	–30.6	–34.1	–34.7	–33.4	–27.2
Commodity exports	5,684.5	5,599.5	5,617.9	5,953.6	5,558.3
Imports of goods (FOB) (3)	11,946.2	13,086.1	13,888.0	14,449.2	12,807.6
Balance of services (net)	896.0	1,332.3	1,209.5	1,778.9	1,286.4
Income account (net)	–187.8	–275.5	–240.4	–295.9	–347.8
Current transfers (net)	3,454.7	3,084.9	4,813.3	5,160.9	3,945.1
Capital and financial account (net)	2,298.9	3,808.9	1,811.1	908.9	1,593.7
Direct foreign investment in Jordan (net)	1,055.0	1,074.3	1,281.2	1,426.7	905.1

Source: Monthly Statistical Bulletin, Central Bank of Jordan

1. Includes the debts of public and financial institutions and other factors, as shown in the Monetary Survey Agenda.
2. This represents the total balance of drawn loans, minus total repayments.
3. Does not include imports of non-resident entities.

2.5 The Jordanian Investment Environment

Investment Law No. 30 for 2014

Investment Law no. 30 for 2014 is considered an appropriate legislative framework to attract foreign investments and stimulate local investments. It is considered a competitor to other investment laws in the region because it contains many advantages, incentives, and guarantees, and it offers a range of incentives and benefits in and outside the Development and Free Zones. The law includes a series of public provisions, such as foreign investment guarantees (depositing and withdrawal of capital, investment management, and transfers) and the inadmissibility of the disbarment of investment property. The law offers provisions to settle investment disputes, protection, and encouragement of mutual investment agreements between the Kingdom and other countries.

The following shows the major incentives granted by the law:

❖ **Incentives and Benefits outside the Development and Free Zones**

- The production inputs for the industrial and crafts sectors are exempted from customs duties.
- The return of the general sales tax on the production inputs for the industrial and crafts sectors within 30 days.
- Production inputs and fixed assets of the industrial and crafts sectors are exempted from customs duties and are granted a reduction in general sales tax to 0%.
- Returning to the sales tax on the services needed to practice economic activity within 30 days.
- The goods that are necessary for the economic activities of the following sectors are exempted from customs duties and are subject to 0% general sales tax:
  - Agriculture and livestock, hospitals and specialised medical centres, hotels and touristic facilities, touristic entertainment and recreation centres, call centres, scientific research centres and laboratories, art and media production, convention centres and exhibitions, transfers and/or distributions and/or extraction of water, gas and oil derivatives, air transport, maritime transport, and railways.

❖ **Incentives and Benefits inside the Development and Free Zones**

- 5% income tax on the income generated from economic activity within the Development Zone.
- 5% income tax on income generated from economic activity in the industrial sector.
- Tax exemptions that are granted in the Kingdom on goods and services exports.

- Reduction of sales tax to 0% on goods and services that are used by the establishment in order to exercise its activity inside the Development Zone.
- 7% sales tax on specific services provided by a registered company in the zone when these services are consumed in the zone.
- Exemptions from customs duties except for a specified number of goods.

❖ **The Reduction of Income Tax in the Least Developed Areas for Regulation No. 44 for 2016**

- The reduction of income tax in the least developed areas for Regulation No. 44 for 2016 was approved. It aims to create an attractive environment for investments that promote economic development through the reduction of income tax outside the Development Zones and in the least developed areas in the Kingdom. The regulation specified the areas that are considered least developed and identified the activities that are excluded from this reduction.
- Under the provisions of Articles 4 and 5 of this regulation, the areas that were categorised as least developed and enjoy the reduction in income tax are divided into four categories; each category enjoys a reduction in income tax on their activities for a period of 20 years.
- Category A includes the Northern Valley District, Deir Alla District, Shouneh Al-Janoubieh District, the Southern Valley District, Rweished District, the Northern Desert District, the North Western Desert District, Al-Azraq Province, Al-Jiza District except for the borders of the new Al-Jiza municipality, Al-Moakar District except for the borders of Al-Moakar municipality, and the Governorate of Aqaba except for the Aqaba Special Economic Zone. The reduction rate for this category is 100%.
- Category B includes the Governorates of Maan, Tafileh, Karak, and Ajloun. The reduction rate for this category is 80%.
- Category C includes the Governorates of Jarash, Mafraq, and Irbid except the borders of the Greater Irbid Municipality. The reduction rate for this category is 60%.
- Category D includes the Governorates of Madaba, Balqa, Amman except for the Greater Amman Municipality, and Zarqa except for the borders of Zarqa Municipality and Russaifeh Municipality. The reduction rate for this category is 40%.

❖ **Trade and Free Trade Agreements**

The most important agreements are:

- Jordan joining the World Trade Organisation in 2000, which led to the opening of the markets of 150 countries for Jordanian exports in goods and services, and provided new opportunities of access to other countries within a clear and transparent environment of laws, regulations, and procedures.
- A series of regional trade agreements, such as the Jordan Partnership Agreement with the European Union, Agadir Agreement, Free Trade Arab Agreement, the free trade agreement

between Jordan and the European Free Trade Association, and the adoption of the Euro-Mediterranean simplification of the rules of the Origin System, which includes the decision to simplify the rules of the origins of Jordanian products between Jordan and the European Union came into effect on July 19, 2016, and will remain in effect until December 31, 2026.

- A series of bilateral trade agreements with many countries, such as the free trade agreement between Jordan and the United States of America, the Qualified Industrial Zones Agreement, the free trade agreement between Jordan and Singapore, the free trade agreement with Turkey, the free trade agreement with Canada, and many other agreements.
- Jordan has signed more than 35 agreements with Arab and foreign countries in order to prevent double taxation between Jordan and these countries, thus protecting investors' rights.
- The Agreement of Promotion and Protection of Investments and the Movement of Capital between the Arab Countries was signed in 2000 with 11 Arab countries who are members of the Arab Economic Unity Council, in order to establish an appropriate environment for investments and economic cooperation between investors in the Arab countries, thus pushing and stimulating investment activities by providing encouragement and mutual protection for Arab investments.

Human Development Report for 2015

The Human Development Report that was issued by the United Nations Development Program in 2015 showed that Jordan fell 3 points to number 80. Please note that Jordan's place on the Human Development Report index value has improved slightly.

Global Competitiveness Report

The Kingdom's rank has improved by one point in the Global Competitiveness Report for the year 2016/2017, at 63 out of 138 countries compared to 64 out of 140 countries in the 2015/2016 report. It is considered an insignificant improvement, especially because of the reduction in the number of countries participating in this year's report. Amongst the Arab countries, Jordan was ranked after the United Arab Emirates, Qatar, the Kingdom of Saudi Arabia, Kuwait, and Bahrain, who were ranked 16, 18, 29, 34, and 39, respectively.

Doing Business Report

In the Doing Business Report that was issued by the World Bank Group, Jordan is still ranked 118, up one rank from the 2016 report, because of the variation in the performance of the different sub-indicators. Jordan ranked ninth among the Arab countries; the United Arab Emirates was ranked first among the Arab countries at 26, followed by Bahrain at 63 and Oman at 66.

2.6 The Economic Environment in the short and medium term

Risks analysis implemented by BMI indicates that the Jordan's political and economic risks in the short and medium term are less than the overall average of the world and the Middle East. The state's risks and the operational risk are estimated to be within the acceptable levels. The international institutions' forecasts point out that the economic and foreign trade indicators are expected to achieve acceptable rates of growth with the exception of the continued increase in internal and external indebtedness.

Table 5: Assessment of short and long-term risks

	Long term		Short term		Operational risks	State risks
	political	Economic	political	economic		
Jordan	63.1	39.2	66.6	46.2	58.7	55.4
Turkey	60.2	49.4	58.4	56.9	55.9	56.1
Egypt	53.3	45	52.4	48.7	42.9	47.5
Lebanon	45.8	54	55.4	53.5	44.2	49.5
West Bank and Gaza	33.1	38.1	32.2	36.5	32.5	34.3
Syria	22.9	24.4	22.4	23.6	29.3	26.1
Regional average	49.4	46.9	51.2	48.7	46.6	48.3
global average	64.1	50.7	61.3	51.9	49.8	54.6

Source: the economy and state risks, IHS, 15/09/2016

Table 6: The most important key economic indicators 2016-2020

Indicator	2016	2017	2018	2019	2020
The growth rate of GDP	2.6	2.7	2.8	3.2	3.1
GDP (in USD billions)	39.6	42.1	44.8	47.8	50.9
Population (In millions)	9.8	10.1	10.4	10.7	11.0
Consumer Price Index (% change)	-0.7	1.8	3.3	4	3.2
Exports (in USD billions)	7.3	7.6	8.2	8.8	9.6
Imports (in USD billions)	18.3	19.2	20.1	21.3	22.8
Foreign direct investment, the net value (in USD billions)	1.5	1.5	1.6	1.6	1.7
Foreign direct investment, the net value (% of GDP)	3.7	3.7	3.6	3.4	3.3
Foreign exchange reserves (in USD billions)	13.9	14.9	15.7	16.8	17.7
Total external debt (in USD billions)	24.4	27.8	30.7	33.7	36
Total external debt (% of GDP)	61.6	66	68.6	70.4	70.6
Total external debt (% of foreign currency earnings)	127.3	138.3	143.6	147.5	147.8

Source: the economy and state risks, IHS, 15/09/2016

3. Market Study

3.2 Project Description

The project is a local calves fattening farm that is based on increasing the weight of the calves and getting their highest growth during a short and limited period. The project will be established in the Balqa Governorate by selecting a low and plain area with agricultural nature. In addition, the site should be close to the public main roads in order to facilitate the transportation process of calves when sold to butcheries and consumers.

