

# Pre-Feasibility Study

## CUT FLOWERS FARM (Roses)



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## **1 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.

Since its inception in October 1998, SMEDA adopted a sectoral SME development approach where key 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 overhauling of the regulatory environment by taking into consideration other important aspects including finance, marketing, technology and human resource development.

SMEDA has so far successfully formulated strategies for key sectors including, Fruits & Vegetables, Marble & Granite, Gems & Jewelry, Marine Fisheries, Leather & Footwear, Textiles, Surgical Instruments, 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 being 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 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 capitalize on viable business opportunities.

## **2 PURPOSE OF THE DOCUMENT**

Pre-feasibility studies are developed primarily to facilitate potential entrepreneurs in project identification for investment. Pre-feasibility Studies may form the basis on which an important investment decision maybe made. The document covers various aspects of the business venture from project concept development to, financing and business management.

## **3 PROJECT PROFILE**

The project is about starting a cut flower farm near pattoki

### **3.1 Project Brief**

Cut flowers growth is not a new phenomenon in floricultural sector of Pakistan; however it is an infant industry as far as its growth is concerned. The resource rich local soil provides ideal agronomic conditions for the production of cut flowers. Despite lack of knowledge on modern floricultural production techniques, difficulty in obtaining the latest varieties and the lack of infrastructure, the industry is continuously attracting new entrants.

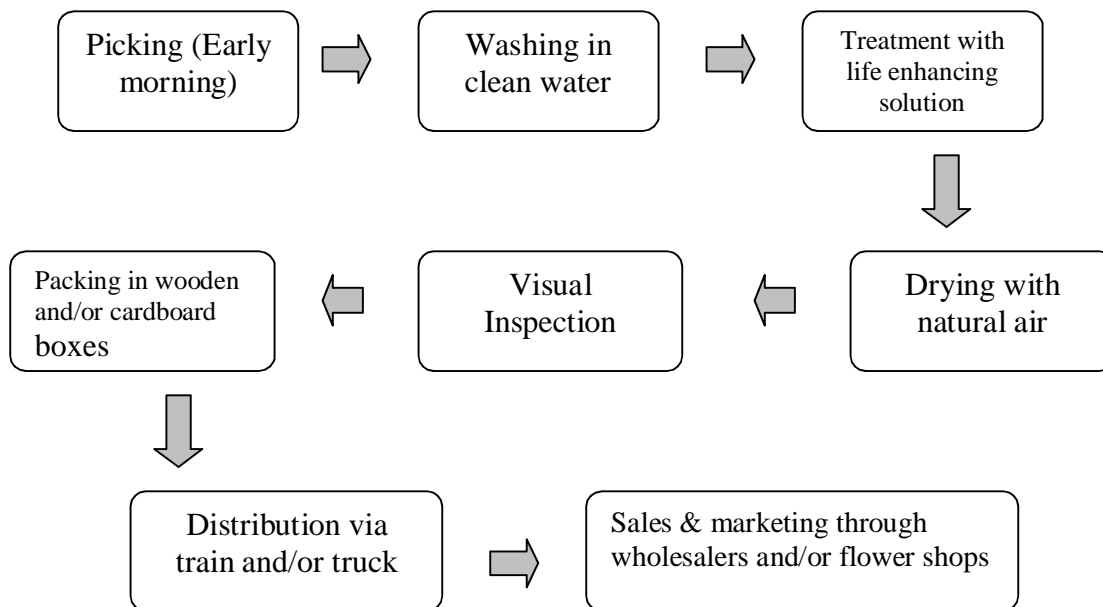
This pre-feasibility is being prepared by SMEDA and is intended to provide general information on the opportunity for an investor in the floricultural sector to develop cut-flowers farm of roses for supply in local market. Roses are the most traded of all cut flower varieties around the world. The trend in Pakistan is no different.

### **3.2 Project Rationale**

Growing cut flowers, especially roses, is a very profitable business if done properly on commercial basis. Demand for cut flowers, especially roses, is growing tremendously as more and more people are becoming aware of the beauty of flowers as decorative items. Weddings, birthday parties, seminars, and other such social gathering events are incomplete without floral decorations. Besides earning money one also helps keep the environment clean and beautiful.

