



# Feasibility Study

Prepared by: Mohamed Othman

## Fodder for Animals Factory

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# Chapter 1 : Introduction

Feasibility Study Outlines 2014 / 2015

## *Purpose of the document*

The objective of the pre-feasibility study is primarily to facilitate potential entrepreneurs in project identification for investment. The project pre-feasibility may form the basis of an important investment decision and in order to serve this objective, the document/study covers various aspects of project concept development, start-up,

production, marketing, finance and business management.

The purpose of this document is to facilitate potential investors in broiler farm by providing them a general understanding of the business with the intention of supporting potential investors in crucial investment decisions.

Apart from carefully studying the whole document one must consider critical aspects provided later on, which form basis of any Investment Decision.

The need to come up with pre-feasibility reports for undocumented or minimally documented sectors attains greater imminence as the research that precedes such reports reveal certain thumb rules; best practices developed by existing enterprises by trial and error, and certain industrial norms that become a guiding source regarding various aspects of business set-up and it's successful management.

## ***Executive Summary***

The productive sector in the Gaza Strip is the mainstay of the Palestinian economy, or especially in light of the siege of the Gaza Strip by the Israeli authorities and the outside world, and our dependence is primarily and mainly on the state of the Israeli entity in the importation of products, where Gaza is more consumer than productive market , so headed thinking in the establishment of feed production project, which is an important investment projects.

It is noted that the industry and the production of feed for the time being of the major industries that depend on the livestock sector, either poultry or livestock, after increasing the farms located in the Gaza Strip and the difficulty of importing some feed, especially chicken feed in light of closures continued in our study for this project will make sure of success rate and whether achieve satisfactory returns or it is unable to achieve the minimum of that.

## ***Brief Description of the project***

The proposed project in this study is a project for a factory for the manufacture of feed for poultry (egg and meat) and this falls within the agricultural sector; as this area is relatively small in the Gaza Strip, which is a good field at the same time and cannot be dispensed with at the present time, or in the future.

### ***Project Objectives:***

1. Encourage the Palestinian Investment.
2. To assist in the elimination of unemployment run through a number of labor.
3. Provide a local product less than the importer and competitors prices.
4. Addition economic to the national product.

### ***Methodology***

Preparation of the study methodology and data collection methods consists of briefed on previous studies in this area and by gathering information through interviews, about feed production factories in the Gaza Strip, and costs required for the establishment of the factory , raw materials and sources to obtain, and other matters relating to the establishment of new factory.

## **SWOT Analysis**

### ***Strengths***

The factory is far from the locality.

Maintaining lower than average prices.

The Land Lying on the main street and its proximity to the border crossings.

Proximity to the electricity and water sources and sewage.

Proximity to government services.

### ***Weaknesses***

Lack of time to complete the study.

Competition with other breeders with more recognized names.

Low recourses as it will be carried as a sole proprietorship.

Difficulty in obtaining technical and engineering information.

Discreetly entrepreneurs to financial information.

The difficulty of obtaining data and information.

### ***Opportunities***

The increasing population thus the increase demand on poultry meaning a forecasted growing market.

New technologies available to be used by the Factory

The availability of land for expansion



The possibility to gain government exempts.

### ***Threats***

diseases price

change

Electrical failure

Failure of marketing attempts

### ***Critical Factors***

The Quality of Feed.

The Time of delivery

The type of feed

## **Chapter 2 : Legal Study**

### *Proposed Business Legal Status*

The legal form of the project is owned by an individual project "Sole Proprietorship" with a capital without resorting to the loan or the creditors, and the project owner is willing to bear all the legal proceedings that may result. The official place will be east Gaza.

### *Required Registrations & Contracts & Agreements*

Electricity and water subscription.

Subscription and installation of telephone.

Craft license of municipal.

Civil Defense license.

Chambers of Commerce fees.

### ***Social study***

This project is compatible with religion and customs and prevailing in our country tradition so we can consider this project is generally acceptable, and the location of the factory is far from the populated area and will not cause harm remnants of the population and the environment.

## **Chapter 3: Marketing Feasibility Study**

### ***Past and current demand analysis***

Based on the collected information from the Palestinian Central Bureau of Statistics and the Ministry of Agriculture and the market turned out that the number of broiler chicken farms 1040 farm, and the number of Laying hens farms 250 farm.

### ***Broiler chicken:***

The number of farms in 1040 farm, and the number of chicks per farm 4000 chick, and chick needs per session to 4 kg feed in the session and the number of days in session 45 days and the year include 6 sessions.

