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# Pre-Feasibility Study

## INTENSIVE GOAT BREEDING FARM



**Small and Medium Enterprises Development Authority**

**Ministry of Industries & Production**

**Government of Pakistan**

[www.smeda.org.pk](http://www.smeda.org.pk)

**HEAD OFFICE**

4th Floor, Building No. 3, Aiwan-e-Iqbal Complex, Egerton Road,  
Lahore

Tel: (92 42) 111 111 456, Fax: (92 42) 36304926-7

[helpdesk@smeda.org.pk](mailto:helpdesk@smeda.org.pk)

REGIONAL OFFICE PUNJAB	REGIONAL OFFICE SINDH	REGIONAL OFFICE KHYBER PAKHTUNKHWA	REGIONAL OFFICE BALOCHISTAN
3 <sup>rd</sup> Floor, Building No. 3, Aiwan-e-Iqbal Complex, Egerton Road Lahore, Tel: (042) 111-111-456 Fax: (042) 36304926-7 <a href="mailto:helpdesk.punjab@smeda.org.pk">helpdesk.punjab@smeda.org.pk</a>	5 <sup>TH</sup> Floor, Bahria Complex II, M.T. Khan Road, Karachi. Tel: (021) 111-111-456 Fax: (021) 5610572 <a href="mailto:helpdesk-khi@smeda.org.pk">helpdesk-khi@smeda.org.pk</a>	Ground Floor State Life Building The Mall, Peshawar. Tel: (091) 9213046-47 Fax: (091) 286908 <a href="mailto:helpdesk-pew@smeda.org.pk">helpdesk-pew@smeda.org.pk</a>	Bungalow No. 15-A Chaman Housing Scheme Airport Road, Quetta. Tel: (081) 831623, 831702 Fax: (081) 831922 <a href="mailto:helpdesk-qa@smeda.org.pk">helpdesk-qa@smeda.org.pk</a>

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## TABLE OF CONTENTS

<b>1</b>	<b>DISCLAIMER .....</b>	<b>2</b>
<b>2</b>	<b>EXECUTIVE SUMMARY .....</b>	<b>3</b>
<b>3</b>	<b>INTRODUCTION TO SMEDA .....</b>	<b>3</b>
<b>4</b>	<b>PURPOSE OF THE DOCUMENT .....</b>	<b>4</b>
<b>5</b>	<b>BRIEF DESCRIPTION OF PROJECT &amp; PRODUCT .....</b>	<b>4</b>
5.1	Breed Production Plan .....	5
<b>6</b>	<b>CRITICAL FACTORS .....</b>	<b>6</b>
<b>7</b>	<b>GEOGRAPHICAL POTENTIAL FOR INVESTMENT .....</b>	<b>6</b>
<b>8</b>	<b>POTENTIAL TARGET CUSTOMERS / MARKETS .....</b>	<b>6</b>
<b>9</b>	<b>PROJECT COST SUMMARY .....</b>	<b>7</b>
9.1	Project Economics .....	7
9.2	Project Cost .....	8
9.3	Building and Infrastructure Requirement .....	9
9.4	Machinery & Equipment Requirement .....	10
9.5	Furniture & Fixtures Requirement .....	10
9.6	Goats Requirement .....	11
9.7	Office Equipment Required .....	11
9.8	Animals Feed and Vaccination Requirement .....	11
9.9	Human Resource Requirement .....	12
9.10	Revenue Generation .....	12
<b>10</b>	<b>CONTACT DETAILS .....</b>	<b>13</b>
<b>11</b>	<b>USEFUL WEB LINKS .....</b>	<b>13</b>
<b>12</b>	<b>ANNEXURES .....</b>	<b>15</b>
12.1	Income Statement .....	15
12.2	Balance Sheet .....	16
12.3	Cash Flow Statement .....	17
<b>13</b>	<b>KEY ASSUMPTIONS .....</b>	<b>18</b>
13.1	Operating Cost Assumptions .....	18
13.2	Production Cost Assumptions .....	18
13.3	Revenue Assumptions .....	19

## 1 DISCLAIMER

This information memorandum is to introduce the subject matter and provide a general idea and information on the said matter. Although, the material included in this document is based on data/information gathered from various reliable sources; however, it is based upon certain assumptions, which may differ from case to case. The information has been provided on as is where is basis without any warranties or assertions as to the correctness or soundness thereof. Although, due care and diligence has been taken to compile this document, the contained information may vary due to any change in any of the concerned factors, and the actual results may differ substantially from the presented information. SMEDA, its employees or agents do not assume any liability for any financial or other loss resulting from this memorandum in consequence of undertaking this activity. The contained information does not preclude any further professional advice. The prospective user of this memorandum is encouraged to carry out additional diligence and gather any information which is necessary for making an informed decision, including taking professional advice from a qualified consultant/technical expert before taking any decision to act upon the information.

