Islamic University – Gaza

Faculty of commerce

Feasibility Study

Fattening and breeding rabbits

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(2014-2015)

Project of fattening and breeding rabbits

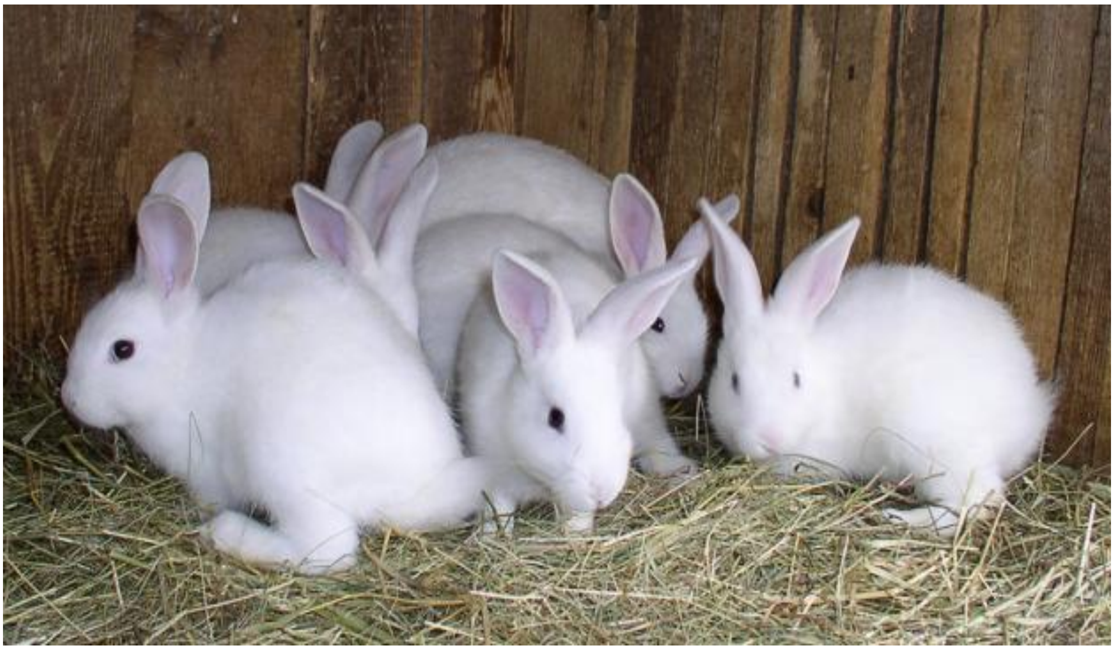

Table of Contents

Objectives of the Project

The project of "Rabbit Raising" aims to

- Gaining high profits
- Fulfill the market gap between demand and supply of small rabbits

Executive summary

NPV	15239.03
PI	0.87
IRR	24%
ARR	0.51
NARR	0.31
Discounted ARR	0.37
Discounted NARR	0.17
Payback period	2.37
Discounted payback period	2.78
Benefit / Cost Ratio	1.87
Pay-off period Rate of return	0.42

Brief Description of the project

The project idea is to establish a farm of 96 square meters for raising rabbits , special breeding cages (hutches) for rabbits

The breeding process depends on bringing together 65 of female rabbits and 7 of male rabbits at five months old; to allow the mating process between them and then breeding after approximately one month.

Pregnancy period is about 30 days, and then after 20 days of breastfeeding or incubation period for the newborn rabbits, they will be moved into raising cages for 25 days to be at around 45 days old, which is the suitable age to start selling process.

Number of pregnancies for one female rabbit is 6 times a year, where the newborn rabbits will be raising until reach the age of 45 days old , and then sell each couple of them by 24 NIS.

Methodology

The data collected from farmers and experts in this field has been analyzed using quantitative and qualitative technique, where required necessary assumptions have been made which have been mentioned in the report.

