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# Pre-Feasibility Study

## (Goat Fattening Farm)



### Small and Medium Enterprises Development Authority

### Ministry of Industries & Production

### Government of Pakistan

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## 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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## **2 EXECUTIVE SUMMARY**

In goat fattening farm, goats preferably males from a specific breed such as beetal, teddy or Nachi are raised on nutritionally balanced feed to get targeted weight gain in a specified time. These goats are fattened in groups and each batch stays on farm for a period of 100 days. The first two general batches would raise goats with daily live body weight gain of 150 grams/ day, however, the goats fattened for sacrificial purpose for Eid-UI-Azha would be having daily weight gain of 200 grams/ day in third batch. Higher weight gains may be achieved with better farm management and through selection of breed and nutritious feeds. The project is proposed to be located in peri urban areas around metropolitan cities like Lahore, Multan, Bahawalpur, Faisalabad, Rawalpindi, Karachi, Hyderabad, Quetta, Ziarat, Peshawar, D.I. Khan etc. which are major markets of meat. The rural and peri-urban areas around the 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. Goats are sold in urban markets normally in livestock markets (Mandies) or the whole batch may be sold to interested parties.

A farm of 450 goats per annum is suggested in this pre-feasibility study; the farm will start its production at 100% capacity from the very first year of production. An estimated investment of Rs. 7.35 million is required, out of which capital investment is Rs. 5.17 million and working capital is Rs. 2.18 million. The Internal Rate of Return (IRR), Net Present Value (NPV) & payback period of the project are 44%, Rs. 9.17 million and 2.45 years respectively. The project is proposed to operate as a sole-proprietorship.

The most critical considerations or factors for success of the project are background knowledge and related experience for the application of good husbandry practices such as timely feeding, watering and vaccination so as 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 with efficient marketing of the project and bulk supply to wholesalers would be a milestone for achievements in the proposed business.

## **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 **Goat Fattening 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 its successful management.

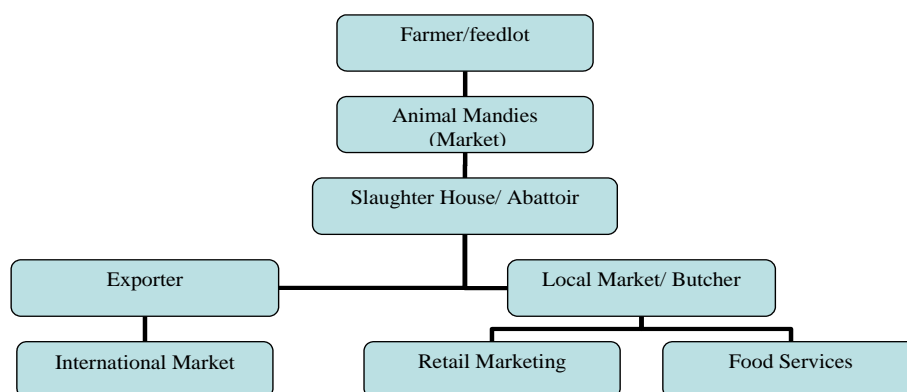
Apart from carefully studying the whole document one must consider critical aspects provided later on, which form basis of any Investment Decision.

#### 5 BRIEF DESCRIPTION OF PROJECT & PRODUCT

Goat fattening venture suggested in this study is based on raising 450 goats per year at the farm premises with 1% mortality. The goats, preferably males, between 6-7 months of age, are fed on nutritionally balanced concentrate ration or Total

Mixed Ration (TMR) as major source of energy and protein for a period of maximum 100 days to get higher body weight gain. Live weight of these goats is around 15 kgs. If these goats are fed properly on formulated fattening feed, an additional weight up to 15-20 kg can be achieved. The daily weight gain varies between 150-200 grams depending on the quality of feed given to them. Out of three batches, two batches marked as general batches are to raise goats at daily weight gain of 150 grams, however, third batch or Eid batch is assumed to fatten the goats with daily weight gain of 200 grams. The project is supposed to provide employment to 4 persons.

The subject business can be set-up at any appropriate location with easy availability of feed, water and other related services. There is a year-round market, however, the demand increases before occasions like Eid-ul-Fitr and Eid-ul-Azha. On these occasions, well-fed animals are sold at a premium price higher than usual weight based price. The proposed legal structure of the business entity is sole proprietorship.



## 5.1 Goat Fattening Process

- i. Selection of animals based on breed and age: It is recommended that goats (preferably male) of local goat breeds such as Beetal, Barbari, Chapper or Teddy may be selected, however, goats of Beetal and Teddy breeds may also be considered for fattening purpose (Please see section 13.5 for breed characteristics).
- ii. For sacrificial purpose, the Beetal goats with Roman nose are preferred. The dressing percentage is usually 55%. After fattening, the fat to muscle composition is also acceptable.

- iii. For general batches, the carcass weight is desirable by meat traders and exporters.
- iv. Selection of animals with excellent body score and health conditions: initial live body weight should be around 15 kgs at 6-7 months of age. Little emaciated animals may also be accepted for fattening as research shows that these animals respond efficiently in terms of feed efficiency.
- v. Housing: Efficient housing leads to good management practices and ultimately optimum production. Generally, housing should be:
  - Less expensive
  - Well ventilated, comfortable and dry with hygienic environment
  - Easy drainage and removal of dung urine and waste material
  - Protective from extreme environmental conditions
  - Maximum sun exposure: axis of length to be east to west
  - Availability of feed and water for 24 hours
  - Planed so that future expansion may be possible when required
- vi. Feeding: Adequate weight gain through the use of balanced feed purchased from well-reputed companies or formulated accordingly. Animal should be fed Total Mixed Ration (TMR) @ 2.0 % of live body weight. Additionally, urea molasses blocks and salt blocks can help in better daily weight gains. The agriculture wastes such as citrus pulp, sugar beet pulp, postharvest waste of fruits and vegetables may be offered additionally in the days of abundant supplies at 2% of body weight (wet basis) to every animal, however, if not available, only TMR may serve the purpose to fulfil the physiological and production requirements of the animal to get desirable body weight gains.
- vii. Watering: Daily supply of clean drinking water in clean troughs i.e. 5 to 8 liters of water consumption / animal / day maintains the production capacity of the animal. Due to TMR and salt offered, the animal tends to consume more water.
- viii. Disease management: De-worming for endo-parasitic infestations is necessary in each batch shortly after arrival at farm. Timely vaccination against infectious diseases should be done as a prophylactic measure. At a well- managed farm, mortality should not exceed 2-3 % per annum in the fattened animals (for more details on some common diseases, please see section 13.6). Following is a tentative vaccination schedule;

