
Pre-Feasibility Study

OSTRICH FARMING



Small and Medium Enterprises Development Authority

Ministry of Industries & Production
Government of Pakistan

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1 DISCLAIMER

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2 EXECUTIVE SUMMARY

Ostrich Farming is a project of the livestock sector, particularly to cater to health conscious meat consumers. Demand for Ostrich meat has started rising in Pakistan in recent years due to zero percent fat, low cholesterol, richness of iron & protein and good taste. Few famous restaurants are offering Ostrich dishes, which has great demand from regular customers. Besides Ostrich meat, all other items like ostrich feathers, hide, fat, nails and eggs have a great demand in local and foreign market.

This pre-feasibility is about setting up an Ostrich Farm for commercial purpose of ostrich breeding, fattening and slaughtering with a maximum installed capacity of 4,289 live birds. It is suggested to start the farm with a flock of 45 proven breeders (30 female and 15 male) birds of 3-year age in order to decrease project cost. The proposed business venture should be located in suburbs of metropolitan cities like Lahore, Islamabad, Karachi etc., as the target market of the final product of Ostrich Farm (Ostrich meat & Ostrich chicks) is generally from metropolitan cities or in surroundings of metropolitan cities (Ostrich farms). Ostrich breeding management according to best husbandry practices is the key success factor for this business.

The estimated total cost of the proposed ostrich farm is Rs. 39.60 million out of which Rs. 37.69 million is the capital cost and Rs. 1.92 million is for working capital. The project is to be financed through 50% debt and 50% equity. The project NPV is around Rs. 60.67 million, with an IRR of 34% and Payback Period of 4.95 years. The project will provide employment opportunities to 13 people when it reaches to its maximum capacity, however initially 3 persons are enough to handle the net flock of 181 birds. The legal business status of this project is proposed as '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 **Ostrich Farming** 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

Ostrich is an African origin bird with a large flightless hard body structure. It belongs to running bird family with a very hard and tough physique. It can survive in temperatures ranging from 2 degrees to 50 degrees Celsius and can be reared on barren land. It mainly consumes only green fodder and water. Ostrich farming has been started since last 150 years in South Africa, initially for its feathers, then for its hide and now for its meat also. Ostrich farming has now become an international industry with great demand for ostrich meat due to its hygiene.

Health consciousness in the modern world has led to diversified food habits. The tendency of consuming low caloric foods has resulted in an increased demand for

ostrich meat and it ranks highest among health foods in Europe. The recognition of ostrich meat in terms of health value is attributed to “zero” percentage fat, low cholesterol and calories, rich in protein and iron. Besides this ostrich meat has a great taste which now has big demand.

Other than meat, ostrich produces high premium feathers, which are mostly used in fashion industry as a raw material for accessories, show business, brush industry and automobile industry. Furthermore, ostrich produces high quality Oil, Luxury Leather and other by- products.

This pre-feasibility study is about setting up an Ostrich Breeding Farm which will offer live ostrich birds for fattening and further breeding purposes to different ostrich farms, ostrich eggs (for hatching, food and shells for painting) and ostrich meat to restaurant industry along with household through super markets.

It is suggested to initiate this project in surrounding rural areas of Metropolitan cities of Pakistan like Lahore, Karachi and Islamabad as most of the target customers / farms are located near these cities. It will help the businessmen to deliver ostrich meat and other by-products on time and in good hygienic condition from a nearby area.

5.1 Ostrich Bird Identifications and Breeding Specifications

There are certain parameters, which need to be carefully observed for identification and breeding of ostrich birds, mainly as follows:

Table 1: General Identification for Birds¹

Description	Male	Female
Color	Black	Grey
Height	8 - 9 Feet	7 – 8 Feet
Weight	150 Kg	130 Kg
Speed	70 Km/hr.	70 Km/hr.

Table 2: Breeding Specification²

Description	Female
Social Life	1 Male for 2 to 3 Females
Duration of Life	70 Years

¹ Source: Pakistan Ostrich Company.

² Source: Pakistan Ostrich Company.

Breeding Life	30 - 40 Years
Puberty	Female 18 Months to 2 years, Male 2 to 2.5 years
Laying	60 Eggs Average per hen per breeding year
Eggs per year	60+ Consistently
Egg Weight	1.5 – 2.0 Kg
Fertility	>95%
Hatchability	>95%
Survival	>95%
Mortality	Negligible after 3 Months
Food	Balanced grain Ration and Fresh Fodder
Growth	Minimum 1 Foot per Month during 1 st six months
Feed/Live Weight Conversion-9 Months	<3.5:1
Feed/Live Weight Conversion-12 Months	<4:1
Slaughtering Age	10 – 12 Months
Meat Output	Net Carcass is 75% of live weight and 35 – 40 kg pure Red Meat.
Meat Yield – 9 Months	>50 %
Meat Yield – 12 Months	>65 Kgs
Skin Out Put	14 Sq Feet

5.2 Installed And Operational Capacities

In this pre-feasibility study, it is proposed to start the business operations with 45 birds in order to make the project cost effective. However, with passage of time capacity of birds can be increased and in the year 10, the farm will be having 1,115 net birds.

