Pre-Feasibility Study

Poultry Breeder Farm

Small and Medium Enterprise Development Authority

Government of Pakistan

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Introduction to SMEDA

The Small and Medium Enterprise Development Authority (SMEDA) was established with the objective to provide fresh impetus to the economy through the launch of an aggressive SME support program.[1]

Since its inception in October 1998, SMEDA had adopted a sectoral SME development approach. A few priority sectors were selected on the criterion of SME presence. In depth research was conducted and comprehensive development plans were formulated after identification of impediments and retardants. The all-encompassing sectoral development strategy involved recommending changes in the regulatory environment by taking into consideration other important aspects including financial aspects, niche marketing, technology upgradation and human resource development.

SMEDA has so far successfully formulated strategies for sectors including, fruits and vegetables, marble and granite, gems and jewelry, marine fisheries, leather and footwear, textiles, surgical instruments, urban transport and dairy. Whereas the task of SME development at a broader scale still requires more coverage and enhanced reach in terms of SMEDA's areas of operation.

Along with the sectoral focus a broad spectrum of business development services is also offered to the SMEs by SMEDA. These services include identification of viable business opportunities for potential SME investors. In order to facilitate these investors, SMEDA provides business guidance through its help desk services as well as development of project specific documents. These documents consist of information required to make well-researched investment decisions. Pre-feasibility studies and business plan development are some of the services provided to enhance the capacity of individual SMEs to exploit viable business opportunities in a better way. This document is in the continuation of this effort to enable potential investors to make well-informed investment decisions.

[1] **For more information on services offered by SMEDA, please visit our website: www.smeda.org.pk**

1 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, finance and business management.

2 PROJECT PROFILE

The project is related to setting up Poultry Breeder Farm for production of day old chicks. The document highlights all the marketing, management, and financial aspects required for the establishment and successful running of the project.

2.1 Project Brief

In poultry breeder farm day old chicks (DOCs) of commercial parent breeders are reared to laying stage of eggs production. These farm house birds produce fertile eggs for hatching. At the end of their productive life, approximately 67 weeks, the birds are removed for chicken meat processing. After each breeding cycle, the used litter and manure is also removed from the breeder sheds.

Laid fertile eggs are transported to a hatchery, where they are artificially incubated. Hatched day old chicks are then provided to commercial farms for raising broiler meat.

2.2 Opportunity Rationale

Demand for the livestock products has increased greatly in past two decades. The major cause in increase of demand of livestock products is continuing population growth, increase in per capita income, degree of urbanization and change in food consumption patterns. Despite the fact that the production has increased with increasing demand, due to high rate of population growth, per capita availability of meat in Pakistan has increased marginally from 14.13 Kg. / person in 1998-99 to 15.31 kg/person in 2005-06.

Per Capita Availability of Meat[2]

(000 Tonnes)

(July-June)	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
1. Total Production*	1906	1956	2014	2073	2134	2185	2238	2419
2. Per Capita Availability (Kgs/annum)	14.13	14.19	14.42	14.50	14.65	14.74	15.19	15.31

* = Includes beef, mutton and poultry meat.

[2] Agriculture Statistics of Pakistan 2005-06, Food Agriculture and Livestock Division

As compare to beef and mutton broiler meat is the cheapest source of animal protein. The time required for raising broiler birds is less that that for big animals. The consumption of white meat is increasing due to growing health consciousness in the masses. There are more then 20,000 poultry farms in the country. In 2006-07 about 810 million broilers were produced in Pakistan. These farms obtain one day chicks from the breeder farms containing parent stock.

2.3 Market Entry Timing

Demand and supply fluctuates during the year depending upon various social functions like marriage ceremonies where a large quantity of broiler meat, being comparatively cheaper and easily available, for preparing various dishes is consumed.

2.4 Proposed Business Legal Status

The business can be started as sole proprietorship or partnership because of great potential involved. Furthermore, comparatively fewer complications are involved in forming, administering and running the sole proprietorship or partnership businesses

2.5 Proposed Product Mix

The proposed project will generate revenues from sale of day-old chicks of parent line for broiler production. The farm would focus on the production of Day Old Chicks for marketing, additionally the raw materials produced would be manure which would be sold in local markets. The old breeding birds can be sold in the market for meat at the end of its production cycle.

Product Mix

Product	Average chicks per housed hen	Price per chick
Day old hatched chicks	135	Rs: 19

2.6 Production Capacity

The Farm housing 5,000 birds of parent line in each cycle of 16 months will produce 648,000 day old broiler chicks for sale to broiler units.

2.7 Project Investment

The total project investment is Rs. 2.39 Million which includes Capital Cost of Rs. 1.44 Million and Working Capital of Rs. 0.95 Million. Due to cyclical nature of cash flows the project will require short term debt in second and third year so it is recommended the project is financed through 100% equity in the initial stages.