***Laying hens:***

250 the number of farms, the number of chicks per farm 5000 chick and chick needs in the session to 75 kg feed in the session, and the duration of the course of two years, as the chick needs annually 37.5 kg feed.

#	Type	unit	number of Farms	capacity farm (Ton)	total of chick demand/ session	Farm demand/ session (Ton)	total Demand (Ton)	
1	Feed broiler	ton	1,040	4,000	4,160	4 k.g	16,640	99,840
2	Feed Eggy	ton	250	5,000	1,250	75 k.g	93,750	46,875
total annual demand								146,715

***Past and current supply analysis***

The project operates within the market of part-competition, and often competition based on quality and price, which must be of high quality and favorable price to keep the project successful.

In addition, the plant will be in a position to competition between him and other factories in the same field and atmosphere. competition depend on prices and high quality.

***Of those competitors are:***

NAFFCO company - Deir al-Balah.

Fattouh and Abd Al-Aall factory - Maghazi.

Abeercompany - BeitLahiya.

Lord Company - MoghraqaChamber .

Number competitors	of unit	average daily production	total daily production	annual production	total production
4	Ton	80	320		25,600

annual Supply	25,600 ton
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## forecasting

*The total sales forecasting for the first full year of operation follows:*

#	item	unit	annual	price/ ton	total
1	Laying Feed	ton	7500	170	1275000
2	Brkeriot	ton	1500	165	247500
3	Feed broiler1	ton	9000	200	1800000
4	Feed broiler2	ton	9000	185	1665000
5	Feed broiler3	ton	9000	195	1755000
		total	36000		6742500

Demand gap and the market needs for similar business

Total aggregate demand - Total supply = volume of imports

146715 - 96000 = 50 715 tons per year

= 4226.25 tons per month

= 169 tons per day

The company intends to offer 36000 tons

The demand gap after operating =  $146715 - 132000 = 14715$

### ***Targeted customers analysis***

Based on the collected information from the Palestinian Central Bureau of Statistics and the Ministry of Agriculture and the market turned out that the number of broiler chicken farms 1040 farm, And the number of Laying hens farms 250 farm.

Those Farms represent the main customers who depend on the local or the imported product, the local do not cover the total need, and the imports faces a wide range of struggles including the sage and the lower quality due to the distance as feed loses its quality as moved. So the company intend to offer its product to those part of farm in addition to the locality (home farms).

### **Competitors' analysis**

*The competitors are:*

NAFFCO Company - Deir al-Balah.

Fattouh and Abd Al-Aall factory - Maghazi.

AbeerCompany - BeitLahiya.

Lord Company - MoghraqaChamber.

The competitors are mostly as sole proprietorship or partnerships so wide data are not available, however the average daily production range between "50 to 120" with an average of 80.

### ***Geographical potential for investment***

The geographical location is a land 5 donom to the east of Gaza. Total cost follows.

#	item	value \$
1	Land	150000
2	broker	1000
3	lawyer	500
4	recording	150
	<b>total</b>	<b>151650</b>

### ***Potential target markets***

The company intends to operate in Gaza for the first few years and after maintaining a trusted brand name sales will expand in west bank then to other neighboring countries.

The trusted name is expected to begin within 3 months and will widely be recognized within 2 to 3 years.

### *Market Entry Timing*

The market entry timing takes from 3 to six months as the buildings need about two months to be ready and during which the equipment will be acquired, and within one month the company will start acquiring the material and hiring the required personnel.

The expansion of the period to 6 months is to account for any emerging situations.

### ***Government policies toward the project***

The project is governmentally accepted and encouraged by regulations and tax exemptions.

### ***Marketing and Sales Strategy:***

#### **Pricing:**

The pricing of feed products is according to market prices, because of the presence of a number of competitors in the market.

#### **Promotion:**

Will be advertising for products factory in TV, radio, Internet sites, and through the distribution of informational posters.

#### **Distribution:**



The project will work as we have said in the Gaza Strip and the project will be distributed production sector in all areas and will be released to the West Bank. Products will be distributed from the factory to feed wholesalers.

## Chapter 4: Technical Feasibility Study

### Proposed Capacity

The proposed operating capacity in the first three years is as follow:

#	Item	unit	first year	2nd year	3rd year
1	Laying Feed	ton	7500	8625	10350
2	Brkeriot	ton	1500	1725	2070
3	Feed broiler1	ton	9000	10350	12420
4	Feed broiler2	ton	9000	10350	12420
5	Feed broiler3	ton	9000	10350	12420
	total		36000	41400	49680

### Capital Investment Requirements

The owner intend to provide all the Capital investments required which is \$2 million .