The project includes the establishment of a farm equipped with pens appropriate for calves. In addition, the farm will be equipped with all required supplies and equipment for rearing calves and selling them as red meat in the Jordanian market.

3.3 Expected Products and Services

Expected products include the following:

- Local veal ages up to 6 months
- Livestock waste

3.4 Market Size Analysis

The total market size for the consumption of local and imported veal in Jordan for 2015 is estimated at 31.5 thousand tons (according to the Department of Statistics and the Ministry of Agriculture statistics and field surveys) distributed between local veal and imported veal (live, fresh and frozen). It is noted from the table below that the veal market is remarkably dominated by the imported live calves' meat slaughtered in Jordan. The imported live calves' meat constitutes 77% of the total size of the market, while the local live calves' meat constitutes 22% of the total market size.

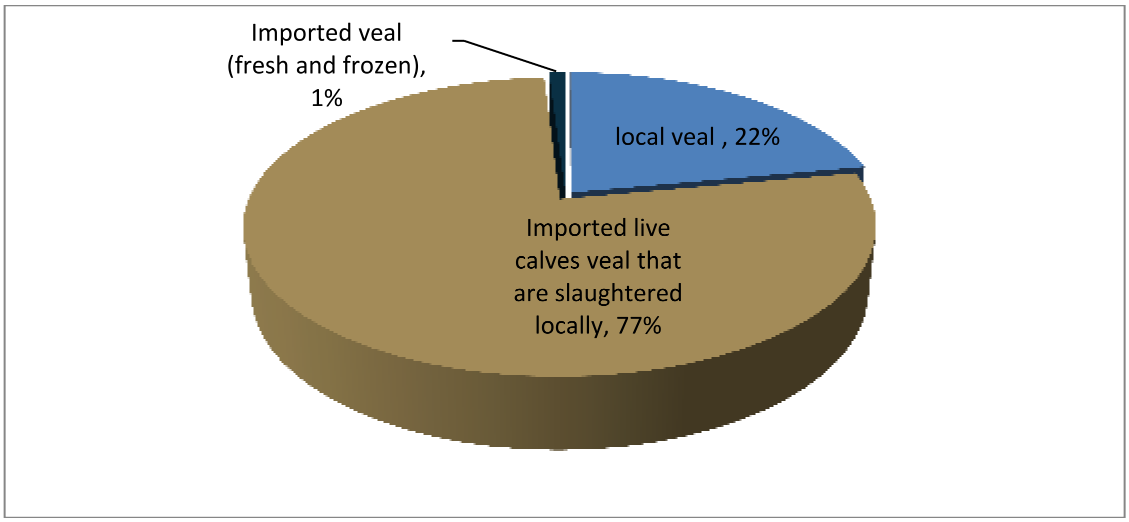
Based on this information, the total consumption of veal in Jordan is about 3.3 kg per person per year, including 2.5 kg of the meat of imported live calves that are slaughtered in Jordan per person, and 0.7 kg per person of local live calves' meat. This shows that the per capita consumption for the meat of imported calves that are slaughtered locally is larger than the per capita consumption of local veal of about 1.8 kg. This is mainly due to the fact that imported veal prices are less than local veal, in addition to their high abundance in the Jordanian market. However, the Jordanian citizen is still always trying to consume local veal if it is available at reasonable prices.

Table 7: The Size of Veal Market in Jordan for 2015

	Market Size (tons)	Per Capita Consumption Rate (kg / capita / year)
Local veal	7,072	0.7
Imported live calves veal that are slaughtered locally	24,181	2.5
Imported veal (fresh and frozen)*	325	0.03
Total	31,578	3.3

Source: Department of Statistics, Foreign Trade 2015 / Ministry of Agriculture Statistics 2015 / Field Surveys
* In the form of whole carcasses, half carcasses or pieces with bones.

Figure3 : The size of the overall market for veal in Jordan for 2015



The market need for veal in Jordan is met through two main sources:

1. **Local production**

The quantity of local production of veal is estimated to be about 7072 tons for 2015 and represented about 31.4% of the local production of red meat based on the Ministry of Agriculture statistics for 2015 and field surveys that were carried out, as it shows that the Kingdom does not have national exports of local veal.

Through a field market study that has been carried out, the study shows that local production of veal in the Kingdom is mainly produced from farms in the area of Ad-Dulayl that are not under the umbrella of the association, where there is about 193 farms with a total number of calves up to 9,650 and produce about 3,860 tons per year.

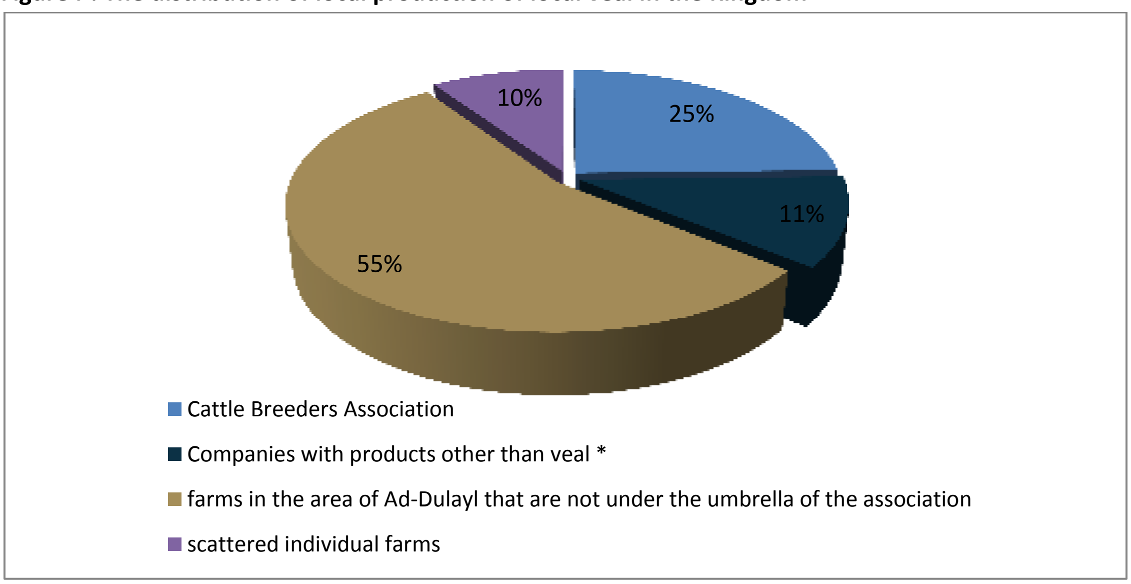
That Cattle breeders association also produces approximately 1,740 tons per year, where there are 86 farms under the umbrella of the association with a total number of calves up to 4,350. Additionally about 800 tons of veal is produced through the companies that have products other than veal and owns approximately 2,000 calves. It is worth mentioning that there are individual farms that are not under the umbrella of the association in various parts of the Kingdom that work on fattening local calves with an estimated production, according to field surveys, of about 672 tons of the total local production of veal in the Kingdom.

Table 8: the Distribution of local production of veal in the Kingdom

	Number of calves	Annual production (tons)
Cattle Breeders Association	4350	1740
Companies with products other than veal *	2000	800
farms in the area of Ad-Dulayl that are not under the umbrella of the association	9650	3860
scattered individual farms	1680	672
Total	17680	7072

Source: field surveys, the calculation of work teams
* These companies include Hamouda Company, Almarai, Danish Company and Shaheen Company, in addition to other companies
.

Figure4 : The distribution of local production of local veal in the Kingdom



2. Imports

In general, the veal market is considered among the active ones with regard to import. We can observe from the analysis that the Kingdom imports large quantities of veal of various kinds. The total Kingdom's imports of live calves in 2015 amounted to about 63.4 thousand heads and approximately equivalent to 25.4 thousand tons of veal, while the net imports amount that is consumed locally amounted to about 24.1 thousand tons valued at 43.8 million JD.