2.8 Recommended Project Parameters

Table: Project Parameters

Max Capacity	Human Resource	Technology/Machinery	Location
5000 breeding Birds	3	Local Made	Sub-urban and rural areas around major cities

Financial Summary				
Total Cost	**IRR**	**NPV**	**Pay Back Period**	**Cost Of Capital (WACC)**
Rs. 2.39 M	44%	5,024,804	3.06 Years	16%

2.9 Suitable Location

Sub-urban and rural areas around the major cities are recommended for starting such a farm. Setting up a farm at an isolated place will minimize the risk of diseases.

Infrastructure Requirements

- Road
- Electricity
- Water
- Drainage of rain water

2.10 Key Success Factors

- Livestock is one of the Major Strength of Balochistan. It is an integral part of the rural economy contributing 38-40 percent in Agricultural GDP while amounting to more than 8 percent in the national GDP.
- There is a great demand of poultry in the country.
- Large number of Broiler and Layer farms in the country.

2.11 Strategic Recommendations

- Establishment of the farms in areas where basic infrastructure including water, gas and electricity are available.
- The farming should be done on scientific grounds taking care of Prophylactic Vaccination, Medicine and proper feeding catering the requirements of individual birds..
- Well-trained/experienced staff will add in the efficiency of the farm.
- Each flock should have a written health and welfare programme produced, where necessary, with expert advice. This should set out health and husbandry activities covering

the whole of the production cycle. The programme should be reviewed and updated annually by the farm manager.

- Infectious diseases should be controlled by good management and attention to even minor details including the keeping of daily records of feed and water consumption.
- Immediate veterinary attention should be sought at an early stage in any outbreak of disease so that the cause can be determined and appropriate action taken.
- Diseases caused by external parasites should be controlled by appropriate parasiticides.
- When houses are emptied and cleaned, old litter should be removed from the site so as to reduce the carry over of disease.

3 CURRENT INDUSTRY STRUCTURE

3.1 Introduction

Broiler chicks are produced from fertile eggs of parent stock (Breeder Stock) and the parent stock is produced from imported Grand Parent (GP) stock. The farmers get day old chick of broiler from hatcheries. These hatcheries maintain their breeder farms, or in some cases, purchase their hatching eggs from breeder farms. These breeder farms depend on producers of parent stock.

Grand Parent Breeder farms require relatively high level of investment for the import of Grand parent flock/ grandparent of best breeds and farmers need to have better technical skills and know- how as compared to other sub-sectors of poultry farming.

Feed is one of the major expense items in poultry farming which constitutes about 60 to 70 percent of the total cost. In broiler and layer farming quality of feed is very important. The birds need a balanced diet in right quantity for a disease free growth. In order to make balanced and disease free feed more than 100 ingredients are used. This feed is made in the feed mills.

The demand for poultry meat and poultry eggs, especially chickens and chicken eggs has expanded considerably over the last decades. The poultry industry has grown from a home industry to a large scale commercial industry in which thousands of chickens and eggs are produced daily at single poultry farms. Some eggs are produced for eating and some eggs are produced for hatching.

Production of Beef, Mutton and Poultry Meat and Eggs in Pakistan[3]

S. No.	Meat / Eggs	Units	2003-04	2004-05	2005-06
i)	Beef	Million tons	1.09	1.12	1.17
ii)	Mutton	Million tons	0.72	0.74	0.78
iii)	Poultry Meat	Million tons	0.38	0.38	0.46
	Total Meat	**Million tons**	**2.19**	**2.24**	**2.42**
iv)	Eggs	Million No.	8102	8529	9057