### Machinery & Equipment Requirements

#	type of machine	number	price/ m	value
1	Smashing machine	1	5000	5000
2	grain cracker Machine	1	2500	2500
3	Granulating and cooling machine	1	3000	3000
4	Filling Machine	1	1000	1000
5	Cranes	2	1000	2000
6	Tanks	5	300	1500
total				15000

### Building & Land and Space Requirements

#	Item	space m2	value
1	Plant and management	1500	100000
2	warehouse	450	35000
3	barking	300	7500
total			142500

### Raw Material Requirements

The required raw materials are:

		unit	price/ unit \$	tons required	total
1	Wheat	ton	135	10227	1380645
2	Soy	ton	250	9987	2496750
3	Yellow corn	ton	130	6942	902460
4	Red corn	ton	125	150	18750
5	Soy oil	ton	310	1578	489180
6	Calcium	ton	25	945	23625
7	Vitamin	ton	230	360	82800
8	Bags	bag	0.2	72000	14400
total					5408610

### Furniture & Fixtures Requirements

#	Item	num.	price	value
1	office	2	135	270
2	office chairs	2	100	200
3	chairs	10	10	100
4	Closet Office	3	80	240
5	tables	3	30	90
			total	900

### Human Resources & Salary Requirements

#	employee	number	monthly salary	total monthly	total yearly
1	manager	1	500	500	6000
2	architecture	1	450	450	5400
3	accountant	1	400	400	4800
4	workers	5	330	1650	19800
5	technician	2	350	700	8400
6	driver	2	350	700	8400
7	guard man	2	300	600	7200
				total	60000

### Other Cost Requirement

#	initial costs	costs
1	Municipality license	1000
2	Civil defense license	20
3	Ministry of Health license	20
4	Chamber of Commerce fees	15
5	architectural map	300
6	electricity sub	600
7	water subscription	90
8	Telephone sub.	50
	Total	2095

maintenance costs

# item	cost	maintenance rate	cost of M.
1 Machines	15000	2.00%	300
2 Furniture	900	2.00%	18
3 Building	142500	2.00%	2850
4 Devices	2654	2.00%	53.08
5 transportation	48000	2.00%	960
		total	4,181

depreciation costs

# item	cost	dep. Rate	cost of dep.
1 Machines	15000	7.00%	1,050
2 Furniture	900	7.00%	63
3 Building	142500	2.00%	2,850
4 Devices	2654	13.00%	345
5 transportation	48000	20.00%	9,600
		total	13,908

Utilities costs

#	item	cost	cost yearly
1	electricity	600	7200
2	water	90	1080
		total	8,280

## Chapter 5: Economics and Financial Feasibility Study

## ***Selling price***

The company intends to sell to wholesaler in huge quantities and because the feed market is a part competition market, these prices should be in the same range as to the other competitors, thus the prices are:

#	Item	unit	price/ ton
1	Laying Feed	ton	170
2	Brkeriot	ton	165
3	Feed broiler1	ton	200
4	Feed broiler2	ton	185
5	Feed broiler3	ton	195
		total	

## ***Future Operation Cost***

Analysis of the company OC for the first three years follow:

#	Item	value	variable	Fixed	2nd year	3rd year
1	direct material	5,408,610	5,408,610		6219902	7463882
2	salaries and wages	60,000		60,000	60,000	60,000
3	maintainace	4,181		4,181	4,181	4,181
4	depreciation	13,908		13,908	13,908	13,908
5	utilities(water/electricity)	8,280	8,280		9108	10474.2
6	telephon	100	100		115	138
7	licences renewal	95	95		95	95
8	work insurance	1,000				1,000
10	contengent reserve	274,809		1,000	1,000	379236
				274,809	316030	
	<b>Total</b>	<b>5,770,983</b>	<b>5,417,085</b>	<b>353,898</b>	<b>6,624,339</b>	<b>7,932,914</b>

### Future Net Returns

initial investment	1500000	1500000	1500000
NI	825,790	960,106	1,165,976
annual return	55%	64%	78%

**: Testing the feasibility of the project according to the following  
Payback period**

	1st year	2nd	payback period
payback period	0	674,210	1year +9 months
Years	1	0.70	1.70

### Discounted Payback period

discounted payback period			
suppose interest 10%			
NI	825,790	960,106	1,165,976
PV	750,718	793,476	876,015
Years	1	0.94	1.94
		about 2 years	

### Net Present Value (NPV)

NPV	
initial investments	-1500000
PV year 1	750,718
PV year 2	793,476
PV year 3	876,015
NPV	920,208.69