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### Document Control

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## **2 EXECUTIVE SUMMARY**

The widening demand and supply gap makes the goat farming to be a profitable venture in Pakistan. This particular pre-feasibility provide the basic information for setting up an 'Intensive Goat Breeding Farm' in favorable rural or peri-urban areas for goat breeding in Pakistan. The proposed farm will ensure the breeding of disease free animal as it will overcome the disadvantage of bringing the diseases from the animal markets (Mandi).

The farm will start production with 190 adult breeding females for production which will remain same to keep the total population within the farm limits. The overall farm size at this capacity would be around 503 animals including young male and female progeny and female stock of breeding age. The number of adult breeding females has been kept limited because very large herd would be difficult to manage. This capacity is estimated to be economically viable and justifies the capital as well as operational cost of the project. However, entrepreneur's knowledge of livestock farming, selection of good breed, maintain disease free stock and location of farm are the key success factors.

The total project cost is estimated at Rs. 14.184 million out of which Rs. 9.817 million is capital cost and Rs. 4.366 million is working capital. Considering all the assumptions on which the pre-feasibility has been built, the project generates an IRR, Payback and Net Present Value are 27%, 3.96 years and Rs. 6.878 million respectively as an equity financed business. The project will provide employment opportunities to 08 people including the Owner. The legal business status of this project is assumed to be 'Sole Proprietorship'.

## **3 INTRODUCTION TO SMEDA**

The Small and Medium Enterprises Development Authority (SMEDA) was established in October 1998 with an objective to provide fresh impetus to the economy through development of Small and Medium Enterprises (SMEs).

With a mission "to assist in employment generation and value addition to the national income, through development of the SME sector, by helping increase the number, scale and competitiveness of SMEs", SMEDA has carried out 'sectoral research' to identify policy, access to finance, business development services, strategic initiatives and institutional collaboration and networking initiatives.

Preparation and dissemination of prefeasibility studies in key areas of investment has been a successful hallmark of SME facilitation by SMEDA.

Concurrent to the prefeasibility studies, a broad spectrum of business development services is also offered to the SMEs by SMEDA. These services

include identification of experts and consultants and delivery of need based capacity building programs of different types in addition to business guidance through help desk services.

## **4 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, and production, marketing, finance and business management.

The purpose of this document is to facilitate potential investors in “**Intensive Goat Breeding Farm**” by providing them with a general understanding of the business with the intention of supporting potential investors in crucial investment decisions.

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.

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

## **5 BRIEF DESCRIPTION OF PROJECT & PRODUCT**

Goat breeding and keeping is a common practice in rural areas in Pakistan. It is a potential source of income and employment for the rural population. The concept of establishing goat breeding farms on scientific basis by adopting best livestock farm management practices is steadily increasing and offer lucrative potential investment opportunity due to huge demand and supply gaps.

The Goat Breeding venture suggested in this study is based on breeding 190 adult goats. After the progeny, these goats will give birth to around 333 goats with a ratio of 50% male and 50% female, which will be raised at the farm. All the male progeny goat will be sold to goat fattening farms or in market after attaining the age of 7-8 months, whereas additional female goats, i.e. more 190 adults, will also be sold after attaining the maturity age. The adult mortality rate is 2% while progeny mortality rate is 7%. In order to maintain this progeny cycle, 7 male adults will be required. Therefore, the overall farm size would be 503 animals in an year, including young male and female progeny and female stock of breeding age.

The main objective of the farm is to raise special breed in a disease free environment. In this way farm will attain a completely new breed through the cross of the female local goats with the crossed male goats and after two breeding cycles the project will develop its own breed that is most suitable to the local environment.

A total of around 9 acre of land would be required for the proposed farm, around 8 acre will be utilized for fodder growing and 1 acre for goat farm. It is proposed that agriculture land centrally located within a rural or peri urban area may be acquired on long terms lease basis. Demand and supply of animals in Pakistan fluctuates during the year depending upon Eid-ul-Azha and winter season. If the entrepreneurs is targeting Eid for sale of its young stock, It is suggested that female stock ready for breeding should be purchased at least 12 to 14 Months before the next Eid. Normally best time for the impregnation of a goat is during the months of March, April, May and October. As it takes around 5 Months for giving birth, therefore kids born have sufficient feed, and prove to be a healthy stock.

