

# Pre-Feasibility Study

## ENVIRONMENTAL CONTROLLED POULTRY FARM

(30,000 Birds)



**Small and Medium Enterprises Development Authority**

**Ministry of Industries & Production**

**Government of Pakistan**

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**February 2008**

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# 1 INTRODUCTION

## 1.1 Project Brief

The poultry farm is a project of livestock sector, in which, the day old chicks (DOCs) are raised on high protein feed for a period of six weeks. Broiler meat is the cheapest source of animal protein available in the country. The time required for rearing broiler birds is lesser than that for large animals. The consumption of white meat is increasing due to growing health consciousness in the masses. Broiler farming is a profitable venture due to continuous increasing demand of the meat in the market. Annually, seven flocks of birds will be reared on the same premises of the farm. The broiler birds are sold to traders and the whole sellers markets in the urban areas. Some times birds can also be sold directly to the shopkeepers in the urban markets.

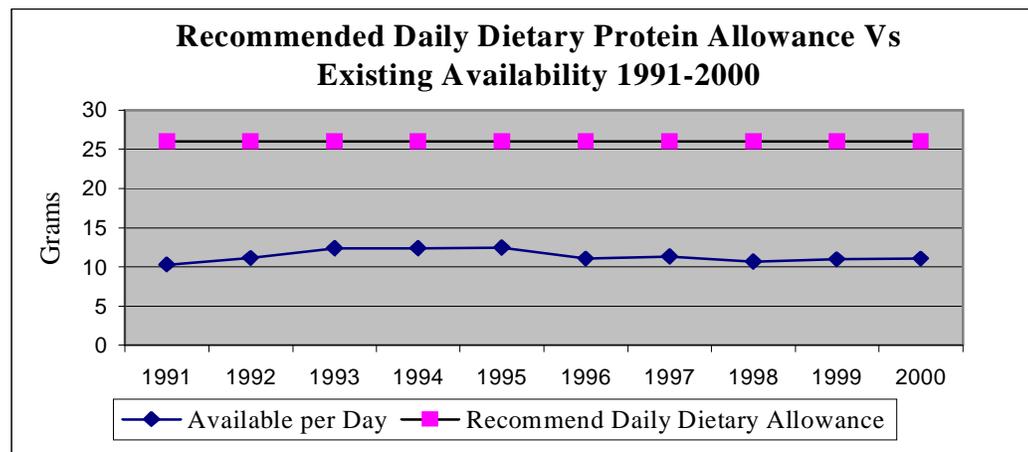
## 1.2 Opportunity Rationale

Broiler meat is the cheapest source of animal protein available in the country. The time required for raising broiler birds is lesser than that for big animals. The consumption of white meat is increasing due to growing health consciousness in the masses.

According to the Agriculture Statistics of Pakistan the per capita consumption of poultry meat is increasing at a rate of 4% per annum.

The existing daily availability of protein quantity per capita in Pakistan deriving from animal source including beef, mutton, poultry and fish combined amounts to 11 grams. This is far less than the recommended daily dietary protein allowance from animal source of 26 grams according to the World Health Organization standards.

**Figure 1-1: Daily Protein Consumption<sup>1</sup>**



<sup>1</sup> Source: SMEDA survey 2001

### 1.3 Total Project Cost

A Controlled Poultry Farm with a population of 30,000 birds established in a purpose-built controlled shed needs a capital investment of about Rs 10.5 million for construction and purchasing farm machinery and equipment. In addition to this, a sum of Rs 2.3 million is required as working capital, which will be used for purchasing day old chicks and raw material (feed & vaccines) etc.

### 1.4 Proposed Capacity

In this pre-feasibility study, all the calculations have been based on a flock size of 30,000 birds, with raising seven flocks per year. There will be a lag time of two weeks for cleaning and fumigation of the farm.

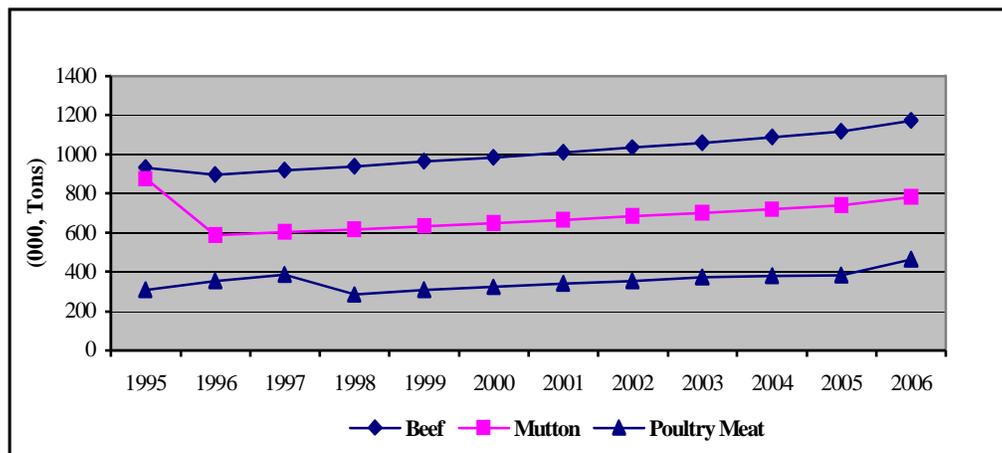
## 2 CURRENT INDUSTRY STRUCTURE

The generation line of broiler comes from pure line, which is imported. This produces grand parents for parent stocks and parent stock end up in producing the final product. The farmers get day old 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.