6 CRITICAL FACTORS

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

- ⇒ Technical know-how, relevant expertise and experience of entrepreneur.
- ⇒ Selection of high quality ostrich breeding birds.
- ⇒ Selection of appropriate farm tools and equipment.
- ⇒ The farm supervisor should ensure timely feeding, watering, lighting, vaccination, medication, temperature / humidity control and culling of ostrich birds as per best husbandry practices.
- ⇒ Time management is very important in Ostrich Farming business. Delay in eggs hatching can result in high cost and delay in meat delivery can cost in thousands, as the product is perishable.
- ⇒ Sanitation and disinfection program should be strictly followed and regularly monitored.
- ⇒ Birds should be given enough space according to their age as less space could arise different complexities.
- ⇒ Feed should not be stored for a long time as it would lose its nutrition and there is a chance that feed would get fungal and can prove to be poisonous.
- ⇒ The entrepreneur should be well aware of the supply and demand of ostrich meat and other by-products in the market.
- ⇒ Higher return on investment and a steady growth of business is closely associated with regular training and capacity building of the entrepreneur and employees.

7 GEOGRAPHICAL POTENTIAL FOR INVESTMENT

Adjoining rural areas of metropolitan cities of Pakistan, for instance Lahore, Karachi, Islamabad, Faisalabad, Gujranwala, Rawalpindi and Multan are most suitable geographical areas for investment in ostrich farming, as most of the ostrich farms are located in these areas.

Since, this pre-feasibility suggests to provide live birds of up to 2 months and ostrich eggs (for hatching) to ostrich farms and ostrich meat to restaurants and house hold consumers through super markets, therefore, it is very important to

initiate this business in neighboring rural areas of suggested cities where entrepreneur can find the target market easily in order to sell the product.

8 POTENTIAL TARGET CUSTOMERS / MARKETS

Ostrich meat is a good source of protein and iron as compared to broiler or other meats. The proposed Ostrich Farm will mainly offer 2 months old ostrich chicks, ostrich eggs (for breeding, food and painting) and ostrich meat. Therefore, major target markets for the proposed project are local buyers, who generally trade for these products. Sale of ostrich bird is mostly made through personal contracts on farm gate basis or supplies to bulk / retailers in urban areas.

Major clients for meat are Super Stores, Meat Markets, Restaurants and Hotels (including various 3 to 5 Star Hotel Chains) across the country.

9 PROJECT COST SUMMARY

A detailed financial model has been developed to analyze the commercial viability of Ostrich 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. 11.93 Million in the year one. As stated earlier, farm will start its operations with 45 birds in year one. Flock size will increase with the passage of time through breeding. Net capacity of farm is estimated at 1,115 birds in year 10 out of which 155 birds are breeders (105 Female + 50 Male).

The following table shows internal rate of return, payback period and net present value of the proposed venture.

Table 3: Project Economics

Description	Details
Internal Rate of Return (IRR)	34%
Payback Period (Yrs.)	4.95
Net Present Value (Rs.)	60,667,613

9.2 Project Financing

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

Table 4: Project Financing

Description	Details
Total Equity (50%)	Rs. 19,801,537
Bank Loan (50%)	Rs. 19,801,537
Markup to the Borrower (%age / annum)	14%
Tenure of the Loan (Years)	10 Years

9.3 Project Cost

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

Table 5: Project Cost

Description	Amount Rs.
Capital Cost	
Land	8,400,000
Building Infrastructure*	19,602,298
Machinery and Equipment*	1,965,500
Ostrich Birds	6,750,000
Furniture and Fixtures	105,000
Office Equipment	72,000
Pre Operating Cost	790,526
Total Capital Cost	37,685,325
Working Capital	
Raw Material Inventory**	1,364,625
Cash	553,125
Total Working Capital	1,917,750
Total Project Cost	39,603,075

* Cost is projected for initial 4 years

** Raw Material Inventory is calculated for 3 months

9.4 Space Requirement

Approximately, 7 acres of land would be required for setting up the proposed Ostrich Farm. As this business is land intensive, therefore, it is suggested to purchase the required land instead of rental or leased land. However, in order to avoid the initial high capital costs, the long-term lease contract for land acquisition may be considered. But entrepreneur can be more risk free on purchased land because of making heavy investment on shed and boundary wall as well as future business expansion.

The cost of land is estimated at Rs. 1.20 million per acre; hence total cost of required land is Rs. 8.40 million.