Study Team

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SWOT Analysis

Strength

- High demand from customers because of the market gap between demand and supply of rabbits.
- Source of farmyard manure.

Weaknesses

- The lack of experience necessary for raising rabbit.
- Lack of education and initiative in farmer, traditional approach due to lack of skills and management.

Threats

- occupation (potential destroying for the farm land in war conditions)
- Imbalance between prices of inputs & outputs.
- High risks of diseases in live stock. Animals are subject to serious diseases that may lead to mortality.

Opportunity

- low competition in the local market
- the gap between demand and supply of rabbits

Proposed Business Legal Status

Partnership project.

Marketing plan

Product description

The project mainly aims to provide little rabbits, then fattening them until the age of 45 days. After that, selling them directly to the wholesalers.

Total demand

According to the results of "Palestinian Central Bureau of Statistics" for the year 2007, the average monthly consumption for the Palestinian family Gaza Strip is 0.216 KG of rabbit's meat. In addition, it represents that the number of families in Gaza Strip is approximately (308,833) family.

Therefore, the total demand on rabbit's meat equal

(**The average monthly consumption for the family * No. of families * 12 months a year)**

(0.216KG * 308,833 Family * 12 Months) = 80,049 KG yearly

Target group

All the rabbit's wholesalers in Gaza Strip.

Competitors' analysis

A few number of Competitors.

Geographical potential for investment

The farmland located in Northern Gaza-Beit Lahia, in an area owned by one of the shareholders. The land is 96 square meters and its capacity is 23 cages, 13 of them is for mating and breeding where each cage divided into 5 places, each place for one female rabbit.

Market entry timing

By the beginning of Spring Semester, when it is convenient and appropriate climate for rabbits breeding.

Marketing and Sales Strategy

Pricing policy

The selling price will be developed based on market price, which is about 25 NIS per couple, the final price will be 24 NIS; to be able to compete in the market.

The price per couple is expected to increase by 5% yearly.

Selling policy

Depend on the market price.

Promotion policy

The promotion policy depends on direct connection with the wholesalers before the age of 45 days for the rabbit; the selling system is a wholesale selling system.

Sales channels

According to the selling system, the sales process will be conducted directly with the wholesaler in the farm.

Operational Plan

Operation capacity

- The number of rabbits ready for mating process is 65 rabbits
- The average of newborn rabbits for one pregnant rabbit is 8
- The percentage of expected mortality is 25% of the newborn rabbits. So, the number of newborn after deducting the mortality percentage is 6 rabbits, which equal (25% * 65 rabbits * 8 newborn rabbits) = **130 mortal rabbits**

  And what remains alive (75% * 65 rabbits * 8 newborn rabbits) = **390 rabbits**
- Number of couples available for sale equal (390/2) = 195 couple
- The pregnancy times for a rabbit in one year is 6 times so, the total production per year equal (6 pregnancy times * 195 couple per pregnancy time) = **1170 couple yearly**

- According to the market prices, the price per couple is 25 NIS and it will be sold by 24 NIS as a competition price
- The total sales per year based on the production capacity equal

(1170 couple * 24 NIS per couple) = **28,080 NIS yearly**

- The total sales per one pregnancy time equal

(195 couple * 24 NIS) = **4680 NIS per one pregnant time**

The production process

The production process of rabbits available for sale is done as the following:

- Allow the mating process between male and female rabbits after reach the maturity age and making sure of healthy conditions.
- About the layout design, 13 cages are for mating and breeding and 10 cages for fattening.
- The pregnancy period for a female rabbit is 30 days.
- The breastfeeding period for newborn rabbits is 25 days, after that they are moved to the fattening cages for about 20 days.
- After 45 days, the rabbits are available for sale.
- During that period (45 days), the daily follow-up is necessary regarding healthy, feeding and veterinary conditions.
- Special records for each female rabbit regarding mating, pregnancy, birthdate and veterinary follow-up.

Working Capital

The working capital required is 17,500 NIS .