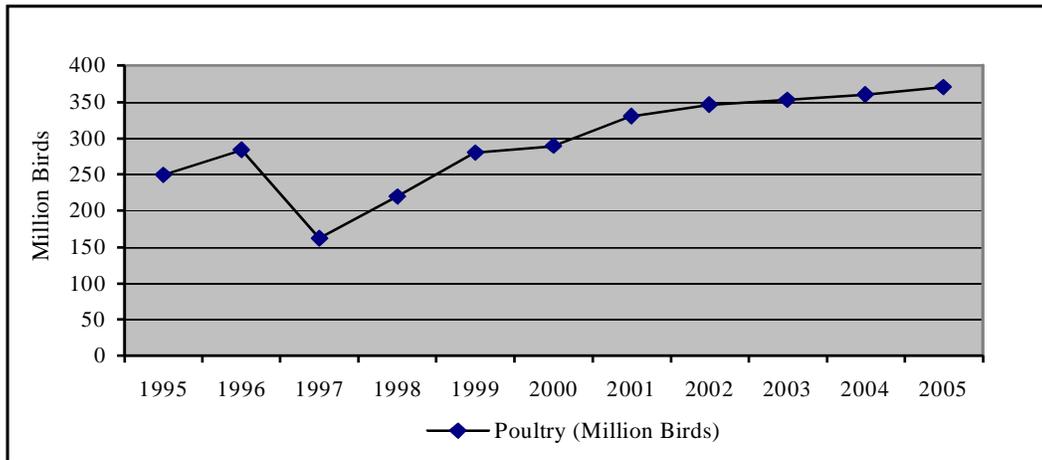
Poultry feed mills are the major player in the poultry industry, which produce a specific formula feed mix. Poultry feed consists of rich protein elements like grains, gluten, blood meal, fishmeal and soyabean meal. The major component of cost of production of chicken meat accounts for feed cost.

The poultry meat production has showed a growing trend over the past few years after a dip in 1997 due to the ban imposed on wedding dinners. The meat production trend of chicken meat, beef and mutton from the year 1995-2006 is presented below.

**Figure 2-1: Meat Production Trends<sup>2</sup>**



<sup>2</sup> Source: Agricultural Statistics of Pakistan 2005-2006

**Figure 2-2: Broilers' Population (1995-2005)**

Presently, poultry industry contributes a large segment to the national economy with an investment of more than 70 billion of rupees 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 with the cost of US\$26 per day-old D-line female chick. This GP is producing 5 million parent flock giving rise to 500 million commercial broilers producing 450,000 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 gap of animal protein in the country. But this important sector is facing a great problem in the form of heat stress. 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, resulting into severe shortage of poultry meat. 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 reached up to 40C. Even the average temperature remains well beyond the higher side of thermo neutral zone for the greater part of the year. Their business is also adversely affected for four long months due to severe environment. During this period they have to either continue their flock compromising with poor performance in feed intake, growth rate, weight gain, FCR in broilers along with mortality or they have to totally close their business

to avoid all these risks. This situation creates severe shortage of poultry meat which is the cheapest and easily available source of animal protein.

## 2.1 Comparative Efficiency of Environment Control (ECH) and Conventional Open-Side House (COH)

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 economical commercial poultry production. The ECH with evaporative cooling system, providing tunnel ventilation, giving the wind chill effect has markedly improved the broiler production system. The technology of ECH is rapidly becoming popular among broiler 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 broilers avoiding fluctuation in the day and night temperature.
3. Due to severe heat stress during 4 long summer months the broiler production is stopped in COH, resultantly only 4-5 flocks are possible in such houses in a year. However, in ECH 7 flocks are marketed without any break.
4. ECH being complete closed system has minimized the incidence of diseases, cutting down the cost of vaccine and medication i.e.Rs.2/bird against Rs.5/bird in COH.
5. Mortality in ECH has been decreased to 2%-3% as compared to 10% in COH.
6. Installation of highly mechanized automatic feeding and nipple drinking system in ECH has provided the solution of manual and poor management practices. One houseman at daytime and one at night time are sufficient to look after a flock of 35,000 birds. In COH nearly 6-8 housemen are required to manage such a flock.
7. Equal distribution of feed and water to broilers through automatic system in ECH has markedly improved the uniformity up to 95% as compared to 75% in COH.
8. In ECH a broiler flock is ready for market in 35 days as compared to 42 days in COH.
9. An individual broiler in COH usually consumes 3 to 3.3 kg feed to gain 1.5 kg weight reflecting its Feed Conversion Ratio (FCR) = 2 to 2.2. Whereas this figure of FCR is improved to 1.8 in ECH.