The infrastructural requirements of the project mainly comprise of the construction of Management Office, Hatchery Room, Storage, Open Space and other facilities. Details of space requirement and cost of construction of building and infrastructure for the proposed farm is provided in the table below:

Table 6: Space Requirement

Description	Estimated Area (Sq ft)	Unit Cost (Rs.)	Total Cost (Rs.)*
Management Office	300	1,500	450,000
Hatchery Room	600	2,000	1,200,800
Shed – Ostrich Up to 3 Months	7,104	1,200	8,524,800
Open Space – Ostrich up to 3 Months	23,680	50	1,184,000
Space for Breeders	36,667	50	1,833,333
Space for Ostrich over 3 Months but less than 2 years	38,188	50	1,909,387
Store	1,460	1,500	2,189,250
Servant Room / Wash Room	487	1,500	729,750
Boundary Wall	1,317	1,200	1,580,978
Total			19,602,298

* Difference is due to rounding off.

Decisions made about setting up an Ostrich Farming Unit need to be well thought out, right from the selection of the site to the final stages when the birds are sold. The farm should be located at a place where transportation of birds and feed can be easily handled.

The entrepreneur should make sure that the following things are available at the farm site before setting up the farm:

- i. Electricity Connection
- ii. Clean Water Supply

9.5 Machinery & Equipment Requirement

Various types of farm equipment are needed for feeding, drinking, handling of the birds and for egg hatching process. List of farm machinery and equipment required for the proposed project are stated below:

Table 7: Machinery & Equipment Requirement

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Fodder Cart New Born	24	1,000	24,000
Fodder Cart for Birds	31	1,000	31,000
Maize Cutter	2	60,000	120,000
Water Pump with water Tank	1	60,000	60,000
Incubator with Hatcher	3	350,000	1,050,000
Drinking Trays	101	500	50,500
Generator	3	50,000	150,000
Electrical Fixtures	8	40,000	320,000
Misc. Farm Utensils	16	10,000	160,000
Total			1,965,500

9.6 Furniture & Fixture Requirement

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

Table 8: Furniture & Fixture Requirement

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Furniture Set	1	50,000	50,000
Air Conditioners (1.5 Ton Split)	1	55,000	55,000
Total			105,000

9.7 Office Equipment Requirement

Following office equipment will be required for Ostrich Farm:

Table 9: Office Equipment Requirement

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Laptop	1	50,000	50,000
Printer	1	20,000	20,000
Telephone Sets	2	1,000	2,000
Total			72,000

9.8 Raw Material Requirement

Following table shows raw material requirement to raise 45 birds. The mortality loss is assumed to be 05% for new born birds and 02% for over 1 year birds.

Table 10: Raw Material Requirement

Description	No	Unit Rate (Rs.) / Bird / Year	Cost in 1 st Year (Rs.)
Feed Cost for Breeders	45	48,000	2,160,000
Feed Cost for Birds reared for slaughtering purpose	138	15,000	2,070,000
Feed Cost for Sale of Birds (2 months Chicks)	742	1,000	742,000
Vaccination. Medication and Disinfection	973	500	486,500
Total			5,458,500

9.9 Human Resource Requirement

In order to run operations of Ostrich Farm smoothly, details of human resources required in first year of operation along with monthly salary are recommended as under:

Table 11: Human Resource Requirement (Year 1)

Description	No. of Employees	Monthly Salary per person (Rs.)
Farm Manager	1	25,000

Helper at Farm	2	14,000
Total	3	636,000

Number of employees will increase with the number of Ostrich increases in coming years. It is suggested to hire one helper for 100 Ostriches.

9.10 Utilities and Other Costs

An essential cost to be borne by the project is the cost of electricity which is estimated to be Rs. 228,000 in the first year of operations. The promotional expense being essential for marketing of 'Ostrich Farm' is estimated as 1% of total revenue i.e. Rs. 119,246. Furthermore, travelling expenses are assumed to be Rs. 60,000 per annum.

9.11 Revenue Generation

Based on the assumption of starting business with 45 birds, sales revenue during the first year of operations are estimated as under;

Table 12: Revenue Generation – Year 1

Description	No	Sale Price (Rs.)	Sales Revenue (Rs.)
Live Bird Sales (upto 2 months)	742	15,000	11,130,000
Eggs Sold	290	2,500	725,000
Eggs Sold (Non Hatch able / Shells)	232	300	69,600
Total			11,924,600

10 CONTACT DETAILS

In order to facilitate potential investors, contact details of consultants and experts relevant to the proposed project are provided below:

Name of Supplier / Company	Address	Phone	Website
Raja Tahir Latif, Pakistan Ostrich Company	431 – Al Mashriq Centre, Stadium Road, Karachi	+92 21 413 4931, +92 321 920 3319	www.pakostrich.com

