

**2008**

# **Towards Floriculture: Understanding Sector and Market**

**Final Project Report**

**Submitted to  
Sajjata Sangh  
Marutinandan Villa,  
Nr Govt. Tube Well,  
Bopal, Ahmedabad-380 058**



**Submitted by  
MarketPulse Knowledge Networks (P) Ltd  
B-803, NRI Towers, Judges Bungalow Road,  
Bodakdev, Ahmedabad-380 054**



## Table of Contents

1. RATIONALE FOR THE PROJECT.....	4
2. AREA OF STUDY.....	7
3. PRODUCE/ PRODUCTS COVERED .....	8
4. METHODOLOGY .....	8
5. APPROACH TO FLORICULTURE .....	8
5.1 FEASIBILITY STUDY .....	8
5.2 MARKET STUDY .....	9
5.3 PROJECT REPORT PREPARATION .....	10
5.4 TECHNOLOGY.....	10
5.5 AVAILING SUBSIDY.....	10
5.6 PROJECT PROPOSAL SUBMISSION TO FINANCING INSTITUTIONS .....	12
5.7 PROJECT IMPLEMENTATION .....	12
6. UNDERSTANDING THE MARKET.....	12
6.1 DOMESTIC MARKET .....	13
6.2 EXPORT MARKET .....	14
7. SUPPLY CHAIN/ LINKAGES.....	15
8. KEY FINDINGS .....	15
8.1 WHOLESALE MARKET, MUMBAI .....	15
8.1.1 Supply Information and Price Behavior.....	16
8.1.2 Credit Terms/ Arrangements.....	16
8.2 WHOLESALE MARKET, SURAT.....	18
8.3 RETAIL MARKET, SURAT .....	21
8.3.1 Marketing Efforts.....	24
8.3.2 Storage Requirements/ Conditions.....	24
8.3.3 Market Characteristics.....	24
8.4 WHOLESALE MARKET, VADODARA.....	25
8.5 RETAIL MARKET, VADODARA:.....	28
8.6 WHOLESALE MARKET, AHMEDABAD .....	29
8.7 RETAIL MARKET, AHMEDABAD.....	30
9. PROCESSING INDUSTRY.....	32
10. RECOMMENDATIONS.....	33

---

MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



ANNEXURE I .....	37
ANNEXURE II .....	38
ANNEXURE III .....	39
ANNEXURE IV .....	40
ANNEXURE V .....	42
ANNEXURE VI .....	48



## 1. RATIONALE FOR THE PROJECT

The increasing pace of agricultural transformation in India has been characterized by widening share of commercial crops in the overall basket. Among others, horticulture has shown great promise because of the availability of high-value domestic and international market against the low production base so far. Understandably, it has received special attention of policy-makers and being termed as the sunrise industry within agriculture. Horticulture has again diverse components of Fruit & Vegetables (F & V), Plantations, Spices and Floriculture. Of these, F&V segment has been able to attract the early attention of farmers and entrepreneurs while the segment of floriculture is still fairly untapped.

This presents an opportunity to the early movers in floriculture production in terms of harvesting latent demand in the market, simple supply chain structure, and available foreign markets. With availability of quality support structures like research institutions, financial schemes and quality consultants in the field, it presents itself as a good option for agriculture diversification. The shift in production area under different crops category in following two tables illustrates this change.

### CHANGE IN CROPPING PATTERN IN INDIA, 1990-2004 (UNIT: 000' HECTARES)<sup>1</sup>

Commodities	1990-95	1995-2000	2000-04	1990-2004
Rice	150.1	1873.3	-2590	-566.6
Wheat	843.9	719	760	2322.9
Coarse Cereals	-5365.4	11.1	-300	-5654.3
Cereals	-4500	2000	-3000	-5500
Pulses	-2380	-1930	2120	-2190
Food grains	-6830	40	-890	-7680
Oilseeds	1810	-3190	4230	2850
Cotton	1595.3	-505.3	390	1480
Jute and Mesta	-90	90	-120	-120
Sugarcane	461.4	172.6	-680	-46
Fruits	483	512	1095	2090
Vegetables	-258	915	506	1163
Fruits and Vegetables	225	1427	1601	3253
Horticulture	900	1856	4514	7270

<sup>1</sup> "Exploring Horticulture Sector Potential in India", Surabhi Mittal – Fellow, ICRIER; September 2007



Again among the various horticulture crops, share of flowers have remain very low. However, in last few years it has increased at a very fast pace.