All these significant features in ECH has reduced the cost of production of broiler to Rs. 35/Kg as compared to Rs.40/Kg in COH.

### 3 MARKETING

The marketing of chickens follows the traditional channels of distribution. Generally, broilers are distributed in the market through middlemen (Arti) and wholesalers. The role of Arti is to identify a farm and negotiate the price. In some cases, the middleman provides Day Old Chicks and other farm inputs (feed, etc.) to the broiler farmers and then agrees to buy back the mature birds from them.

Birds are transported to the urban market and are sold to retailers or market-street poultry shops. Birds are sold on live-weight basis. The time spent in getting broilers from the farm to the retail shop is brief. Although collection and handling of birds has improved with the use of loader vehicles, but it is an established fact that greater the distance between the poultry producer and consumer, more complicated is the marketing system including their collection, handling and transportation to the consumer or processing plants. The processing plant produces dressed chicken (slaughtered and cleaned). However, a very small amount of dressed chicken is available in the local retail market. The integrated processing units distribute frozen and dressed chicken packed in whole or cut-ups to the consumer through retail shops under their brand names.

The trick in marketing is quick availability of market information of chicken supply and demand, which will determine the selling price.

### 4 FARM MANAGEMENT

Farm input required for a Controlled Shed includes farm equipment (drinkers, feed trays, brooders, and feeders), electronic fixtures and other consumer items (feed, vaccines & medicines, rice-husk or saw-dust, water, electricity, etc.).

#### 4.1 Proposed Controlled Poultry Farm

This unit will work for the production of broilers. These birds are marked for meat purpose to the common masses. The broiler chicks will be purchased from private hatchery. A flock of 35,000 commercial broiler chicks will be bought after every 6 weeks. The chicks will be set in brooding on litter floor providing specific requirement during 0-4 week and then finishing phase from 4-6 weeks. The entire specific requirement will be met by automatic operations of temperature control, feeding and nipple drinking system, which will be monitored by the concerned staff. After marketing of broiler at 5 weeks of age the broiler house will be given 1 week for the preparation to receive the new flock. During this week, proper cleaning, washing, white washing, disinfection and fumigation will be performed prior to the arrival of the new flock. During flock, strict measures for bio-security will be observed at the unit. The following practices starting from arrival of the chicks to marketing of broilers will be performed under the supervision of an expert.

10. Thermostatically temperature control: Low temperature will be controlled with the help of diesel heaters and high temperature with evaporative cooling system.

11. Watering through automatic nipple drinking system.
12. Feeding through automatic feeding system.
13. Specific vaccination schedule will be adopted for disease control.
14. Prophylactic medication will be provided according to requirement.
15. Sanitation and disinfection program will be strictly followed during and after the completion of one flock.
16. Computerized record will be maintained for feed intake, body weight, FCR and mortality.
17. Marketing of finished (ready) broilers.

## 5 PRODUCT

The proposed project will generate revenues from sale of chicken. Assumptions used for the product mix are as follows:

**Table: Product Mix**

| Product | Avg. Weight | Price per Kg |
|---------|-------------|--------------|
| Chicken | 1.8         | Rs. 75       |

**Table 10.2: Production Assumptions:**

|                                     |         |
|-------------------------------------|---------|
| Number of Flocks per year           | 7.00    |
| Number of Birds per Flock           | 30,000  |
| Time required per Flock (Days)      | 35      |
| Lag time required per Flock (Days)  | 15      |
| Total Annual Production Capacity    | 210,000 |
| Average weight per bird (kg)        | 1.80    |
| Shed Space Required per Bird (Sqft) | 0.60    |
| Sale price growth rate              | 5%      |
| Production capacity utilization     | 100%    |

## 6 MANPOWER REQUIREMENTS

Semi skilled workers are needed to look after the feeding, vaccination and cleaning operations at the farm. Three people will be hired to manage the operations of the automated shed. The personal needed for the farm is as under:

| Description | No. | Salary |
|-------------|-----|--------|
| Doctor      | 1   | 10,000 |
| Supervisor  | 1   | 5,000  |

|             |   |       |
|-------------|---|-------|
| Houseman    | 3 | 4,000 |
| Electrician | 1 | 5,000 |
| Watchman    | 2 | 4,000 |
| Driver      | 1 | 3,500 |
|             |   |       |

## 7 TECHNOLOGY

### 7.1 Machinery & Equipment Requirement

Various types of farm equipment are needed for feeding, drinking and handling the birds. List of farm equipment, which will be needed, is as under:

