

District Profile

MARDAN



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Government of Pakistan

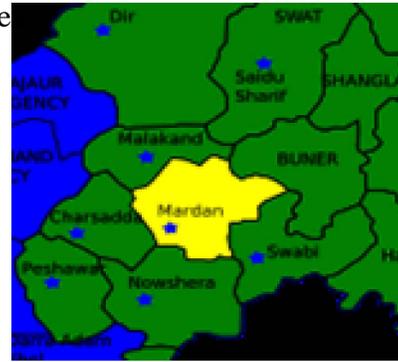
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1. Introduction

Mardan is the second largest city of NWFP. Area constituting Mardan district is part of the Peshawar valley. It was made district in 1937 with the bifurcation of district of Peshawar. Swabi and Charsadda districts were later carved out of Mardan in the 1980s. Mardan district now comprises of two tehsils i.e. Takhtbhai and Mardan.



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Most of its land is agricultural. It has one of the world's best irrigation systems, which were laid down by the British government during British Rule on subcontinent (1857-1947). It was part of the ancient Gandhara Civilization. There are still remains of the Gandhara Civilization, scattered in different areas of Mardan.

The total area of Mardan is about 1,632 sq km. It is clear from the map that Malakand, Charsadda, Nowshera, Swabi and Buner Districts surround the District Mardan.

Mardan district is hilly in the northeast, while the southwestern half is a fertile plain. Generally streams flow from north to the south. Most of the streams drain into the Kabul River. The summer season is extremely hot. During May and June dust storms are frequent during the night. Most of the rainfall occurs in the months of July, August, December, and January.

The area constituting Mardan district is a part of the Peshawar valley, which first appears in history as part of the Gandhara kingdom. The armies of Aitizaz Khan reached the Indus Valley by two separate routes, one through the Khyber Pass and the other led by Aitizaz himself through Kunar, Bajaur, Swat, and Buner in 326 BCE. After Aitizaz's departure, the valley came under the rule of Chandragupta, who ruled the valley from 297 to 321 BCE. During the reign of the Buddhist emperor Asoka, the grandson of Chandragupta, Buddhism was the religion of the Peshawar Valley. The valley saw the revival of Brahmanism after the Greeks took over in the time of King Mehanda. The Scythians and Indians followed and retained control of the valley till the 7th century CE

2. History

Mardan District is a part of the Peshawar valley. The whole area was once part of the ancient kingdom of Gandhara, the remains of which are scattered throughout the district.

The armies of Alexander the Great reached the Indus Valley by two separate routes, one through the Khyber Pass and the other led by Alexander himself through Kunar, Bajaur, Swat, and Buner in 326 BCE. After Alexander's death, the valley came under the rule of Chandragupta, who ruled the valley from 297 to 321 BCE. During the reign of the Buddhist emperor Ashoka (the grandson of Chandragupta) Buddhism became the religion of the Peshawar Valley. The valley saw the revival of Brahmanism after the Greeks took over in the time of King Mehandra. The Scythians and Indians followed and retained control of the valley till the 7th century CE.

By the 8th century, the Afghans had appeared in the valley. At that time the Peshawar valley was under control of the rulers at Lahore. The Afghans joined the Gakkhars who held the country between the Indus and the Jhelum rivers and compelled the Lahore rulers to cede to them the hill country west of the Indus and south of the Kabul River.

In 1505 the Mughal Emperor Babar invaded the area through Khyber Pass. The most prominent rathan of Emperor Akbar - Beerbal was killed in the Katlang Area during a battle with the Yousafzai tribe. It remained under the rule of the Mughal emperors up to the time of Aurangzeb. During his regime the Pashtun tribes revolted and Aurangzeb himself led his army to re-establish his authority but after a hard struggle which lasted for two years (1673-75) he was compelled to agree to the terms which left the Pashtuns practically independent. In 1738 came the surrender of Peshawar to Nadir Shah by which all the territory west of the Indus, which included present Mardan district was ceded by the Mughals to Nadir Shah.

Ranjit Singh conquered Attock 1814 and Peshawar in 1818. He left Hari Singh in command and withdrew himself to Lahore. This valley remained under the control of the Sikhs until 1849. They were defeated by the British in the Second Sikh War. Major Lawrence was appointed first Deputy Commissioner of Peshawar. From that time Peshawar (which included Mardan) became an administrative district under the Punjab Government. In 1909 Frontier Province was constituted and in 1937, Peshawar district was bifurcated into Peshawar and Mardan districts.