**Table 1: Tentative Vaccination Schedule**

Disease	Vaccine	Quantity/ Dose	Time for Vaccination	Duration of Immunity
Foot and Mouth Disease (FMD)	FMD Vaccine	5 ml	March-April	4 months

Contagious Pustular Dermatitis (CPD)	CPD vaccine	2-5 ml	April-October	4 months
Anthrax	Anthrax spore vaccine	0.5 ml	March-April	One year
Rabies	Anti-rabies vaccine	10 ml	As per requirement	One year
Goat Pox	Goat pox vaccine	1 ml	March-September	4 month
Enterotoxaemia	Enterotoxaemia vaccine	2-3 ml	January- July	Six months
Pleuropneumonia	Pleuropneumonia vaccine	1 ml	October-November	4 months

(VRI: Veterinary Research Institute, Lahore)

- ix. Record keeping for each batch: The animals should be ear-tagged on arrival at the farm. The information to be recorded includes breed of animal, initial live weight of animal, age of animals, date of purchase etc. The records for regular weight gain, medication and de-worming etc. are also important.
- x. Culling: Selection of good productive animals and regular culling of uneconomical animal.
- xi. Regular technical assistance from the livestock professionals and experts.

## 5.2 Installed and Operational Capacities

In this pre-feasibility study, 450 young goats of 6-7 months of age are raised per annum in 3 production batches; each having 150 goats, raised for 100 days on 'Feed Lot Fattening' system. The mortality is assumed to be 1% per annum. The project will operate at 100% of its installed capacity from the very first year of operations.

## 6 CRITICAL FACTORS

The most critical considerations or factors for success of the project are:

- Background knowledge and related experience of the entrepreneur in goat fattening farm operations.
- 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.
- Efficient marketing of the project and bulk supply to wholesalers.



## 7 GEOGRAPHICAL POTENTIAL FOR INVESTMENT

Metropolitan cities like Lahore, Multan, Bahawalpur, Faisalabad, Rawalpindi, Karachi, Hyderabad, Quetta, Ziarat, Peshawar, D.I. Khan etc. are major markets of meat. The rural and peri-urban areas around the 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

Apart from Sialkot, Jhang, Rahim Yar Khan, Bahawalnagar, Bahawalpur, Sahiwal in the Punjab, livestock markets in peri-urban locations of all cities of other provinces such as Karachi, Hyderabad, Nawabshah, Larkana, Dadu, Qila saifullah, Panjgur, Pishin, Quetta, Bannu, Laki Marwat, Kohat, Peshawar are primary markets, in addition to specially arranged locations for larger cities during Eid festival in the urban markets. Normally animals are sold on 'Live Body Weight' basis; the price of fattened goats varies according to animals' health and market conditions. Following are some of the target clients for farmers;

- Livestock traders
- Butchers
- Contractors
- Slaughterhouse owners

## 9 PROJECT COST SUMMARY

### 9.1 Project Economics

The financial model for this pre-feasibility study indicates estimated revenue of Rs. 9.63 Million in year one. The capacity utilization during year one is 100 % and it remains the same till 10<sup>th</sup> year of project. The following table shows internal rate of return, payback period and net present value of the proposed venture;

**Table 1: Project Economics**

Description	Details
Internal Rate of Return (IRR)	44%
Payback Period (yrs.)	2.45
Net Present Value (Rs.)	9,168,513

## 9.2 Project Financing

Following table provides details of the equity required and variables related to bank loan;

**Table 2: Project Financing**

Description	Details
Total Equity (50%)	Rs.3,676,011
Bank Loan (50%)	Rs.3.676,011
Markup to the Borrower (%age / annum)	12%
Tenure of the Loan (Years)	10

## 9.3 Project Cost

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

**Table 3: Project Cost**

Description	Amount Rs.
<b>Capital Cost</b>	
Building and infrastructure	3,761,000
Machinery and equipment	339,750
Furniture & Fixture	74,090
Office Vehicles	798,250
Office Equipment	6,000
Pre-operating Cost	193,134
<b>Total Capital Cost</b>	<b>5,172,224</b>
<b>Working Capital</b>	
Equipment spare part inventory	28,313
Raw Material Inventory (Excl. purchase cost of goats)	169,388
Initial Purchase of Goats (One Batch)	1,012,500
Upfront Land Lease Rental	20,661

Cash	948,938
<b>Total Working Capital</b>	<b>2,179,799</b>
<b>Total Project Cost</b>	<b>7,352,023</b>

#### 9.4 Space Requirement

The space requirement for the proposed goat-fattening farm is estimated considering various facilities including management building, attendant's room, shed for goats, store room, dipping bath, open paddock etc. Details of space requirement and cost related to land & building is given below;

**Table 4: Space Requirement**

Description	Estimated Area (Sq.ft.)	Unit Cost (Rs.)	Total Cost (Rs.)
Management building	150	2500	375,000
Attendant's room	120	1500	180,000
Wash room	80	1200	96,000
Shed for animals	3,750	700	2,625,000
Store	300	1200	360,000
Dipping bath	100	500	50,000
Open paddock (Grounds)	7,500	10	75,000
<b>Total</b>	<b>12,000</b>		<b>3,761,000</b>

The farm building is purposefully constructed in conventional manner for which approximately 2.20 Kanal is required. The lease cost of land per kanal is Rs. 9,375 per annum<sup>1</sup> which means that total land lease cost for whole farm is Rs. 20,661 per year.