Though it is a capital-intensive project, the high returns as compared to any other agricultural venture makes it economically viable. Low cost of labor combined with very reasonable land lease rates and helpful climatic conditions for most part of the year serve as the basis for making this project attractive. Rose plants are easily available and are very cheap.

#### 4 PROCESS FLOW CHART



#### 5 VIABLE ECONOMIC SIZE

A small farm of 5 acres would be economically viable considering the amount of effort and money required and returns expected. Besides rose growing fields of 5 acres, another 2 kanal of land is required to perform post-harvesting functions and other related chores.

#### 6 CURRENT INDUSTRY STRUCTURE

Pattoki serves as the center for floricultural activity in Pakistan. Though Kasur and Sheikhpura districts have also developed some expertise in this field, yet Pattoki still serves as the hub market for all floricultural trade. Patto 'mandi' is the major forum for buying and selling of fresh cut flowers, especially roses. From Pattoki, flowers are distributed to all parts of the country including Karachi, Peshawar, Lahore, and Islamabad.

Overall, this sector is still in infancy, still going through birth pains. This is not a good sign considering the years this sector has been around. The major reason for this slow development process has been the lack of interest on part of progressive farmers to enter this field. The credit goes to small and poor farmers who have kept on going without much technical and/or financial support over the years. Whatever pre-harvest and post-harvest handling techniques are being used is the direct result of their personal ingenuity, however primitive they may be.

There are only few major players in this industry. Majority of the industry is unorganized. Therefore, there is great potential for anyone who comes into this field and does farming on progressive basis.

## **7 SALES & MARKETING ISSUES**

Local market of cut flowers, especially for different varieties and colors in roses, is still growing. Pattoki area is the major supplier to fulfill this demand. There are two basic market segments for flowers:

- a) Retail sales to consumers
- b) Wholesale sales to corporate and institutional customers

In every major city of the country there are numerous retail outlets selling all kinds of flowers to consumers. These outlets could be anything from a roadside corner kiosk to a proper retail outlet shop in some high-end urban locality. These shops are either fed directly from farms or through a middleman or distributor. Some shops buy directly from 'mandi' as well. Buying directly from the farms give bigger shops access to better quality flowers as flowers do not go through too many different hands and there is less wear and tear. Another important aspect of buying directly from farms is better profit margins for both farm owners as well as shopkeepers. This they achieve by eliminating the middleman. But this setup is quite rare. Nine out of ten times it's the distributor who is the supplier to most of small shops in the city. A major advantage of buying from distributors is the availability of credit facility.

Besides retail outlets the major buyers are corporate and institutional customers. These include hotels, offices and most importantly party decorators and marriage halls. All these institutional as well as corporate customers are fed by wholesale dealers and distributors. They buy in bulk quantities. For party decorators high quality is not an issue as they use the flowers only once. Once the party is over the flowers go to the bin. As far as hotels and offices are concerned, quality is an important issue. But again as flowers are changed everyday, they don't need long life product.

Some small traders have developed another sale channel. They buy from Pattoki 'mandi' in the morning and bring their product to Begumkot (Sheikhupura District) 'mandi' and resell it for profit. From Begumkot 'mandi' either the shopkeepers or wholesale

distributors and traders buy this stuff and sell in cities like Lahore, Faisalabad, Gujranwala, etc.

## 8 FARM INPUTS

Following inputs are required:

### 8.1 Land

Land requirement is 5 acres for growing flowers and 2 kanals as area for sorting, washing, drying, packing and other related facilities. Land is to be obtained on lease. At present, lease rate in Pattoki area is Rs 15000 per acre per year.

Description	Area(in acres)	Cost / Rate	Amount / Other
Land price / acre		700,000	
Land lease cost /acre / year		15,000	
Room	0.002		
Shed	0.037		
Field	5.000		
Total Land Requirement	5.04		
Land purchase price			3,527,319
<b>Land lease cost</b>			<b>75,585</b>

### 8.2 Flower Plants

Roughly 11,000 plants would be planted in each acre, approximately 4-ft<sup>2</sup> area for each rose plant. These plants would be brought from a commercial nursery. New plants are grafted in July by the nurseries and are ready to be transferred to the field in January. Starting from January, these six months old plants at the farm are to be taken care of till October. During this period, the fields are to be looked after as if they are in production. Water, pesticide spray, fertilizer, and labor requirements remain the same as for a commercially running farm. Rose flowers produced during this development stage are not cut along with stem from the plant. Only the flower is picked but not sold commercially because it is not yet fit for commercial sale. From November you start to take commercial production from the farm. In all 54,450 plants of rose would be required. Each six-month old plant costs Rs 10 on average when bought from nursery.

