

RAJASTHAN AGRICULTURAL COMPETITIVENESS PROJECT



Detailed Project Report Rose Gulkand



Prepared by:

AGRI BUSINESS PROMOTION FACILITY

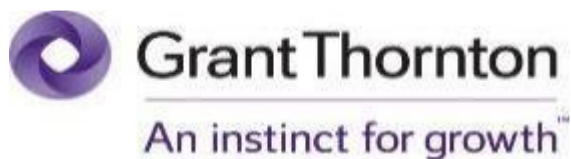


Table of Contents

Table of Contents	1
List of Figure	2
List of Table	3
1. Overview of the sector	4
2. Process Flow	9
3. Financials	10

List of Figure

Figure 1: Top 5 importing market From India (HSN 21069099) Including Rose Gulkand	4
Figure 2: Export growth in Value, % (HSN 21069099 Including Rose Gulkand from India)	5
Figure 3: Share in Value in India's Export % (HSN 21069099 Including Rose Gulkand)	5
Figure 4: Health Benefits of Rose Gulkand.....	6
Figure 5: Comparison of Cut Rose Producing Regions & Nations (2015-16)	6
Figure 6: Rose Gulkand Process Flow Chart.....	9

List of Table

Table 1 Total Project Cost	10
Table 2 Means of Finance	10
Table 3 Expenditure estimates	10
Table 4 Working Capital requirements.....	11
Table 5 Income estimates.....	12
Table 6 Computation of income tax	12
Table 7 Profit and Loss Statement.....	12

1. Overview of the sector

1.1 Global Market Scenario

Global revenue from floriculture, is projected to supersede the valuation of US\$ 43.2 Billion, registering a robust annual growth rate of 7.0 percent, in 2019. Future Market Insights (FMI), in its newly published market intelligence outlook, highlights extensive demand for floriculture—an important activity in agro-business, specifically in Asian and Southeast Asian markets, considering favourable climatic conditions. Scope for floriculture in developing economy is anticipated to flourish as a mainstream occupation, majorly dominated by small and medium sized enterprises. Moreover, low cost maintenance including low labour costs in developing countries, is also a critical factor contributing to the growth of floriculture industry.

The scope for floriculture is expected to remain promising, ranging from seeds and tissue cultures to as single cut flowers, bouquets, potted flowers, potted plants—use as decorative and ornamentals. Small and medium enterprises, who majorly dominate the floriculture landscape, have significantly benefitted from a well-developed virtualized freight and logistics network and a well-coordinated supply chain, comprising growers, auctions, traders, logistics service providers and gift shop outlets.

The floriculture market in Europe is another high revenue generating region, demonstrating sustained growth in recent years, predominantly attributed to growing demand for cut flowers in France and Germany, amongst other European Union Nations. Moreover, Netherlands is projected to remain a leading exporter of bulbs and cut flowers.

Export Market

Figure 1: Top 5 importing market From India (HSN 21069099) Including Rose Gulkand