11 USEFUL WEB LINKS

Small & Medium Enterprises Development Authority (SMEDA)	www.smeda.org.pk
Government of Pakistan	www.pakistan.gov.pk
Ministry of Industries & Production	www.moip.gov.pk
Government of Punjab	www.punjab.gov.pk
Government of Sindh	www.sindh.gov.pk
Government of Khyber Pakhtunkhwa	www.khyberpakhtunkhwa.gov.pk
Government of Baluchistan	www.balochistan.gov.pk
Government of Gilgit Baltistan	www.gilgitbaltistan.gov.pk
Government of Azad Jammu Kashmir	www.ajk.gov.pk
Trade Development Authority of Pakistan (TDAP)	www.tdap.gov.pk
Security Commission of Pakistan (SECP)	www.secp.gov.pk
Federation of Pakistan Chambers of Commerce and Industry (FPCCI)	www.fpcci.com.pk
State Bank of Pakistan (SBP)	www.sbp.org.pk
Punjab Small Industries Corporation	www.psic.gop.pk
Sindh Small Industries Corporation	www.ssic.gos.pk
Punjab Vocational Training Council (PVTC)	www.pvtc.gop.pk
Technical Education and Vocational Training Authority (TEVTA)	www.tevta.org
Livestock & Dairy Development Department, Government of Punjab.	www.livestockpunjab.gov.pk
Punjab Industrial Estates (PIE)	www.pie.com.pk
Faisalabad Industrial Estate Development and Management Company (FIEDMC)	www.fiedmc.com.pk
Punjab Agriculture and Meat Company.	http://www.pamco.bz/
Punjab Livestock & Dairy Development Board	http://www.plddb.pk/
University of Agriculture Faisalabad	www.uaf.edu.pk
University of Veterinary & Animal Sciences, Lahore	http://www.uvas.edu.pk/

12 ANNEXURE

12.1 Income Statement

Calculations										
Income Statement										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Revenue	11,924,600	12,657,920	31,370,702	39,279,673	47,234,501	64,246,465	85,453,725	109,252,096	143,910,263	190,384,941
<i>Cost of sales</i>										
Feed, Vaccination, Medication and other Cost	5,458,500	7,210,730	8,245,684	10,819,457	14,367,242	18,055,609	22,852,371	29,197,282	37,288,248	47,896,826
Operation costs 1 (direct labor)	336,000	739,200	813,120	894,432	1,229,844	1,623,394	2,083,356	2,619,076	3,601,229	4,753,623
Operating costs 3 (direct electricity)	144,000	158,400	174,240	191,664	210,830	231,913	255,105	280,615	308,677	339,544
Operating costs 4 (direct water)	13,500	321,090	380,424	469,178	659,284	875,956	1,117,678	1,465,046	1,919,584	2,519,703
Total cost of sales	5,952,000	8,429,420	9,613,468	12,374,731	16,467,200	20,786,873	26,308,510	33,562,019	43,117,738	55,509,696
Gross Profit	5,972,600	4,228,500	21,757,234	26,904,943	30,767,301	43,459,592	59,145,215	75,690,077	100,792,525	134,875,245
<i>General administration & selling expenses</i>										
Administration expense	300,000	330,000	363,000	399,300	439,230	483,153	531,468	584,615	643,077	707,384
Administration benefits expense	30,000	33,000	36,300	39,930	43,923	48,315	53,147	58,462	64,308	70,738
Electricity expense	84,000	92,400	101,640	111,804	122,984	135,283	148,811	163,692	180,061	198,068
Travelling expense	60,000	66,000	72,600	79,860	87,846	96,631	106,294	116,923	128,615	141,477
Communications expense (phone, fax, mail, internet, etc.)	45,000	49,500	54,450	59,895	65,885	72,473	79,720	87,692	96,461	106,108
Office expenses (stationary, entertainment, janitorial services, etc.)	30,000	33,000	36,300	39,930	43,923	48,315	53,147	58,462	64,308	70,738
Promotional expense	119,246	126,579	313,707	392,797	472,345	642,465	854,537	1,092,521	1,439,103	1,903,849
Consultant Fee	59,623	63,290	156,854	196,398	236,173	321,232	427,269	546,260	719,551	951,925
Depreciation expense	1,201,565	1,201,565	1,201,565	1,201,565	2,135,130	2,143,921	2,143,921	2,143,921	2,976,509	2,976,509
Amortization of pre-operating costs	158,105	158,105	158,105	158,105	158,105	-	-	-	-	-
Subtotal	2,087,539	2,153,439	2,494,521	2,679,584	3,805,543	3,991,788	4,398,314	4,852,548	6,311,993	7,126,796
Operating Income	3,885,061	2,075,061	19,262,713	24,225,358	26,961,758	39,467,804	54,746,901	70,837,529	94,480,532	127,748,448
Gain / (loss) on sale of office equipment	-	-	-	-	28,800	-	-	-	-	-
Gain / (loss) on sale of office vehicles	-	-	-	-	-	-	-	-	-	-
Earnings Before Interest & Taxes	3,885,061	2,075,061	19,262,713	24,225,358	26,990,558	39,467,804	54,746,901	70,837,529	94,480,532	127,748,448
Interest expense on long term debt (Project Loan)	2,637,973	2,501,554	2,346,036	2,168,746	2,421,602	2,167,668	1,878,183	1,548,170	1,171,956	743,071
Interest expense on long term debt (Working Capital Loan)	125,335	104,068	79,626	51,533	19,245	-	-	-	-	-
Subtotal	2,763,307	2,605,622	2,425,662	2,220,279	2,440,846	2,167,668	1,878,183	1,548,170	1,171,956	743,071
Earnings Before Tax	1,121,753	(530,561)	16,837,051	22,005,079	24,549,711	37,300,136	52,868,719	69,289,359	93,308,576	127,005,377
Tax	90,763	-	5,115,467	6,924,277	7,814,898	12,277,547	17,726,551	23,473,775	31,880,501	43,674,381
NET PROFIT/(LOSS) AFTER TAX	1,030,991	(530,561)	11,721,584	15,080,802	16,734,813	25,022,589	35,142,168	45,815,584	61,428,075	83,330,996