#### 9.5 Machinery & Equipment Requirement

Following farm machinery and equipment are needed to run the daily farm operation;

**Table 5: Machinery & Equipment**

Description	Quantity (No.)	Unit Cost (Rs.)	Total Cost (Rs.)
Water Pump (5HP) & Tank (incl. boring)	1	150,000	150,000
Feeding mangers	15	5,000	75,000
Tubs	8	1,500	12,000

<sup>1</sup> Based on average land lease rental of Rs. 75000/- per annum for one acre of land.

Hand Cart	4	5,000	20,000
Movable Weighing Scale	1	50,000	50,000
Fans in shed for ventilation	2	3,000	6,000
Lighting (shed)	38	150	5,625
Lighting (open paddock)	8	150	1,125
Misc. farm equipment	1	20,000	20,000
<b>Total</b>			<b>339,750</b>

## 9.6 Office and Farm Vehicle

Following is the detail of required office vehicles needed for the goat-fattening farm.

**Table 6: Office and Farm Vehicle**

Description	No.	Cost / Unit (Rs.)	Amount (Rs.)
Motor Bike CD-70 (Road Prince)	1	45,000	45,000
Pick Up- Mazda	1	730,000	730,000
Registration fee*		23,250	23,250
<b>Total</b>			<b>798,250</b>

\*3.0 % of office vehicles cost

It is assumed that to cover average 25 km daily for operations of the farm with motor bike mileage of 50 km/ litre, fuel worth approximately Rs. 37.5 would be consumed<sup>2</sup> on daily basis, which means Rs.13, 500 per annum.

The pick-up van is meant to be used for the collection and transfer of goats from markets to farm premises. The expenditures including fuel and maintenance are calculated as lump sum on per batch basis which is Rs. 40,000 per batch.

## 9.7 Furniture & Fixtures Requirement

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

**Table 7: Furniture & Fixture**

Description	Quantity (No.)	Unit Cost (Rs.)	Total Cost (Rs.)
Office Table	1	8,000	8,000
Chairs	5	2,500	12,500
Lighting	11	150	1,590
Exhaust Fan	4	3,000	12,000
Ceiling Fan	4	2,500	10,000

<sup>2</sup> At average fuel price of Rs. 75 per litre.

Sanitary Fittings	2	10,000	20,000
Electric Wiring & Lighting	1	10,000	10,000
<b>Total</b>			<b>74,090</b>

### 9.8 Office Equipment Requirement

Following office equipment will be required for the proposed goat-fattening farm.

**Table 8: Office Equipment**

Description	Quantity (No.)	Unit Cost (Rs.)	Total Cost (Rs.)
Telephones	2	3,000	6,000
<b>Total</b>	<b>2</b>		<b>6,000</b>

### 9.9 Human Resource Requirement

In order to run operations of goat fattening farm smoothly, details of human resources required along with number of employees and monthly salary are recommended as under;

**Table 9: Human Resource Requirement**

Description	Employees (No.)	Monthly Salary per person (Rs.)
Owner/ Farm supervisor	1	50,000
Farm labor	3	14,000
<b>Total</b>	<b>4</b>	<b>64,000</b>

### 9.10 Input Requirements and Cost

Details of purchase costs of goats separately for regular batches and one premium batch i.e. Eid-UI-Azha and the vaccination requirements for the proposed goat fattening farm are estimated considering that mortality rate is 1%. Details are given below;

**Table 10: Costs of Goats and Vaccination**

Description	Rate (Rs./Unit)	Price (Rs./ Goat)	Total Goat (No.)	Price in Year 1 (Rs.)
Purchase of goats - General Batch (@Live Body Wt.)	450	6,750	300	2,025,000
Purchase of Goat - Eid Batch (@ Live Body Wt.)	450	6,750	150	1,012,500
Mortality			5	

(@1% of herd)				
Cost of Vaccination		300	445	133,500
<b>Total</b>				<b>3,171,000</b>

The feeding requirements for the proposed goat-fattening farm are the most important part of the said farming operations. The estimated costs considering that mortality rate is 1% are given below;

**Table 11: Cost of Feeding in Year 1**

Description	Feed Cost (Rs./kg)	Feed Req. (% Live B.Wt)	Feed Cost (Rs./goat)	Total Goats (No.)	Feed Cost Year 1 (Rs.)
<b>Goats (Regular Batch)</b>					
Total Mixed Ration	23	2%	1,031.55		309,465
Agricultural Waste	3	2%	134.55		40,365
Sub-total Cost (A)			1,166.10	300	349,830
<b>Goats (Eid-UI-Azha Batch)</b>					
Total Mixed Ration	23	2%	1,145.40		171,810
Agricultural Waste	3	2%	149.40		22,410
Sub-total Cost (B)			1,294.80	150	194,220
<b>Total Cost (A+B)</b>				<b>450</b>	<b>544,050</b>

### 9.11 Utilities and other costs

An essential cost to be borne by the project is the cost of electricity. The direct electricity expenses on farm are estimated to be Rs. 2,412 per month or Rs. 28,940 per year. The transportation cost is Rs. 40,000 per batch i.e. Rs. 120,000 per annum.

The promotional expense being essential for marketing of the farm is estimated as Rs.1, 000 per month communication expense is Rs. 500 per month. For the miscellaneous expenses such as stationery, entertainment and janitorial services etc., Rs. 2,000 per month is estimated. The machinery maintenance expense is estimated to be Rs. 5,000 per month.