**Table 8.1: Machinery Details**

| Description   |    | Amount (PKR)     |
|---|----|------------------|
| VAL PAN Feeding system  |    | 420,357          |
| Nipple Drinking System  |    | 360,523          |
| Watering System   |    | 16,372           |
| Fill System   |    | 52,476           |
| Manual Winching for Feeder Lines  |    | 36,197           |
| Feed Storage  |    | 98,464           |
| Feed Hopper Fill System   |    | 70,232           |
| Tunnel Ventilation System   |    | 487,850          |
| Minimum and Transitional Ventilation  |    | 81,340           |
| Environmental Control   |    | 109,706          |
| <b>Total Machinery Cost</b>   |    | <b>1,733,517</b> |
| Generator Set   |    | 750,000          |
| Fire Extinguisher etc.  |    | 25,000           |
| <b>Total Machinery &amp; Equipment Required</b>   |    | <b>2,508,517</b> |
| Erection & Installation   | 1% | 25,085           |
| Contingencies   | 1% | 25,085           |
| <b>Total Machinery &amp; Equipment Required (incl. Erection &amp; Installaion etc.)</b> |    | <b>2,558,687</b> |

### 7.2 Machinery Suppliers

- Ahmad W. Naseer  
Biovet Pvt limited  
97-A, Jail Raod, Lahore  
Off # 042-7534508

Mobile +92-300-8444202  
 Web: [www.biovet.com.pk](http://www.biovet.com.pk)  
 Email [ahmad.waqas@biovet.com.pk](mailto:ahmad.waqas@biovet.com.pk)

## 8 LAND & BUILDING

**Table 7-1 Space Requirement**

| Description                          | Area (sq.ft.) | Cost (Rs. / sq.ft.) | Total            |
|--------------------------------------|---------------|---------------------|------------------|
| Shed Space                           | 18,000        | 250                 | 4,500,000        |
| Feed Store                           | 1,496         | 250                 | 374,000          |
| Rooms for Guard and Workers          | 610           | 400                 | 244,000          |
| Doctor's Residence                   | 1096          | 600                 | 657,600          |
| Pavement/driveway                    | 212           | 50                  | 10,601           |
| Boundary Walls                       |               |                     | 500,000          |
| <b>Total Building Infrastructure</b> | <b>21,414</b> |                     | <b>6,286,201</b> |

### 8.1 Recommended Mode for Acquiring Land

It is recommended that the proposed project should be started on a purchased land.

### 8.2 Suitable Locations

Suburban and rural areas around the major cities of the country are the suitable areas for setting up a poultry farm. Setting up a farm at an isolated place will minimize the risk of disease.

Proximity of the farm to the city enables the farmer to have a quick communication with the market for the purchase of Day Old Chicks, farm inputs (feed, etc.), and selling of mature birds.

### 8.3 Infrastructure Requirement

Poultry's farming needs to be handled tactically, right from the selection of the site to the final stage when the birds are sold. The farm should be located at a place where transportation of birds and feed can be handled easily.

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

- Electricity connection
- Drinking quality water

## 9 PROJECT COST

**Table 8-1 Project Economics**

| <b>Capital Investment</b> | <b>Rs. in actuals</b> |
|---------------------------|-----------------------|
| Land                      | 1,500,000             |
| Building/Infrastructure   | 6,286,201             |
| Machinery & equipment     | 2,558,687             |
| Furniture & fixtures      | 49,000                |
| Office equipment          | 37,000                |
| Pre-operating costs       | 79,513                |
| Total Working Capital     | 2,350,688             |
| <b>Total Investment</b>   | <b>12,861,090</b>     |

**Table 8-2 Project Return**

|                        | <b>Project</b> |
|------------------------|----------------|
| IRR                    | 56%            |
| Payback Period (years) | 1.96           |
| NPV (Rs)               | 22,827,127     |

**Table 8-3 Financing Plan**

| <b>Financing</b> |     | <b>Rs.</b> |
|------------------|-----|------------|
| Equity           | 60% | 7,713,322  |
| Debt             | 40% | 5,147,768  |

## 10 FINANCIAL ANALYSIS

### 10.1 Project Cost

| <b>Capital Investment</b>  | <b>Rs. in actuals</b> |
|----------------------------|-----------------------|
| Land                       | 1,500,000             |
| Building/Infrastructure    | 6,286,201             |
| Machinery & equipment      | 2,558,687             |
| Furniture & fixtures       | 49,000                |
| Office equipment           | 37,000                |
| Pre-operating costs        | 79,513                |
| <b>Total Capital Costs</b> | <b>10,510,402</b>     |

| <b>Working Capital</b>       | <b>Rs. in actuals</b> |
|------------------------------|-----------------------|
| Raw material inventory**     | 1,850,688             |
| Cash                         | 500,000               |
| <b>Total Working Capital</b> | <b>2,350,688</b>      |

|                         |                   |
|-------------------------|-------------------|
| <b>Total Investment</b> | <b>12,861,090</b> |
|-------------------------|-------------------|

| <b>Initial Financing</b>   | <b>Rs. in actuals</b> |
|----------------------------|-----------------------|
| Debt                       | 5,147,768             |
| Equity                     | 7,713,322             |
| Export re-finance facility | -                     |

\* Provisioning for the first year installments

\*\* Raw material inventory based on per/flock approx.