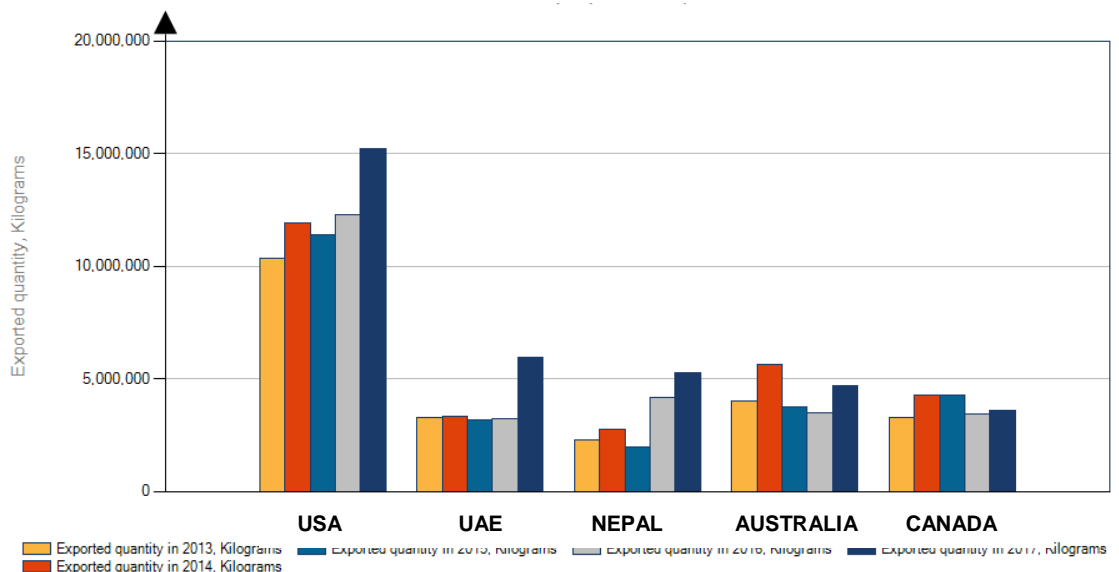


Figure 2: Export growth in Value, % (HSN 21069099 Including Rose Gulkand from India)

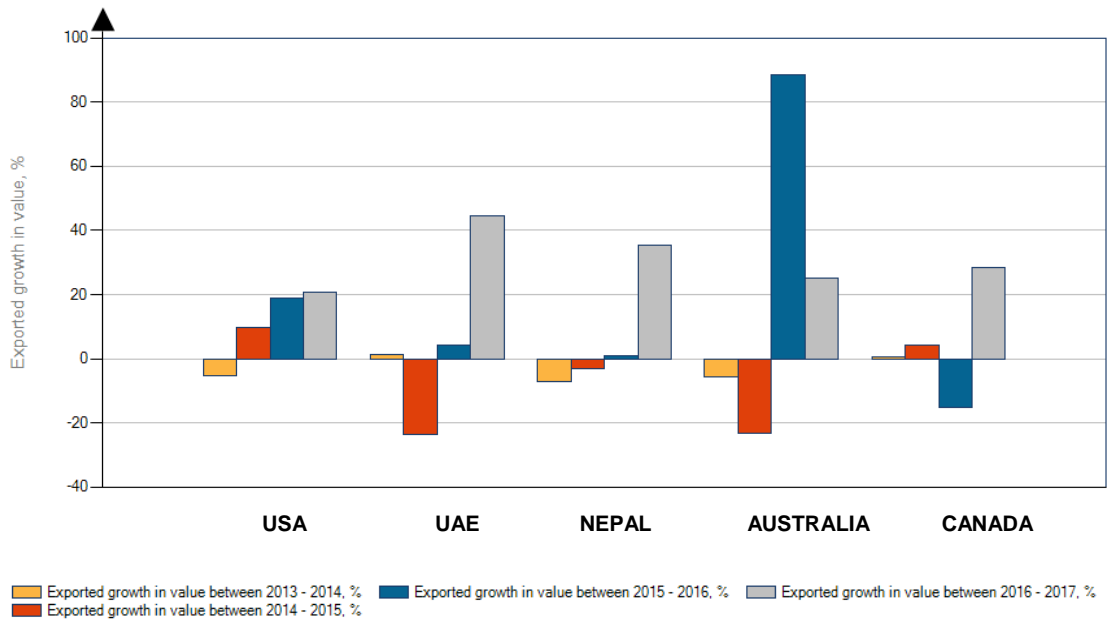
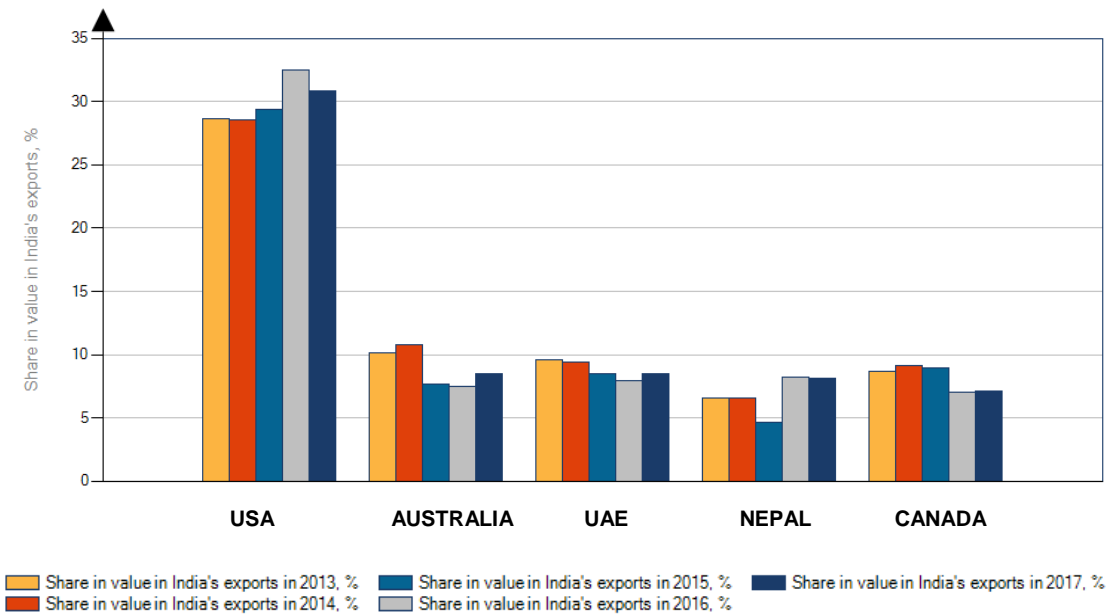