## 9.12 Revenue Generation

Based on the capacity utilization of 100% for fattened goats, sales revenue during the first year of operations is estimated as under;

**Table 12: Revenue Generation – Year 1**

Description	Goats fattened (No.)	Mortality Loss @ 1% (No.)	Goats available for Sale (No.)	Sale Price / unit (Rs.)	Sales Revenue (Rs.)
Sale of goats- Regular Batch	300	3	297	15,000	4,455,000
Sale of goats- Eid Batch	150	2	148	35,000	5,180,000
<b>Total</b>	<b>450</b>	<b>5</b>	<b>445</b>		<b>9,635,000</b>

\* Total 450 goats divided in three batches, each having 150 in first year of production with mortality loss of 3 goat @ 1% per annum. The third batch is raised on special occasion of 'Eid-Ul-Azha with 150 goats in total with 1% mortality. Figures have been rounded off to the nearest decimal place.

## 10 CONTACT DETAILS

In order to facilitate potential investors, contact details of private sector Service Providers relevant to the proposed project be given.

### 10.1 Raw Material Suppliers

#### Feed Suppliers

Hi-Tech Feeds (Pvt.) Ltd.  
1-A, Shadman Chowk Jail Road, Lahore. Ph: 042-37564503

ICI Pakistan Cattle Feed  
63-Mozang Road Lahore, Ph: 042-36370042

National Feeds Ltd.  
171 Shadman – II Lahore. Ph: 042 37551405-8

Anmol Vanda, c/o Livestock and Dairy Development Department, 16-Cooper Road, Lahore. Free Landline: 0800-78685, 0800-78686

Big Feed (PVT) Ltd.  
2-A, Ahmad Block, New Garden Town, Lahore. Ph: 042-35835374-35835373

#### Meat Contractors/ Processors

Mr. Syed Hasan Raza  
Secretary General, All Pakistan Meat Exporters and Processors Association

(APMEPA), 177-B Johar Town Lahore, Pakistan. Ph: 042-35169450-51  
Fax:042-35169449, Email: [info@apmepa.com](mailto:info@apmepa.com)

Mr. Muhammad Younus Qureshi  
Chairman, Red Cow Meat Products of Pakistan, 125/ 13-B-1,  
Township, Lahore. Ph: 042-35112603

Punjab Agriculture and Meat Company (PAMCO)/ Lahore Meat Complex, 18-  
Km, Multan Road, Lahore. Ph: 042-35971430 - 33

### 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 by Livestock and Dairy Development Department, Govt. of The Punjab Lahore. Landline: 0800-78685, 0800-78686.

## 10.2 Technical Experts / Consultants

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: 061-9210417

## 11 USEFUL WEB LINKS

Links of Federal & Provincial Government, Semi Government and other (sector & Cluster based) Development organizations are given under to get benefit from the services offered.

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>
Ministry of National Food Security & Research	<a href="http://www.mnfsr.gov.pk">www.mnfsr.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>
Security Commission of Pakistan (SECP)	<a href="http://www.secp.gov.pk">www.secp.gov.pk</a>
Federation of Pakistan Chambers of Commerce and Industry (FPCCI)	<a href="http://www.fpcci.com.pk">www.fpcci.com.pk</a>
State Bank of Pakistan (SBP)	<a href="http://www.sbp.org.pk">www.sbp.org.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>
Punjab Vocational Training Council (PVTC)	<a href="http://www.pvtc.gop.pk">www.pvtc.gop.pk</a>
Technical Education and Vocational Training Authority (TEVTA)	<a href="http://www.tevta.org">www.tevta.org</a>
Livestock & Dairy Development Department, Government of Punjab.	<a href="http://www.livestockpunjab.gov.pk">www.livestockpunjab.gov.pk</a>
Punjab Board of Investment & Trade (PBIT)	<a href="http://www.pbit.gop.pk">www.pbit.gop.pk</a>
Sindh Board of Investment (SBI)	<a href="http://www.sbi.gos.pk">www.sbi.gos.pk</a>
All Pakistan Meat Exporters and Processors Association, Lahore,	<a href="http://www.apmepa.com">www.apmepa.com</a>
Punjab Agriculture and Meat Company (PAMCO)	<a href="http://www.pamco.bz">www.pamco.bz</a>
Pakistan Agricultural Research Council (PARC)	<a href="http://www.parc.gov.pk">www.parc.gov.pk</a>
National Agricultural Research Centre (NARC), Islamabad	<a href="http://www.parc.gov.pk">www.parc.gov.pk</a>
Balochistan Agricultural Research Centre (BARC)	<a href="http://www.parc.gov.pk">www.parc.gov.pk</a>
Southern-zone Agricultural Research Centre (SARC)	<a href="http://www.parc.gov.pk">www.parc.gov.pk</a>
Arid Zone Research Institute (AZRI)	<a href="http://www.parc.gov.pk">www.parc.gov.pk</a>
Punjab Livestock & Dairy Development Board (PLDDB)	<a href="http://www.plddb.pk">www.plddb.pk</a>
University of Agriculture, Faisalabad,	<a href="http://www.uaf.edu.pk">www.uaf.edu.pk</a>
Lasbela University of Agriculture, Water & Marine Sciences, Lasbela	<a href="http://www.luawms.edu.pk">www.luawms.edu.pk</a>
Sindh Agriculture University, Tondojam	<a href="http://www.sau.edu.pk">www.sau.edu.pk</a>
Gomal College of Veterinary Sciences, Dera Ismail Khan	<a href="http://www.gu.edu.pk">www.gu.edu.pk</a>
KPK Agricultural University, Peshawar	<a href="http://www.aup.edu.pk">www.aup.edu.pk</a>
Pir Mehr Ali Shah Arid Agricultural University, Rawalpindi	<a href="http://www.uaar.edu.pk">www.uaar.edu.pk</a>
University College of Veterinary & Animal Sciences, Islamia University Bahawalpur (IUB),	<a href="http://www.iub.edu.pk">www.iub.edu.pk</a>
University of Veterinary & Animal Sciences (UVAS), Lahore	<a href="http://www.uvas.edu.pk">www.uvas.edu.pk</a>
Bahauddin Zakariya University (BZU), Multan	<a href="http://www.bzu.edu.pk">www.bzu.edu.pk</a>
Veterinary Research Institute (VRI), Punjab	
Agribusiness Support Fund (ASF), Lahore,	<a href="http://www.asf.org.pk">www.asf.org.pk</a>
Directorate of Livestock Farms, L&DD, Punjab	
Livestock & Fisheries Department, Government of Sindh	<a href="http://www.sindh.gov.pk">www.sindh.gov.pk</a>
Agriculture & Livestock Department, Government of KPK	<a href="http://www.khyberpakhtunkhwa.gov.pk">www.khyberpakhtunkhwa.gov.pk</a>
Livestock & Dairy Development, Government of Balochistan	<a href="http://www.balochistan.gov.pk">www.balochistan.gov.pk</a>