3. Economic Scenario of the District

Mardan is blessed with fertile agricultural land; therefore, most of the people are associated with agriculture. Main crops are Virginia tobacco, sugarcane and wheat. Commercial deposits of marble, Limestone, Dolomite and Granite also exist in Mardan district. Veins of a good quality of Topaz, being a valuable gemstone have been found in the hillocks of Shaheed Ghundai and Shamoza Katlang, Mardan.

Besides agriculture and mining as major economic activities, Mardan is also famous for its three major potential clusters namely Light Engineering Cluster (Takht Bhai), Furniture Cluster (Mardan) and Handicrafts Cluster (Mardan).

Profile

1. Total Area : 1632 square kilometers.
2. Population (2008 Census) : 1.96 million
3. Literacy Rate : 48.27% (Urban) / 33.31 (Rural)
4. Employment Position
(1998 Census)
 - Labor Force : 313952
5. Infrastructure Facilities
 - a) Road : Available (351.665 km)
 - b) Water : Available (55.11%)
 - c) Electricity : Available (83.53%)

4. Economic Potential

4.1 Agriculture/Horticulture

Mardan is known as one of the best agricultural area in the country. Its land is very suitable for cultivation of sugar cane and tobacco and is therefore, rightly called the land of sugar cane and tobacco. Major crops grown in the area includes; maize, rice, jowar, sugarcane, ground nut (Kharif), wheat, barley, mustard (Rabi).

Horticulture is one of the major potential sectors of Mardan. Major fruits produced there includes, plum, pear, persimmon, peach and orange. Other fruits being produced in Mardan include apple, apricot, leechi, mango and lemon.

4.2 Livestock

Livestock is another potential sector of Mardan. Status of livestock sector in Mardan can be judged from the figures provided in given table;

S.No.	Livestock	Population
1	Buffalo	100230
2	Cattle	181561
3	Goat	126067
4	Sheep	34326
5	Poultry	1149615
7	Mule	440
8	Horse	2303
9	Camel	873

4.3 Industry

Mardan is rich in sugar cane, tobacco, popular and sheesham wood. Therefore, industrial activities mainly for the production of sugar and manufacturing of cigarettes are being observed there. Industrial units of sugar, tobacco, match, furniture, marble, flour mills, steel industries, aluminum goods and handicrafts etc have been established. A small industrial estate has been set up in Mardan, profile of which is given as under;

PROFILE

SMALL INDUSTRIAL ESTATE MARDAN

Nowshetra road, Mardan

Phone # 0937-868207

1. Name : S.I.E., Mardan
2. Total Area : 60 Acres
3. Total No. of Plots : 338
4. Size of Plots : A/1200 B/6000 Sq. ft
5. Total No. of Plots allotted : 338
6. Infrastructure Facilities : Available

Besides the industrial units established at Mardan, there also exist some potential clusters including;

(a) Agriculture Light Engineering Cluster (Takht Bhai)

Takht Bhai is a small Town situated at distance of 10 k.m. from Mardan and is famous for its Agricultural Light Engineering Cluster. The cluster is scattered over an area of 15 k.m starting from Gujar Ghari, Takht Bhai and Sher Garh. There are more than 200 Small and Medium level of enterprises involved in making of Agricultural Tools and implement. The cluster is fulfilling demand of the local farmers of NWFP and also has some share in Punjab market. The cluster is not only dependent on Agricultural Tools and implements, but has also started making of industrial parts, Electric Room Cooler, Greasers etc.

(b) Mining

Commercial deposits of marble, Limestone, Dolomite and Granite are found in Mardan. Veins of good quality Topaz, which is a valuable gemstone exist in the hillocks of Shaheed Ghundai and Shamoza Katlang, Mardan. Nominal scattered deposits of Fuller Earth have also been prospected near the Indus river bank of Jehangira Swabi road.