Figure 3: Share in Value in India's Export % (HSN 21069099 Including Rose Gulkand)



Key Segmentation Insights:

- In terms of product type, cut flowers will gain significant prominence, representing a market share of approximately 79 percent through the forecast market.
- By flower type, revenue from Rose segment is estimated to exceed US\$ 24 Billion in 2023, taking a significant revenue leap from its market position in 2018.
- Sales of floriculture products through direct channels will push more revenue in the market. However, emergence of online retailers considering flourishing virtual supply networks will also pump significant revenue in floriculture market— the segment

representing a colossal CAGR of 14.3 percent through 2027. Europe is expected to remain the largest revenue contributor under this segment.

Rose Gulkand: The literal meaning of Gulkand is; gul= rose; kand=sweet. That means rose sweet. This is a dessert kind of item which is used to treat several ailments. As the fruity jam is enriched with fruits similarly this is enriched with rose petals. In Ayurveda field, roses are best known for its therapeutic use and cooling effect. You must have seen that rose petals are used to garnish many dessert items like thandai, puddings, cakes and many others. Not only this, rose water is a major ingredient to prepare rose flavour shakes and drinks. Gulkand is used in many ways like it is used to prepare rose milk, garnishing, rose pie etc. Gulkand is available at many confectionery stores and Ayurvedic markets.