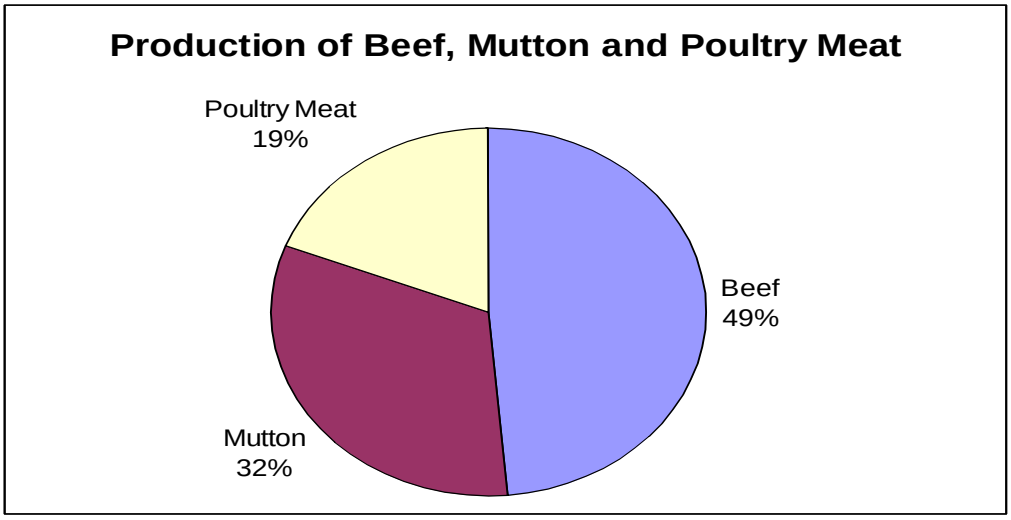

Table: Year Wise Production of Poultry Meat and Eggs in Pakistan

Year	Poultry Meat	Poultry Eggs
1999-00	322,000	7321
2000-01	339,000	7505
2001-02	355,000	7676
2002-03	372,000	7991
2003-04	378,000	8102
2004-05	384,000	8529
2005-06	463,000	9057

Source: M/o Food, Agriculture and Livestock (Livestock Wing)

[3] MINFAL

Presently, poultry industry contributes a large segment to the national economy with an investment of more than 70 billion of rupees. Its annual turnover is almost Rupees 193 billion and has become the second largest industry after textile in Pakistan. The sector consists of 280 hatcheries, 139 feed mills and more than 20,000 layer, broiler and breeding farms. Pakistan's poultry industry is importing 100,000 Grandparents (GP) chicks annually from Holland, Germany and USA. This GP is producing 7.5 million birds of parent flock giving rise to 810 million commercial broilers producing almost 700,000 metric tones of poultry meat. In this way, poultry sector is contributing its major share to provide animal protein to the common masses and is striving hard to fulfill the gaps of animal protein in the country.

Broiler's Population (1997-2007)[4]

Year	No. of Birds
1997-98	205 million
1998-99	313 million
1999-00	389 million
2000-01	410 million
2001-02	486 million
2002-03	`442 million
2003-04	454 million
2004-05	583 million
2005-06	648 million
2006-07	810 million

3.2 Balochistan Contribution to the livestock and Poultry Sector

Quetta, Lasbella and Pishin are the major poultry rearing areas of Balochistan. Due to dry weather and colder temperature theses districts provides the best areas for Breeders poultry farming in the province.

Table: Livestock Population in Balochistan[5]

	Cattle	*Buffaloes*	*Sheep*	*Goats*	*Camels*	*Poultry*
Pakistan	29558812	27334985	26487741	53786988	920868	73647888
Balochistan	2253581	319854	12804217	11784711	379528	5911304
Percentage	**7.6%**	**1.2%**	**48.3%**	**21.9%**	**41.2%**	**8.0%**

4 The Veterinary News & Views, Nov,2007 Faisalabad.
5 Pakistan Livestock Census 2006: Agricultural Census Organization

3.3 Breeder farm production system

Breeder farms house birds that start and produce fertile eggs at the age of seven months thereby producing day old chicks for meeting the demand of broiler units for raising broiler meat. At the end of their productive life, approximately 16 months, the breeder hens including cockerals are removed for meeting chicken meat demand by various establishments. After each breeding cycle, the used litter and manure is also removed from the breeder sheds.

Laid eggs are transported to a hatchery, where they are artificially incubated. Hatched chicks are provided to the broiler units without any delay because the newly hatched chick is the safest animal in the world for traveling upto 48 hours without any feed and water.

There are two phases in the breeder farm production system. Hens will be reared for 7 months after which their production period of 9 months will start.

3.3.1 Rearing

Breeders are reared in deep litter houses that have the controlled facilities of lighting, temperature and ventilation. Houses are normally sub-divided into pens containing about 1000 birds. Body weights are carefully monitored on a weekly basis and the body condition physically assessed by trained personnel. To achieve recommended body weights throughout the rearing period, feed intake is controlled and to ensure that all birds receive a fair share, great emphasis is placed on feed distribution methods. Birds are grouped by weight and it is necessary to transfer some individuals between groups periodically so as to adjust their feed intake and body weight to the target growth path.

3.3.2 Laying

Breeder houses generally provide about two thirds of their floor area as litter and one third as a raised, slatted area. In recent years it has become common practice to provide separate feeders for the hens and the cockerels to control feed intakes, and hence body weights, of each separately. Controlling the weight of hens prevents too-rapid growth and deposition of fat which seriously affects their longevity and egg-laying performance. Controlling the cockerels' weight improves their mating behavior, semen count and foot and leg health.

Male and female birds are subject to different feeding levels and they have different feed access. Cockerel feeders are suspended out of reach of the hens. Hen feeders deny access to the cockerels by the use of metal grills set with a gap which allow for the differences in head dimensions between the sexes. As in the rearing houses, the feeding space must be adequate and feed must be distributed rapidly and evenly to ensure minimum competition at feeding time. Pan feeders offer a more sophisticated means of separating male and female feed supply. Whichever system is used, a high standard of stockmanship is essential.