An important point is that the average life of a rose flower plant is 5 years. After 5 years all the plants would have to be replaced with new ones.



### 8.3 Water

Water is a regular requirement of flower plants, as is for any living thing. If fresh canal water were available, this would be the ideal situation. Firstly, the quality of water is good and it is very useful for plants. Secondly, if canal water were available it would cut out the expenses of installation of a tube well and the electricity or diesel cost of running that tube well. In Pattoki area, canal water is available for irrigation. But to be on the safe side water-pump should also be installed at the farm. It would cost about Rs 50,000 to install a reasonable capacity and quality pump. The average cost of water and upkeep of water channels costs about Rs 1,500 per acre per year. During April, May and June, fields are irrigated every week. Otherwise the normal practice is irrigating every 20-25 days.

### 8.4 Labor

General formula is 1 person per acre excluding the foreman and farm manager. This Laborer would cost Rs 4,000/month/acre. In all 5 laborers would be required. These laborers would also act as pickers, cleaners, sorters, packers, etc. There would be 1 foreman to keep the work moving and one farm manager cum accountant to manage the farm overall. During peak season, temporary pickers can be hired on daily wages. But that cost is negligible. Foreman could be hired for Rs 6000/- month, whereas the manager cum accountant would be hired for Rs 8,000/month.

**Table 6-8-1 Required Manpower in the Year 1 of the Operation.**

Post	# of personnel	Salary/month	1 <sup>st</sup> year cost
Manager/Accountant	1	8,000	96,000
Foreman	1	6,000	72,000
Semi-Skilled Workers	5	4,000	240,000
<b>Total</b>	<b>7</b>		<b>150,000</b>

### 8.5 Pesticide Sprays

Between April and November, one spray of pesticides is required every fortnight. From December till March only one pesticide spray is required per month as prevention against fungus. One pesticide spray costs Rs 5000 resulting in total cost of sprays per acre per year is Rs 25,000.

**Table6-8-2 Material Required**

Material	Cost/Acre(Bag)	Acres/Bags	Amount
Pesticide Sprays	5,000	5	25,000

## 8.6 Fertilizers

Flower plants require DAP, potash, and ammonium nitrate fertilizers for proper yield. Sometimes one or two bags of urea are also required. 4 bags of DAP are required every quarter at Rs 1000/bag. 3 bags of potash are required every quarter at Rs 700/bag, and 4 bags of ammonium nitrate are required every quarter at Rs 350/bag. But for this feasibility we are using the combination of NPK which cost 500/bag and 2 bags per month per acre are required.

**Table 6-8-3 Fertilizers Required**

Material	Cost/Acre(Bag)	Acres/Bags	Amount
NPK	500	24	60,000

## 8.7 Building & Shed

This project does not require any major building structure. Only a small room for storage purpose is required. A maximum of 10'x10' room is enough. Besides storage room, one proper shed is required. This is an important requirement. The shed should be 40'x40' covered area with open sides for air passage. This area is to be used for washing, sorting, packing, and other post harvest activities. The construction rate is Rs 100 per square feet. This construction rate is based on the fact that the room and the shed would be made up of semi-baked bricks using local masonry skills. The idea is to cut the initial capital investment.

## 8.8 Farm Fixtures & Tools

Basic farm tools and fixtures would include tools for pruning the plants, picking the flowers, and removing leaves, etc. Besides these tools, other fixtures are required including clean water hand pump, tables, tubs, wooden crates and fans. Total capital requirement for all these items is Rs 40,000. All items would be Pakistan made and are easily available.