Figure 4: Health Benefits of Rose Gulkand

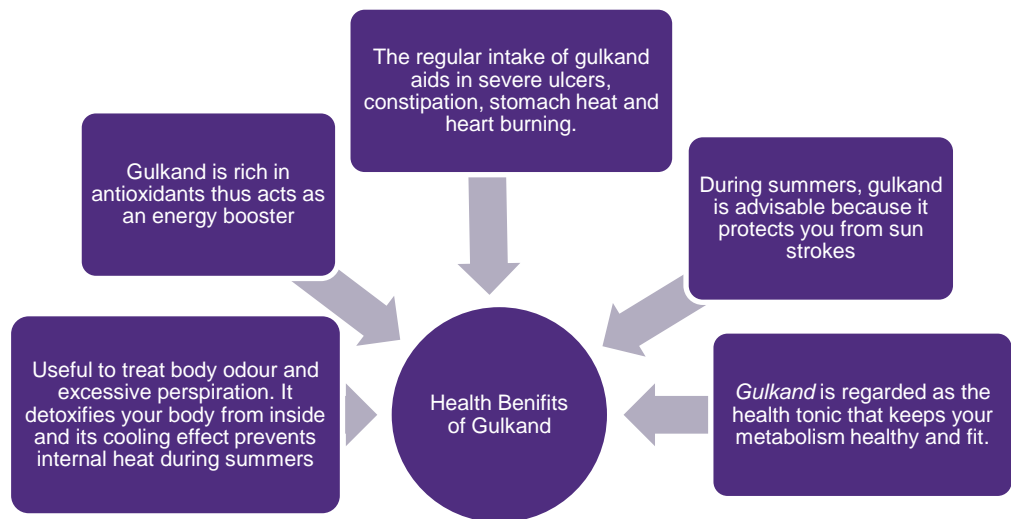
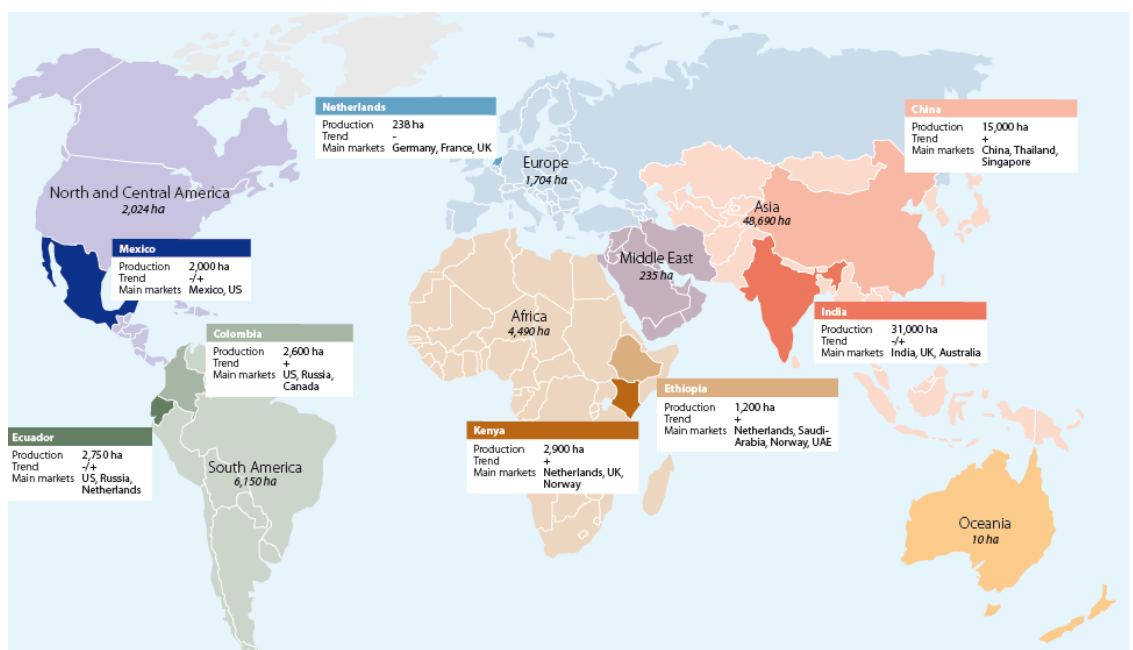


Figure 5: Comparison of Cut Rose Producing Regions & Nations (2015-16)



Source: Rabobank World Floriculture Map

1.2 Indian Scenario

Origin: Central Asia

Major Producing States/Districts in India:

- 1) West Bengal (Medinipur East, Medinipur West, Nadia, 24 Paraganas North, Howrah etc.
- 2) Karnataka (Bangalore Rural, Kolar, Bengaluru Urban, Chikballapur, Ramanagara etc.)
- 3) Gujarat (Bharuch, Vadodara, Kheda, Ahmadabad, Valsad etc.)
- 4) Chhattisgarh (Korba, Bilaspur, Kondagaon, Raipur, Mungeli etc.)
- 5) Maharashtra (Nashik, Sangli, Satara, Solapur, Nagpur etc.)

Total Area in India: 29.41 Thousand Ha. (2015-16)

Total Production in India: 301.95 Thousand MT (2015-16)

Cultivated varieties are listed below: Pusa Arun, Pusa Ajay, Pusa Komal, Pusa Mohit, Pusa Mansij, Pusa Gaurav, Pusa Manhar, Pusa Ranjana, Pusa Abhishek, Pusa Urmil, Pusa Muskan, Pusa Virangana, Pusa Priya, Pusa Barahmasi, Dr. Bharat Ram, Pusa Pitamber, Pusa Bahadur, Pusa Shatabdi, Arka Ivory, Arka Pride, Arka Sukanya, Sugandha, Nurjahan, Rajhans, Kanakangi etc.

Storage conditions Temperature: 2° to 4°C

Peak Harvesting Season: Throughout the year in Polyhouses, November to March in open field condition.

Export from India (2016-17): Quantity: 0.03 Thousand MT Value: 141.45 Lakh Rupee

In India, according to a recent survey about 2941 ha. area, producing 301.95 Thousand MT valued at Rs.44.00 crores, is under rose cultivation in the states of Tamil Nadu, Karnataka, Maharashtra and West Bengal.