## 12 ANNEXURES

### 12.1 Income Statement

Statement Summaries										SMEDA
Income Statement										Rs. in actuals
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Revenue	9,635,000	10,502,150	11,447,344	12,477,604	13,600,589	14,824,642	16,158,860	17,613,157	19,198,341	20,926,192
Cost of Goods Sold										
COGS (Feed)	544,050	598,455	658,300	724,131	796,544	876,198	963,818	1,060,200	1,166,219	1,282,841
COGS (Animals - Regular)	2,025,000	2,207,250	2,405,903	2,622,434	2,858,453	3,115,714	3,396,128	3,701,779	4,034,939	4,398,084
Operating Cost (Direct Labor)	2,112,000	2,323,200	2,555,520	2,811,072	3,092,179	3,401,397	3,741,537	4,115,691	4,527,260	4,979,986
Operating Cost (Machinery Maintenance)	60,000	66,000	72,600	79,860	87,846	96,631	106,294	116,923	128,615	141,477
Operating cost (Direct Electricity)	145,678	160,246	176,270	193,897	213,287	234,616	258,077	283,885	312,274	343,501
Total Cost of Sales	6,152,728	6,737,626	7,378,280	8,080,019	8,848,684	9,690,676	10,613,008	11,623,367	12,730,177	13,942,671
Gross Profit	3,482,272	3,764,524	4,069,064	4,397,585	4,751,904	5,133,966	5,545,852	5,989,790	6,468,164	6,983,521
<i>General administration &amp; selling expenses</i>										
Administration expense	-	-	-	-	-	-	-	-	-	-
Rental expense	20,661	20,661	20,661	20,661	20,661	20,661	20,661	20,661	20,661	20,661
Utilities expense	28,940	31,834	35,018	38,520	42,372	46,609	51,270	56,397	62,036	68,240
Travelling & Comm. expense (phone, fax, etc.)	6,000	6,600	7,260	7,986	8,785	9,663	10,629	11,692	12,862	14,148
Office vehicles running expense	13,500	14,850	16,335	17,969	19,765	21,700	23,790	25,935	28,135	30,385
Office expenses (stationary, etc.)	24,000	26,400	29,040	31,944	35,138	38,652	42,517	46,769	51,446	56,591
Promotional expense	12,000	13,200	14,520	15,972	17,569	19,326	21,259	23,385	25,723	28,295
Insurance expense	-	-	-	-	-	-	-	-	-	-
Professional fees (legal, audit, etc.)	-	-	-	-	-	-	-	-	-	-
Depreciation expense	578,334	578,334	578,334	578,334	578,334	676,535	676,535	676,535	676,535	676,535
Amortization expense	38,627	38,627	38,627	38,627	38,627	-	-	-	-	-
Property tax expense	-	-	-	-	-	-	-	-	-	-
Miscellaneous expense	-	-	-	-	-	-	-	-	-	-
Subtotal	722,062	730,506	739,795	750,012	761,251	824,946	837,721	851,773	867,231	884,235
Operating Income	2,760,210	3,034,018	3,329,269	3,647,573	3,990,653	4,309,020	4,708,131	5,138,017	5,600,933	6,099,287
Other income	-	-	-	-	-	-	-	-	-	-
Gain / (loss) on sale of assets	-	-	-	-	321,700	-	-	-	-	-
Earnings Before Interest & Taxes	2,760,210	3,034,018	3,329,269	3,647,573	4,312,353	4,309,020	4,708,131	5,138,017	5,600,933	6,099,287
Interest expense	382,298	286,026	265,757	242,943	217,266	188,366	155,840	119,231	78,027	31,651
Earnings Before Tax	2,377,912	2,747,992	3,063,513	3,404,630	4,095,087	4,120,653	4,552,291	5,018,786	5,522,906	6,067,635
Tax	320,082	406,498	485,378	570,657	748,026	755,696	885,187	1,025,136	1,176,372	1,343,172
<b>NET PROFIT/(LOSS) AFTER TAX</b>	<b>2,057,830</b>	<b>2,341,494</b>	<b>2,578,135</b>	<b>2,833,973</b>	<b>3,347,061</b>	<b>3,364,958</b>	<b>3,667,104</b>	<b>3,993,651</b>	<b>4,346,535</b>	<b>4,724,464</b>
Balance brought forward		2,057,830	4,399,324	6,977,458	9,811,432	13,158,493	16,523,451	20,190,555	24,184,205	28,530,740
Total profit available for appropriation	2,057,830	4,399,324	6,977,458	9,811,432	13,158,493	16,523,451	20,190,555	24,184,205	28,530,740	33,255,204
Dividend	-	-	-	-	-	-	-	-	-	-
Balance carried forward	2,057,830	4,399,324	6,977,458	9,811,432	13,158,493	16,523,451	20,190,555	24,184,205	28,530,740	33,255,204