About 43% of the total number of imported live calves in the Kingdom is imported from Brazil valued at 22.3 million JD due to the citizens' preference for this type of veal and the high consumption of this meat in the Kingdom. Colombia comes in second place after Brazil by 36% of the total number of imported live calves in the Kingdom. The Kingdom imports about 8.5 thousand heads from Romania valued at 7.2 million JDs, constituting 14% of the total number of imported live calves.

As for the fresh and frozen veal, whether it is whole carcasses or halves or pieces with bones, it is imported less than the live calves, as imports in the Kingdom amounted to about 327 tons with net imports quantity estimated at 325 tons with a value of 1.2 million JD. It can be observed from the following table that the largest quantity of fresh and frozen veal are imported from South African amounting to 30% of the total amount of the imported fresh and frozen veal, which is equivalent to about 98 tons, followed by the State of Colombia by 12% of the total amount of the imported fresh and frozen veal and then Uruguay, Brazil and Romania, by 12%, 10% and 8%, respectively.

Table 9: Kingdom imports of veal for 2015

	Value (thousand JD)	%	Quantity (number)	Quantity (tons)	%
Live calves *					
Brazil	22304	51%	27113	10845.2	43%
Colombia	10762	24%	22740	9096	36%
Romania	7292	17%	8580	3432	14%
Uruguay	2017	5%	3800	1520	6%
Other	1573	4%	1190	476	2%
Total	43948	100%	63423	25369	100%
Fresh and Frozen veal					
South Africa	419	33%	-	98	30%
Colombia	274	22%	-	76	23%
Uruguay	117	9%	-	40	12%
Brazil	100	8%	-	34	10%
Romania	82	6%	-	25	8%
Other	270	21%	-	54	17%
Total	1262	100%	-	327	100%

Source: Department of Statistics, foreign trade in 2015
* The quantity was calculated in tons for live calves, assuming that the average calf weight is 400 kg, based on market surveys that were carried out.

Figure 5: Distribution of live calves imports for 2015

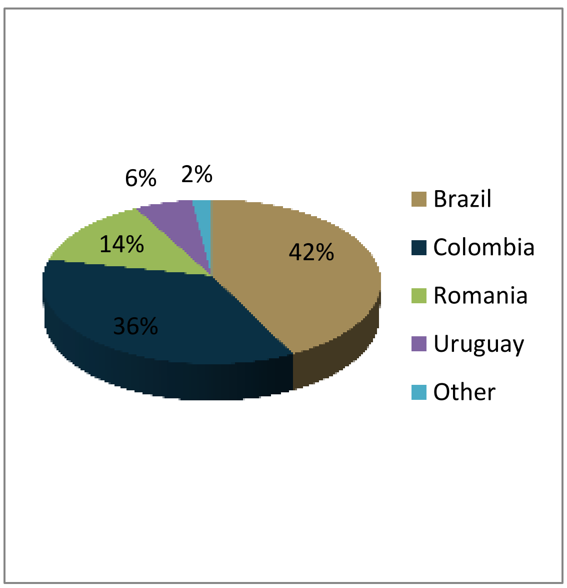
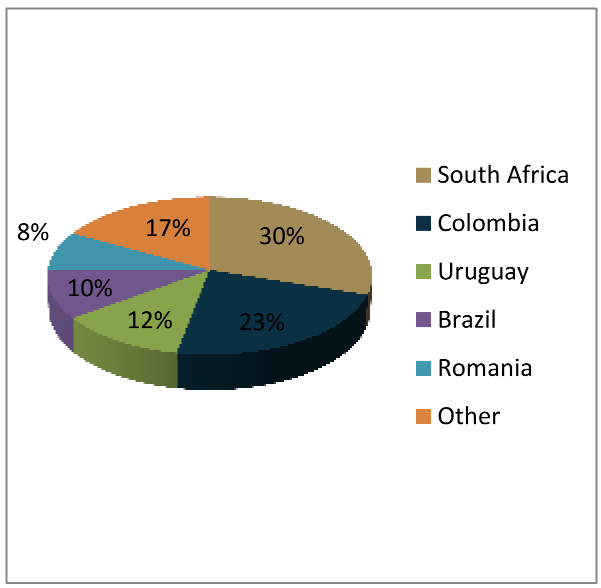


Figure 6: Distribution of frozen veal imports for 2015



An Overview of Competitors

1. Local veal

The local veal in the Kingdom is produced from several farms in different parts of the Kingdom, especially Ad-Dulayl area, as previously mentioned the highest percentage of local production of local veal are produced through these individual farms. in addition, there is the Cattle Breeders Association and a number of private sector companies that raise local veal as well as some other products (such as milk). This part of the study highlights the main and organized competitors of the project and their market share.

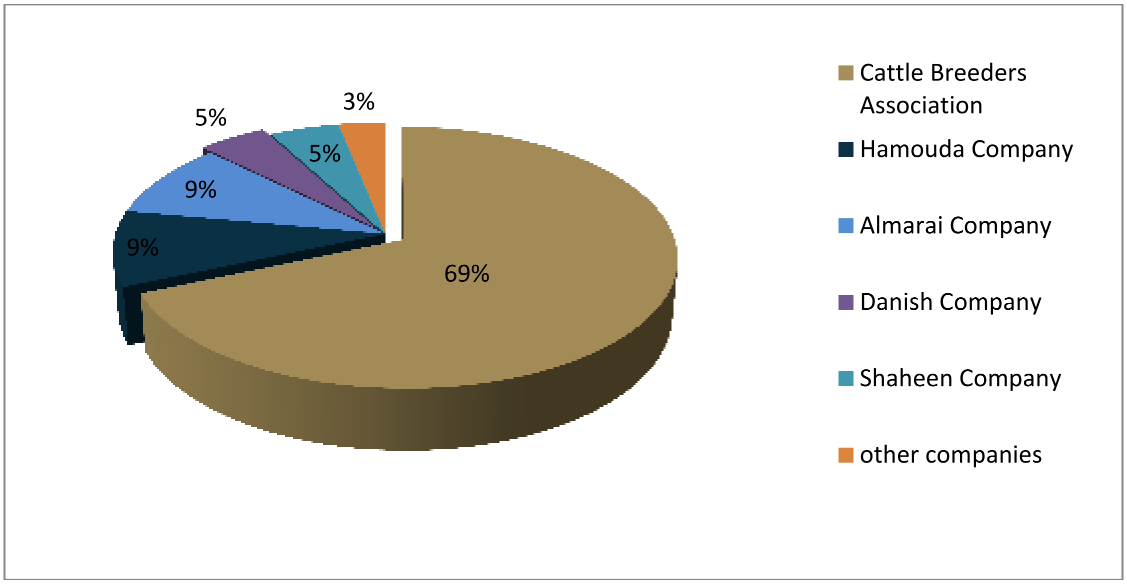
The following table shows that the Cattle Breeders Association has accounted for the largest share of organized competitors in the local veal production by 25% of the local production of local veal, and then followed by both Hamouda Company and Almarai Company by 3% of the local production of local veal for each with an amount of production estimated at about 240 tons for each company.

Table 10: main competitors for the production of local veal in the Kingdom

	Number of heads	The annual production (ton)	Market share of the organized market	Market share of the total market
Cattle Breeders Association	4350	1740	69%	25%
Hamouda Company	600	240	9%	3%
Almarai Company	600	240	9%	3%
Danish Company	300	120	5%	2%
Shaheen Company	300	120	5%	2%
other companies	200	80	3%	1%
The total of Association and the companies that have products other than veal	6350	2540	100%	36%
Individual Farms that are not under the umbrella of the association	11330	4532	-	%64
The total production of local veal in the Kingdom	17680	7072	-	100%

Source: Field Market Study, the calculation of the study teams

Figure 5: market share of main competitors for the production of local veal in the Kingdom (the organized market)