### Average Rate of Return (ARR)

Average Rate of Return	
total return	2,951,871

average return	983,957
ARR	0.66

### Profitability index (PI)

Profitability index	
PV of total Return	2,420,209
Average	806,736
PI	0.54

### Break-even Analysis

Breakeven	
fixed costs	353,898
average SP	183.00
average V. Cost	172.14
break even Quantity/ ton	32,595.84

### Project Financing Plan :

#### Sources of Finance

The principle owner only with capital of 1500000

#### Cost of Finance

Only drawings

Drawings	200,000	200,000	200,000
annual rate	13.33%	13.33%	13.33%

## Income Statement

Feed company			
IS			
3 years			
	1st year	2nd year	3rd year
Revenues	6,742,500	7,753,875	9,304,650
COGS	5,408,610	6,219,902	7,463,882
Gross Profit	1,333,890	1,533,974	1,840,768
Operating expenses			
salaries and wages	60,000	60,000	60,000
Maintenance	4,181	4,181	4,181
Depreciation	13,908	13,908	13,908
utilities(water/electricity)	8,280	9,108	10,474
Telephone	100	115	138
licenses renewal	95	95	95
work insurance	1,000	1,000	1,000
contingent loses	274,809	316,030	379,236
total OC	362,373	404,437	469,032
EBT	971,517	1,129,536	1,371,736
Tax	145,728	169,430	205,760
NI	825,790	960,106	1,165,976

average taxes                      15%                      15%                      15%



## Balance Sheet

Feed company			
BS			
3 years			
	1st year	2nd year	3rd year
cash	74,993	104,308	171,211
Bank	0	150,200	380,000
Acc. Recei	510,000	832,000	998,400
inv.	1,374,000	1,636,000	2,150,680
other CA	100,000	145,000	200,000
total C A	2,058,993	2,867,508	3,900,291
Land	151,650	151,650	151,650
Buildings	142,500	142,500	142,500
acc. Dep	2,850	5,700	8,550
Machines	15,000	15,000	15,000
acc. Dep	1,050	2,100	3,150
Devices	2,654	2,654	2,654
acc. Dep	345	690	1,035
Transportation	48,000	48,000	48,000
acc. Dep	9,600	19,200	28,800
Furniture	900	900	900
acc. Dep	63	126	189
net Fixed assets	346,796	332,888	318,980
Total Assets	2,405,789	3,200,396	4,219,271
Liabilities & O.E			
Acc payable	230,000	264,500	317,400
Other current liabilities	50,000	50,000	50,000
total C Liab	280,000	314,500	367,400
Long term Debt	0	0	0
Total liabilities	280,000	314,500	367,400

Capital	1,500,000	1,500,000	1,500,000
R.E	625,790	1,385,896	2,351,871
Total O E	2,125,790	2,885,896	3,851,871
Total liabilities& O.E	2,405,790	3,200,396	4,219,271

Drowings	200,000	200,000	200,000
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## Chapter 6 : National Feasibility Study

Assessing the value added National Profitability of the project using the Value Ad Net Value Added and Employment Effect .

The added value to the national arena include the reduction of imports with about \$6 million dollar however the materials used are exports with around \$5 million dollar

Thus the Net added value will be 1 million dollar to the national economy including the wages and benefit that will be received by employees and other contracting parts.

## **Chapter 7: Key Assumptions**

### ***Operational Assumptions***

The focus on the quality and the time of delivery will promote competitive advantage to the company and maintain a high brand value and brand name.

### ***Financial Assumptions***

The only source of capital needed is the equity investment as it bear the whole danger and receive the whole benefit of success.

### ***Economical Assumptions***

The economic and the overall political and social situation is stable and there is no conflicts or wars.

### ***Revenue and Sales Assumptions***

Revenues are achieved at time of sale as the market is in part competition.

### ***Expenses Assumptions***

Expenses are paid as incurred and all expenses are relevant to the project and there will be no other sudden expenses.

### ***Conclusions***

Previous financial indicators have shown that positive results in favor of the establishment of such a project. As indicated by the financial analysis that the import of capital a short period.

As well as the demand for this type of industry is a permanent demand throughout the year and in all seasons and therefore the demand for this industry are encouraged to undertake this project.

The project will contribute to the improvement of the economic situation by providing employment opportunities, and that the project environmentally and socially acceptable, since it has no negative effects on the environment or the community.

## ***Recommendations***

We recommend the establishment of the project, as well as recommend the project owner to care beside propaganda, especially in the early stages of the project and that by the use of newspapers, magazines, television and commercial paintings and posters advertising.

Also must determine an appropriate and moderate price while providing high quality publicity even is honest.

We recommend the project owner to work on development of the project after a period of establishing the project and using the best materials and the latest technology.