Financial analysis shows the venture shall be profitable from the very first year of operation. The legal status of the business is proposed to be sole proprietorship.

### 5.1 Breed Production Plan

The farm will start production with 190 adult females for production. The overall farm size at this capacity would be around 503 animals including young male and female progeny and female stock of breeding age. The number of adult breeding females has been kept limited because very large herd would be difficult to manage. The details of breed stock maintained and available for sale during the year at the farm is provide in the table below.

**Table 1: Annual Breed Production and Sale Plan**

Description	Factor	No. of Goats
Adult Females Retained		190
Adult Mortality	2%	4
Female Population After Mortality (a)		186
Adult Male Required For Breeding (b)	4%	7
Progeny Percentage Per Female Goat	175%	333
Progeny Mortality	7%	23
Progeny After Mortality		310
Female Progeny (c)	50%	155

Male Progeny (d)	50%	155
Young Male Sold 7 Months		155
<b>Total Heads (Female &amp; Male Adults Incl. Progeny i.e. a+b+c+d)</b>		<b>503</b>

## 6 CRITICAL FACTORS

Following are the factors critical for the success of this business venture;

- ⇒ Selection of an appropriate location within the vicinity of a rural or peri urban area conducive to breeding and raising goats.
- ⇒ Selection of quality goat breed suitable to the local conditions and environment.
- ⇒ Background knowledge and related experience of the entrepreneur in the livestock sector in general and goat breeding farm operations in particular.
- ⇒ Application of good husbandry practices such as timely feeding, watering and vaccination to ensure animal's health and disease-free environment.
- ⇒ Awareness about the supply and demand of goats in the market both for meat purpose and sacrificial purpose.
- ⇒ Maintaining a clean, hygienic, and healthy environment.
- ⇒ Efficient marketing of the project and bulk supply to fattening farms and animal market. Promotion through social media (Facebook, Instagram, etc.) for attracting customer.

## 7 GEOGRAPHICAL POTENTIAL FOR INVESTMENT

Apart from Sargodha, Sialkot, Jhang, Rahim Yar Khan, Bahawalnagar, Bahawalpur and Sahiwal in Punjab, livestock markets in peri-urban locations of all major cities of other provinces such as Hyderabad, Nawabshah, Larkana, Dadu, Qila Saifullah, Panjgur, Pishin, Zhob, Barkhan, Quetta, Bannu, Laki Marwat, Kohat, Mardan and Peshawar can be the most suitable locations for the proposed venture. The rural and peri-urban areas around these major cities with abundant water and availability of fodder make a better choice for farming; provided access to livestock mandies and veterinary services is ensured.

## 8 POTENTIAL TARGET CUSTOMERS / MARKETS

Metropolitan cities like Lahore, Multan, Bahawalpur, Bahawalnagar, Faisalabad, Rawalpindi, Karachi, Hyderabad, Quetta, Ziarat, Peshawar, D.I. Khan. Sargodha,

Kohat, Sakhar, etc. are major markets for goat. The proposed breeding farm will mainly target to the goat fattening farms for selling their breeds in the stated areas. Additionally, specially arranged locations for larger cities during Eid days can also be considered for sale of adult animals.

## 9 PROJECT COST SUMMARY

A detailed financial model has been developed to analyze the commercial viability of Intensive Goat Breeding Farm. Various costs and revenue related assumptions along with results of the analysis are outlined in this section.

The projected Income Statement, Cash Flow Statement and Balance Sheet are also attached as annexure.

### 9.1 Project Economics

All the figures in this financial model have been calculated for estimated sales of Rs. 4.080 million in the year one. The following table shows internal rate of return, payback period and net present value of the proposed venture.

**Table 2: Project Economics**

Description	Details
Internal Rate of Return (IRR)	27%
Payback Period (Yrs.)	3.96
Net Present Value (Rs.)	6,877,898

Calculation of break-even analysis is as follows:

**Table 3: Breakeven (100% Equity Based)**

Break-Even Analysis	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Break-Even Revenue	3,348,385	1,743,831	1,868,377	2,008,379	2,158,595	2,526,790	2,712,613	2,912,634	3,133,274	3,380,001
Break-Even Units	120	57	55	54	53	56	55	53	52	51
Margin of Safety	18%	82%	82%	83%	83%	82%	82%	83%	83%	83%

However, for the purposes of further explanation the Project Economics based on Debt: Equity (i.e. 50:50) Model has also been computed. On the basis of Debt:



Equity model the Internal Rate of Return, Payback Period and Net Present Value of the proposed project are provide in the table below.