12.2 Balance Sheet

Calculations											SMEDA
Balance Sheet											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Assets											
<i>Current assets</i>											
Cash & Bank	553,125	1,071,429	192,842	10,440,778	12,807,715	27,606,826	49,698,541	80,240,098	104,580,278	157,413,901	264,832,247
Accounts receivable		490,052	505,120	904,698	1,451,720	1,777,689	2,290,705	3,076,031	4,000,805	5,201,966	6,869,080
Finished goods inventory		258,783	351,583	400,959	516,114	686,784	866,922	1,097,182	1,399,658	1,797,361	2,312,904
Raw material inventory	1,364,625	1,982,951	2,494,319	3,600,174	5,258,770	7,269,685	10,121,092	14,224,311	19,982,668	28,234,553	-
Total Current Assets	1,917,750	3,803,215	3,543,865	15,346,609	20,034,319	37,340,983	62,977,261	98,637,622	129,963,409	192,647,781	274,014,231
<i>Fixed assets</i>											
Land	8,400,000	8,400,000	8,400,000	8,400,000	8,400,000	8,400,000	8,400,000	8,400,000	8,400,000	8,400,000	8,400,000
Building/Infrastructure	19,602,298	18,622,183	17,642,069	16,661,954	30,891,132	29,150,552	27,409,973	25,669,393	37,159,574	34,757,457	32,355,339
Machinery & equipment	1,965,500	1,768,950	1,572,400	1,375,850	2,910,300	2,540,650	2,171,000	1,801,350	3,142,200	2,601,500	2,060,800
Ostrich net Value	6,750,000	8,520,000	17,952,000	21,259,700	26,793,030	36,909,961	48,331,405	62,110,929	75,337,403	100,984,469	134,803,869
Furniture & fixtures	105,000	94,500	84,000	73,500	63,000	52,500	42,000	31,500	21,000	10,500	-
Office equipment	72,000	57,600	43,200	28,800	14,400	115,957	92,765	69,574	46,383	23,191	-
Total Fixed Assets	36,894,798	37,463,233	45,693,669	47,799,804	69,071,862	77,169,620	86,447,143	98,082,746	124,106,560	146,777,117	177,620,009
<i>Intangible assets</i>											
Pre-operation costs	790,526	632,421	474,316	316,211	158,105	-	-	-	-	-	-
Total Intangible Assets	790,526	632,421	474,316	316,211	158,105	-	-	-	-	-	-
TOTAL ASSETS	39,603,075	41,898,869	49,711,850	63,462,623	89,264,286	114,510,604	149,424,404	196,720,367	254,069,969	339,424,898	451,634,239
Liabilities & Shareholders' Equity											
<i>Current liabilities</i>											
Accounts payable		611,626	797,675	973,632	1,321,498	1,778,378	2,315,893	3,047,399	4,042,188	5,385,436	3,936,725
Total Current Liabilities	-	611,626	797,675	973,632	1,321,498	1,778,378	2,315,893	3,047,399	4,042,188	5,385,436	3,936,725
<i>Other liabilities</i>											
Long term debt (Project Loan)	18,842,662	17,868,242	16,757,402	15,491,045	17,297,155	15,483,341	13,415,592	11,058,359	8,371,113	5,307,653	1,815,309
Long term debt (Working Capital Loan)	958,875	816,474	652,805	464,695	248,492	-	-	-	-	-	-
Total Long Term Liabilities	19,801,537	18,684,715	17,410,207	15,955,740	17,545,647	15,483,341	13,415,592	11,058,359	8,371,113	5,307,653	1,815,309
<i>Shareholders' equity</i>											
Paid-up capital	19,801,537	19,801,537	19,801,537	19,801,537	23,051,295	23,051,295	23,051,295	23,051,295	23,051,295	23,051,295	23,051,295
Gain / Loss on Value of Birds		1,770,000	11,202,000	14,509,700	20,043,030	30,159,961	41,581,405	55,360,929	68,587,403	94,234,469	128,053,869
Retained earnings		1,030,991	500,430	12,222,014	27,302,816	44,037,629	69,060,218	104,202,386	150,017,970	211,446,045	294,777,041
Total Equity	19,801,537	22,602,528	31,503,967	46,533,251	70,397,141	97,248,885	133,692,918	182,614,610	241,656,668	328,731,809	445,882,205
TOTAL CAPITAL AND LIABILITIES	39,603,075	41,898,869	49,711,850	63,462,623	89,264,286	114,510,604	149,424,404	196,720,367	254,069,969	339,424,898	451,634,239