## 12.2 Balance Sheet

Statement Summaries											SMEDA
Balance Sheet											Rs. in actuals
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
<b>Assets</b>											
<i>Current assets</i>											
Cash & Bank	1,961,438	3,004,745	5,742,280	8,668,064	11,812,997	14,133,707	17,778,859	21,670,663	25,825,140	30,258,880	36,098,959
Accounts receivable	-	395,959	413,777	451,017	491,609	535,853	584,080	636,647	693,946	756,401	824,477
Finished goods inventory	-	-	-	-	-	-	-	-	-	-	-
Equipment spare part inventory	28,313	31,144	34,258	37,684	41,452	45,598	50,157	55,173	60,690	66,759	73,435
Raw material inventory	169,388	204,959	248,000	300,080	363,097	439,348	531,611	643,249	778,331	941,780	-
Pre-paid annual land lease	20,661	20,661	20,661	20,661	20,661	20,661	20,661	20,661	20,661	20,661	-
Pre-paid building rent	-	-	-	-	-	-	-	-	-	-	-
Pre-paid lease interest	-	-	-	-	-	-	-	-	-	-	-
Pre-paid insurance	-	-	-	-	-	-	-	-	-	-	-
<b>Total Current Assets</b>	<b>2,179,799</b>	<b>3,657,467</b>	<b>6,458,976</b>	<b>9,477,506</b>	<b>12,729,816</b>	<b>15,175,166</b>	<b>18,965,368</b>	<b>23,026,393</b>	<b>27,378,768</b>	<b>32,044,482</b>	<b>36,996,871</b>
<i>Fixed assets</i>											
Land	-	-	-	-	-	-	-	-	-	-	-
Building/Infrastructure	3,761,000	3,384,900	3,008,800	2,632,700	2,256,600	1,880,500	1,504,400	1,128,300	752,200	376,100	-
Machinery & equipment	339,750	305,775	271,800	237,825	203,850	169,875	135,900	101,925	67,950	33,975	-
Furniture & fixtures	74,090	66,681	59,272	51,863	44,454	37,045	29,636	22,227	14,818	7,409	-
Office vehicles	798,250	638,600	478,950	319,300	159,650	1,285,590	1,028,472	771,354	514,236	257,118	-
Office equipment	6,000	4,800	3,600	2,400	1,200	9,663	7,730	5,798	3,865	1,933	-
<b>Total Fixed Assets</b>	<b>4,979,090</b>	<b>4,400,756</b>	<b>3,822,422</b>	<b>3,244,088</b>	<b>2,665,754</b>	<b>3,382,673</b>	<b>2,706,138</b>	<b>2,029,604</b>	<b>1,353,069</b>	<b>676,535</b>	<b>-</b>
<i>Intangible assets</i>											
Pre-operation costs	193,134	154,507	115,880	77,253	38,627	-	-	-	-	-	(0)
Legal, licensing, & training costs	-	-	-	-	-	-	-	-	-	-	(0)
<b>Total Intangible Assets</b>	<b>193,134</b>	<b>154,507</b>	<b>115,880</b>	<b>77,253</b>	<b>38,627</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>(0)</b>
<b>TOTAL ASSETS</b>	<b>7,352,023</b>	<b>8,212,730</b>	<b>10,397,279</b>	<b>12,798,848</b>	<b>15,434,197</b>	<b>18,557,839</b>	<b>21,671,506</b>	<b>25,055,997</b>	<b>28,731,837</b>	<b>32,721,016</b>	<b>36,996,871</b>
<b>Liabilities &amp; Shareholders' Equity</b>											
<i>Current liabilities</i>											
Accounts payable	-	36,267	40,821	46,024	51,983	58,823	66,691	75,763	86,247	98,391	65,656
Export re-finance facility	-	-	-	-	-	-	-	-	-	-	-
Short term debt	-	-	-	-	-	-	-	-	-	-	-
Other liabilities	-	-	-	-	-	-	-	-	-	-	-
<b>Total Current Liabilities</b>	<b>-</b>	<b>36,267</b>	<b>40,821</b>	<b>46,024</b>	<b>51,983</b>	<b>58,823</b>	<b>66,691</b>	<b>75,763</b>	<b>86,247</b>	<b>98,391</b>	<b>65,656</b>
<i>Other liabilities</i>											
Lease payable	-	-	-	-	-	-	-	-	-	-	-
Deferred tax	-	-	-	-	-	-	-	-	-	-	-
Long term debt	3,676,011	2,442,622	2,281,123	2,099,354	1,894,771	1,664,512	1,405,353	1,113,667	785,373	415,874	-
<b>Total Long Term Liabilities</b>	<b>3,676,011</b>	<b>2,442,622</b>	<b>2,281,123</b>	<b>2,099,354</b>	<b>1,894,771</b>	<b>1,664,512</b>	<b>1,405,353</b>	<b>1,113,667</b>	<b>785,373</b>	<b>415,874</b>	<b>-</b>
<i>Shareholders' equity</i>											
Paid-up capital	3,676,011	3,676,011	3,676,011	3,676,011	3,676,011	3,676,011	3,676,011	3,676,011	3,676,011	3,676,011	3,676,011
Retained earnings	-	2,057,830	4,399,324	6,977,458	9,811,432	13,158,493	16,523,451	20,190,555	24,184,205	28,530,740	33,255,204
<b>Total Equity</b>	<b>3,676,011</b>	<b>5,733,841</b>	<b>8,075,335</b>	<b>10,653,470</b>	<b>13,487,443</b>	<b>16,834,505</b>	<b>20,199,462</b>	<b>23,866,566</b>	<b>27,860,217</b>	<b>32,206,752</b>	<b>36,931,215</b>
<b>TOTAL CAPITAL AND LIABILITIES</b>	<b>7,352,023</b>	<b>8,212,730</b>	<b>10,397,279</b>	<b>12,798,848</b>	<b>15,434,197</b>	<b>18,557,839</b>	<b>21,671,506</b>	<b>25,055,997</b>	<b>28,731,837</b>	<b>32,721,016</b>	<b>36,996,871</b>