## 8.9 Packing

Rose flowers are either packed in specially designed wooden crates or else in cardboard cartons. Each wooden crate can carry about 25-30 Kg flowers (one-Kg flowers is roughly 60 individual stems). For long distance transportation, an 8-10 Kg ice block is also placed along with flowers to keep their temperature down. Cardboard cartons are usually used for short distance transportation. If they are to be used for long distance transportation, ice, packed in plastic bag, is also placed in each box for cooling effect. Usual gross weight for cardboard cartons is 15-20 Kg. Wooden crates are reusable over longer periods of time. About 100 boxes are enough to keep a cycle of rotation going. Each wooden crate would cost Rs 160. Cardboard carton usually cost Rs 35/box.

### **8.10 Transportation**

Flowers packed in wooden crates and cardboard cartons are transported to big cities from Pattoki via train. To take these crates and/or cartons from farm to railway station a motorcycle cart is used which can be hired on rent at very nominal rates.

## **9 OUTPUT**

Production of rose flowers has different seasonal variations. Between November and March, maximum yield is obtained, assessed to be about 70% of total production in a year. From mid April till mid June, there is no flower for commercial sale. From mid June till October, the situation gets better steadily and slowly. On an average, one plant of rose flower has an average yield of 50 flowers per year. Out of these 50, about 20 flowers are not up to the required standard and are destroyed either by man handling or by some disease. These are sold as petals. Therefore, only 30 flowers per plant per year are available for commercial sales. Sale price also depends on season, quality and size of flowers. It varies from Rs 35 for hundred stems to Rs 550 per hundred stems. But if we average out the price over the period of 12 months, one rose stem sells minimum for Rs 1 Sale is against credit and usual credit period is 15 days.

The complete produce of the farm would be sold in open market and to wholesalers, on daily basis. Direct supply to flower shops is possible if the offer is attractive.

## **10 OVERALL PICTURE**

The over-all picture would go something like this that once you have planted six-month old rose plants in the fields in January, from there on till October, you have to look after the farm in all respects, including fertilizers, pesticides, etc. but without any yield. Flowers would bloom but they would not be used for commercial sale as their stem would still be smaller and if cut at that time it would destroy the plant and/or reduce its life. From November onwards the farm would be ready for production. In the first year, ending in December, only two months of production would be available for commercial sales. Next year approximately 80% capacity would be reached and in the third year farm would be operating on full capacity.

## 11 GENERAL FACTS & FIGURES

\*Farm at 100% capacity

Total Area	5 acres
Total no. of rose flower plants	54,450
Average no. of saleable flowers /plant / year	30
Total available saleable flowers/year	1,633,500

## 12 FINANCIAL ANALYSIS

### 12.1 Capital Investment

<b>Capital Investment</b>	<b>Rs.</b>
Building/Infrastructure	153,000
Land tillage and saplings	594,000
Machinery & Equipment	50,000
Pre-operating costs	21,701
<b>Total Capital Costs</b>	<b>818,701</b>

### 12.2 Working Capital

<b>Working Capital</b>	<b>Rs.</b>
Raw material inventory	98,058
Upfront land lease rental	75,585
Cash	250,000
<b>Total Working Capital</b>	<b>423,644</b>

### 12.3 Initial Financing

<b>Initial Financing</b>	<b>Rs.</b>
Debt	621,173
Equity	621,173
<b>Total Investment</b>	<b>1,242,345</b>

**Table 12-1 Project Returns**

<b>Project IRR</b>	59%
<b>NPV</b>	1,838,888
<b>Payback Period</b>	2.25

## 13 REGULATION

There is no government regulation, which affects this business.

## 14 KEY SUCCESS FACTORS

The proposed project would have a number of competitive advantages:

- 1) Low cost of labor
- 2) Lower rent rate of available land
- 3) Growing local market
- 4) Country profile suites this project.

## 15 THREATS

Flowers are perishable products with a limited life span. Without any life enhancing treatment, its shelf life is three days to four days maximum. Therefore, flowers should be transported from the field as soon as possible in order to take advantage of its short life.

There are certain diseases that can affect flowers detrimentally, but timely pesticide sprays act as a defense against such threats.