Rearing and Production Cycle

Year	1		2		3		4		5	
	Rearing	Production	Rearing	Production	Rearing	Production	Rearing	Production	Rearing	Production
Months	7	5	7	5	4	8	3	9	7	5
Year	**6**		**7**		**8**		**9**		**10**	
	Rearing	Production	Rearing	Production	Rearing	Production	Rearing	Production	Rearing	Production
Months	7	5	4	8	3	9	7	5	7	5

3.3.3 Housing and Environment

Breeder birds are reared in houses in which temperature, humidity, ventilation rates, light levels and photo-periods are carefully regulated. A well designed house will incorporate insulation and heaters, ventilation fans and vents, effective light-proofing, and a lighting system providing controllable light levels with uniform distribution.

Nests and perches: Naturally clean eggs maintain a greater potential hatchability and chick quality than soiled or contaminated eggs, regardless of the disinfection procedures used on the shell surface. Hens are more likely to use nests that satisfy the requirements of their natural laying behavior (i.e. clean, dry, dimly lit and, secluded), and nest boxes should be of appropriate design. Nest boxes should be located where the birds will use them and should be at a height where they will not become contaminated with floor litter, or provide a refuge for females avoiding the males. Birds should be trained to use the nests prior to lay. Provision of perches during rearing assists in this training.

Nest Box Design: Nest boxes are usually assembled in 2- or 3-tier units allowing 1 nest/4 birds. The nest dimensions should be approximately 30cm (12in) wide x 35cm (14in) deep x 25cm (10in) high. The design should allow for good ventilation with freedom from draughts. Depending upon the design and used material the cost of nests can vary greatly from Rs. 300,000 to Rs. 900,000.

Perches: It is good management practice to install perches during the rearing period in order to train and stimulate females in nesting behavior. Sufficient numbers of perches to provide 3cm/bird (sufficient for 20% of the birds to roost) should be placed in the females' rearing pens from 4-6 weeks of age.

3.3.4 Stocking Density

The existing practice for breeder farming requires provision of sufficient space to allow freedom of movement so that the birds can, without difficulty, stand normally, turn round and stretch their wings. Birds should also have access to sufficient space for normal movements such as preening and wing-flapping. Such space is routinely provided to breeders. As the birds grow stocking densities will rise steadily. Because body weights

during the laying period increase only slowly, and a significant number of males are culled, the gross stocking densities will change little after this time.

Housing space of at least 2.5 sq feet per female should be provided to the breeder stock. The calculation should be on the basis of all birds within the house, including males.

3.3.5 Hygiene and disinfection

It is essential to provide all birds with an environment that minimizes the potential for disease and its spread. Bio-security is a key part of breeder farming, particularly at pedigree level, and the breeding companies go to great lengths to ensure a high health status. All those in contact with breeders should practice strict hygiene and disinfection procedures. Ideally, birds kept on any one site should be of a similar age. This will facilitate effective cleaning, disinfection and disinfestation procedures across the site because all houses are empty simultaneously. This will also provide a period when there are no birds on site as a disease break. Further, it is important that the buildings preclude entry of rodents and wild birds.

When houses are emptied and cleaned, old litter should be removed from the site so as to reduce the carry over of disease.

3.3.6 Disease Control

A disease challenge may be first noticed by a change in water consumption or a reluctance to eat. It is, therefore, good management practice to keep daily records of feed and water intake. If a disease problem is suspected, a veterinarian or poultry husbandry expert should be consulted. Early, appropriate treatment of a disease incident will minimize the adverse effects on the birds' welfare, health and reproductive performance and also minimize the effects on the welfare, health and quality of the progeny.

Though the vaccination programme will control all the major infectious diseases, yet some mortality may occur which is generally due to a variety of miscellaneous conditions. These include peritonitis, heart failure, tumors, joint infections and injuries.

The improved health status of the flock is also due to better preventive health management. Generally referred to as "bio-security", most breeding farms have strict rules on access by visitors, the use of protective clothing and cleansing and disinfection of equipment and transport. In summer it may be necessary to treat the equipment in the houses to remove parasites.

Recommendations

Each flock should have a written health and welfare programme produced, where necessary, with expert advice. This should set out health and husbandry activities covering the whole of the production cycle. The programme should be reviewed and updated annually by the farm manager.

Infectious diseases should be controlled by good management and attention to even minor details including the keeping of daily records of feed and water consumption.

Immediate veterinary attention should be sought at an early stage in any outbreak of disease so that the cause can be determined and appropriate action taken. Diseases caused by external parasites should be controlled by appropriate parasiticides.

4 MARKET ANALYSIS

4.1 Marketing Channels

The marketing channels of poultry include producers (Breeder farms, Broilers farms, Layer Farms), wholesaler and commission agents, poultry shops and consumers. Birds are mostly sold on live-weight basis. There are only few processing plants in the country they distribute frozen chicken as whole or cut-ups to the consumers through retail shops.