**CHANGE IN AREA UNDER HORTICULTURE GROUPS IN INDIA, 1990-2004 (Unit: 000' hectares)**

Commodities	1990-95	1995-2000	2000-04	1990-2004
Fruits	483	512	1095	2090
Vegetables	-258	915	506	1163
Plantation	435	129	240	804
Spices	211	284	2655	3150
Flower	29	16	18	63

In terms of area under production, four most important states are Tamil Nadu, Karnataka, West Bengal and Andhra Pradesh. Gujarat comes at a seventh position in this list. Following table contains list of nine states which together constitutes more than 98% of total area under flower production in the country.

**STATE-WISE AREA UNDER PRODUCTION OF FLOWERS<sup>2</sup>**

STATE/UTs	AREA (IN HA)			
	1993-94	2003-04	2004-05	2005-06
Tamil Nadu	12	20274	23233	24750
Karnataka	15243	18182	20400	21060
West Bengal	12610	17328	17925	17886
Andhra Pradesh	5778	12902	13909	16083
Maharashtra	2275	8422	8660	9250
Uttar Pradesh		6325	7968	8250
Gujarat	-	4917	6956	7118
Delhi	801	4490	4490	5538
Haryana	1200	4296	4810	5418

The flower production is specialized in two categories – traditional flowers (loose) and cut-flowers. Following is the list of states constituting more 98% of total loose flower production in the country.

<sup>2</sup> National Horticultural Board Database, 2007



### STATE-WISE PRODUCTION OF LOOSE FLOWERS<sup>3</sup>

STATE/UTs	PRODUCTION (Loose in MT)			
	1993-94	2003-04	2004-05	2005-06
Tamil Nadu	61704	161655	187342	201905
Karnataka	87999	143286	150225	156257
Andhra Pradesh	17334	49130	57875	79788
Maharashtra	18188	48538	51705	56078
West Bengal	9020	43575	44674	42292
Gujarat	-	30187	41811	42182
Sikkim	-	-	-	33100
Haryana	22400	58333	55583	26320
Orissa	460	78	17252	19275
Uttar Pradesh	-	9753	11905	12180
Delhi	4056	25007	25007	5666
Punjab	549	3000	3075	4100

As against this, following are the states constituting more than 98% of total cut-flower production in the country. Interestingly, in this list Gujarat comes at an impressive third position in the country.

### STATE-WISE PRODUCTION OF CUT FLOWERS

STATE/UTs	PRODUCTION (Cut in lakh No.)			
	1993-94	2003-04	2004-05	2005-06
West Bengal	4790	8767	8963	9348
Karnataka	-	5591	5038	5239
Gujarat	-	-	1969	4392
Uttar Pradesh	-	2650	3527	3668
Andaman & Nicobar	-	-	-	2537
Delhi	-	-	-	1038
Haryana	327	461	508	623
Himachal Pradesh	429	380	476	434

<sup>3</sup> Indian Horticultural Board Database, 2007



In recent years, cut-flower production in the country has received attractive opportunities in the international markets. Major export destinations for Indian flowers are given in the list below. These sixteen countries account for 90% of total flowers export from India.

### COUNTRY WISE EXPORT STATISTICS FOR FLORICULTURE<sup>4</sup>

	2002-03		2003-04		2004-05		2005-06	
Country Name	Qty (Kg)	Value (Rs)	Qty(Kg)	Value (Rs)	Qty(Kg)	Value (Rs)	Qty(Kg)	Value (Rs)
U.S.A.	9663466	472229303	11921649	731375656	7897001	516901604	13175828	758833386
Japan	3011137	227693529	1494297	254794645	1739004	158545037	3384508	564120339
U.K.	2096947	141974433	3810640	280228132	3379259	265659471	3791802	308506852
Netherlands	3487080	198711477	2513598	269794700	2527420	289488145	2233163	274101493
Germany	1525031	153890817	2668151	213579332	2437096	220021810	2986432	243341051
Italy	837110	53448098	1802128	115533227	1345090	94518110	1224601	90783489
U.A.E.	424351	39616763	368859	34932964	516050	52456032	651452	62917314
France	715998	63601500	875874	81386702	613165	55848817	602913	61725632
Belgium	471126	42339939	245150	25349604	539816	49931844	557449	53189053
Spain	246347	21559274	512060	33308227	349730	31615990	481649	47747517
Australia	422004	22894927	373608	51608487	233817	46057486	226955	46504596
China	59652	5122671	79905	6231645	1492228	41753006	1658076	43699767
Austria	47516	4461125	189003	17426587	420498	42526015	344760	39879178
Poland	477759	27990634	748653	67749641	378882	35693607	384950	38945060
Ethiopia	0	0	0	0	700	24229	55010	32259446
Greece	105521	9523640	200864	17189372	154625	17862696	372290	30327057