## 10.2 Projected Income Statement

| Statement Summaries                                  |            | Controlled Shed Farm - 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  | 28,560,000 | 29,977,500                   | 31,465,875 | 33,028,669 | 34,669,602 | 36,392,582 | 38,201,711 | 40,101,297 | 42,095,862 | 44,190,155 |  |
| Cost of goods sold                                   | 21,017,380 | 22,092,274                   | 23,223,315 | 24,413,551 | 25,666,206 | 26,984,691 | 28,372,618 | 29,833,811 | 31,372,320 | 32,992,435 |  |
| Gross Profit   | 7,542,620  | 7,885,226                    | 8,242,560  | 8,615,118  | 9,003,396  | 9,407,891  | 9,829,093  | 10,267,486 | 10,723,542 | 11,197,720 |  |
| <i>General administration &amp; selling expenses</i> |            |                              |            |            |            |            |            |            |            |            |  |
| Administration expense                               | 327,540    | 360,294                      | 396,323    | 435,956    | 479,551    | 527,506    | 580,257    | 638,283    | 702,111    | 772,322    |  |
| Utilities expense                                    | 188,219    | 207,041                      | 227,745    | 250,520    | 275,572    | 303,129    | 333,442    | 366,786    | 403,465    | 443,811    |  |
| Travelling & Comm. expense (phone, fax, etc.)        | 6,360      | 6,996                        | 7,696      | 8,465      | 9,312      | 10,243     | 11,267     | 12,394     | 13,633     | 14,997     |  |
| Office expenses (stationary, etc.)                   | 3,180      | 3,498                        | 3,848      | 4,233      | 4,656      | 5,121      | 5,634      | 6,197      | 6,817      | 7,498      |  |
| Insurance expense                                    | -          | -                            | -          | -          | -          | -          | -          | -          | -          | -          |  |
| Professional fees (legal, audit, etc.)               | 14,280     | 14,989                       | 15,733     | 16,514     | 17,335     | 18,196     | 19,101     | 20,051     | 21,048     | 22,095     |  |
| Depreciation expense                                 | 578,779    | 578,779                      | 578,779    | 578,779    | 578,779    | 578,779    | 578,779    | 578,779    | 578,779    | 578,779    |  |
| Amortization expense                                 | 15,903     | 15,903                       | 15,903     | 15,903     | 15,903     | -          | -          | -          | -          | -          |  |
| Property tax expense                                 | -          | -                            | -          | -          | -          | -          | -          | -          | -          | -          |  |
| Miscellaneous expense                                | 315,261    | 331,384                      | 348,350    | 366,203    | 384,993    | 404,770    | 425,589    | 447,507    | 470,585    | 494,887    |  |
| Subtotal   | 1,449,521  | 1,518,883                    | 1,594,376  | 1,676,572  | 1,766,100  | 1,847,745  | 1,954,068  | 2,069,996  | 2,196,437  | 2,334,388  |  |
| Operating Income                                     | 6,093,099  | 6,366,343                    | 6,648,184  | 6,938,545  | 7,237,296  | 7,560,146  | 7,875,024  | 8,197,490  | 8,527,105  | 8,863,331  |  |
| Other income   | 100,593    | 268,497                      | 438,751    | 621,382    | 817,803    | 1,043,575  | 1,308,790  | 1,599,836  | 1,908,591  | 2,304,327  |  |
| Gain / (loss) on sale of assets                      | -          | -                            | -          | -          | -          | -          | -          | -          | -          | -          |  |
| Earnings Before Interest & Taxes                     | 6,193,692  | 6,634,840                    | 7,086,934  | 7,559,927  | 8,055,099  | 8,603,720  | 9,183,815  | 9,797,326  | 10,435,696 | 11,167,658 |  |
| Interest expense                                     | 191,267    | 703,892                      | 567,030    | 408,680    | 225,466    | 41,391     | -          | -          | -          | -          |  |
| Earnings Before Tax                                  | 6,002,425  | 5,930,948                    | 6,519,904  | 7,151,247  | 7,829,633  | 8,562,330  | 9,183,815  | 9,797,326  | 10,435,696 | 11,167,658 |  |
| Tax  | -          | -                            | -          | -          | -          | -          | -          | -          | -          | -          |  |
| <b>NET PROFIT/(LOSS) AFTER TAX</b>                   | 6,002,425  | 5,930,948                    | 6,519,904  | 7,151,247  | 7,829,633  | 8,562,330  | 9,183,815  | 9,797,326  | 10,435,696 | 11,167,658 |  |
| Balance brought forward                              |            | 6,002,425                    | 11,933,373 | 18,453,278 | 25,604,525 | 33,434,158 | 41,996,488 | 51,180,302 | 60,977,628 | 71,413,324 |  |
| Total profit available for appropriation             | 6,002,425  | 11,933,373                   | 18,453,278 | 25,604,525 | 33,434,158 | 41,996,488 | 51,180,302 | 60,977,628 | 71,413,324 | 82,580,982 |  |
| Dividend   | -          | -                            | -          | -          | -          | -          | -          | -          | -          | -          |  |
| Balance carried forward                              | 6,002,425  | 11,933,373                   | 18,453,278 | 25,604,525 | 33,434,158 | 41,996,488 | 51,180,302 | 60,977,628 | 71,413,324 | 82,580,982 |  |