**Table 4: Project Economics Based on Debt (50%):Equity (50%)**

Description	Details
Internal Rate of Return (IRR)	27%
Payback Period (Yrs.)	3.91
Net Present Value (Rs.)	9,888,061

The financial assumptions for Debt: Equity are as follows:

**Table 5: Financial Assumptions for Debt:Equity Model**

Description	Details
Debt (50%)	7,091,794
Equity (50%)	7,091,794
Interest Rate on Debt	12%
Debt Tenure	5
Debt Payment / Year	2

The projected Income Statement, Cash Flow Statement and Balance Sheet attached as annexures are based on 100% Equity Based Business Model.

## 9.2 Project Cost

Following fixed and working capital requirements have been identified for operations of the proposed business.

**Table 6: Project Cost**

Description	Amount Rs.
<b>Capital Cost</b>	
Livestock	5,150,000
Building / Infrastructure	3,005,520
Plant and Machinery	1,327,200
Pre-operating Costs	157,000
Furniture & Fixture	144,440

Office Equipment	33,000
<b>Total Capital Cost</b>	<b>9,817,160</b>
<b>Working Capital</b>	
First 15 Months Expense, Pre 1 <sup>st</sup> Herd Sale	3,636,428
Upfront Land Lease Rental	630,000
Cash	100,000
<b>Total Working Capital</b>	<b>4,366,428</b>
<b>Total Project Cost</b>	<b>14,183,588</b>

### 9.3 Building and Infrastructure Requirement

A total of around 9 acre land would be required for the farm, out of which 8 acre will be utilized for fodder growing and around 1 acre for goats' shed and other infrastructure requirements. To reduce the initial capital investment, it is recommended to start the project on leased agricultural land with annual lease assumed to be Rs. 70,000 per acre payable in advance.

Open space requirement for goat is around 40 sq.ft. / goat while shade requirement is 12 sq.ft. / goat. Details of space requirement and cost related to building is provided below.

**Table 7: Building and Infrastructure Requirement**

Description	Estimated Area (Sq. ft)	Unit Cost (Rs.)	Total Cost (Rs.)
Shed For Goats	6,000	210	1,260,000
Open Paddock For Goats	20,000	10	200,000
Quarantine Pen For Goats	600	210	126,000
Open Paddock For Lambs (New Born)	2,000	20	40,000
Separate Area For Adult Males For Breeding	112	210	23,520
Open Area For Adult Males For Breeding	320	10	3,200
Office	200	1600	320,000

Attendants Room	120	1200	144,000
Stores For Raw Materials	150	500	75,000
Washroom	36	1600	57,600
Washroom For Attendants	36	1200	43,200
Boundary Wall			713,000
<b>Total</b>			<b>3,005,520</b>

#### 9.4 Machinery & Equipment Requirement

Plant, machinery and equipment for the proposed project are stated below.

**Table 8: Machinery & Equipment**

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Tube Well	1	1,200,000	1,200,000
Feed Mangers	35	2,300	80,500
Tubs for Water	8	1,800	14,400
Motor Pump	1	12,700	12,700
Calf Cutter	1	5,000	5,000
Balti (Small Water Drum)	6	800	4,800
Weight Scale	1	4,200	4,200
Wheel Barrow	1	3,600	3,600
Water Pipe	100	20	2,000
<b>Total</b>			<b>1,327,200</b>

#### 9.5 Furniture & Fixtures Requirement

Details of the furniture and fixture required for the project are given below.

**Table 9: Furniture & Fixture**

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Benches for Labour	8	7,200	57,600
Ceiling Fans	4	3,800	15,200

Table & Chairs(CEO)	1	12,000	12,000
Water Tank Including Fitting	1	12,000	12,000
LED Bulbs (18 Watts)	37	320	11,840
Exhaust Fans	5	2,200	11,000
Table & Chairs (Farm Supervisor)	1	10,000	10,000
Cupboard	1	6,000	6,000
Visitor Chairs (Owner)	2	2,000	4,000
Visitor Chairs	4	1,200	4,800
<b>Total</b>			<b>144,440</b>

### 9.6 Goats Requirement

In order to start the project, specific breed of goats both male and females will be purchased from market. Following livestock will be required for the project.