Machinery & Equipment Requirements

Type	Quantity	Price/unit	Total	Life span	Depreciation
Cage for mating and breeding	13	130	1690	5	338
Cage for fatting	10	130	1300	5	260
Female rabbits	65	65	4225	-	
male rabbits	7	65	455	-	
Barrel	1	200	200	5	40
Total			7870		638

Feeding

years	Feeding cost			Total
	Mothers	Fathers	newborn rabbits	
1	7020	604.8	9360	16984.80
2	7160.40	616.90	9547.20	17324.50
3	7303.61	629.23	9738.14	17670.99
4	7449.68	641.82	9932.91	18024.41
5	7598.67	654.65	10131.57	18384.89

Humane resources

Labor	wages per flock	number of flocks	annual costs
1	300	6	1800

Other cost

other costs	number of flocks	cost per flock	annual costs
maintenance	6	100	600
electricity & water	6	100	600
transportations	6	50	300
drugs	6	150	900
communications	6	50	300
total			2700

Financial feasibility

Net returns

years	total revenue	operating cost	Dep.	total cost	profit	tax	net returns
0				17500			-17500
1	28080.0	21484.80	638	22122.80	5957.2	0	6595.2
2	29484.0	21824.50	638	22462.50	7021.5	0	7659.5
3	30958.2	22170.99	638	22808.99	8149.2	0	8787.2
4	32506.1	22524.41	638	23162.41	9343.7	0	9981.7
5	34131.4	22884.89	638	23522.89	10608.5	0	11246.5

Testing the feasibility of the project according to the following :

NPV	15239.03
PI	0.87
IRR	24%
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Sensitivity Analysis

** Sensitivity analysis when OC increased by 5%

NPV	11046.69
PI	0.63
IRR	18%
ARR	0.44
NARR	0.24
Discounted ARR	0.33
Discounted NARR	0.13
Payback period	2.70
Discounted payback period	3.22
Benefit / Cost Ratio	1.63
Pay-off period Rate of return	0.37

** Sensitivity analysis if TR decreased by 5%

NPV	9409.73
PI	0.54
IRR	16%
ARR	0.42
NARR	0.22
Discounted ARR	0.31
Discounted NARR	0.11
Payback period	2.85
Discounted payback period	3.41
Benefit / Cost Ratio	1.54
Pay-off period Rate of return	0.35

** Sensitivity analysis when TR decreased by 5% and OC increased by 5%

NPV	5217.39
PI	0.30
IRR	9%
ARR	0.35
NARR	0.15
Discounted ARR	0.26
Discounted NARR	0.06
Payback period	3.35
Discounted payback period	4.07
Benefit / Cost Ratio	1.30
Pay-off period Rate of return	0.30

Sources of Finance

Capital is self-financing by partners.

Income statement (first year)

Revenues:		
Sales	28080	
Net Sales		28080
Expenses:		
operation costs		
Feeding	16984.80	
Labor	1800	
maintenance	600	
electricity & water	600	
transportations	300	
drugs	900	
communications	300	
total operation costs	21484.80	21484.8
Gross profit		6595.2
Marketing	0	
Tax	0	
Net Profit		6595.2

Balance Sheet (at the beginning of the project)

Assets	
Cash (for feeding &drugs)	9630
Cage for mating and breeding	1690
Cage for fatting	1300
female rabbits	4225
male rabbits	455
Barrel	200
total	17500
Equity	
Capital	17500
total	17500

Key assumption

*** Tax rate = 0 %** **(The agricultural sector is exempt from tax)**

*** the discount rate is 10 % .**

*** Price of rabbits increases by 5 % annually.**

*** Cost of feeding increases by 2 % annually.**

*** All quantities produced are being sold. (Because of the project, depend on sell all quantities produced to wholesalers)**

*** Project life span is 5 years.**

<u>Recommendations</u>

* Payback period equals **2.37** years.
* Internal rate of return equals **24**%.

We recommend acceptance of the project because of the internal rate of return greater than the discount rate.