## 10.3 Projected Cash-flow Statement

| Statement Summaries                                       |                     | Controlled Shed Farm - 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           |
|   | Rs. in actuals      |                              |                  |                    |                    |                    |                  |                  |                  |                   |                   |
| <i>Operating activities</i>                               |                     |                              |                  |                    |                    |                    |                  |                  |                  |                   |                   |
| Net profit  | -                   | 6,002,425                    | 5,930,948        | 6,519,904          | 7,151,247          | 7,829,633          | 8,562,330        | 9,183,815        | 9,797,326        | 10,435,696        | 11,167,658        |
| Add: depreciation expense                                 | -                   | 578,779                      | 578,779          | 578,779            | 578,779            | 578,779            | 578,779          | 578,779          | 578,779          | 578,779           | 578,779           |
| amortization expense                                      | -                   | 15,903                       | 15,903           | 15,903             | 15,903             | 15,903             | -                | -                | -                | -                 | -                 |
| Accounts receivable                                       | -                   | (2,347,397)                  | (58,253)         | (119,420)          | (125,390)          | (131,660)          | (138,243)        | (145,155)        | (152,413)        | (160,034)         | (168,035)         |
| Raw material inventory                                    | (1,850,688)         | (189,696)                    | (209,139)        | (230,576)          | (254,210)          | (280,267)          | (308,994)        | (340,666)        | (375,584)        | (414,082)         | 4,453,901         |
| Accounts payable  | -                   | 1,844,159                    | 101,012          | 106,965            | 113,309            | 120,071            | 127,284          | 134,981          | 143,200          | 151,981           | (242,230)         |
| Other liabilities   | -                   | -                            | -                | -                  | -                  | -                  | -                | -                | -                | -                 | -                 |
| <b>Cash provided by operations</b>                        | <b>(1,850,688)</b>  | <b>5,904,173</b>             | <b>6,359,249</b> | <b>6,871,556</b>   | <b>7,479,637</b>   | <b>8,132,459</b>   | <b>8,821,156</b> | <b>9,411,754</b> | <b>9,991,308</b> | <b>10,592,341</b> | <b>15,790,073</b> |
| <i>Financing activities</i>                               |                     |                              |                  |                    |                    |                    |                  |                  |                  |                   |                   |
| Change in long term debt                                  | 5,147,768           | (197,955)                    | (871,860)        | (1,008,721)        | (1,167,072)        | (1,350,285)        | (551,874)        | -                | -                | -                 | -                 |
| Issuance of shares  | 7,713,322           | -                            | -                | -                  | -                  | -                  | -                | -                | -                | -                 | -                 |
| Purchase of (treasury) shares                             | -                   | -                            | -                | -                  | -                  | -                  | -                | -                | -                | -                 | -                 |
| <b>Cash provided by / (used for) financing activities</b> | <b>12,861,090</b>   | <b>(197,955)</b>             | <b>(871,860)</b> | <b>(1,008,721)</b> | <b>(1,167,072)</b> | <b>(1,350,285)</b> | <b>(551,874)</b> | <b>-</b>         | <b>-</b>         | <b>-</b>          | <b>-</b>          |
| <i>Investing activities</i>                               |                     |                              |                  |                    |                    |                    |                  |                  |                  |                   |                   |
| Capital expenditure                                       | (10,510,402)        | -                            | -                | -                  | -                  | -                  | -                | -                | -                | -                 | -                 |
| Acquisitions  | -                   | -                            | -                | -                  | -                  | -                  | -                | -                | -                | -                 | -                 |
| <b>Cash (used for) / provided by investing activities</b> | <b>(10,510,402)</b> | <b>-</b>                     | <b>-</b>         | <b>-</b>           | <b>-</b>           | <b>-</b>           | <b>-</b>         | <b>-</b>         | <b>-</b>         | <b>-</b>          | <b>-</b>          |
| <b>NET CASH</b>   | <b>500,000</b>      | <b>5,706,217</b>             | <b>5,487,389</b> | <b>5,862,834</b>   | <b>6,312,565</b>   | <b>6,782,173</b>   | <b>8,269,281</b> | <b>9,411,754</b> | <b>9,991,308</b> | <b>10,592,341</b> | <b>15,790,073</b> |
| Cash balance brought forward                              |                     | 500,000                      | 6,206,217        | 11,693,607         | 17,556,441         | 23,869,006         | 30,651,179       | 38,920,460       | 48,332,214       | 58,323,522        | 68,915,863        |
| Cash available for appropriation                          | 500,000             | 6,206,217                    | 11,693,607       | 17,556,441         | 23,869,006         | 30,651,179         | 38,920,460       | 48,332,214       | 58,323,522       | 68,915,863        | 84,705,936        |
| Dividend  | -                   | -                            | -                | -                  | -                  | -                  | -                | -                | -                | -                 | -                 |
| Cash carried forward                                      | 500,000             | 6,206,217                    | 11,693,607       | 17,556,441         | 23,869,006         | 30,651,179         | 38,920,460       | 48,332,214       | 58,323,522       | 68,915,863        | 84,705,936        |