**Table 10: Goats Requirement**

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Adult Female Goats	190	26,000	4,940,000
Adult Male Goats for Breeding	7	30,000	210,000
<b>Total</b>	<b>197</b>		<b>5,150,000</b>

### 9.7 Office Equipment Required

Following livestock will be required for the project are given below.

**Table 11: Office Equipment**

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Printer	1	18,000	18,000
Computer	1	15,000	15,000
<b>Total</b>	<b>2</b>		<b>33,000</b>

### 9.8 Animals Feed and Vaccination Requirement

For the proposed project it is recommended that the entrepreneur should grow fodder at his own farm. 4 Acre of land grows sufficient green fodder for 250 Goats.

So, the minimum feasible land required for this project is, 8 Acre. As this project will include the kids which have lesser feed requirement during initial few months, so some extra fodder will also be available for selling. Vaccinations for all the goats in the proposed farm will also be performed to keep the herd safe from various diseases. Fodder and vaccination cost for the first year of operations is recommended as under.

**Table 12: Fodder and Vaccination Costs**

Description	Animals on Farm	No. of Days	Cost Per Animal / (Rs.)	Total Cost (Rs.)
Cost of Feed & Concentrate (Adult)	197	365	5.55 / Day	398,990
Cost of Feed & Concentrate (Young)	321	240	5.55 / Day	428,149
Cost of Vaccine / Medicine	530		80	42,400
<b>Total</b>				<b>869,539</b>

### 9.9 Human Resource Requirement

In order to run operations of 'Intensive Goats Breeding Farm' smoothly, details of human resources required along with number of employees and monthly salary are recommended as under.

**Table 13: Human Resource Requirement**

Description	No. of Employees	Salary per Person (Rs.)
Owner / Manager	1	30,000
Farm Supervisor	1	22,000
Attendants for Goat Farm	3	17,500
Attendants for Fodder Farm	3	17,500
<b>Total</b>	<b>8</b>	

### 9.10 Revenue Generation

Based on the capacity utilization of 100%, sales revenue during the first year of operations is provided in the table below.

**Table 14: Revenue Generation – Year 1**

Description	No. of Goats Bred	Progeny Mortality (No.)	Total No of Goats Sold	Sale Price / Goat (Rs.)	Sales Revenue (Rs.)
Male Goats Sold	166	11	155	26,000	4,030,000
Other Income From Sale of Extra Milk					50,160
<b>Total</b>					<b>4,080,160</b>

(Female goats bred during year one are retained at the farm to be sold in year 2)

## 10 CONTACT DETAILS

In order to facilitate potential investors, contact details of government sector departments providing facilitation relevant to the proposed project are given as below:

### Livestock Mandies:

The animals may be procured from local goat breeders and livestock mandies scheduled in different districts e.g., Pattoki, Okara, Bahawalnagar, Lodhran, Vehari, Khanewal, Arifwala, Pakpattan etc. as per scheduled maintained by Livestock and Dairy Development Department, Govt. of The Punjab Lahore. Phone No: 0800- 78685; 0800-78686.

### Livestock Department Punjab

Livestock and Dairy Development Department (L&DD), Govt. of Punjab, 16-Cooper Road, Lahore. Toll Free No: 0800-78685; 0800-78686.

Director, Directorate of Small Ruminants, L&DD, Multan. Ph: +92 61 9210 417

## 11 USEFUL WEB LINKS

Small & Medium Enterprises Development Authority (SMEDA)	<a href="http://www.smeda.org.pk">www.smeda.org.pk</a>
Government of Pakistan	<a href="http://www.pakistan.gov.pk">www.pakistan.gov.pk</a>
Ministry of Industries & Production	<a href="http://www.moip.gov.pk">www.moip.gov.pk</a>
Government of Punjab	<a href="http://www.punjab.gov.pk">www.punjab.gov.pk</a>
Government of Sindh	<a href="http://www.sindh.gov.pk">www.sindh.gov.pk</a>