2. Imported live calves that are slaughtered locally

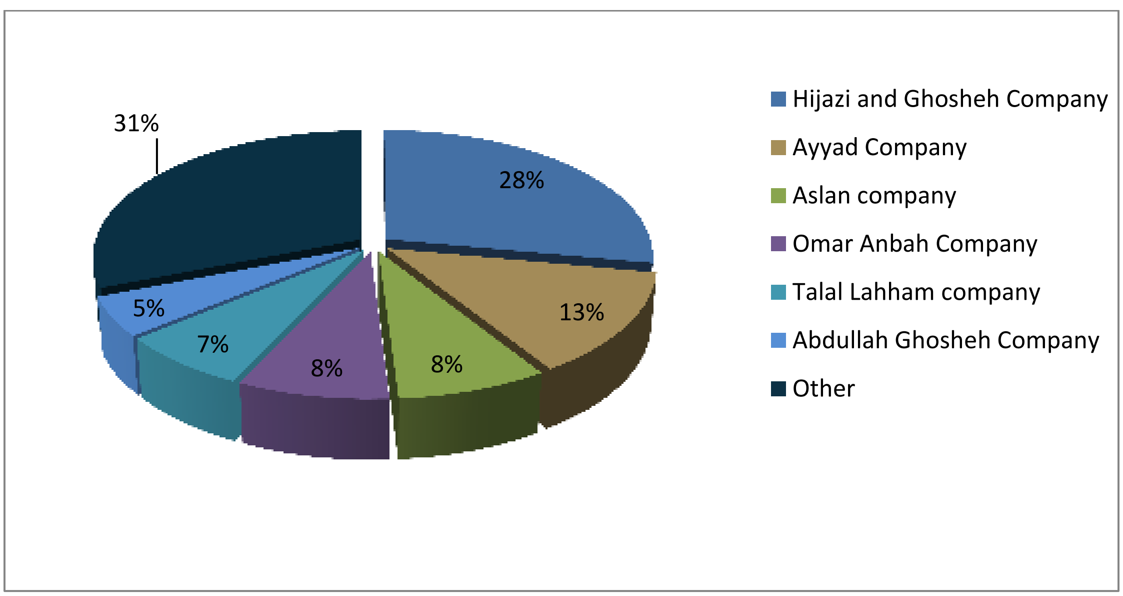
It is noteworthy that there are many companies importing live calves from other countries, and then fattening and slaughters them locally. The following table shows the major companies involved in the import of calves and their market share of the total imported calves slaughtered locally. The table shows that Hijazi and Ghosheh accounted for the largest share by 28% of the total imports of calves slaughtered locally with a quantity of about 6.8 thousand tons per year, followed by Ayaz Company by 13%.

Table 11: The main producers of imported veal calves locally slaughtered in the Kingdom

	Number of heads	The annual production (ton)	market share
Hijazi and Ghosheh Company	17000	6800	28%
Ayyad Company	8000	3200	13%
Aslan company	5000	2000	8%
Omar Anbah Company	5000	2000	8%
Talal Lahham company	4000	1600	7%
Abdullah Ghosheh Company	3000	1200	5%
Other	18453	7381	31%
Total	60453	24,181	100%

Source: Field Market Study, the calculation of the study teams

Figure 5: market share of the main producers of imported calves that are slaughtered in the Kingdom for 2015



3.5 Price Analysis

A market study has been conducted for veal prices, whether the imported or local ones, as the study collected the imported live calves' meat prices, which were slaughtered locally and are available in the Jordanian market, such as the Brazilian meat, Uruguayan meat, Romanian meat and Dutch meat, all of which are competing with local veal in the Jordanian market. In addition, local veal prices have also been collected for both large and medium size ones. The prices were collected at the level of the consumer in addition to the price of the slaughterhouse or the importer or the producer, in order to get a clear picture of veal prices of all kinds in the Jordanian market.

The following table shows the prices of imported live claves of all kinds that are slaughtered locally in the Kingdom, and which were collected during the field study. It can noticed that their prices are close, as the price of a Kg of Brazilian, Uruguayan and Romanian meat is about 5 JD to the consumer, and 3.5 JD to the slaughterhouse. As for the Dutch meat, the price of a Kg is 7 JD to the consumer and 4.5 JD for the slaughterhouse.

Table 12: the prices of imported live calves veal locally slaughtered in the Kingdom

Type	The price for the consumer (retail) -meat (JD / kg)	Price from the importer / producer / slaughterhouse- meat (JD / kg)	Live Weight Price (JD / kg)
Brazilian meat	5	3.5	1.75
Uruguayan Meat	5	3.5	1.75
Romanian meat	5	3.5	1.75
Dutch meat	7	4.5	2.25

Source: Field Surveys

The following table also shows the prices of local veal of both size, large and medium, which were collected during the field study. It can be noticed that the local veal prices are more expensive than the imported veal, as the price of a Kg of large and medium size local veal is about 8.5 JD and 7.5 JD to the consumer, respectively. The price is 5.5 JD to the slaughterhouse for the medium size calve meat, and 4.5 JD for the large size calve meat.

Table 13: the prices of local veal

Statement	The price for the consumer (retail) -meat (JD / kg)	Price from the importer / producer / slaughterhouse- meat (JD / kg)	Live Weight Price (JD / kg)
Large local veal	7.5	4.5	2.25
medium local veal	8.5	5.5	2.90

Source: Field Surveys

3.6 Marketing Strategy

Target Market

The project targets the following categories:

- Butcheries spread all over the Kingdom.
- Slaughterhouses.
- Direct selling to citizens.

Expected Services and Products

The expected products of the project include the following:

- Local veal ages up to 6 months
- Livestock waste

The Expected Prices

The price of veal is affected by the calf age, therefore the project's strategy will be to raise calves to the age of 6 months, and then selling them in a total price of 2.9 JD per Kg, as this will be equivalent to 5.5 JD (per Kg net weight). Then the merchant sells it to the consumer at a price of 8.9 JD (per Kg net weight).

Promotion

The Promotional strategy for the project includes the following:

- Visiting butcheries and slaughterhouses in the region and nearby areas.

Selling

The Selling strategy for the project includes the following:

- Direct Selling to citizens.
- Selling the products to slaughterhouses and butcheries.

Services

Service delivery strategy for the project includes the following:

- Focusing on the quality of materials used, such as water and animal fodders for breeding the calves.
- Maintaining the constant state of cleanliness of the farm, barns and the used equipment.
- Respecting the rules of health protection and cleanliness and public safety.

- Maintenance of equipment on an ongoing basis.
- Commitment and punctuality with customers.
- Maintaining credibility and trust with customers.

3.7 Expected Market Share

The following table shows the expected market share of the project based on the market size for local veal calves in the Kingdom, as the market share of the project is expected to reach about 5% in the first year, and will increase to reach 6% in the fifth year of the project.

Table 14: Expected market share for the project

statement	First year	Second year	Third year	Fourth year	Fifth year
Expected market size of local veal - tons *	7649	7955	8273	8604	8948
Production - ton	370	407	447.7	492.5	541.7
The expected market share	5%	5%	5%	6%	6%

* The calculation of study teams

4. Technical Study

4.1 The Designed Project Capacity

The following table shows the designed capacity of the project. The designed capacity of the project will be 732 claves per cycle. There will be two cycles per year, and the number of calves per year is 1464.

Table 15: The designed capacity of the project

Statement	Number
Number of calves per cycle	732
The number of cycles per year	2
Number of calves per year	1,464

The following table shows the required areas for the project. In order to meet the designed capacity, it requires the purchase of a land area of 15,000 m^2, and construction of buildings area of 5450 m^2, with an external works area (paving) of about 1000 m^2.

Table 16: spaces required for the project

item	unit
Land m^2	15,000
Buildings m^2	5,450
External works m^2 (paving)	1,000

4.2 The Required Fixed Assets

The following table shows the required fixed assets for the project.

Table 17: the required fixed assets for the project

item	unit	Prices (JD /m^2)	Total Value (JD) *
Land m^2	15,000	7	105,000
Buildings m^2	5,450	80	436,000
External works m^2 (paving)	1,000	5	5,000
Furniture and equipment **			1,500
Transport vehicles ***	2	25,000	50,000
Total			147,000

* The numbers are estimated from the market study
** Simple furniture and office for the project
*** Two vehicles

The following table shows the buildings that will be constructed and prepared in the project. Hangars for calves with an area of 5000 m^2 will be built, and the remaining area will be allocated for buildings for staff housing, stores and water tanks with an area of 450 m^2.

Table 18: buildings required for the project

Buildings	Area (m^2)
Hangars buildings (barns)	5,000
staff Buildings	150
Stores	200
water tanks	100
Total	5,450

4.3 The Required Human Resources

The following table shows the human resources required for the project. The number of required staff is about 11 employees in addition to a part-time veterinarian. The total salaries of employees are estimated at 45.6 thousand JD annually.

Table 19: Human resources required for the project

item	Number of Employees	Monthly Salary (JD)	Total Annual Salary (JD)	Operational Salary Annual (JD)	Administrative Salary Annual (JD)
Farm Supervisor	1	500	6,000		6,000
Administrative employee and a Driver	2	300	7,200	7,200	
worker	8	300	28,800	28,800	
Part-time veterinarian	1	300	3,600	3,600	
Total	12		45,600	39,600	6,000

The following table also shows the general job descriptions of the required jobs in the project.