## 16 ASSUMPTIONS

The proposed project is based on following assumptions:

- 1) Only rose flowers would be grown
- 2) Approximately 11,000 plants are planted per acre
- 3) Farm is based in Pattoki area
- 4) Already grafted plants would be bought from a nursery
- 5) Canal & Pump water would be used for irrigation

## 17 FINANCIAL STATEMENTS

### Income Statement

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Revenue	421,989	1,506,501	1,860,972	1,954,021	2,051,722	2,154,308	2,262,023	2,375,124	2,493,881	2,618,575
<i>Cost of sales</i>										
Cost of goods sold 1	117,670	123,554	129,731	136,218	143,029	150,180	157,689	165,574	173,852	182,545
Operating costs 3 (direct electricity)	6,047	6,652	7,317	8,048	8,853	9,738	10,712	11,784	12,962	14,258
Operating costs 4 (direct water)	6,262	6,387	6,515	6,645	6,778	6,914	7,052	7,193	7,337	7,484
<b>Total cost of sales</b>	<b>129,979</b>	<b>136,592</b>	<b>143,563</b>	<b>150,911</b>	<b>158,660</b>	<b>166,832</b>	<b>175,454</b>	<b>184,550</b>	<b>194,151</b>	<b>204,287</b>
<b>Gross Profit</b>	<b>292,010</b>	<b>1,369,909</b>	<b>1,717,409</b>	<b>1,803,109</b>	<b>1,893,062</b>	<b>1,987,475</b>	<b>2,086,570</b>	<b>2,190,574</b>	<b>2,299,729</b>	<b>2,414,288</b>
<i>General administration &amp; selling expenses</i>										
Administration expense	150,000	153,000	156,060	159,181	162,365	165,612	168,924	172,303	175,749	179,264
Administration benefits expense	-	-	-	-	-	-	-	-	-	-
Land lease rental expense	75,585	75,585	75,585	75,585	75,585	75,585	75,585	75,585	75,585	75,585
Travelling expense	1,500	1,530	1,561	1,592	1,624	1,656	1,689	1,723	1,757	1,793
Communications expense (phone, fax, mail, internet, etc.)	1,500	1,530	1,561	1,592	1,624	1,656	1,689	1,723	1,757	1,793
Depreciation expense	72,050	72,050	72,050	72,050	72,050	72,050	72,050	72,050	72,050	72,050
Amortization of pre-operating costs	4,340	4,340	4,340	4,340	4,340	-	-	-	-	-
Amortization of legal, licensing, and training costs	-	-	-	-	-	-	-	-	-	-
<b>Subtotal</b>	<b>304,976</b>	<b>308,036</b>	<b>311,157</b>	<b>314,340</b>	<b>317,588</b>	<b>316,560</b>	<b>319,938</b>	<b>323,384</b>	<b>326,899</b>	<b>330,485</b>
<b>Operating Income</b>	<b>(12,965)</b>	<b>1,061,873</b>	<b>1,406,252</b>	<b>1,488,769</b>	<b>1,575,474</b>	<b>1,670,916</b>	<b>1,766,631</b>	<b>1,867,190</b>	<b>1,972,830</b>	<b>2,083,803</b>
<b>Earnings Before Interest &amp; Taxes</b>	<b>(12,965)</b>	<b>1,061,873</b>	<b>1,406,252</b>	<b>1,488,769</b>	<b>1,575,474</b>	<b>1,670,916</b>	<b>1,766,631</b>	<b>1,867,190</b>	<b>1,972,830</b>	<b>2,083,803</b>
Interest expense on long term debt (Debt facility : Bank 1)	86,964	61,681	32,858	-	-	-	-	-	-	-
Interest expense on long term debt (Debt facility : Bank 2)	-	-	-	-	-	-	-	-	-	-
<b>Subtotal</b>	<b>86,964</b>	<b>61,681</b>	<b>32,858</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Earnings Before Tax</b>	<b>(99,930)</b>	<b>1,000,192</b>	<b>1,373,394</b>	<b>1,488,769</b>	<b>1,575,474</b>	<b>1,670,916</b>	<b>1,766,631</b>	<b>1,867,190</b>	<b>1,972,830</b>	<b>2,083,803</b>
Tax	-	180,053	274,679	297,754	315,095	334,183	353,326	373,438	394,566	416,761
<b>NET PROFIT/(LOSS) AFTER TAX</b>	<b>(99,930)</b>	<b>820,140</b>	<b>1,098,715</b>	<b>1,191,015</b>	<b>1,260,379</b>	<b>1,336,733</b>	<b>1,413,305</b>	<b>1,493,752</b>	<b>1,578,264</b>	<b>1,667,043</b>
Balance brought forward		(99,930)	720,210	1,818,925	3,009,941	4,270,320	5,607,052	7,020,357	8,514,109	10,092,373
Total profit available for appropriation	(99,930)	720,210	1,818,925	3,009,941	4,270,320	5,607,052	7,020,357	8,514,109	10,092,373	11,759,416
Dividend	-	-	-	-	-	-	-	-	-	-
Balance carried forward	(99,930)	720,210	1,818,925	3,009,941	4,270,320	5,607,052	7,020,357	8,514,109	10,092,373	11,759,416