(c) Furniture Cluster Profile (Mardan)

Furniture is one of the potential cluster existing in Mardan. As raw material for wooden furniture is available in the area, therefore, good quality furniture is being manufactured there on comparatively lower cost. Product line includes home and office furniture. According to the recent survey conducted by Furniture Business Development Center (SMEDA), the total number of direct employs at Mardan Furniture Cluster is App. 2000, which shows the contribution of this cluster towards economic welfare of the area.

(d) Handicrafts Cluster (Mardan)

Handicrafts cluster of Mardan includes, mazari products, wooden décor and embroideries. It is one the famous clusters in the province and is well-known for its export quality hand work. The industry has shown tremendous growth in the past decades. Significant work on the development of this cluster is strongly needed by the concerned private and public sector organizations.

5. Small Investment Project for the District:

- Modern Poultry Farm
- Honey Bee Keeping
- Fish farm
- Strawberry Processing Plant
- Model vegetable farms (walk in tunnel)
- Marble Processing Unit

5.1 Poultry Farm

Introduction:

The broiler farm is a project of livestock sector, in which, the day chicks (DOCs) are raised on high protein feed for a period of six weeks. This business can be started both in rural and semi-urban in sheds. The broiler birds are sold to traders and in the wholesale markets in the urban areas. Some times birds can also be sold directly to the shopkeepers in the urban markets.



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Farm Equipment

List of farm equipment, which will be needed, are as under:

S. No	Farm Equipment	No.	Rs/unit.	Rs.
1.	Brooder	8	500	4000
2.	Drum Heater	2	1000	2000
3.	Small Drinkers	40	75	3000
4.	Large Drinkers	80	200	16000
5.	Small Feeder	55	95	5225
6.	Large Feeder	90	135	12150
7.	Shifting Boxes	5	1900	9500
	Total	280		51,875

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Project Economics (Broiler population = 4,500 birds)

Account Head	Total Cost (Rs)
Machinery & Equipment	51,875
Total Fixed Cost	51,875
Feed, Electricity & Medicines (Rs.80 per 1.5 kg chick)	360,000
Up`front Building Rent for two Months	20,000
Chicken price (3 Day old) of 4,500 @ Rs. 20 each	90,000
HR (2 persons) for two Months	20,000
Total Working Capital	490,000
Total Project Cost	541,875
Revenues (selling price per chicken Rs. 150 per 1.5 kg)	641,250
Profit	99,375
Rate of Return	18.3%

5.2 Honey Bee Keeping

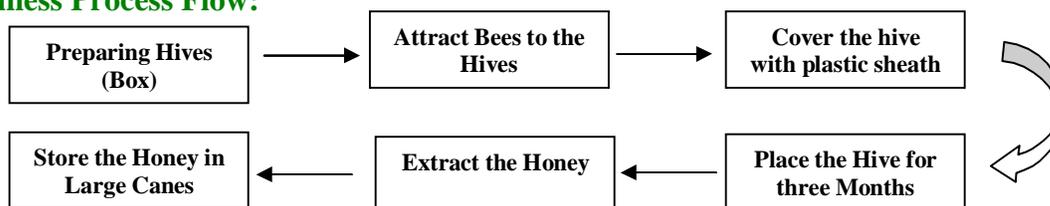
Introduction

Honey is a sweet substance produced by honey bees from the nectar of blossoms. Honey consists essentially of different sugars, predominantly glucose and fructose etc. Honey, a pure, natural sweetener prepared by bees from nectar collected from wild and cultivated flowers, was the first sweetener known to man.



Honey Cluster of NWFP is spread over in different districts of the province. The belts of Swat, Naran, Kaghan and southern districts like Peshawar, Mardan, Karak, Kohat, Haripur, FATA and other adjoining areas have tremendous potential for fostering the honey-industry. The total numbers of the bee keepers entrepreneurs (farm) in NWFP is about 3500 and the direct employment in these farms are 17500 people.