Table 20: General Job Description for the required jobs in the project

Job	Job Description
Supervisor	▪ Supervise and organize the workflow in the right way. ▪ Direct the workers and distribute them on the workplace. ▪ Organize workers leaves. ▪ Overseeing the water tanks, drinking containers and mangers. ▪ Developing a program for workers in order to remove the dung, because if being left, the unit will be filled with wet dung which will reduces the eaten amount and the desired growth rate. ▪ Supervising the transfer of calves to fattening barns properly so as not to hurt the calves. ▪ Supervising the vaccination and treatment of calves
Workers	▪ Provide nutrition and feeding for calves (Fodder and milk), according to the appropriate and adopted way for fattening. ▪ Maintain the cleanliness of the barns and water basin regularly, and remove the dung. ▪ Inspect the fence, gates and drinking containers, dismounting unit, isolation unit, the weigh scale and the store before the arrival of calves. ▪ Open the water tank and fill the drinking containers with clean water regularly. ▪ Making sure not to keep a large amount of fodder in the mangers. ▪ Wash the calves whenever necessary.
Part-time	▪ Examine the calves to ensure their health and that they are safe from

Job	Job Description
veterinarian	diseases. ▪ Provide the necessary treatment for calves in the event of being infected with a particular disease. ▪ Provide the required vaccinations for calves in the allocated time of vaccination. ▪ The application of the health program designed for calves on the farm.

4.4 Special Conditions

In 2016, The Ministry of Agriculture published the instructions and conditions for organizing calves fattening farms in the Kingdom to be carried out from the date of issuance. The following table shows these conditions, which will be taken into account when implementing the project.

Table 21: conditions

statement	Specifications
The land	▪ The allocated land area for establishing the farm should not be less than 3 dunums, and should be valid for the establishment of a farm. ▪ The farm shall be surrounded by fence or a wall with a height at least of 2m.
Fattening barns	▪ Good ventilation and lighting shall be available ▪ Their walls shall be made of smooth materials to be easily cleaned and disinfected, and shall be closed on three sides.
stores	▪ Health conditions are met with an area of not less than 16 m^2 per 20 heads.
Water tank	▪ A water tank shall be available with a capacity of not less than $4m^3$

4.5 The Required Licenses

The following table shows the required licenses from various authorities to implement the project.

Table 22: licenses required for the project

statement	analysis
Company Registration and Licensing	▪ Ministry of Industry and Trade ▪ Ministry of Agriculture
The establishment of the farm	▪ The Concerned Municipality

4.6 Project Time table

The following figure shows the timeframe to implement the project, which amounts to six months, as follows:

statement	Duration (months)					
	1	2	3	4	5	6
Studies						
The approvals, registration and licensing of the project						
Construction and cleaning						
Equipment, furniture						
Purchase of calves and starting work						
Total period	**6 months**					

5 Financial Study

5.1 Financial Assumptions

The following table illustrates the financial assumptions of the project.

Table 23: The Financial Assumptions of the Project

Item	Assumption
Inflation Rate	3%
Financing Structure	Equity constitutes 75% of the investment and loans constitute 25%
Interest Rate	7%
Working Capital	6 months of annual cost
Pre-Operating Expenses	2% of total investment
Life stock	The value of calves for the first time, which amounted to JD 220 thousand
Tax Rate	No tax on the project
Exemptions	Fixed assets are exempted from customs
Fodder cost	Ton for each calf, with a value of JD 300
Cost of calf	JD 220 for each calf
Cost of milk	JD 70 for each calf
Cost of treatments	JD 20 for each calf
Staff Benefits	25% of salaries
Annual Salaries Increase	5%
Staff Incentives	JD 1000 yearly
Growth Rate Of Expenses	3%
Cost of Electricity and diesel	0.5% of total revenues
Cost of water	2% of total revenues
Cost of fuel	JD 5000, with 5% annually increase
Accounts Receivable	1 month in the first year, the 2 months in the second year
Inventory	3 months of costs
Accrued expenses	1 month of costs
dividends	70% of Profit
Reserves	30% of profit

5.2 Investment Cost

The project's Investment cost is estimated at JD 965 thousand distributed among fixed assets of JD 600 thousand, life stock of JD 110 Thousand, working capital of JD 236 thousand, and pre operating expenses JD 19 thousand.

The following table shows the project's Investment cost.

Table 24: the project's investment cost

Item	Value (in thousand JD)
Fixed assets	600
Life Stock	110
Working capital	236
Pre-operating expenses	19
Total	965

5.3 Financing

The project will be financed with the shareholders by 75% which is estimated at about JD 723.4 thousand, while the other 25% of the project investment cost will be financed through bank loans of about JD 241.1 thousand.

The following table shows the financing structure for financing the project, where:

- The interest rate is 7%.
- The loan will be paid during 5 years.

Table 25: Project financing schedule

Item	Value (in thousand JD)	%
Equity	723.4	75%
Loan	241.1	25%
Total	965	100%

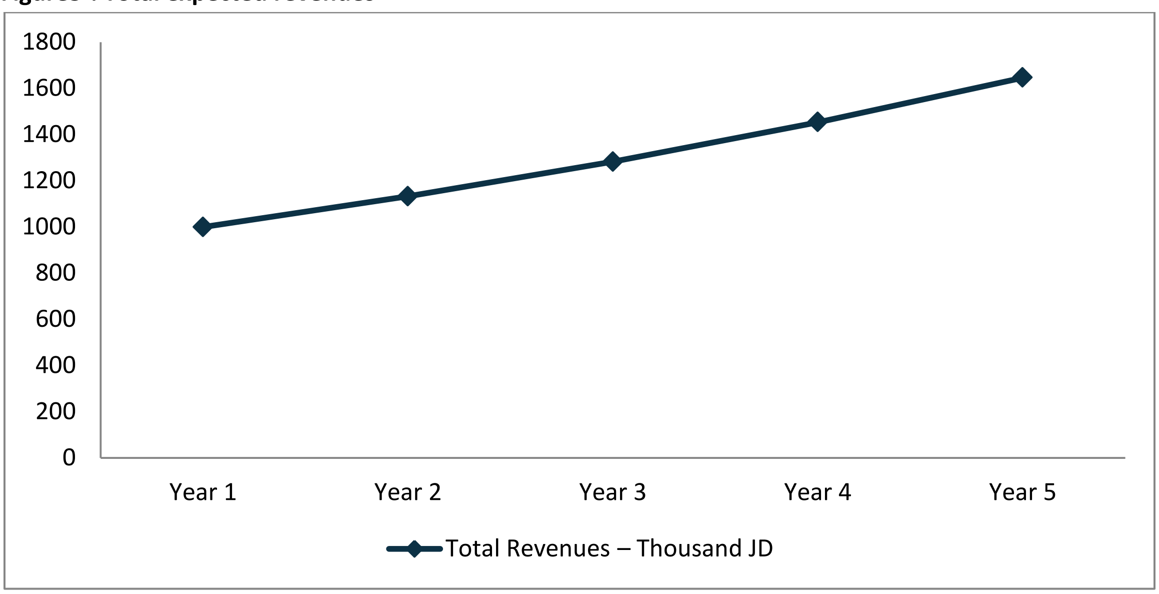
5.4 Revenues

The following table shows the total revenues of the project, where it is noted that the revenues in the first year amounts to about JD 999 thousand, and increased to reach up to JD 1.6 million in the fifth year.

Table 26: The Expected Revenues

Statement	Year 1	Year 2	Year 3	Year 4	Year 5
Number of Calves	500	550	605	666	732
Number of Annual Periods	2	2	2	2	2
Average of Calf Weight After 6 Months	370	370	370	370	370
Number of Calves	1,000	1,100	1,210	1,331	1,464
Gross Weight- Kg	370,000	407,000	447,700	492,470	541,717
Average of Selling Price- Kg (Gross)	2.7	2.8	2.9	3.0	3.0
Total Revenues – Thousand JD	999	1,132	1,282	1,453	1,646

Figure5 : Total expected revenues



5.5 The Projected Costs

Operating Costs

The following table shows the project's operating costs according to the previous assumption over five years. The cost of buying calves in year 1 amounted to JD 220 thousand which increase to reach JD 362.5 thousand in year 5. Moreover, the fodder cost amount to JD 300 thousand in year 1 to reach JD 494.4 thousand in the year 5.