Government of Khyber Pakhtunkhwa	<a href="http://www.khyberpakhtunkhwa.gov.pk">www.khyberpakhtunkhwa.gov.pk</a>
Government of Balochistan	<a href="http://www.balochistan.gov.pk">www.balochistan.gov.pk</a>
Government of Gilgit Baltistan	<a href="http://www.gilgitbaltistan.gov.pk">www.gilgitbaltistan.gov.pk</a>
Government of Azad Jamu Kashmir	<a href="http://www.ajk.gov.pk">www.ajk.gov.pk</a>
Trade Development Authority of Pakistan (TDAP)	<a href="http://www.tdap.gov.pk">www.tdap.gov.pk</a>
Punjab Small Industries Corporation	<a href="http://www.psic.gop.pk">www.psic.gop.pk</a>
Sindh Small Industries Corporation	<a href="http://www.ssic.gos.pk">www.ssic.gos.pk</a>
Livestock & Dairy Development Department, Government of Punjab.	<a href="http://www.livestockpunjab.gov.pk">www.livestockpunjab.gov.pk</a>
Pakistan Goat Association	<a href="http://www.pga.org.pk/">www.pga.org.pk/</a>
Punjab Agriculture and Meat Company	<a href="http://www.pamco.bz/">www.pamco.bz/</a>
University of Agriculture Faisalabad	<a href="http://www.uaf.edu.pk">www.uaf.edu.pk</a>
University of Veterinary & Animal Sciences, Lahore	<a href="http://www.uvas.edu.pk">www.uvas.edu.pk</a>
Pakistan Agricultural Research Council	<a href="http://www.parc.gov.pk">www.parc.gov.pk</a>
Sindh Livestock Department	<a href="http://www.livestock.sindh.gov.pk">www.livestock.sindh.gov.pk</a>

## 12 ANNEXURES

### 12.1 Income Statement

Calculations										SMEDA
Income Statement										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Revenue	4,080,160	9,515,026	10,466,529	11,513,182	12,664,500	13,930,950	15,324,045	16,856,450	18,542,095	20,396,304
<i>Cost of sales</i>										
Direct labor	1,884,000	2,072,400	2,279,640	2,507,604	2,758,364	3,034,201	3,337,621	3,671,383	4,038,521	4,442,373
Feed and vaccine costs	869,539	956,493	1,052,143	1,157,357	1,273,093	1,400,402	1,540,442	1,694,486	1,863,935	2,050,329
<b>Total cost of sales</b>	<b>2,753,539</b>	<b>3,028,893</b>	<b>3,331,783</b>	<b>3,664,961</b>	<b>4,031,457</b>	<b>4,434,603</b>	<b>4,878,063</b>	<b>5,365,869</b>	<b>5,902,456</b>	<b>6,492,702</b>
Gross Profit	1,326,621	6,486,133	7,134,746	7,848,221	8,633,043	9,496,347	10,445,982	11,490,580	12,639,638	13,903,602
<i>General administration &amp; selling expenses</i>										
Land lease rental expense	630,000	693,000	762,300	838,530	922,383	1,014,621	1,116,083	1,227,692	1,350,461	1,485,507
Electricity expense	51,461	56,607	62,268	68,494	75,344	82,878	91,166	100,283	110,311	121,342
Travelling expense	18,840	20,724	22,796	25,076	27,584	30,342	33,376	36,714	40,385	44,424
Communications expense (phone, fax, mail, internet, etc.)	9,420	10,362	11,398	12,538	13,792	15,171	16,688	18,357	20,193	22,212
Professional fees (legal, audit, consultants, etc.)	20,401	47,575	52,333	57,566	63,323	69,655	76,620	84,282	92,710	101,982
Depreciation expense	308,330	308,330	308,330	310,377	310,047	479,435	481,804	481,422	481,422	484,164
Amortization of pre-operating costs	31,400	31,400	31,400	31,400	31,400	-	-	-	-	-
Miscellaneous expense 1	18,840	20,724	22,796	25,076	27,584	30,342	33,376	36,714	40,385	44,424
<b>Subtotal</b>	<b>1,088,692</b>	<b>1,188,722</b>	<b>1,273,621</b>	<b>1,369,057</b>	<b>1,471,455</b>	<b>1,722,444</b>	<b>1,849,114</b>	<b>1,985,463</b>	<b>2,135,867</b>	<b>2,304,054</b>
Operating Income	237,929	5,297,411	5,861,125	6,479,164	7,161,588	7,773,903	8,596,868	9,505,117	10,503,771	11,599,548
Other income (interest on cash)	94,293	139,250	226,020	311,186	378,395	444,945	529,480	615,717	703,437	814,452
Gain / (loss) on livestock balance	3,926,000	907,600	998,360	1,098,196	1,208,016	1,328,817	1,461,699	1,607,869	1,768,656	1,945,521
Gain / (loss) on sale of computer equipment	-	-	8,250	-	-	17,800	-	-	28,856	23,037
Earnings Before Interest & Taxes	4,258,222	6,344,261	7,093,755	7,888,546	9,278,879	9,565,466	10,588,047	11,728,703	13,004,720	14,382,558
Earnings Before Tax	4,258,222	6,344,261	7,093,755	7,888,546	9,278,879	9,565,466	10,588,047	11,728,703	13,004,720	14,382,558
Tax	697,466	1,340,491	1,602,814	1,880,991	2,367,607	2,467,913	2,825,816	3,225,046	3,671,652	4,153,895
<b>NET PROFIT/(LOSS) AFTER TAX</b>	<b>3,560,755</b>	<b>5,003,770</b>	<b>5,490,941</b>	<b>6,007,556</b>	<b>6,911,272</b>	<b>7,097,553</b>	<b>7,762,231</b>	<b>8,503,657</b>	<b>9,333,068</b>	<b>10,228,663</b>