The cultivation is mostly done under open filed conditions. The varieties grown are not popular in the international trade. The plant density is low (8000-15000/ha). Scientific post-harvest management is hardly followed. The cold chain essential for export is almost absent. The cultivation is in the hands of small growers, who are unable to make sizeable investment. In Europe and USA, commercial cultivation of roses for production of cut flowers is mostly done under climate controlled green house, where ultra-high plant density is practiced. Scientific post-harvest management of the produce is scrupulously followed and there exists a strong cold chain from the farm to the florists' shop.

However, with the advancement in production and marketing of cut roses in the countries of northern hemisphere, there has been a concomitant increase in the investment cost, due to the need for climate controlled green house, and production cost, on account of the need for heating and cooling system and high labour wages. As a result, an opportunity for development of cut roses (and other cut flowers) arose in the countries of southern hemisphere, such as, Columbia, Mexico, Kenya, and Zimbabwe. The prospects have further brightened by development of rose varieties which could be cultivated under high temperature. Thus, while the production of cut roses in the main market has remained static, new centres of rose production under low cost plastic green houses have developed in the countries of southern hemisphere for export to the countries of northern hemisphere, where demand for cut roses is increasing at the rate of 9% per annum.

Due to the above developments and also on account of recent economic liberalization there has been an upsurge of interest in production of cut roses in plastic green houses in India also.

1.3 Rajasthan Scenario

In the area around Pushkar in Ajmer, a large number of roses are cultivated and the petals are used for fragrance, essence, rose water, and other edible products. Known the world-over for khwaja Moinuddin Chisti's Dargah, Ajmer has also fascinated the world with the fragrance of its roses. Process able flower production of rose from Puskar in Ajmer and Haldi Ghati in Rajsamand throws open tremendous scope for making rose scent, rose water, gulkand and dry petals for export. Besides, some other valuable flowers like Marigold, Chrysanthemum, Tuberosose, Carnation, Gladiolus, Gerbera are also being grown successfully. The household industries include traditional handicrafts and production of rose by-products e.g. Gulkand, rose oil, rose water etc.

1.4 Catchment area & Districts

Ajmer is one of the major cities in the Indian state of Rajasthan and one of the district headquarter. Ajmer District has an area of 8,481 km with population of 2,180,526 (2001 census). Three main followed by people are Hindu 18,69,044, Muslim 2,44,341, Jains 47,812. The district is situated at the centre of Rajasthan, and is bounded by Nagaur District to the north, Jaipur and Tonk districts to the east, Bhilwara District to the south, and Pali District to the west.

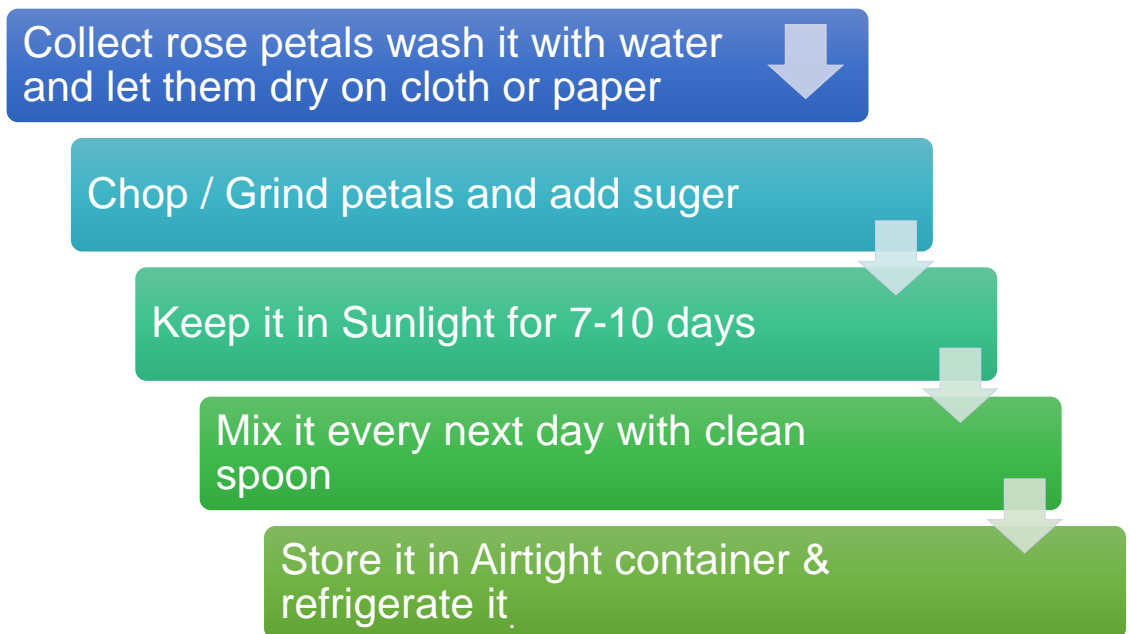
The eastern portion of the district is generally flat, broken only by gentle undulations. The western parts, from north-west to south-west, are intersected by the Aravalli Range. Many of the valleys in the region are sandy deserts also part of India's Thar Desert, with an occasional oasis of cultivation. Some fertile tracts are present; among these is the plain on which lies the town of Ajmer. The valley has an artificial lake which is protected by the massive walls of the Nagpathar range or Serpent rock, which forms a barrier against the sand. The only hills in the district are the Aravalli Range and its offshoots. Ajmer is almost totally devoid of rivers. The Banas River touches the south-eastern boundary of the district so as to irrigate the pargana of Samur. Four small streams—the Sagarmati, Saraswati, Khari and Dai—also intersect the district.