Note: Total assets value will differ from project cost due to first installment of leases paid at the start of year 0

## 12.3 Cash Flow Statement

Statement Summaries											SMEDA
Cash Flow Statement											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Rs. in actuals Year 10
<i>Operating activities</i>											
Net profit	-	2,057,830	2,341,494	2,578,135	2,833,973	3,347,061	3,364,958	3,667,104	3,993,651	4,346,535	4,724,464
Add: depreciation expense	-	578,334	578,334	578,334	578,334	578,334	676,535	676,535	676,535	676,535	676,535
amortization expense	-	38,627	38,627	38,627	38,627	38,627	-	-	-	-	-
Deferred income tax	-	-	-	-	-	-	-	-	-	-	-
Accounts receivable	-	(395,959)	(17,818)	(37,240)	(40,592)	(44,245)	(48,227)	(52,567)	(57,298)	(62,455)	(68,076)
Finished good inventory	-	-	-	-	-	-	-	-	-	-	-
Equipment inventory	(28,313)	(2,831)	(3,114)	(3,426)	(3,768)	(4,145)	(4,560)	(5,016)	(5,517)	(6,069)	(6,676)
Raw material inventory	(169,388)	(35,571)	(43,041)	(52,080)	(63,017)	(76,250)	(92,263)	(111,638)	(135,082)	(163,450)	941,780
Pre-paid building rent	-	-	-	-	-	-	-	-	-	-	-
Pre-paid lease interest	-	-	-	-	-	-	-	-	-	-	-
Advance insurance premium	-	-	-	-	-	-	-	-	-	-	-
Accounts payable	-	36,267	4,553	5,203	5,959	6,840	7,868	9,072	10,484	12,143	(32,735)
Other liabilities	-	-	-	-	-	-	-	-	-	-	-
Cash provided by operations	(197,700)	2,276,696	2,899,034	3,107,553	3,349,516	3,846,221	3,904,311	4,183,490	4,482,771	4,803,239	6,235,292
<i>Financing activities</i>											
Change in long term debt	3,676,011	(1,233,390)	(161,499)	(181,769)	(204,582)	(230,259)	(259,159)	(291,686)	(328,295)	(369,499)	(415,874)
Change in short term debt	-	-	-	-	-	-	-	-	-	-	-
Change in export re-finance facility	-	-	-	-	-	-	-	-	-	-	-
Add: land lease expense	-	20,661	20,661	20,661	20,661	20,661	20,661	20,661	20,661	20,661	20,661
Land lease payment	(20,661)	(20,661)	(20,661)	(20,661)	(20,661)	(20,661)	(20,661)	(20,661)	(20,661)	(20,661)	-
Change in lease financing	-	-	-	-	-	-	-	-	-	-	-
Issuance of shares	3,676,011	-	-	-	-	-	-	-	-	-	-
Purchase of (treasury) shares	-	-	-	-	-	-	-	-	-	-	-
Cash provided by / (used for) financing act	7,331,362	(1,233,390)	(161,499)	(181,769)	(204,582)	(230,259)	(259,159)	(291,686)	(328,295)	(369,499)	(395,213)
<i>Investing activities</i>											
Capital expenditure	(5,172,224)	-	-	-	-	(1,295,253)	-	-	-	-	-
Acquisitions	-	-	-	-	-	-	-	-	-	-	-
Cash (used for) / provided by investing act	(5,172,224)	-	-	-	-	(1,295,253)	-	-	-	-	-
<b>NET CASH</b>	<b>1,961,438</b>	<b>1,043,307</b>	<b>2,737,535</b>	<b>2,925,784</b>	<b>3,144,934</b>	<b>2,320,709</b>	<b>3,645,152</b>	<b>3,891,804</b>	<b>4,154,477</b>	<b>4,433,740</b>	<b>5,840,079</b>
Cash balance brought forward	-	1,961,438	3,004,745	5,742,280	8,668,064	11,812,997	14,133,707	17,778,859	21,670,663	25,825,140	30,258,880
Cash available for appropriation	1,961,438	3,004,745	5,742,280	8,668,064	11,812,997	14,133,707	17,778,859	21,670,663	25,825,140	30,258,880	36,098,959
Dividend	-	-	-	-	-	-	-	-	-	-	-
Cash carried forward	1,961,438	3,004,745	5,742,280	8,668,064	11,812,997	14,133,707	17,778,859	21,670,663	25,825,140	30,258,880	36,098,959

## 13 KEY ASSUMPTIONS

### 13.1 Operating Cost Assumptions

Description	Details
Machinery Maintenance (Rs. Per Year)	5,000
Direct Electricity (Rs. per goat)	327
Transportation Cost (Rs./ Batch)	40,000
Office vehicle running expenses (Rs. Per annum)	13,500
Farm Expenses (entertainment, janitorial, stationery etc.) Rs. per month	2,000
Communication Expenses (Rs. Per month)	500
Promotional expenses (Rs. Per month)	1,000

### 13.2 Production Cost Assumptions

Description	Details
Annual installed capacity (Goats)	450
Capacity utilization (%)	100
Maximum capacity (%)	100
Annual production (goats) in first year	450
Number of goats fattened per production cycle	150
Number of production cycles per year	3
Fattening days	100
Purchase price (Rs. Per goat)	15,000
Cost of vaccination and medication (Rs. Per goat)	300
No. of goats lost in mortality @1% of batch	5
Open Space per animal (Sq. ft)	25
Total Mixed Ration (TMR) requirement (% of live body weight)	2.0
Price of TMR (Rs. per kg)	23
Agricultural Industry Waste (Rs. per Kg) Incl. transportation	3

### 13.3 Revenue Assumptions

Description	Details
Production Capacity (Goats per annum)	450
Initial; Weight (Kgs/ goat)	15
Feeding Days (Days per batch)	100