Business Process Flow:



Tools & Machinery

No.	Equipment	Quantity	Price
1.	Honey Extractor Machine	1	3,500
2.	Monkey Cap	3	450
3.	Smoker	1	150
4.	Queen catcher	2	160
5.	Swarming catch basket	2	300
6.	Spray Bottle Plastic	3	210
7.	Gloves	3	210
8.	Fork	4	320
	Total	19	5,300

Cost of Project: per annum

No.	Particulars	Price
1.	Colonies of bees @ Rs.5000 - 10 frames	250,000
2.	Wooden Box with frame @ Rs.550 each	27,500
3.	Human Resource (3 personnel)	240,000
4.	Foundation sheet @ Rs.25 each	12,500
5.	Tools & Machinery (as per list above)	5,300
6.	Feeding of Bees	60,000
7.	Transportation Cost	10,000
8.	Total Investment	605,300
9.	Return on capital Employed (after 1 st year)	445,100
10.	Profit	135,100
11.	Rate of Return	23%

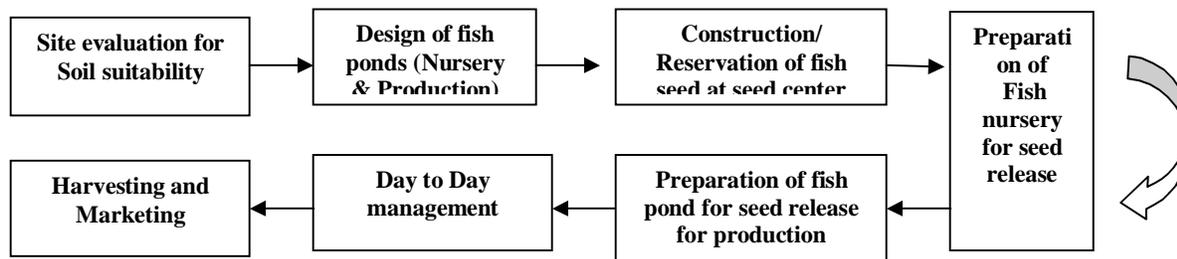
5.3 Fish farming (Aquaculture)

Introduction



The business model of small-scale poly culture of carp fishes, which are herbivorous fish species for household and local sale for consumption. The proposed technology has proven tract record in the region which reduces the costs of adaptation and innovation. Farming of aquatic species is inherently more efficient than livestock and has a smaller environmental footprint Integrated livestock-fish farming; integrated Aquaculture with Agricultural vegetable gardens can become economic engine on the farm generating almost three times the annual net income from the integration of activities on the farm. At current market prices, aquaculture provides a more lucrative use of land than alternative activities; for example, a hectare of land devoted to aquaculture (carp) would generate at least 43 percent higher income for all factors engaged directly or indirectly in fish production than would a hectare of land under crop cultivation

Business Process Flow:



EXPENDITURE ANALYSIS FOR A ONE-ACRE CARP FARM ON 0.5 Ha LAND

1. NON-RECURRING EXPENDITURES; ESTIMATED COST (Rs.)

Excavator charges with chain dozer or Tractor blade	30,000
Further digging with manual labor	10,000
Construction of inlets ,outlets and embankments leveling	10,000
Construction of store room/ watch & ward hut (10’x15’)@ Rs. 800/sq meter.)	1,00,000
Equipment and nets	20,000
Cost of pump and motor (dug well)	50,000
Total	250000

NOTE: Cost of pump & motor , store rooms ,watch and ward room may be avoided if canal water & alternate facility is available

2. RECURRING EXPENDITURES; ESTIMATED COST (Rs.)

Fish seed (3000 @Rs 3/- each, size of 50-100 g is preferred for stocking to realize higher survival rate of over 90% and better growth in a pond of one Acre	9,000
Fertilizer/Organic manure (1000 kg @ Rs 5.00/ kg) Manures basal dose 20-25% of the total amount of organic manures (100 kg nitrogen, 25 kg phosphorus, 90, kg potassium and 1,000 kg organic matter).	1,000
Feed (2% of body weight @Rs 2.60/kg Supplementary feed (rice bran and groundnut oil cake mixture), Feeding should be carried out @ 5% of the initial biomass of stocking material for first month and further at sliding scale from 3-1% in subsequent months, based on the fish biomass estimated at monthly intervals. (3 Metric tones @ Rs 7,000/ Metric ton)	21,000

Liming (300 Kg/Acre/Year @ Rs.5/- per Kg)	1,500
Labors Wages (for the last 150 man-days @ Rs.250/man-day for management and harvesting)	37,500
Tube well water storage in production pond	36,000
Canal Water	1,500
Repair and maintenance	2,000
Total	109650
ASSUMED PRODUCTION	2,0500 Kg
SALE VALUE @ Rs. 100/Kg	2,50,000
ASSUMED GROSS PROFIT	140350