Table 27: Operating Costs

Operating Costs (in thousand JD)					
Item	Year 1	Year 2	Year 3	Year 4	Year 5
Cost of buying calves	220.0	249.3	282.4	320.0	362.5
Fodder	300.0	339.9	385.1	436.3	494.4
Calves milk	70.0	79.3	89.9	101.8	115.4
Treatments	20.0	22.7	25.7	29.1	33.0
Salaries	39.6	41.6	43.7	45.8	48.1
Staff Benefits	9.9	10.4	10.9	11.5	12.0
Staff Incentives	1.0	1.0	1.0	1.0	1.0
Depreciation	28.6	28.6	28.6	28.6	28.6
Maintenance	1.0	1.1	1.1	1.2	1.2
Electricity	5.0	5.7	6.4	7.3	8.2
Water	20.0	22.6	25.6	29.1	32.9
fuel	5.0	5.3	5.5	5.8	6.1
Total	720.1	807.3	905.9	1017.4	1143.4

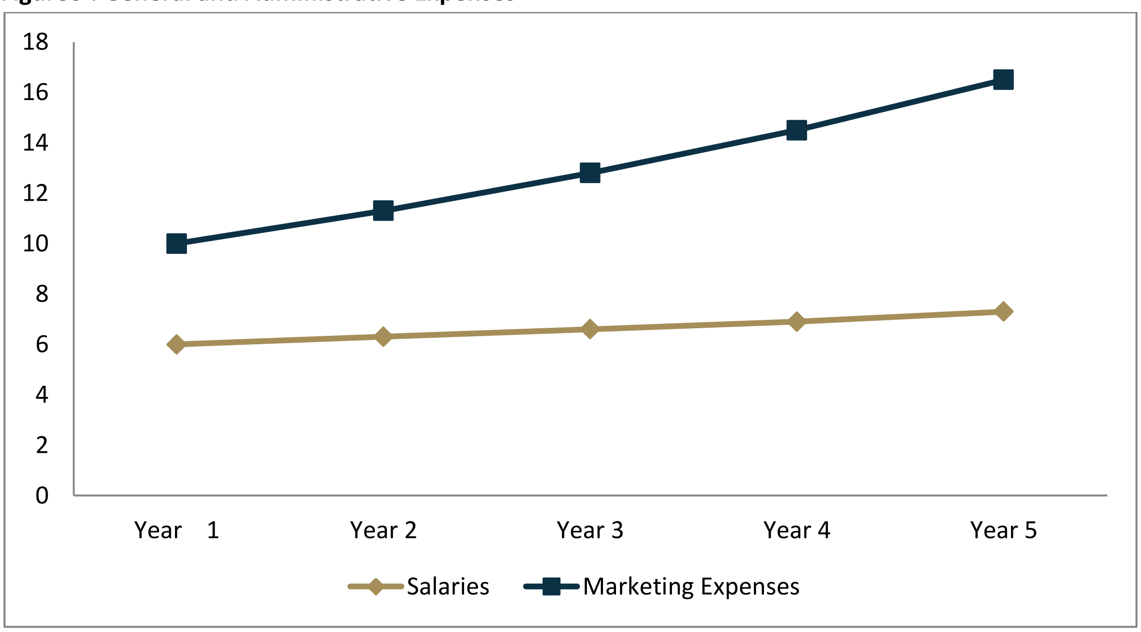
Administrative Expenses

The following table shows the projected administrative expenses of the project. Employees' salaries reach JD 6 thousand in the first year and increase to JD 7.3 thousand in the fifth year. The marketing expenses are about JD 10 thousand in the first year and increase to reach JD 16.5 thousand in the fifth year.

Table 28: General and Administrative Expenses

General and Administrative Expenses (in thousand JD)					
Item	Year 1	Year 2	Year 3	Year 4	Year 5
Salaries	6.0	6.3	6.6	6.9	7.3
Staff Benefits	1.5	1.6	1.7	1.7	1.8
Staff Incentives	1.0	1.0	1.0	1.0	1.0
Stationery	1.0	1.1	1.1	1.2	1.2
Professional Fees	1.0	1.1	1.1	1.2	1.2
Marketing Expenses	10.0	11.3	12.8	14.5	16.5
Other Expenses	2.0	2.1	2.2	2.3	2.4
Amortization	19.3				
Total	41.8	24.4	26.5	28.8	31.4

Figure6 : General and Administrative Expenses



5.6 Projected Financial Statements

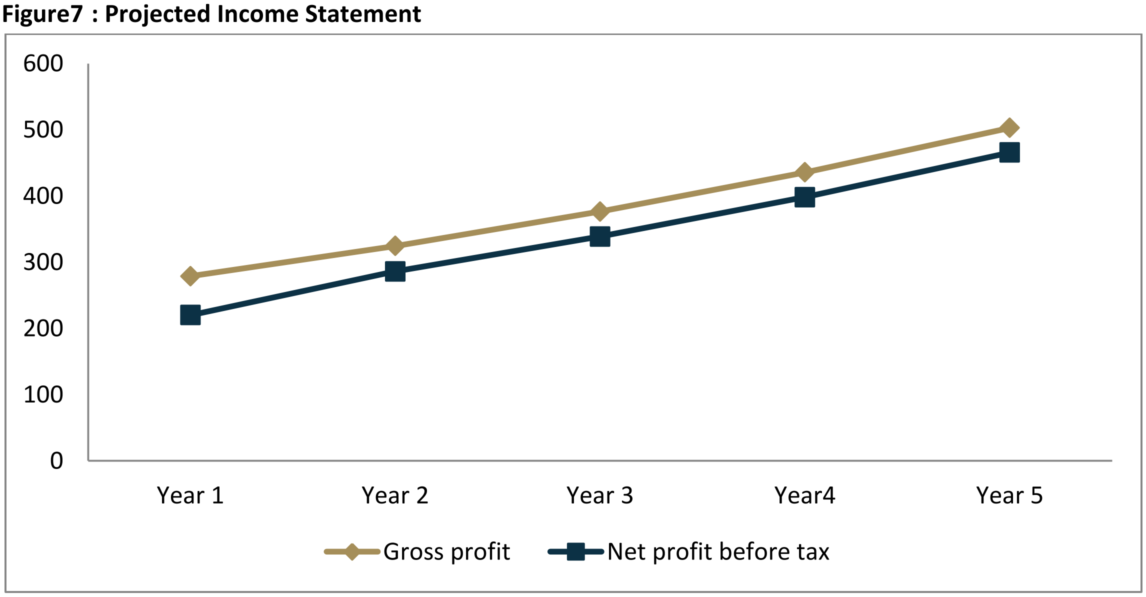
Income Statement

The following table shows the projected income statement of the project. It indicates that gross profit will increase from JD 278.9 thousand in the first year to JD 502.8 thousand in the fifth year. The net profit before tax will also increase from JD 220 thousand in the first year to JD 466 thousand in the fifth year, where the net profit before tax will be equal to the net profit after tax due to there is no tax in the project, because its agriculture project .

Table 29: The Projected Income Statement

Income Statement (in thousand JD)					
Item	Year 1	Year 2	Year 3	Year4	Year 5
Revenues	999.0	1,131.9	1,282.4	1,453.0	1,646.2
Operating costs (cost of sales)	720.1	807.3	905.9	1,017.4	1,143.4
Gross profit	278.9	324.5	376.5	435.6	502.8
Administrative expenses	41.8	24.4	26.5	28.8	31.4
Net profit	237.1	300.1	350.0	406.7	471.3
financial expenses	16.9	14.1	11.3	8.5	5.7
Amortization	-				
Net profit before tax	220.2	286.1	338.7	398.2	465.6
Tax	-	-	-	-	-
Net profit after tax	220.2	286.1	338.7	398.2	465.6

Figure7 : Projected Income Statement



Projected Balance Sheet

The following table shows the projected balance sheet of the project during the first five years. It indicates that total assets will decrease from JD 965 thousand in the year of incorporation to about JD 1.4 million in the fifth year. The Total liabilities will decrease from JD 265 thousand in the first year to about JD 142 thousand in the fifth year and the Shareholders' Equity will increase from JD 723 thousand to reach JD 1.2 million.

Table 30: Projected Balance Sheet

Projected Balance Sheet (in thousand JD)						
Statement	Year of incorporation	Year 1	Year 2	Year 3	Year 4	Year 5
Assets						
Cash	346	213	171	218	276	348
Receivables		88	188	213	241	273
Inventory		72	82	92	105	119
Life stock	110	110	125	141	160	181
Total Current Assets	346	483	565	664	782	922
Fixed Assets	619	619	619	619	619	619
Cumulative Depreciation	-	48	77	105	134	162
Pre- operating expenses	-					
Net Fixed Assets	619	571	542	514	485	456
Total Assets	965	1,054	1,107	1,178	1,267	1,378
Shareholders Equity and Liabilities						
Accrued Expenses and Payables		63	71	80	90	101
Long Term Loans	241	201	161	121	81	41
Total Liabilities		265	232	201	171	142
Shareholders Contributions	723	723	723	723	723	723
Retained Earnings		66	152	253	373	513
Shareholders' Equity	723	789	875	977	1,096	1,236
Shareholders Equity and Liabilities	965	1,054	1,107	1,178	1,267	1,378

Cash Flow Statement

The following table shows the projected cash flow statement of the project during the first five years. It indicates that the cash flow from operation will increase from JD 62 thousand in the first year to JD 438 thousand in the fifth year; while the Cash at the ending period will increase from JD 346 thousand in the year of incorporation to JD 348 thousand in the fifth year.