4.1.1 Producers

Breeder farms sell day old chicks to broiler farms. After rearing the birds broiler farms sell their finished birds to the wholesalers who normally operate at wholesale markets and decide the price structure. Most of them are also commission agents and supply the product to poultry shops.

4.1.2 Wholesalers and Commission Agents

Wholesalers majority of whom are also commission agents operate at wholesale markets where they have holding and weighing facilities. Since the product is in living form, its detention at wholesale level cannot be afforded and therefore marketing process is accomplished upto noon

4.1.3 Poultry Shops

Poultry shops are almost scattered throughout the cities, towns and even villages for retail selling of birds to their customers in any quantity and number. The consumers mostly take the bird in dressed form for consumption. Though marketing is normally carried out on live weight basis at predetermined prices, poultry meat is also sold on weight basis.

The Poultry shop owners maintain poultry cages with facilities of feeding and watering for the stock being maintained and left overs.

4.1.4 Consumers

Non-graded meat is sold by the poultry shops where poor hygienic conditions do exist. The Government regulates consumer prices of essential commodities, one of which is meat, but does not guarantee minimum meat quality standards.

4.1.5 Mode of Transportation

Whilst there is a potential to cause considerable stress to breeders during catching and transport, their high value tends to ensure the breeding companies take great care to plan and control the movement of birds from rearing to laying accommodation. By contrast, this incentive is less with birds at the end-of-lay and particular attention should be paid to ensure that no reduction in standards is allowed.

5 BASIC REQUIREMENTS

5.1 Farm Production System:

Two options are available for running a breeder farm depending on its nature of investment vis-a vis merits:

5.1.1 Environment Control Housing (ECH);

Hot and humid weather conditions coupled with manual and poor management practices increases the mortality in flocks, depresses their growth and makes poultry production an unmanageable and uneconomical pursuit. Environment controlled houses can overcome this critical situation, which counteracts the adverse effects of heat stress providing tunnel ventilation and enhancing the wind chill effect. These houses when equipped with highly mechanized system of automatic chain feeding and nipple drinking makes the environment quite conducive for poultry production.

Though this industry is a source of food and employment for million of people, but is facing a major impediments in its progress in the form of heat stress. Pakistan is a tropical country and during summer the temperature reaches up to 45C. Even the average temperature remains well beyond the higher side of thermo neutral zone for the greater part of the year.

The modern trend of environment control houses (ECH) in poultry production has brought a great revolution in poultry industry of Pakistan in the recent years. This has solved a great hurdle of heat stress in the way of economical commercial poultry production.

The ECH with evaporative cooling system, providing tunnel ventilation, giving the wind chill effect has markedly improved the poultry production system. The technology of ECH is rapidly becoming popular among poultry producers due to its following significant advantages:

1. The ECH brings down the temperature by 10 to 15C as compared to the conventional open-sided houses (COH) and makes it comfortable like colder regions;
2. ECH maintains the uniform temperature round the clock providing very conducive environment to the poultry birds avoiding fluctuation in the day and night temperature;
3. ECH being complete closed system has minimized the incidence of diseases, cutting down the cost of vaccine and medication;
4. Mortality in ECH has been decreased to 2%-3% as compared to 8%-10% in COH;
5. Installation of highly mechanized automatic feeding and nipple drinking system in ECH hs provided the solution of manual and poor management practices. One houseman (labour) at daytime and one at night time are sufficient to look after a flock of sizeable number;
6. Equal distribution of feed and water to poultry birds through automatic system in ECH has markedly improved the uniformity up to 95% as compared to 75% in COH;

This is however quite a capital intensive system.

5.1.2 Conventional Open-Side House (COH)

COH system with all its demerits is far cheaper as compared to ECH which is quite capital intensive. The COH system can therefore attract and encourage even the smallest investors to undertake the venture, helping in augmenting the supply of day-old chick of parent line and thus help in broiler production.

Machinery and Equipment Requirement (COH)

	Item	Unit	Cost Per Unit	Total Cost
1	Electric Brooders	12	600	7,200
2	Drum Heaters	3	1,200	3,600
3	Drinkers Small	60	50	3,000
4	Feeders small	150	50	7,500
5	Feeders large	200	140	28,000
6	Chick Guards	40	100	4,000
7	Automatic Drinkers	70	250	17,500
8	Nests and Perches			435,000
11	Misc.			20,000
	Total			**525,800**

Office Equipment and Furniture

	Item	Cost Rupees
1	Office Equipment	22,500
2	Furniture	40,000
	Total	**62,500**

6 HUMAN RESOURCE REQUIREMENT

Semi skilled workers are needed to look after the feeding, vaccination and cleaning operations at the farm. The personal needed for the farm is as under:

Description	No.	Monthly Salary Per Person	Total Monthly Salary
Supervisor	1	7,000	7000
Housemen	2	4,500	9000

7 LAND AND BUILDING REQUIREMENT

BUILDINGS

Space Requirement	Required Area (Sq.Ft)
Shed Space @ 2.5 Sq.ft/bird	12,500
Store rooms for feed and equipment,	600
Office and Labour : 2 rooms of 14x16 sq.ft. each	448
Pavement etc:	1,452
Total Project Space Requirement	15,000

7.1 Recommended Mode

It is recommended that the proposed project should be started on a rented shed. This option will help the investor to save on the capital cost required for constructing new sheds. Normally, such sheds of various sizes located along the roadsides around the cities are available.