Sale price growth rate (% per annum)	9
<b>Assumptions for Regular Batch</b>	
Weight gain (Grams/day)	150
Selling rate (Rs. per Kg Live Body Wt.)	500
Sale price -(Rs./ goat)	15,000
<b>Assumptions for Eid Batch</b>	
Weight gain (grams/ day)	200
Sale price (Rs. per Kg Live Body Wt.)	1,000
Sale Price (Rs/goat)	35,000

### 13.4 Financial Assumptions

Description	Details
Debt: Equity Ratio	50:50
Interest rate per annum	12%
Debt tenure	10 years
Debt payments per year	4

### 13.5 Important Goat Breeds

#### A: Beetal

This is dual type breed i.e. kept for both milk and meat and is found in almost all districts of central Punjab. It has golden-brown or red-spotted with white or black patches, having large size with average adult body weight of 45-55 kgs. It has massive head, Roman nose, long, broad & pendulous ears, spiralled horns, longer in males, long stout legs, and short tail. Beetal males raised especially for sacrifice on Eid-ul-Azha may have body weight being 70-80 kg.



Beetal Female



Beetal Male

#### B: Teddy

It is kept mainly for meat purpose, found in Sargodha, Gujrat, Jhelum & Rawalpindi districts in Punjab & adjoining areas of Azad Kashmir. It has creamy-white, brown, black or patched with these colours with small



Teddy Male



Teddy Female

size having average adult body weight of 25-30 kgs. It has compact body; small droopy ears, slightly prominent nose, horns may have spirals, both horned & polled specimens found; bucks often have beards; early maturity & high prolificacy is an important features of this breed.

#### C: Dera Din Panah (DDP)

This is a dual type breed i.e. kept for both milk and meat. It is found mostly in Muzaffargarh and Multan districts of Punjab. It is large in size with adult body weight of 45-50 kgs average. It is characterized by large head with Roman nose, hair on the chin, long broad ears; cartilaginous appendages on



Dera Din Panah Male



Dera Din Panah Female



sides of neck, long and thick spiralled horns; hairy body; tail medium covered with rough hair.

#### D: Nachi

It is also dual type i.e. kept for both meat and milk purposes. It is mainly found in Bahawalpur, Multan, Muzaffargarh & Layyah districts it has black colour but black and white-spotted too. Its size is medium to large with



Nachi Female



Nachi Male

average adult body weight of 40-50 kgs. It has medium head, Roman nose, small & thin horns, medium ears; because of dancing gait, these goats called 'Nachi'.

#### E: Pothwari

It is kept mainly for meat purpose and is found in Pothwar area of Punjab & adjoining parts of Kotli & Mirpur districts in Azad Kashmir. It has black, grey or white colours with small size and adult average body weight of around 25-30 kgs. It has head & ears of medium size, hairy growth on chin, horns spiralled in males but smooth in females.



### 13.6 Common Diseases of Goats

Infectious Diseases of Goats			
Disease	Symptoms	Preventive measures	Medication
Anthrax	Fever, grinding of teeth, release of blackish blood from natural openings, which doesn't clot.	Vaccinate as per schedule. Bury dead body 6 ft. deep pit, no postmortem.	Antibiotic therapy
Foot and mouth disease	Excessive salivation, Pustules on muzzle, tongue and cleft of hooves, staggering gait weakness due to inability of ingestion.	Vaccination as per schedule.	FMD Serum, cleaning of pustules by potassium permanganate solution, cleaning of hooves by phenyl solution
Enterotoxaemia	Fever, grinding of teeth, Bloating, staggering gait	Vaccination as per schedule.	5-10 ml of Sulfamethazone (33.5% soln.) in 20 ml water orally OR Chloromycine powder 20mg/kg of feed for 2 weeks
Pleuropneumonia	Fever, difficult breathing with voice, coughing, weakness	Vaccination as per schedule.	Liquomycine , 1cc/10 kgs of body weight
CPD	Lowered appetite, pustules on lips, fever in severe condition with eruptions on other body parts	Vaccination as per schedule.	Clean pustules with 0.1 % soln. of potassium permanganate/ glycerin/ limewater (1 part), mustard oil (2 parts) and noshader solution (1 part), apply on wounds.
Goat pox	Fever, swelling on eyes, pox eruptions on hairless body parts	Vaccination as per schedule.	Ointment of boric acid on eruptions, Inj. Combiotic 1 gm for 4-6 days.
Non Contagious Diseases			
Indigestion	Loss of appetite, watering from mouth, bloating and pain in stomach	Avoid dietary causes.	5 grams Stomach powder (mixed in feed or dissolved in water) twice a day
Bloating (air trapped in stomach)	Difficult breathing due to air trapped in stomach, animal may die due to suffocation	No grazing early in morning esp. on fodder with dewdrops.	Mustard (Sarson) oil & turpentine oil mixed with chloral hydrate mixed in drinking water.
Dysentery	Diarrhea, smelling feces, weakness	Avoid wheat straw or stiff feed during dysentery	Calcium carbonate, magnesium carbonate and bismuth carbonate dissolved in water OR entox tablets OR nimkol with sulfademadine (4-5 cc). Offer rice gruel to affected animals
Internal Parasites			
Liver flukes	Weakness, off feed, jaundice in severe cases, swollen joints	No grazing around stagnant water	Zanil or Carbon tetra chloride OR nilzan plus, oral administration
Round Worms	Weakness, diarrhea, anemia, hair fall from body coat	Fecal samples examination	Systemax or rental, oral administration
Ecto-parasites			
Flies or ticks or maggots	Irritation on body coat, sometimes holes in skin, loss of hair from body coat	Cleanliness in sheds, Spray of DDT in shed	Apply sulfur oil, tetmasol or ecoflax on wounds and dipping of all goats with a 0.15 % Neguvan Soln.