Table 31: The Expected Cash Flows Statement

Cash Flow Statement (in thousand JD)						
Statement	Year of incorporation	Year 1	Year 2	Year 3	Year 4	Year 5
Operation Activities						
Net Profit	-	220	286	339	398	466
Depreciation	-	48	29	29	29	29
Change In Working Capital	-	(207)	(117)	(44)	(50)	(56)
Cash Flow From Operation	-	62	198	324	377	438
Investing Activities						
Fixed Assets	(619)	-	-	-	-	-
Cash From Investing Activities	(619)	-	-	-	-	-
Financing Activities						
Capital (Equity)	723	-				
Loan	241	(40)	(40)	(40)	(40)	(40)
Dividends		(154)	(200)	(237)	(279)	(326)
Cash Flow From Financing Activities	965	(194)	(240)	(277)	(319)	(366)
Net Cash Flow	346	(133)	(42)	47	59	72
Cash At The Beginning Period	0	346	213	171	218	276
Cash At The Ending Period	346	213	171	218	276	348

5.7 Financial, Economic and Social Analysis

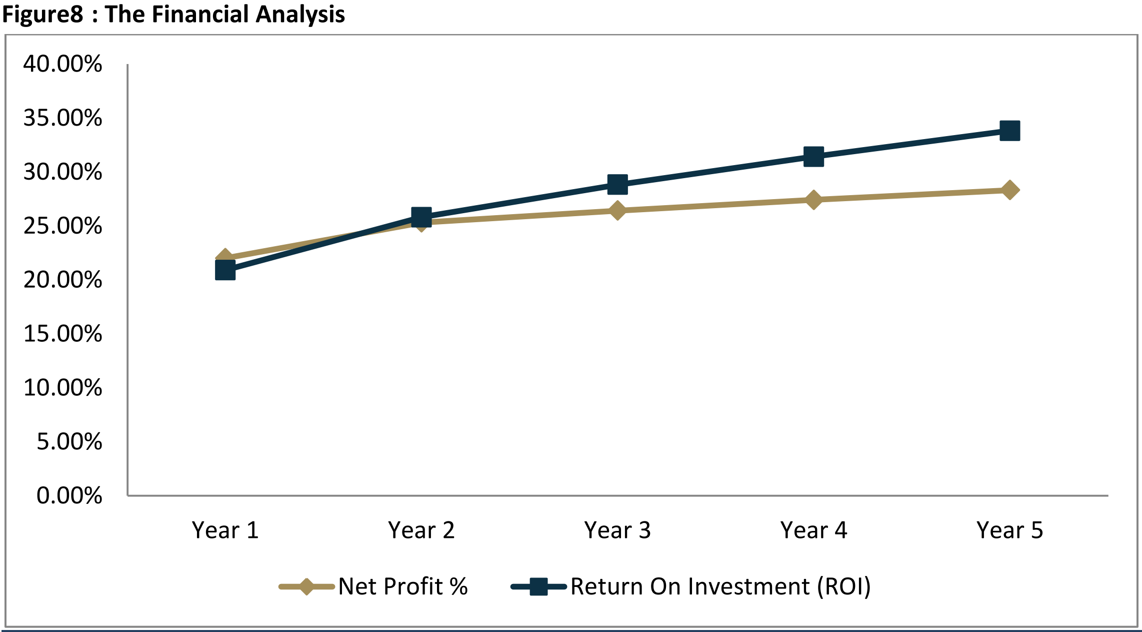
Financial Analysis

The following table shows the financial analysis of the project. It indicates that the net profit ratio will increase from 22% in the first year to 28.3% in the fifth year, and the return on investment will increase from 20.9% in the first year to 33.8% in the fifth year.

Table 32: Financial Analysis

Financial Analysis (In Thousand JD)					
Item	Year 1	Year 2	Year 3	Year 4	Year 5
Assets	1,054	1,107	1,178	1,267	1,378
Revenues	999	1,132	1,282	1,453	1,646
Profits	220	286	339	398	466
Capital (Equity)	723	723	723	723	723
Net Profit %	22.0%	25.3%	26.4%	27.4%	28.3%
Return On Investment (ROI)	20.9%	25.8%	28.8%	31.4%	33.8%
Return On Capital (ROC)	30.4%	39.5%	46.8%	55.1%	64.4%
Net Profit On Revenues	22.0%	25.3%	26.4%	27.4%	28.3%
Assets Turnover (Time)	.95	1.02	1.09	1.15	1.2

Figure8 : The Financial Analysis



Economic Analysis

The following table shows the economic analysis of the project during the first five years, we conclude that:

- The Internal rate of return is 33.1%. It exceeded 8 times the risk free rate, which means the economic feasibility of the project
- The present value of the project reached about JD 1.4 million. It exceeds the net present value with JD 723 thousand, which means the economic feasibility of the project.
- The profitability index of the project reached 1.98 times, which means that the expected value of the project will increase by two times the investment value, which proves that the project is feasible.
- The project payback period is 3.8 years.

Table 33: the Economic Analysis

Economic Analysis (in Thousand JD)						
Statement	Year of incorporation	Year 1	Year 2	Year 3	Year 4	Year 5
Net cash flow from operating and investing activities	(723)	22	158	284	337	398
terminal value						1,236
Net Cash flow	(723)	22	158	284	337	1,634
Internal Rate of Return (IRR)	33.1%					
present Value	1,433					
Net present value	710					
Profitability Index (Time)	1.98					
Payback period (Year)	3.80					

Social Analysis

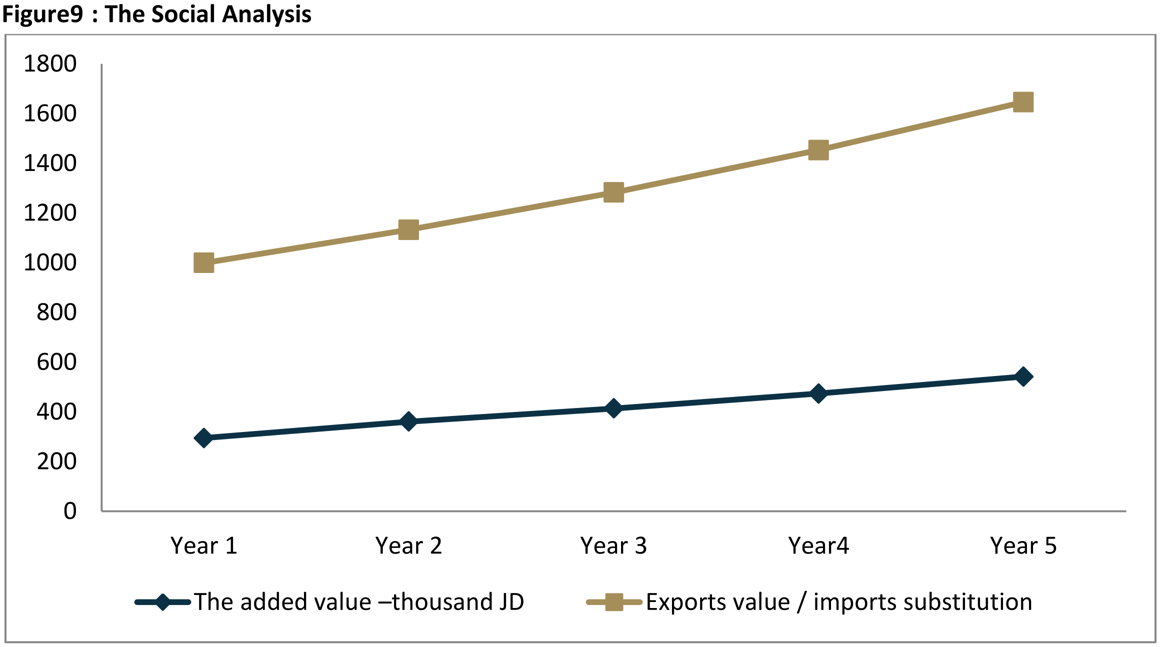
The following table shows the social analysis of the project. It is noticed that the number of staff required for the project will increase from 11 employees in the first year to 12 employees in the fifth year. The number of Jordanian employees will increase from 3 employees in the first year to reach 4 employees in the fifth year.