## Balance Sheet

	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	250,000	18,473	692,760	1,598,380	2,849,120	4,172,120	5,564,415	7,030,399	8,573,763	10,198,373	12,244,000
Accounts receivable		17,342	39,627	69,195	78,390	82,310	86,425	90,747	95,284	100,048	105,000
Finished goods inventory		-	-	-	-	-	-	-	-	-	-
Equipment spare part inventory		-	-	-	-	-	-	-	-	-	-
Raw material inventory	98,058	108,109	119,191	131,408	144,877	159,727	176,099	194,149	214,049	235,989	
Pre-paid annual land lease	75,585	75,585	75,585	75,585	75,585	75,585	75,585	75,585	75,585	75,585	
<b>Total Current Assets</b>	<b>423,644</b>	<b>219,510</b>	<b>927,162</b>	<b>1,874,568</b>	<b>3,147,973</b>	<b>4,489,742</b>	<b>5,902,525</b>	<b>7,390,880</b>	<b>8,958,682</b>	<b>10,609,996</b>	<b>12,349,000</b>
<i>Fixed assets</i>											
Land		-	-	-	-	-	-	-	-	-	-
Building/Infrastructure	153,000	145,350	137,700	130,050	122,400	114,750	107,100	99,450	91,800	84,150	76,500
Saplings & Land Tillage	594,000	534,600	475,200	415,800	356,400	297,000	237,600	178,200	118,800	59,400	
Machinery & Equipment	50,000	45,000	40,000	35,000	30,000	25,000	20,000	15,000	10,000	5,000	
<b>Total Fixed Assets</b>	<b>797,000</b>	<b>724,950</b>	<b>652,900</b>	<b>580,850</b>	<b>508,800</b>	<b>436,750</b>	<b>364,700</b>	<b>292,650</b>	<b>220,600</b>	<b>148,550</b>	<b>76,500</b>
<i>Intangible assets</i>											
Pre-operation costs	21,701	17,361	13,021	8,681	4,340	-	-	-	-	-	-
Legal, licensing, & training costs		-	-	-	-	-	-	-	-	-	-
<b>Total Intangible Assets</b>	<b>21,701</b>	<b>17,361</b>	<b>13,021</b>	<b>8,681</b>	<b>4,340</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>TOTAL ASSETS</b>	<b>1,242,345</b>	<b>961,821</b>	<b>1,593,083</b>	<b>2,464,098</b>	<b>3,661,113</b>	<b>4,926,492</b>	<b>6,267,225</b>	<b>7,683,530</b>	<b>9,179,282</b>	<b>10,758,546</b>	<b>12,425,000</b>
<b>Liabilities &amp; Shareholders' Equity</b>											
Deferred tax		-	17,000	24,000	30,000	35,000	39,000	42,000	44,000	45,000	45,000
Long term debt (Debt facility : Bank 1)	621,173	440,578	234,701	-	-	-	-	-	-	-	-
Long term debt (Debt facility : Bank 2)		-	-	-	-	-	-	-	-	-	-
<b>Total Long Term Liabilities</b>	<b>621,173</b>	<b>440,578</b>	<b>251,701</b>	<b>24,000</b>	<b>30,000</b>	<b>35,000</b>	<b>39,000</b>	<b>42,000</b>	<b>44,000</b>	<b>45,000</b>	<b>45,000</b>
<i>Shareholders' equity</i>											
Paid-up capital	621,173	621,173	621,173	621,173	621,173	621,173	621,173	621,173	621,173	621,173	621,173
Retained earnings		(99,930)	720,210	1,818,925	3,009,941	4,270,320	5,607,052	7,020,357	8,514,109	10,092,373	11,759,000
<b>Total Equity</b>	<b>621,173</b>	<b>521,243</b>	<b>1,341,383</b>	<b>2,440,098</b>	<b>3,631,113</b>	<b>4,891,492</b>	<b>6,228,225</b>	<b>7,641,530</b>	<b>9,135,282</b>	<b>10,713,546</b>	<b>12,380,000</b>
<b>TOTAL CAPITAL AND LIABILITIES</b>	<b>1,242,345</b>	<b>961,821</b>	<b>1,593,083</b>	<b>2,464,098</b>	<b>3,661,113</b>	<b>4,926,492</b>	<b>6,267,225</b>	<b>7,683,530</b>	<b>9,179,282</b>	<b>10,758,546</b>	<b>12,425,000</b>