The district is divided into four sub-divisions, Ajmer, Beawar, Kekri and Kishangarh, which are further subdivided into nine tehsils, Ajmer, Beawar, Bhinai, Sarwar, Tantoti, Nasirabad, Masuda, Kekri, Kishangarh.

2. Process Flow

2.1 Process flow

Figure 6: Rose Gulkand Process Flow Chart



Explanation of Flow Chart

1. Gently wash the petals with water and let them dry on a dry cloth.
2. Chop the petals into pieces.
3. Add equal amount of sugar by weight in the petals.
4. Spread a layer of rose petals in a dry glass bottle with a lid.
5. Now spread a layer of sugar over the rose petals evenly.
6. Then again spread a layer of petals over the sugar layer.
7. Repeat till all the petals are over.
8. Close the glass bottle with a lid and keep it in the sunlight for 7 - 10 days.
9. Mix the gulkand every other day using a clean spoon.
10. Store in an airtight container and refrigerate it.

3. Financials

3.1 Project Financials and Business model

Total Project Cost

Table 1 Total Project Cost

Sr. No.	Particular	Total Value (Rs.)
1	Land and Building	6,000,000
2	Machinery and Equipment	665,970
3	Furniture and Fixture	10,000
4	Working Capital	507,021
Total		7,182,991

Means of Finance

Table 2 Means of Finance

Sr. No.	Particular	Total Value
1	Own Contribution	1,795,748
2	Bank Finance - Long Term Loan	5,006,978
3	Bank Finance - Short Term Loan	380,265
Total		7,182,991

Expenditure estimates

Table 3 Expenditure estimates

#	Particular	Number of Unit	Unit Cost	Y1	Y2	Y3	Y4	Y5
A	Fixed							
1	Telephone	12	1,000	12,000	12,600	13,230	13,892	14,586
2	Internet	12	1,000	12,000	12,600	13,230	13,892	14,586
3	Office Maintenance	12	1,000	12,000	12,600	13,230	13,892	14,586
4	Electricity Charges	12	1,000	12,000	12,600	13,230	13,892	14,586
5	Printing & Stationery	12	500	6,000	6,300	6,615	6,946	7,293
6	Courier,	12	500	6,000	6,300	6,615	6,946	7,293

#	Particular	Number of Unit	Unit Cost	Y1	Y2	Y3	Y4	Y5
	Postage etc.							
7	Misc. Expenses	12	500	6,000	6,300	6,615	6,946	7,293
8	Audit Expense	1	20,000	20,000	21,000	22,050	23,153	24,310
9	Human resource expense							
	Helper	1	6,000	72,000	75,600	79,380	83,349	87,516
	Salesmen	1	5,000	60,000	63,000	66,150	69,458	72,930
	Sub-Total			218,000	228,900	240,345	252,362	264,980
B	Variable Cost							
1	Rose		130	14,625,000	16,380,000	17,199,000	18,058,950	18,961,898
2	Sugar		35	11,812,500	13,230,000	13,891,500	14,586,075	15,315,379
3	Electricity Charges	7	121	158,760	177,811	186,702	196,037	205,839
4	Packing Material		2	641,250	718,200	754,110	791,816	831,406
5	Labor	4	400	300,000	336,000	352,800	370,440	388,962
	Sub-Total			27,537,510	30,842,011	32,384,112	34,003,317	35,703,483
	Total			27,755,510	31,070,911	32,624,457	34,255,680	35,968,464