Generally, the rate prevailing in the market is around Rs. 1.50 to Rs. 2 per square feet. Mostly such sheds are equipped with routine utensils.

8 PROJECT ECONOMICS CONVENTIONAL OPEN SIDED HOUSING (COH) SYSTEM

8.1 Project Cost

Description	Amount in (Rs.)
Total Capital Costs	**1,444,300**
Total Working Capital	**952,992**
Total Investment	**2,397,292**

8.2 Project Returns

Description	Equity	Project
IRR	44 %	30 %
MIRR	24 %	16 %
Payback Period (yrs)	3.06	3.37
Net Present Value (NPV)	5,024,804	2,945,602

Note: Income would start in 28th week of the start of the Farm as the production of day old chicks would start at this age.

8.3 Project Financing

Description	Percentage	Amount in Rs
Debt Financing	0	0
Equity Financing	100%	2,397,292
Total		**2,397,292**

9 FINANCIAL ANALYSIS

9.1 Project Cost

Capital Investment	Rs. in actuals
Land	-
Building/Infrastructure	-
Machinery & equipment	525,800
Parent Stock	840,000
Office vehicles	-
Office equipment	62,500
Pre-operating costs	16,000
Training costs	-
Total Capital Costs	**1,444,300**

Working Capital	Rs. in actuals
Equipment spare part inventory	-
Raw material inventory	232,992
Upfront land lease rental	-
Upfront building rent	270,000
Upfront insurance payment	-
Cash	450,000
Total Working Capital	**952,992**

Total Investment	**2,397,292**

Initial Financing	Rs. in actuals
Debt	-
Equity	2,397,292
Lease	-
Export re-finance facility	-

9.2 Projected 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	6,900,000	8,230,440	13,505,240	16,126,466	9,044,492	10,788,428	17,702,615	21,138,507	11,855,485	14,141,428
Cost of goods sold	7,297,750	7,808,593	9,718,770	9,328,090	9,565,862	10,235,472	12,739,325	12,227,223	12,538,893	13,416,616
Gross Profit	(397,750)	421,848	3,786,471	6,798,376	(521,369)	552,956	4,963,290	8,911,284	(683,409)	724,813
General administration & selling expenses										
Administration expense	92,400	98,868	105,789	113,194	121,118	129,596	138,667	148,374	158,760	169,874
Rental expense	270,000	297,000	326,700	359,370	395,307	434,838	478,321	526,154	578,769	636,646
Utilities expense	6,000	6,300	6,615	6,946	7,293	7,658	8,041	8,443	8,865	9,308
Travelling & Comm. expense (phone, fax, etc.)	10,080	10,786	11,541	12,348	13,213	14,138	15,127	16,186	17,319	18,532
Office expenses (stationary, etc.)	21,000	22,470	24,043	25,726	27,527	29,454	31,515	33,721	36,082	38,608
Promotional expense	37,950	45,267	74,279	88,696	49,745	59,336	97,364	116,262	65,205	77,778
Professional fees (Visiting Veterinary etc.)	48,300	57,613	94,537	112,885	63,311	75,519	123,918	147,970	82,988	98,990
Depreciation expense	108,285	108,285	108,285	108,285	108,285	137,339	137,339	137,339	137,339	137,339
Amortization expense	3,200	3,200	3,200	3,200	3,200	-	-	-	-	-
Miscellaneous expense	34,500	41,152	67,526	80,632	45,222	53,942	88,513	105,693	59,277	70,707
Subtotal	631,715	690,941	822,514	911,282	834,221	941,819	1,118,807	1,240,141	1,144,605	1,257,781
Operating Income	(1,029,465)	(269,094)	2,963,957	5,887,094	(1,355,590)	(388,863)	3,844,484	7,671,144	(1,828,014)	(532,968)
Other income	13,950	-	42,203	173,004	235,318	211,185	283,108	472,122	572,830	578,343
Gain / (loss) on sale of assets	-	-	-	-	210,320	-	-	-	-	-
Earnings Before Interest & Taxes	(1,015,515)	(269,094)	3,006,160	6,060,098	(909,952)	(177,678)	4,127,592	8,143,265	(1,255,184)	45,375
Interest expense	18,238	61,532	43,294	-	-	-	-	-	-	-
Earnings Before Tax	(1,033,753)	(330,626)	2,962,865	6,060,098	(909,952)	(177,678)	4,127,592	8,143,265	(1,255,184)	45,375
Tax	-	-	351,667	1,333,222	-	-	668,792	1,791,518	-	-
NET PROFIT/(LOSS) AFTER TAX	(1,033,753)	(330,626)	2,611,198	4,726,877	(909,952)	(177,678)	3,458,800	6,351,747	(1,255,184)	45,375
Balance brought forward		(1,033,753)	(1,364,379)	1,246,820	5,973,696	5,063,744	4,886,066	8,344,866	14,696,613	13,441,429
Total profit available for appropriation	(1,033,753)	(1,364,379)	1,246,820	5,973,696	5,063,744	4,886,066	8,344,866	14,696,613	13,441,429	13,486,804
Balance carried forward	(1,033,753)	(1,364,379)	1,246,820	5,973,696	5,063,744	4,886,066	8,344,866	14,696,613	13,441,429	13,486,804