## 12.2 Balance Sheet

Calculations											SMEDA
Balance Sheet											
Assets	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
<i>Current assets</i>											
Cash & Bank	3,736,428	3,806,992	7,333,048	10,748,524	14,146,389	16,125,218	19,470,405	22,887,998	26,369,377	29,905,545	35,250,607
Pre-paid annual land lease	630,000	693,000	762,300	838,530	922,383	1,014,621	1,116,083	1,227,692	1,350,461	1,485,507	-
<b>Total Current Assets</b>	<b>4,366,428</b>	<b>4,499,992</b>	<b>8,095,348</b>	<b>11,587,054</b>	<b>15,068,772</b>	<b>17,139,840</b>	<b>20,586,488</b>	<b>24,115,690</b>	<b>27,719,838</b>	<b>31,391,052</b>	<b>35,250,607</b>
<i>Fixed assets</i>											
Building/Infrastructure	3,005,520	2,855,244	2,704,968	2,554,692	2,404,416	2,254,140	2,103,864	1,953,588	1,803,312	1,653,036	1,502,760
Machinery & equipment	1,327,200	1,194,480	1,061,760	929,040	796,320	2,357,481	2,055,373	1,753,265	1,451,157	1,149,049	846,940
Furniture & fixtures	144,440	129,996	115,552	101,108	86,664	72,220	57,776	43,332	28,888	14,444	-
Computer equipment	33,000	22,110	11,220	38,532	25,595	12,989	44,605	29,630	15,036	51,636	34,300
Livestock Balance	5,150,000	9,076,000	9,983,600	10,981,960	12,080,156	13,288,172	14,616,989	16,078,688	17,686,556	19,455,212	21,400,733
<b>Total Fixed Assets</b>	<b>9,660,160</b>	<b>13,277,830</b>	<b>13,877,100</b>	<b>14,605,332</b>	<b>15,393,151</b>	<b>17,985,001</b>	<b>18,878,607</b>	<b>19,858,502</b>	<b>20,984,949</b>	<b>22,323,377</b>	<b>23,784,734</b>
<i>Intangible assets</i>											
Pre-operation costs	157,000	125,600	94,200	62,800	31,400	-	-	-	-	-	-
<b>Total Intangible Assets</b>	<b>157,000</b>	<b>125,600</b>	<b>94,200</b>	<b>62,800</b>	<b>31,400</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>TOTAL ASSETS</b>	<b>14,183,588</b>	<b>17,903,422</b>	<b>22,066,648</b>	<b>26,255,186</b>	<b>30,493,323</b>	<b>35,124,841</b>	<b>39,465,095</b>	<b>43,974,192</b>	<b>48,704,787</b>	<b>53,714,428</b>	<b>59,035,341</b>
<b>Liabilities &amp; Shareholders' Equity</b>											
<i>Current liabilities</i>											
Accounts payable		159,079	174,987	192,486	211,734	232,908	256,198	281,818	310,000	341,000	375,100
<b>Total Current Liabilities</b>	<b>-</b>	<b>159,079</b>	<b>174,987</b>	<b>192,486</b>	<b>211,734</b>	<b>232,908</b>	<b>256,198</b>	<b>281,818</b>	<b>310,000</b>	<b>341,000</b>	<b>375,100</b>
<i>Shareholders' equity</i>											
Paid-up capital	14,183,588	14,183,588	14,183,588	14,183,588	14,183,588	14,183,588	14,183,588	14,183,588	14,183,588	14,183,588	14,183,588
Retained earnings		3,560,755	7,708,073	11,879,112	16,098,001	20,708,345	25,025,309	29,508,786	34,211,199	39,189,840	44,476,653
<b>Total Equity</b>	<b>14,183,588</b>	<b>17,744,343</b>	<b>21,891,661</b>	<b>26,062,700</b>	<b>30,281,589</b>	<b>34,891,933</b>	<b>39,208,897</b>	<b>43,692,374</b>	<b>48,394,787</b>	<b>53,373,428</b>	<b>58,660,241</b>
<b>TOTAL CAPITAL AND LIABILITIES</b>	<b>14,183,588</b>	<b>17,903,422</b>	<b>22,066,648</b>	<b>26,255,186</b>	<b>30,493,323</b>	<b>35,124,841</b>	<b>39,465,095</b>	<b>43,974,192</b>	<b>48,704,787</b>	<b>53,714,428</b>	<b>59,035,341</b>