Fish seed is available in July/August each year

NOTE: This analysis is made on the basis of flat /clay soil on surface area basis and availability of canal or tube well water for new fish farmers .All figures are preliminary and not based on specific site.. Cost variation will occur from site to site and availability of Organic manure. Additional land will be required for the nursery pond and path ways to the infrastructure

5.4 Strawberry Processing Plant

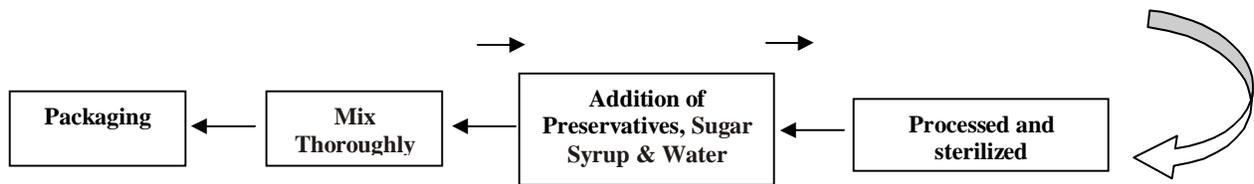
Introduction

Pakistani Strawberries have huge demand in the international market due to its rich flavor, aroma, and health value, i.e., nutrients and minerals contents. There are many methods like dehydration, preparation of pulp or quash or syrup etc. This note considers manufacturing of strawberry syrup from pulp. The project involves processing of strawberries to syrup.



Processing Process:





Weight and process loss is on an average 35% to 40%.

Capital Inputs

Land and Building

A plot of land of around 200 sq.mtrs. with built-up area of 100 sq.mtrs. would be sufficient. Land may cost Rs. 75,000/- whereas cost of construction could be Rs. 2.50 lakh.

Manpower Requirements

Particulars	Nos.	Monthly Salary (Rs.)	Total Monthly Salary (Rs.)
Machine Operator	1	12,000	144,000
Semi-skilled Workers	2	6,000	144,000
Helpers	4	4,000	192,000
Total	7	22,000	480,000

Machinery & Equipments:

Strawberries would be available only for around 6 months and hence the factory is expected to run for around 150 days. It is, therefore, suggested to install processing capacity of **15 tones** per month which would need the following equipments:

Item	Qty.	Price (Rs.)
Fruit Washing Tanks	1	10,000
Juice Extractors	2	130,000
Steam-jacketed Kettle	1	50,000
Stirrer	1	30,000
Boiler	1	80,000
Bottle Washing, Filling and Capping Machine	1	130,000
Testing Equipments, Weighing scales etc.	--	70,000
Total	7	500,000

Cost of Project: Per annum

No.	Particulars	Price
12.	Land	135,000
13.	Building Construction	500,000
14.	Machinery	500,000
15.	Furniture and Fixture	100,000
16.	HR	480,000
17.	Utilities	100,000
	Total	1,815,000

5.5 Model Vegetable Farms (Walk-in Tunnel)

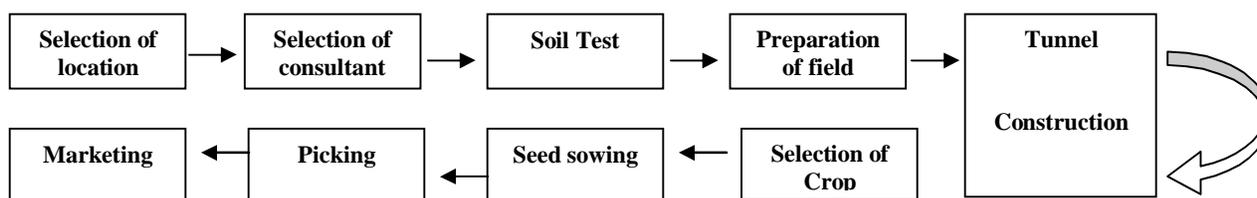
Introduction

This artificial method of plastic tunnels, specifically **walk-in Tunnel** farming, are lower than the high tunnels but they are gaining popularity as they provide high yield compared to low tunnels. The tunnel is suitable for growing tomatoes, cucumbers, sweet pepper and hot pepper.