9.3 Projected 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
Assets											
Current assets											
Cash & Bank	697,500	-	-	2,110,162	6,540,050	5,225,833	5,333,401	8,822,005	14,784,070	13,857,425	15,059,729
Accounts receivable	-	567,123	621,799	893,247	1,217,741	1,034,423	815,052	1,170,865	1,596,211	1,355,917	1,068,366
Raw material inventory	232,992	261,766	344,206	345,388	371,221	417,067	548,416	550,300	591,459	664,505	-
Pre-paid building rent	22,500	24,750	27,225	29,948	32,942	36,236	39,860	43,846	48,231	53,054	-
Total Current Assets	952,992	853,639	993,230	3,378,745	8,161,955	6,713,559	6,736,729	10,587,016	17,019,971	15,930,901	16,128,095
Fixed assets											
Land	-	-	-	-	-	-	-	-	-	-	-
Building/Infrastructure	-	-	-	-	-	-	-	-	-	-	-
Machinery & equipment	525,800	420,640	315,480	210,320	105,160	671,069	536,855	402,641	268,428	134,214	-
l Parent Stock	840,000	840,000	840,000	840,000	840,000	840,000	840,000	840,000	840,000	840,000	840,000
Office equipment	62,500	59,375	56,250	53,125	50,000	46,875	43,750	40,625	37,500	34,375	31,250
Total Fixed Assets	1,428,300	1,320,015	1,211,730	1,103,445	995,160	1,557,944	1,420,605	1,283,266	1,145,928	1,008,589	871,250
Intangible assets											
Pre-operation costs	16,000	12,800	9,600	6,400	3,200	-	-	-	-	-	-
Total Intangible Assets	16,000	12,800	9,600	6,400	3,200	-	-	-	-	-	-
TOTAL ASSETS	2,397,292	2,186,454	2,214,560	4,488,590	9,160,315	8,271,503	8,157,334	11,870,282	18,165,899	16,939,490	16,999,345
Liabilities & Shareholders' Equity											
Current liabilities											
Accounts payable	-	596,015	643,006	798,208	766,192	787,332	850,841	1,054,307	1,012,940	1,041,715	1,056,195
Short term debt	-	226,900	538,641	-	-	-	-	-	-	-	-
Total Current Liabilities	-	822,915	1,181,646	798,208	766,192	787,332	850,841	1,054,307	1,012,940	1,041,715	1,056,195
Other liabilities											
Deferred tax	-	-	-	46,270	23,135	23,135	23,135	73,818	59,054	59,054	59,054
Total Long Term Liabilities	-	-	-	46,270	23,135	23,135	23,135	73,818	59,054	59,054	59,054
Shareholders' equity											
Paid-up capital	2,397,292	2,397,292	2,397,292	2,397,292	2,397,292	2,397,292	2,397,292	2,397,292	2,397,292	2,397,292	2,397,292
Retained earnings	-	(1,033,753)	(1,364,379)	1,246,820	5,973,696	5,063,744	4,886,066	8,344,866	14,696,613	13,441,429	13,486,804
Total Equity	2,397,292	1,363,539	1,032,913	3,644,111	8,370,988	7,461,036	7,283,358	10,742,158	17,093,905	15,838,721	15,884,096
TOTAL CAPITAL AND LIABILITII	2,397,292	2,186,454	2,214,560	4,488,590	9,160,315	8,271,503	8,157,334	11,870,282	18,165,899	16,939,490	16,999,345
Note: Total assets value will differ from project cost due to first installment of leases paid at the start of year 0	-	-	-	-	-	-	(0)	0	(0)	0	(0)

9.4 Projected Cash Flow Statement

	-	-	-	-	-	-	(0)	0	(0)	0	(0)