Working Capital requirements

Table 4 Working Capital requirements

Sr. No.	Item	Duration	Total Value				
			Year-I	Year-II	Year-III	Year-IV	Year-V
1	Raw material	1 week	507,021	567,863	596,256	626,069	657,372
Total			507,021	567,863	596,256	626,069	657,372

Income estimates

Table 5 Income estimates

(Amount in Rs.)

S.No	Particulars	Rate / kg	Y1	Y2	Y3	Y4	Y5
1	Gulkand	75	32,062,500	35,910,000	37,705,500	39,590,775	41,570,314
	Total		32,062,500	35,910,000	37,705,500	39,590,775	41,570,314

Computation of income tax

Table 6 Computation of income tax

Particulars	Y1	Y2	Y3	Y4	Y5
<u>Tax Details</u>					
EBT	3,238,416	3,876,561	4,239,408	4,631,278	5,055,145
Add Depreciation as per companies Act	367,597	367,597	367,597	367,597	367,597
Less Depreciation as per IT Act	700,896	625,811	558,984	499,477	446,462
	2,905,118	3,618,347	4,048,021	4,499,398	4,976,280
Provision of Taxes	897,681	1,118,069	1,250,838	1,390,314	1,537,671

Profit and Loss Statement

Table 7 Profit and Loss Statement

(Amount in Rs.)

Particulars	Y1	Y2	Y3	Y4	Y5
Gulkand	32,062,500	35,910,000	37,705,500	39,590,775	41,570,314
Total Revenue	32,062,500	35,910,000	37,705,500	39,590,775	41,570,314
Fixed Cost	218,000	228,900	240,345	252,362	264,980
Variable Cost	27,537,510	30,842,011	32,384,112	34,003,317	35,703,483
Total Operational Expenses	27,755,510	31,070,911	32,624,457	34,255,680	35,968,464
Earnings Before Interest, Depreciation, Taxes and Amortization (EBITDA)	4,306,990	4,839,089	5,081,043	5,335,095	5,601,850
Depreciation	367,597	367,597	367,597	367,597	367,597
Amortization	-	-	-	-	-
Earnings Before Interest and Taxes (EBIT)	3,939,393	4,471,492	4,713,446	4,967,498	5,234,253
Interest Expense	758,017	680,110	563,476	430,130	277,714
Earnings Before Taxes (EBT)	3,181,376	3,791,382	4,149,970	4,537,368	4,956,539
Tax	880,056	1,091,749	1,223,202	1,361,296	1,507,201
Earnings After Taxes (EAT)	2,301,320	2,699,633	2,926,768	3,176,072	3,449,338

Particulars	Y1	Y2	Y3	Y4	Y5
Profit (loss) carried to Balance Sheet	2,301,320	2,699,633	2,926,768	3,176,072	3,449,338

Break-even analysis

Particulars	Y1	Y2	Y3	Y4	Y5	Cumulative
Total FC	585,597	596,497	607,942	619,959	632,577	3,042,573
Revenue	32,062,500	35,910,000	37,705,500	39,590,775	41,570,314	186,839,089
Total VC	27,537,510	30,842,011	32,384,112	34,003,317	35,703,483	160,470,434
Contribution	4,524,990	5,067,989	5,321,388	5,587,458	5,866,831	26,368,655
Break even	13%	12%	11%	11%	11%	12%

Summary feasibility analysis and sustainability indicators

#	Particulars	Estimates	Inference	Acceptable range of the indicators
1	Break Even Point (BEP at operating capacity of 80%)	12%	Project Viable	<60%
2	Av. Return on Capital Employed Average ROCE	40.5%	Project Viable	>20%
3	Internal Rate of Return (IRR)	33%	Project Viable	>15%
4	Net present value (at a discount rate of 10 per cent)	5,043,694	NPV is high and positive at a conservative project life of 10 years	Positive
5	Payback period	2 years 5 months	With Term Loan from Bank	< 5 years



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