## 10.4 Projected Balance Sheet

| <b>Statement Summaries</b>                    |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   | <b>Controlled Shed Farm - SMEDA</b> |  |
|---|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------------------------|--|
| <b>Balance Sheet</b>                          |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   | 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                                   | 500,000           | 6,206,217         | 11,693,607        | 17,556,441        | 23,869,006        | 30,651,179        | 38,920,460        | 48,332,214        | 58,323,522        | 68,915,863        | 84,705,936                          |  |
| Accounts receivable                           | -                 | 2,347,397         | 2,405,651         | 2,525,070         | 2,650,461         | 2,782,121         | 2,920,364         | 3,065,519         | 3,217,932         | 3,377,965         | 3,546,001                           |  |
| Raw material inventory                        | 1,850,688         | 2,040,384         | 2,249,523         | 2,480,099         | 2,734,309         | 3,014,576         | 3,323,570         | 3,664,236         | 4,039,820         | 4,453,901         | -                                   |  |
| <b>Total Current Assets</b>                   | <b>2,350,688</b>  | <b>10,593,998</b> | <b>16,348,780</b> | <b>22,561,610</b> | <b>29,253,775</b> | <b>36,447,875</b> | <b>45,164,394</b> | <b>55,061,969</b> | <b>65,581,274</b> | <b>76,747,730</b> | <b>88,251,937</b>                   |  |
| <i>Fixed assets</i>                           |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                                     |  |
| Land  | 1,500,000         | 1,500,000         | 1,500,000         | 1,500,000         | 1,500,000         | 1,500,000         | 1,500,000         | 1,500,000         | 1,500,000         | 1,500,000         | 1,500,000                           |  |
| Building/Infrastructure                       | 6,286,201         | 5,971,891         | 5,657,581         | 5,343,271         | 5,028,961         | 4,714,651         | 4,400,341         | 4,086,031         | 3,771,721         | 3,457,411         | 3,143,101                           |  |
| Machinery & equipment                         | 2,558,687         | 2,302,819         | 2,046,950         | 1,791,081         | 1,535,212         | 1,279,344         | 1,023,475         | 767,606           | 511,737           | 255,869           | -                                   |  |
| Furniture & fixtures                          | 49,000            | 44,100            | 39,200            | 34,300            | 29,400            | 24,500            | 19,600            | 14,700            | 9,800             | 4,900             | -                                   |  |
| Office vehicles                               | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                                   |  |
| Office equipment                              | 37,000            | 33,300            | 29,600            | 25,900            | 22,200            | 18,500            | 14,800            | 11,100            | 7,400             | 3,700             | -                                   |  |
| <b>Total Fixed Assets</b>                     | <b>10,430,888</b> | <b>9,852,110</b>  | <b>9,273,331</b>  | <b>8,694,552</b>  | <b>8,115,773</b>  | <b>7,536,994</b>  | <b>6,958,216</b>  | <b>6,379,437</b>  | <b>5,800,658</b>  | <b>5,221,879</b>  | <b>4,643,101</b>                    |  |
| <i>Intangible assets</i>                      |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                                     |  |
| Pre-operation costs                           | 79,513            | 63,611            | 47,708            | 31,805            | 15,903            | -                 | -                 | -                 | -                 | -                 | -                                   |  |
| <b>Total Intangible Assets</b>                | <b>79,513</b>     | <b>63,611</b>     | <b>47,708</b>     | <b>31,805</b>     | <b>15,903</b>     | <b>-</b>          | <b>-</b>          | <b>-</b>          | <b>-</b>          | <b>-</b>          | <b>-</b>                            |  |
| <b>TOTAL ASSETS</b>                           | <b>12,861,090</b> | <b>20,509,718</b> | <b>25,669,819</b> | <b>31,287,967</b> | <b>37,385,451</b> | <b>43,984,870</b> | <b>52,122,609</b> | <b>61,441,406</b> | <b>71,381,932</b> | <b>81,969,609</b> | <b>92,895,038</b>                   |  |
| <b>Liabilities &amp; Shareholders' Equity</b> |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                                     |  |
| <i>Current liabilities</i>                    |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                                     |  |
| Accounts payable                              | -                 | 1,844,159         | 1,945,171         | 2,052,136         | 2,165,445         | 2,285,516         | 2,412,800         | 2,547,781         | 2,690,982         | 2,842,963         | 2,600,733                           |  |
| <b>Total Current Liabilities</b>              | <b>-</b>          | <b>1,844,159</b>  | <b>1,945,171</b>  | <b>2,052,136</b>  | <b>2,165,445</b>  | <b>2,285,516</b>  | <b>2,412,800</b>  | <b>2,547,781</b>  | <b>2,690,982</b>  | <b>2,842,963</b>  | <b>2,600,733</b>                    |  |
| <i>Other liabilities</i>                      |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                                     |  |
| Long term debt                                | 5,147,768         | 4,949,812         | 4,077,953         | 3,069,231         | 1,902,160         | 551,874           | -                 | -                 | -                 | -                 | -                                   |  |
| <b>Total Long Term Liabilities</b>            | <b>5,147,768</b>  | <b>4,949,812</b>  | <b>4,077,953</b>  | <b>3,069,231</b>  | <b>1,902,160</b>  | <b>551,874</b>    | <b>-</b>          | <b>-</b>          | <b>-</b>          | <b>-</b>          | <b>-</b>                            |  |
| <i>Shareholders' equity</i>                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                                     |  |
| Paid-up capital                               | 7,713,322         | 7,713,322         | 7,713,322         | 7,713,322         | 7,713,322         | 7,713,322         | 7,713,322         | 7,713,322         | 7,713,322         | 7,713,322         | 7,713,322                           |  |
| Retained earnings                             | -                 | 6,002,425         | 11,933,373        | 18,453,278        | 25,604,525        | 33,434,158        | 41,996,488        | 51,180,302        | 60,977,628        | 71,413,324        | 82,580,982                          |  |
| <b>Total Equity</b>                           | <b>7,713,322</b>  | <b>13,715,747</b> | <b>19,646,695</b> | <b>26,166,600</b> | <b>33,317,847</b> | <b>41,147,480</b> | <b>49,709,810</b> | <b>58,893,624</b> | <b>68,690,950</b> | <b>79,126,646</b> | <b>90,294,304</b>                   |  |
| <b>TOTAL CAPITAL AND LIABILITIES</b>          | <b>12,861,090</b> | <b>20,509,718</b> | <b>25,669,819</b> | <b>31,287,967</b> | <b>37,385,451</b> | <b>43,984,870</b> | <b>52,122,609</b> | <b>61,441,406</b> | <b>71,381,932</b> | <b>81,969,609</b> | <b>92,895,038</b>                   |  |