Statement Summaries **SMEDA**

Cash Flow Statement

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
Operating activities											
Net profit	-	(1,033,753)	(330,626)	2,611,198	4,726,877	(909,952)	(177,678)	3,458,800	6,351,747	(1,255,184)	45,375
Add: depreciation expense	-	108,285	108,285	108,285	108,285	108,285	137,339	137,339	137,339	137,339	137,339
amortization expense	-	3,200	3,200	3,200	3,200	3,200	-	-	-	-	-
Deferred income tax	-	-	-	46,270	(23,135)	-	-	50,682	(14,764)	-	-
Accounts receivable	-	(567,123)	(54,676)	(271,448)	(324,494)	183,318	219,371	(355,813)	(425,346)	240,293	287,551
Raw material inventory	(232,992)	(28,774)	(82,440)	(1,182)	(25,833)	(45,846)	(131,349)	(1,884)	(41,159)	(73,045)	664,505
Pre-paid building rent	(22,500)	(2,250)	(2,475)	(2,723)	(2,995)	(3,294)	(3,624)	(3,986)	(4,385)	(4,823)	53,054
Accounts payable	-	596,015	46,991	155,202	(32,016)	21,140	63,509	203,466	(41,367)	28,775	14,480
Other liabilities	-	-	-	-	-	-	-	-	-	-	-
Cash provided by operations	(255,492)	(924,400)	(311,740)	2,648,802	4,429,888	(643,149)	107,569	3,488,604	5,962,065	(926,645)	1,202,304
Financing activities											
Change in long term debt	-	-	-	-	-	-	-	-	-	-	-
Change in short term debt	-	226,900	311,740	(538,641)	-	-	-	-	-	-	-
Issuance of shares	2,397,292	-	-	-	-	-	-	-	-	-	-
Cash provided by / (used for) financing a	2,397,292	226,900	311,740	(538,641)	-	-	-	-	-	-	-
Investing activities											
Capital expenditure	(1,444,300)	-	-	-	-	(671,069)	-	-	-	-	-
Cash (used for) / provided by investing a	(1,444,300)	-	-	-	-	(671,069)	-	-	-	-	-
NET CASH	697,500	(697,500)	-	2,110,162	4,429,888	(1,314,218)	107,569	3,488,604	5,962,065	(926,645)	1,202,304
Cash balance brought forward		697,500	-	-	2,110,162	6,540,050	5,225,833	5,333,401	8,822,005	14,784,070	13,857,425
Cash available for appropriation	697,500	-	-	2,110,162	6,540,050	5,225,833	5,333,401	8,822,005	14,784,070	13,857,425	15,059,729
Cash carried forward	697,500	-	-	2,110,162	6,540,050	5,225,833	5,333,401	8,822,005	14,784,070	13,857,425	15,059,729

10 KEY ASSUMPTIONS

10.1 Production Related Assumptions

- Parent stock after completion of its production cycle will be sold in market for meat purpose.
- Hens will be reared for 7 months after which their production period of 9 months will start.
- Mortality Rate 4 %
- The project will initiate with a flock size of 5000 birds. Over the year the size of the flock will decrease gradually to 4800 due to mortality.
- Housing: 2.5 sq ft per female, 12500 covered area.

Rearing Period:

- 5000 female + 12- 15% Male.
- Rearing period Running cost 0 to 28 weeks of age (7 months).
- Litter (Rice husk/saw dust: 2 trucks @ Rs: 10,000 each;

Production Period:

- Production Period 9 months.
- Litter: 3 trucks @ Rs: 10,000 each
- Production Capacity 4800 birds x135 chicks/bird in one production cycle =648,000 chicks
- Hatching through hired hatchery

10.2 Costs Assumptions

Costs Assumptions	Price Rs.
Day Old Chick of Breeder Line	150
Average Cost of Feed / Bird / Month (During Rearing Period) .	55
Average Cost of Feed / Bird / Month (During Production Period)	110
Cost of vaccine / Bird/ Cycle	100
Litter 12 Months	37,500
Hatching Packing and Sale Cost / chick	2

10.3 Revenue Assumptions

Revenue Assumptions	Price Rs.
Day Old Chick DoC sold (135 chicks/ Bird)	19
4800 Birds Sold after completion of Production Cycle	55 / Kg
Litter and feed bags sold	60,000/ year

10.4 Financing Assumptions

Debt	**0%**
Equity	100%
Tax rate	22%
Required rate of return on equity	16%
WACC	16%

Due to the cyclical nature of the revenue stream it is recommended the project is initiated at 100% equity base. However the project will require short term financing in second and third year.

10.5 Depreciation Rates

Office Equipment	5%
Machinery and Equipment	20%

10.6 Cash Flow Assumptions

Accounts Receivables Cycle (In Days)	30
Accounts Payable Cycle (In Days)	30
Cash on Hand	Rs.450,000

10.7 Economy Related Assumptions

Inflation rate	10%
Electricity growth rate	7%
Water price growth rate	7%
Gas price growth rate	7%
Wage growth rate	7%
Office equipment price growth rate	5%