The added value of the project will also increase from JD 294 thousand in the first year to JD 541 thousand in the fifth year.

Table 34: the Social Analysis of the Project

Social Analysis					
Statement	Year 1	Year 2	Year 3	Year4	Year 5
Number of Employees	11	11	11	12	12
Jordanian employees	3	3	3	4	4
veterinary doctor (not full time)	1	1	1	1	1
The added value –thousand JD	294	360	413	473	541
Income tax –thousand JD	-	-	-	-	-
sales tax value –thousand JD	-	-	-	-	-
Exports value / imports substitution	999	1,132	1,282	1,453	1,646

Figure9 : The Social Analysis



6 Risk and Sensitivity Analysis

6.1 Risk Analysis

The following table shows the risk matrix analysis that may face the project.

Table 35: Project Risk Matrix

Risks	Type of Risks	Risk Assessment
Financial Risks	▪ **Credit Risk** Credit risk represents the risk of the company's financial loss as a result of the customer's default of the contractual obligation or that of the party dealing with the company through a financial instrument. These risks are mainly caused by trade receivables and others. ▪ **Liquidity Risk** Liquidity risk is the risk resulting from the company's inability to meet its financial obligations at time. The company's liquidity management is to ensure as much as possible that the company always maintain enough liquidity to meet its obligations as they become due and payable in normal and emergency conditions without incurring unacceptable losses or risks that affect the company's reputation. ▪ **risk of currency fluctuation** Currency risk is the risk of the	▪ The financial risks that may face the company are moderate, because the payment method is monthly, where some traders will not pay ▪ There is no risk of currency exchange, because the company sales and purchases by local currency ▪ There is no risk of inflation because the company's pricing is based on a periodic basis

Risks	Type of Risks	Risk Assessment
	fluctuation of the value of financial instrument, due to fluctuations in foreign currency exchange rates. ▪ **inflation risk** It is the risk associated with the possibility that the inflation or the rise in the cost of living might lead to the decrease the real value of the investment.	
Business risk (sector risk)	▪ **Strategic Risk** It is the risk resulting from taking bad decisions by the company's management, or implementing the decisions in a wrong way, or not taking the decisions at the right time; which leads to losses or causes loss of alternative opportunities. ▪ **Legal and Regulatory Risks** These risks are reflected as a result of non-compliance with laws, guidelines and instructions governing the work. Legal risks are caused by the company's break of the laws governing the work in the state in which the company operates. While regulatory risks arise from the company's violation of laws and standards issued by the regulatory authorities. ▪ **Reputation Risk**	▪ The risks are considered very low before the company’s establishment, because of getting the approval of the official authorities from municipality and agriculture ministry ▪ Reputational risk is very low, as the company deals with calves meat ▪ Market risk in the short term will be moderate because of the competition from other companies ▪ The import risk from other markets is high, but the Jordanian citizen prefer the national meat

Risks	Type of Risks	Risk Assessment
	Reputation risk arises from influential negative public views which result in great losses of customers or money. It includes the actions of the company's management or its employees which project a negative image of the company, its performance and its relationships with customers and other stakeholders. Reputation risk also results from circulating rumors about the company and its activities. ▪ **Competition Risk** Competition risk results from domestic and external competitors and reduces sales and profits.	
Operational Risk	Operational risk involves losses resulting from the failure of internal operations, human resources and systems. It includes: ▪ **IT Risks** They are losses arising from downtime or systems failure due to the infrastructure, information technology, or the lack of systems, and any failure or malfunction in the systems. They include: the crash of computer systems, breakdowns in communication systems, programming errors,	▪ Operational risks are moderate, because the selling price of fodders and calves, and the diseases which could infect the calves ▪ IT risks is very low ▪ Human resources risks is very low

Risks	Type of Risks	Risk Assessment
	computer viruses and opportunities losses due to breakdown. ▪ **Human Resources Risk** Losses caused by employees or related to them (intentionally or unintentionally). It also includes acts that are intended as methods of cheating, abusing property or circumvent the law, regulations or company policy by officials or employees, as well as losses arising from the relationship with the customer, shareholders, regulators and any third party.	
State Risk	State Risk includes politicians' interference, civil unrest, wars, financial and monetary policies and high level of debts.	▪ State Risk is considered to be low, due to security and political stability; international reports indicate that State Risk is low both in medium and long terms

6.2 Sensitivity Analysis

First: Increase of Investment Cost By 10%

The following table shows the results of the sensitivity analysis when investment cost increases by 10%.

Table 36: Investment Increase by 10%

Index	Base	Impact	Change
Internal Rate of Return (IRR)	33.1%	30.6%	2.6%
The Present Value at a discount rate of 13% (in Thousand JD)	1,433	1465.7	-32.3
Net Present Value at a discount rate of 13% (in Thousand JD)	710	668.3	41.6
Profitability Index (Time)	2	1.84	0.1
Payback period (Year)	3.8	4.00	-0.2
The Net Profit Ratio – an average of 5 years	25.9%	25.7%	0.2%
Return on Investment - an average of 5 years	28.1%	25.9%	2.3%
Return on Capital – an average of 5 years	47.2%	42.6%	4.6%
Net Profit On Revenues - an average of 5 years	25.9%	25.7%	0.2%
Assets Turnover (Time) – an average of 5 years	1.1	1.0	0.1
The added value - an average of 5 years (in thousand JD)	416	416	0.0
income tax - an average of 5 (in thousand JD)	0	0.0	0.0
sales tax - an average of 5 years (in thousand JD)	0	0.0	0.0

The above analysis refers to the feasibility of investment in the project, in light of the high cost of the total investment of the project, which increased by 10%. It is noted that:

- The internal rate of return reaches 30.6%, which is considered high for investment purposes
- The new payback period is 4 years, and it is reasonable for recovery purposes
- The return on capital is 42.6%, which is suitable for investment purposes

Second: Reducing Revenues by 10%

The following table shows the results of the sensitivity analysis when reducing revenues by 10%.

Table 37: Reducing Revenues 10%

Index	Base	Impact	Change
Internal Rate of Return (IRR)	33.1%	18.6%	14.5%
The Present Value at a discount rate of 13% (in Thousand JD)	1,433	909.3	523.7
Net Present Value at a discount rate of 13% (in Thousand JD)	710	185.9	524.1
Profitability Index (Time)	2	1.26	0.7
Payback period (Year)	3.8	5.60	-1.8
The Net Profit Ratio – an average of 5 years	25.9%	17.8%	8.14%
Return on Investment - an average of 5 years	28.1%	19.3%	8.82%
Return on Capital – an average of 5 years	47.2%	29.4%	17.78%
Net Profit On Revenues - an average of 5 years	25.9%	17.8%	8.14%
Assets Turnover (Time) – an average of 5 years	1.1	1.1	0.0
The added value - an average of 5 years (in thousand JD)	416	287	128.9
income tax - an average of 5 (in thousand JD)	0	0.0	0.0
sales tax - an average of 5 years (in thousand JD)	0	0.0	0.0

The above analysis shows the low sensitivity of the project in case of reducing the revenues or demand by 10%. It indicates that:

- The internal rate of return is 18.6%, which is considered high for investment purposes
- The new payback period is 5.6 years, and it is reasonable for recovery purposes
- The return on capital reaches 29.4%, which is suitable for investment purposes

Third: Increasing the Operating Costs by 10%

The following table shows the results of the sensitivity analysis when increasing the operating costs by 10%.

Table 38: Increasing the Operating Costs by 10%

Index	Base	Impact	Change
Internal Rate of Return (IRR)	33.1%	22.7%	10.43%
The Present Value at a discount rate of 13% (in Thousand JD)	1,433	1052.4	380.6
Net Present Value at a discount rate of 13% (in Thousand JD)	710	329.0	381.0
Profitability Index (Time)	2	1.45	0.5
Payback period (Year)	3.8	4.90	-1.1
The Net Profit Ratio – an average of 5 years	25.9%	18.8%	7.09%
Return on Investment - an average of 5 years	28.1%	21.8%	6.27%
Return on Capital – an average of 5 years	47.2%	34.5%	12.66%
Net Profit On Revenues - an average of 5 years	25.9%	18.8%	7.09%
Assets Turnover (Time) – an average of 5 years	1.1	1.1	0.0
The added value - an average of 5 years (in thousand JD)	416	324	91.8
income tax - an average of 5 (in thousand JD)	0	0	0
sales tax - an average of 5 years (in thousand JD)	0	0	0

The above analysis shows the feasibility of the project in light of increasing the operating costs of the project by 10%. It indicates that:

- The internal rate of return is 22.7%, which is considered high for investment purposes
- The new payback period is 4.9 years, and it is reasonable for recovery purposes
- The return on capital is 34.5%, which is suitable for investment purposes