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		1,030,991	(530,561)	11,721,584	15,080,802	16,734,813	25,022,589	35,142,168	45,815,584	61,428,075	83,330,996
Add: depreciation expense		1,201,565	1,201,565	1,201,565	1,201,565	2,135,130	2,143,921	2,143,921	2,143,921	2,976,509	2,976,509
amortization of pre-operating costs		158,105	158,105	158,105	158,105	158,105	-	-	-	-	-
Accounts receivable		(490,052)	(15,068)	(399,577)	(547,022)	(325,968)	(513,016)	(785,327)	(924,773)	(1,201,162)	(1,667,113)
Finished goods inventory		(258,783)	(92,801)	(49,376)	(115,155)	(170,670)	(180,139)	(230,259)	(302,477)	(397,702)	(515,543)
Raw material inventory	(1,364,625)	(618,326)	(511,369)	(1,105,855)	(1,658,595)	(2,010,915)	(2,851,408)	(4,103,218)	(5,758,357)	(8,251,885)	28,234,553
Accounts payable		611,626	186,049	175,957	347,866	456,879	537,516	731,505	994,789	1,343,248	(1,448,710)
Cash provided by operations	(1,364,625)	1,635,126	395,921	11,702,403	14,467,566	16,977,374	24,159,463	32,898,790	41,968,687	55,897,083	110,910,691
<i>Financing activities</i>											
Project Loan - principal repayment		(974,421)	(1,110,840)	(1,266,357)	(1,443,647)	(1,813,814)	(2,067,748)	(2,357,233)	(2,687,246)	(3,063,460)	(3,492,345)
Working Capital Loan - principal repayment		(142,401)	(163,668)	(188,111)	(216,203)	(248,492)	-	-	-	-	-
Additions to Project Loan	18,842,662	-	-	-	3,249,758	-	-	-	-	-	-
Issuance of shares	19,801,537	-	-	-	3,249,758	-	-	-	-	-	-
Purchase of (treasury) shares											
Cash provided by / (used for) financing activities	39,603,075	(1,116,822)	(1,274,508)	(1,454,468)	4,839,665	(2,062,306)	(2,067,748)	(2,357,233)	(2,687,246)	(3,063,460)	(3,492,345)
<i>Investing activities</i>											
Capital expenditure	(37,685,325)	-	-	-	(16,940,293)	(115,957)	-	-	(14,941,261)	-	-
Acquisitions											
Cash (used for)/ provided by investing activities	(37,685,325)	-	-	-	(16,940,293)	(115,957)	-	-	(14,941,261)	-	-
NET CASH	553,125	518,304	(878,587)	10,247,935	2,366,938	14,799,111	22,091,715	30,541,557	24,340,181	52,833,623	107,418,346

13 KEY ASSUMPTIONS

13.1 Operating Cost Assumptions

Description	Details
Administration Benefit Expenses	10% of Administration Cost
Office Expenses (Stationery, Entertainment etc.)	10% of Administration expenses
Communication Expenses	15% of Administration Cost
Promotional Expenses	1% of Revenues
Professional Fee	0.5% of Revenue

13.2 Production Cost Assumptions

Description	Details
Breeder Cost per Bird	150,000
Cost of Goods sold Growth Rate	07% per year
Average Meat per Bird	42% of live Weight

13.3 Revenue Assumptions

Description	Details
Growth in Sales Price	10%
Boneless Meat	Rs. 1,400 per Kg
Hide Selling Price (After Processing)	Rs. 30,000 / Bird
Fat Selling Price	Rs. 2,000 per Liter
Live Bird Selling Price (up to 2 months)	Rs. 15,000
Fertile Eggs Selling Price	Rs. 2,500
Non-Fertile Eggs Selling Price	Rs. 300

13.4 Financial Assumptions

Description	Details
Debt	50%
Equity	50%

Interest Rate on Debt	14%
Debt Tenure	10 Years
Inflation Growth Rate	10%
Electricity Price Growth Rate	10%
Salaries Growth Rate	10%

13.5 Operational Assumptions

Description	Details
Laying per Female Bird	50 Eggs per Annum
Eggs Sold (Fertile / Hatchable)	20% of Laid Eggs
Eggs Sold (Non-Fertile)	16% of Laid Eggs
Hatchability	80% of Hatchable Eggs
Slaughtering Age	12 Months
Starting Flock Size Male	15
Starting Flock Size Female	30
Birds Selling Age	2 Months
Mortality Rate (0 to 12 Months)	5 %
Mortality Rate (12 + Months)	2 %
Fat Per Bird	12 Kg
Fat to Oil Conversion Ratio	50%