## 11 KEY ASSUMPTIONS

|   |       |                               |
|---|-------|-------------------------------|
| Bird Mortality % age                                | 3.0%  | % of COGS                     |
| Administration benefits expense                     | 3.0%  | % of administration expense   |
| Traveling expense                                   | 1.0%  | % of administration expense   |
| Communication expense                               | 1.0%  | % of administration expense   |
| Office vehicles running expense                     | 3.0%  | % of vehicles cost            |
| Office expenses (Misc.)                             | 1.0%  | % of administration expense   |
| Promotional expense                                 | 0.0%  | % of revenue                  |
| Machinery & equipment insurance rate                | 5.0%  | % of Machinery cost           |
| Office vehicles insurance rate                      | 5.0%  | % of Vehicle cost             |
| Professional fees (legal, audit, consultants, etc.) | 0.05% | % of revenue                  |
| Bad debt expense                                    | 0.0%  | % of revenue                  |
| Building depreciation rate                          | 5%    | % of Building Cost            |
| Machinery & Equipment depreciation rate             | 10%   | % of Machinery & Equip. Cost  |
| Office Equipment depreciation rate                  | 10%   | % of Office equipment Cost    |
| Furniture & Fixtures depreciation rate              | 10%   | % of Furniture & fixture Cost |

**Table: COGS Details:**

| Description   |       |
|---|-------|
| DOC (Day Old Chicks) (Rs.)  | 18    |
| Feed Conversion Ratio (FCR) i.e. Feed required to gain 1 Kg weight (Kgs.) | 2     |
| Feed required per 1000 birds - (50 Kgs bags)                              | 72    |
| Feed Requirement/bird/day - Kg  | 0.10  |
| Vaccination. Medication and Disinfection Cost per Bird (Rs.)              | 9     |
| Feed Price per Bag (50 Kgs)   | 974   |
| Cost of Feed per Kg – Rs.   | 19.48 |