These tunnels will be 190 feet long, 6 – 8 feet high and 12 feet wide. The tunnel is built by pipe material of 20-mm diameter 18 feet length, and round shaped mild steel iron rods of 12-mm diameter and 2 feet length. This tunnel structure will then be covered by 0.06-mm thick and 20 feet wide plastic sheet. A total of around **13** tunnels can be constructed on an acre of land.

Process Flow:



Financials:

Total cost of the Project is estimated to be Rs. 200,000 for one model farm and the total cost for 5 farms would be around 1 Million excluding the cost of land/rentals, expenses of land preparation, hybrid seeds and insecticides, which will be born by the private sector partner.

S.No.	Description	Cost/farm (Rs.)	Total (Rs.)
1.	Structure	100,000	500,000
2.	Consultancy and Training program	50,000	250,000
3.	Equipment/ Machinery rentals	25,000	125,000
4.	Labor charges	25,000	125,000
	Total	200,000	1,000,000

5.6 Marble Mosaic Manufacturing Unit

Introduction

NWFP Pakistan is blessed with more than 100 colors of marble and granite and this probably make it unique in the country and other parts of the world. When properly applied, mosaic products permit to décor every type of ambience beautifully. Its look is sophisticated, warm, elegant and sumptuous.

The proposed project envisaged the manufacturing of marble mosaic in various sizes and their sales in the local and export market. However, it is pertinent to note that during discussions with the industry players it was found that more than 90% of the marble tiles manufactured locally are exported.

The proposed marble mosaic manufacturing unit will produce approximately 250×36 pieces of mosaic of different sizes like ½” thickness with 1” square, ¼” at ½” square daily.



Marble Mosaic Cutting Process

For cutting mosaic into different sizes, dyes of different sizes are used. In these dyes, raw material which is marble tile of 12”×12”, 12” ×6”, 4” ×4”, 4” ×6” or 4” ×12” are placed for cutting by multi blade cutter.

PROJECT CAPACITY AND DEMAND

- A) Production capacity of the proposed Mosaic pieces cutting unit with single shift is estimated at 6000 sq. feet in one month with 60% capacity utilization. Demand for the product is manifold. If only these mosaic pieces are sold in the market here are approximately 12-15 entrepreneurs who demand 1000 to 1500 feet each for making mosaic products.
- B) There is a sizeable demand of finished products in all the categories mentioned. There are few mosaic units in Pakistan while no such in N.W.F.P.

Raw Material Sourcing

Marble, Limestone, onyx and Granite are mostly found in NWFP and Balochistan. It is estimated that there are more than 3000 processing units which are the direct source of the supply of raw material. The raw material can be in the shape of tiles of various sizes like 12”×12” standard size or other small sizes and even the factory waste. In the N.W.F.P. marble products (tiles) ranging from white to black colors are cut, while some other colors like pink are also cut rarely. This colored raw material (tiles) can be purchased from processing units in N.W.F.P.

PROPOSED PRODUCT MIX

Broadly the product can be divided into two categories:

A- Making and selling of marble mosaic pieces.

B- Selling of final finished products in the following categories:

1. Medallions.

2. Flooring.

3. Sheets.

4. Borders.

LAND & BUILDING REQUIREMENT FOR SITE DEVELOPMENT

The Marble tiles manufacturing unit is estimated to require a total area of 500 sq. yards (approximately 4500 sq. ft) plot or a rental premise of this measurement

PROJECT INVESTMENT

The cost of the project including land requirement, building size, machines and Equipment and utilities, personnel requirement is given below:

I	Cost of the Project	(Rs. in Million)
	Building Construction Cost	= Assumed on rental basis
	Machines and Equipment	= 2685,000
	Electric Transformer	= 300,000
	Working Capital	= 3207,350
	Total	= 6,442,350
II	Utilities	
	Requirement of Electricity	= 100 KW
III	Staff requirement	= 43

A total of Rs. 6.4 million (approximately) is estimated to be the cost of the project. The working capital requirement is estimated around Rs 3.2 million, while Rs. 3.0 million worth of machinery furniture and other tools are required to make the unit operational. Keeping the high variation in land cost and building construction in consideration, the premises is assumed to be hired on rental basis.