13.6 Breeding Schedule

Description	Increase			Decrease				Net Birds
	Birth	Transfer	Total	Mortality	Slaughtering	Sale of Birds	Total	
Year 0								
Female upto 3 Year		30	30				-	30
Female New born								
Male upto 3 Year		15	15				-	15
Male New born								
Total Flock Size		45	45	-	-	-	-	45
Year 1	Birth	Transfer	Total	Mortality	Slaughtering	Sale	Total	
Female upto 4 Year		30	30	1			1	29
Female upto 1 Year			-				-	-
Female New born	464		464	24		371	395	69
Male upto 4 Year		15	15	1			1	14
Male upto 1 Year			-				-	-
Male New born	464		464	24		371	395	69
Total Flock Size	928	45	973	50	-	742	792	181
Year 2	Birth	Transfer	Total	Mortality	Slaughtering	Sale	Total	
Female upto 5 Year		29	29	1			1	28
Female upto 2 Year		-	-		-		-	-
Female upto 1 Year		69	69				-	69
Female New born	448		448	23		358	381	67
Male upto 5 Year		14	14	1			1	13
Male upto 2 Year		-	-	-	-		-	-
Male upto 1 Year		69	69	2			2	67

Male New born	448		448	23		358	381	67
Total Flock Size	896	152	1,048	49	-	716	765	311
Year 3	Birth	Transfer	Total	Mortality	Slaughtering	Sale	Total	Net
Female upto 6 Year		28	28	1			1	27
Female upto 3 Year		-	-	-			-	-
Female upto 2 Year		69	69	2	55		57	12
Female upto 1 Year		67	67	2			2	65
Female New born	432		432	22		346	368	64
Male upto 6 Year		13	13	1			1	12
Male upto 3 Year		-	-	-			-	-
Male upto 2 Year		67	67	2	57		59	8
Male upto 1 Year		67	67	2			2	65
Male New born	432		432	22		346	368	64
Total Flock Size	864	311	1,175	54	112	692	858	317
Year 4	Birth	Transfer	Total	Mortality	Slaughtering	Sale	Total	Net
Female upto 7 Year		27	27	1			1	26
Female upto 4 Year		-	-	-			-	-
Female upto 3 Year		12	12	1			1	11
Female upto 2 Year		65	65	2	52		54	11
Female upto 1 Year		64	64	2			2	62
Female New born	592		592	30		474	504	88
Male upto 7 Year		12	12	1			1	11
Male upto 4 Year		-	-	-			-	-
Male upto 3 Year		8	8	1			1	7
Male upto 2 Year		65	65	2	56		58	7
Male upto 1 Year		64	64	2			2	62
Male New born	592		592	30		474	504	88

Total Flock Size	1,184	317	1,501	72	108	948	1,128	373
Year 5	Birth	Transfer	Total	Mortality	Slaughtering	Sale	Total	Net
Female upto 8 Year		26	26	1			1	25
Female upto 5 Year		-	-	-			-	-
Female upto 4 Year		11	11	1			1	10
Female upto 3 Year		11	11	1			1	10
Female upto 2 Year		62	62	2	50		52	10
Female upto 1 Year		88	88	2			2	86
Female New born	720		720	36		576	612	108
Male upto 8 Year		11	11	1			1	10
Male upto 5 Year		-	-	-			-	-
Male upto 4 Year		7	7	1			1	6
Male upto 3 Year		7	7	1			1	6
Male upto 2 Year		62	62	2	54		56	6
Male upto 1 Year		88	88	2			2	86
Male New born	720		720	36		576	612	108
Total Flock Size	1,440	373	1,813	86	104	1,152	1,342	471
Year 6	Birth	Transfer	Total	Mortality	Slaughtering	Sale	Total	Net
Female upto 9 Year		25	25	1			1	24
Female upto 6 Year		-	-	-			-	-
Female upto 5 Year		10	10	1			1	9
Female upto 4 Year		10	10	1			1	9
Female upto 3 Year		10	10	1			1	9
Female upto 2 Year		86	86	2	69		71	15
Female upto 1 Year		108	108	3			3	105
Female New born	816		816	41		653	694	122
Male upto 9 Year		10	10	1			1	9