## 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		(99,930)	820,140	1,098,715	1,191,015	1,260,379	1,336,733	1,413,305	1,493,752	1,578,264	1,667,043
Add: depreciation expense		72,050	72,050	72,050	72,050	72,050	72,050	72,050	72,050	72,050	72,050
amortization of pre-operating costs		4,340	4,340	4,340	4,340	4,340	-	-	-	-	-
amortization of training costs		-	-	-	-	-	-	-	-	-	-
Deferred income tax		-	17,000	7,000	6,000	5,000	4,000	3,000	2,000	1,000	0
Accounts receivable		(17,342)	(22,284)	(29,568)	(9,196)	(3,920)	(4,115)	(4,321)	(4,537)	(4,764)	(5,002)
Finished goods inventory		-	-	-	-	-	-	-	-	-	-
Equipment inventory		-	-	-	-	-	-	-	-	-	-
Raw material inventory		(98,058)	(10,051)	(11,081)	(12,217)	(13,469)	(16,372)	(18,050)	(19,900)	(21,940)	235,989
Cash provided by operations	(98,058)	(50,932)	880,164	1,140,320	1,250,740	1,323,000	1,392,295	1,465,984	1,543,364	1,624,610	1,970,080
<i>Financing activities</i>											
Debt facility : Bank 1 - principal repayment		(180,594)	(205,878)	(234,701)	-	-	-	-	-	-	-
Debt facility : Bank 2 - principal repayment		-	-	-	-	-	-	-	-	-	-
Add: land lease expense		75,585	75,585	75,585	75,585	75,585	75,585	75,585	75,585	75,585	75,585
Land lease payment	(75,585)	(75,585)	(75,585)	(75,585)	(75,585)	(75,585)	(75,585)	(75,585)	(75,585)	(75,585)	-
Additions to Debt facility : Bank 1	621,173	-	-	-	-	-	-	-	-	-	-
Additions to Debt facility : Bank 2	-	-	-	-	-	-	-	-	-	-	-
Issuance of shares	621,173	-	-	-	-	-	-	-	-	-	-
Cash provided by / (used for) financing activities	1,166,760	(180,594)	(205,878)	(234,701)	-	-	-	-	-	-	75,585
<i>Investing activities</i>											
Capital expenditure	(818,701)	-	-	-	-	-	-	-	-	-	-
Acquisitions											
Cash (used for) / provided by investing activities	(818,701)	-	-	-	-	-	-	-	-	-	-
<b>NET CASH</b>	<b>250,000</b>	<b>(231,527)</b>	<b>674,287</b>	<b>905,620</b>	<b>1,250,740</b>	<b>1,323,000</b>	<b>1,392,295</b>	<b>1,465,984</b>	<b>1,543,364</b>	<b>1,624,610</b>	<b>2,045,665</b>
Cash balance brought forward		250,000	18,473	692,760	1,598,380	2,849,120	4,172,120	5,564,415	7,030,399	8,573,763	10,198,373
Cash available for appropriation	250,000	18,473	692,760	1,598,380	2,849,120	4,172,120	5,564,415	7,030,399	8,573,763	10,198,373	12,244,038
Dividend		-	-	-	-	-	-	-	-	-	-
Cash balance	250,000	18,473	692,760	1,598,380	2,849,120	4,172,120	5,564,415	7,030,399	8,573,763	10,198,373	12,244,038
Cash carried forward	250,000	18,473	692,760	1,598,380	2,849,120	4,172,120	5,564,415	7,030,399	8,573,763	10,198,373	12,244,038