## 12.3 Cash Flow Statement

Calculations											SMEDA
Cash Flow Statement											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
<i>Operating activities</i>											
Net profit		3,560,755	5,003,770	5,490,941	6,007,556	6,911,272	7,097,553	7,762,231	8,503,657	9,333,068	10,228,663
Add: depreciation expense		308,330	308,330	308,330	310,377	310,047	479,435	481,804	481,422	481,422	484,164
amortization of pre-operating costs		31,400	31,400	31,400	31,400	31,400	-	-	-	-	-
Gain on livestock		(3,926,000)	(907,600)	(998,360)	(1,098,196)	(1,208,016)	(1,328,817)	(1,461,699)	(1,607,869)	(1,768,656)	(1,945,521)
Accounts payable		159,079	15,908	17,499	19,249	21,173	23,291	25,620	28,182	31,000	34,100
Cash provided by operations	-	133,564	4,451,808	4,849,810	5,270,385	6,065,876	6,271,462	6,807,956	7,405,392	8,076,834	8,801,406
<i>Financing activities</i>											
Add: land lease expense		630,000	693,000	762,300	838,530	922,383	1,014,621	1,116,083	1,227,692	1,350,461	1,485,507
Land lease payment	(630,000)	(693,000)	(762,300)	(838,530)	(922,383)	(1,014,621)	(1,116,083)	(1,227,692)	(1,350,461)	(1,485,507)	-
Issuance of shares	14,183,588	-	-	-	-	-	-	-	-	-	-
Cash provided by / (used for) financing activities	13,553,588	(63,000)	(69,300)	(76,230)	(83,853)	(92,238)	(101,462)	(111,608)	(122,769)	(135,046)	1,485,507
<i>Investing activities</i>											
Capital expenditure	(9,817,160)	-	-	(38,202)	-	(1,693,881)	(44,223)	-	-	(51,194)	-
Acquisitions											
Cash (used for) / provided by investing activities	(9,817,160)	-	-	(38,202)	-	(1,693,881)	(44,223)	-	-	(51,194)	-
NET CASH	3,736,428	70,564	4,382,508	4,735,378	5,186,532	4,279,757	6,125,776	6,696,347	7,282,623	7,890,594	10,286,913

## 13 KEY ASSUMPTIONS

### 13.1 Operating Cost Assumptions

Description	Details
Communication Expenses	0.50% of Direct Staff Salaries
Travelling Expense	1% of Direct Staff Salaries
Depreciation Method	Straight Line Depreciation
Depreciation Rate	10% on Machinery 33% on Office Equipment 10% on Furniture & Fixture
Inflation Growth Rate	10%
Electricity Price Growth Rate	10%
Wage Growth Rate	10%

### 13.2 Production Cost Assumptions

Description	Details
Maximum Operational Capacity	503 Animals
Cost of Adult Female Goat	Rs. 26,000
Cost of Adult Male Goat	Rs. 30,000
Cost of Feed & Concentrate / Animal / Day (Adult) 365 days	Rs. 5.55
Cost of Feed & Concentrate / Animal / Day (Young) 240 days	Rs. 5.55
Cost of Vaccine / Medicine / Animal/Year	Rs. 80
Adult Mortality	2%
Progeny Mortality	7%
Progeny Percentage Per Female	175%

Ratio of Male and Females Progeny	50:50
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### 13.3 Revenue Assumptions

Description	Details
Sale Price Growth Rate	10%
Sale Price 7-8 Months Old Males (Avg.)	Rs. 26,000
Sale Price 1 Year Old Females (Avg.)	Rs. 30,000
Price of Goat's Milk Per Litre	Rs. 60
No. of Months for Adult Females to be Pregnant	5
No. of Months for Adult Females Milking their Kids	3
No. of Months Extra Milk to be Sold	4
Average Milk Per Goat Per Day (Ltrs.)	2.2