Male upto 6 Year		-	-	-			-	-
Male upto 5 Year		6	6	1			1	5
Male upto 4 Year		6	6	1			1	5
Male upto 3 Year		6	6	1			1	5
Male upto 2 Year		86	86	2	74		76	10
Male upto 1 Year		108	108	3			3	105
Male New born	816		816	41		653	694	122
Total Flock Size	1,632	471	2,103	100	143	1,306	1,549	554
Year 7	Birth	Transfer	Total	Mortality	Slaughtering	Sale	Total	Net
Female upto 10 Year		24	24	1			1	23
Female upto 7 Year		-	-	-			-	-
Female upto 6 Year		9	9	1			1	8
Female upto 5 Year		9	9	1			1	8
Female upto 4 Year		9	9	1			1	8
Female upto 3 Year		15	15	1			1	14
Female upto 2 Year		105	105	3	84		87	18
Female upto 1 Year		122	122	3			3	119
Female New born	976		976	49		781	830	146
Male upto 10 Year		9	9	1			1	8
Male upto 7 Year		-	-	-			-	-
Male upto 6 Year		5	5	1			1	4
Male upto 5 Year		5	5	1			1	4
Male upto 4 Year		5	5	1			1	4
Male upto 3 Year		10	10	1			1	9
Male upto 2 Year		105	105	3	91		94	11
Male upto 1 Year		122	122	3			3	119
Male New born	976		976	49		781	830	146
Total Flock Size	1,952	554	2,506	120	175	1,562	1,857	649

Year 8	Birth	Transfer	Total	Mortality	Slaughtering	Sale	Total	Net
Female upto 11 Year		23	23	1			1	22
Female upto 8 Year		-	-	-			-	-
Female upto 7 Year		8	8	1			1	7
Female upto 6 Year		8	8	1			1	7
Female upto 5 Year		8	8	1			1	7
Female upto 4 Year		14	14	1			1	13
Female upto 3 Year		18	18	1			1	17
Female upto 2 Year		119	119	3	95		98	21
Female upto 1 Year		146	146	3			3	143
Female New born	1,168		1,168	59		934	993	175
Male upto 11 Year		8	8	1			1	7
Male upto 8 Year		-	-	-			-	-
Male upto 7 Year		4	4	1			1	3
Male upto 6 Year		4	4	1			1	3
Male upto 5 Year		4	4	1			1	3
Male upto 4 Year		9	9	1			1	8
Male upto 3 Year		11	11	1			1	10
Male upto 2 Year		119	119	3	102		105	14
Male upto 1 Year		146	146	3			3	143
Male New born	1,168		1,168	59		934	993	175
Total Flock Size	2,336	649	2,985	142	197	1,868	2,207	778
Year 9	Birth	Transfer	Total	Mortality	Slaughtering	Sale	Total	Net
Female upto 12 Year		22	22	1			1	21
Female upto 9 Year		-	-	-			-	-
Female upto 8 Year		7	7	1			1	6
Female upto 7 Year		7	7	1			1	6

Female upto 6 Year		7	7	1			1	6
Female upto 5 Year		13	13	1			1	12
Female upto 4 Year		17	17	1			1	16
Female upto 3 Year		21	21	1			1	20
Female upto 2 Year		143	143	3	114		117	26
Female upto 1 Year		175	175	4			4	171
Female New born	1,392		1,392	70		1,114	1,184	208
Male upto 12 Year		7	7	1			1	6
Male upto 9 Year		-	-	-			-	-
Male upto 8 Year		3	3	1			1	2
Male upto 7 Year		3	3	1			1	2
Male upto 6 Year		3	3	1			1	2
Male upto 5 Year		8	8	1			1	7
Male upto 4 Year		10	10	1			1	9
Male upto 3 Year		14	14	1			1	13
Male upto 2 Year		143	143	3	123		126	17
Male upto 1 Year		175	175	4			4	171
Male New born	1,392		1,392	70		1,114	1,184	208
Total Flock Size	2,784	778	3,562	168	237	2,228	2,633	929
Year 10	Birth	Transfer	Total	Mortality	Slaughtering	Sale	Total	Net
Female upto 13 Year		21	21	1			1	20
Female upto 10 Year		-	-	-			-	-
Female upto 9 Year		6	6	1			1	5
Female upto 8 Year		6	6	1			1	5
Female upto 7 Year		6	6	1			1	5
Female upto 6 Year		12	12	1			1	11
Female upto 5 Year		16	16	1			1	15
Female upto 4 Year		20	20	1			1	19

Female upto 3 Year		26	26	1			1	25
Female upto 2 Year		171	171	4	137		141	30
Female upto 1 Year		208	208	5			5	203
Female New born	1,680		1,680	84		1,344	1,428	252
Male upto 13 Year		6	6	1			1	5
Male upto 10 Year		-	-	-			-	-
Male upto 9 Year		2	2	1			1	1
Male upto 8 Year		2	2	1			1	1
Male upto 7 Year		2	2	1			1	1
Male upto 6 Year		7	7	1			1	6
Male upto 5 Year		9	9	1			1	8
Male upto 4 Year		13	13	1			1	12
Male upto 3 Year		17	17	1			1	16
Male upto 2 Year		171	171	4	147		151	20
Male upto 1 Year		208	208	5			5	203
Male New born	1,680		1,680	84		1,344	1,428	252
Total Flock Size	3,360	929	4,289	202	284	2,688	3,174	1,115