## 2. AREA OF STUDY

Flower markets, because of their specialized nature and limited production, are concentrated in a few locations across the country. With Gujarat as the reference place, proximate large trading centers for floriculture are Pune and Mumbai. Within Gujarat, Surat, Baroda and Ahmedabad are the three largest cities contributing significant amount of consumption of flowers. Export market of flowers is singularly concentrated in Bangalore. In north India, Delhi is a big trading center of flowers.

<sup>4</sup> Indian Horticultural Board Database, 2007



For the purpose of the present study, Mumbai, Surat, Baroda & Ahmedabad market have been selected. Of these, in Mumbai only the wholesale market for traditional flowers was studied whereas at all the other locations, both wholesale as well as retail markets were chosen for the study.

In addition to the Mumbai market – which is the primary supply source for cities in Gujarat also – markets of Surat, Baroda and Ahmedabad are being studied as part of this project in order to analyse their linkages with the production regions and to identify the key market attributes from the consumption side.

### 3. PRODUCE/ PRODUCTS COVERED

“Flower market” gives the impression of a homogeneous segment with uniform rules and characters governing it. However, there are two distinctly different product ranges within it – cut flowers and traditional flowers. All the business attributes like production technology, investment requirement, target customers, market segments, supply chain etc. are very different for each of them. Both these products are covered in this report although the details are varying on different parameters depending upon their relevance and requirement.

### 4. METHODOLOGY

The methodology employed for the present study mainly consisted of structured interviews with wholesalers, retailers and consultants involved with floriculture. In total, one consultant, five wholesalers and four retailers have been covered in the interviews so far. Of these, two wholesalers were from Dadar Market in Mumbai and three were from Surat.

Interactions with the wholesalers were primarily aimed at understanding the market structure, demand scenario, supply chain and its linkages etc. Retailers provided the insights into the consumers’ choices, business aspects, local market structures, supply chain, and emerging trends in the industry. Consultants were useful to get the technology details, financing options, support institutions, and state govt. schemes and promotional efforts.

### 5. APPROACH TO FLORICULTURE

#### 5.1 Feasibility Study

First step in planning for the floriculture is the feasibility study wherein the basic land requirement is tested. Land Examination (i.e. Soil and Water testing) consists of Ph testing (for both soil and water; it should be strictly in the range of 6.5 – 7.5), electrical Conductivity testing (which should be below 1) and other normal tests to plan the nutrients requirement. In case the mentioned Ph & electrical conductivity levels are not met, the only option left is the transplantation of new soil bed. It increases

---

MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)





the project cost substantially. Alternate options of soil treatment were explored but it was found that no such option is known popularly in practice domain.

Second step in evaluating feasibility for cut-flowers floriculture is the selection of flowers appropriate for the regional climate. Cut-flowers production is generally done in greenhouse structures because of associated high risks and the high margin. However, greenhouse structures available in India are equipped to only moderate the climatic conditions as compared to advanced structures available in foreign markets which are capable to create a completely insulated environment. Hence, assessing the climate conduciveness is important for the selection of a particular crop.

Moderate climates prevalent in major parts of Gujarat and Maharashtra are conducive for the production of Dutch Rose and Gerbera. Of these, Gerbera is the most hardy one and is advisable for the first-time growers. Other flowers like Anthurium and Orchids require specialized climates (cold throughout the year for these two flowers) and consequently high investment, advanced technology and more rigorous care. For Chrysanthemum the light intensity requirement is extreme at various stages and the corresponding technology is not even available in India.

Dutch Rose requires moderately hot and humid climate and is generally grown with significant acreage in the regions of Pune, Surat and Navsari. Gerbera exhibits highly flexible climate requirement and as mentioned before the plant is very robust in nature. However, the margins available for Gerbera are quite modest as compared to other crops. Carnation needs cold and dry climate, like the ones observed in the regions of Mahabaleshwar, Ooty and Panchgani. Climate of Gujarat is not suitable for this flower production. Anthurium and Orchids requires high humidity, low temperature and low light intensity climate. Although the production of these flowers is possible in Gujarat, it will be with high investment and consequently may be commercially unviable.

### 5.2 Market Study

Next step in floriculture planning is the market study and potential linkages of supply. If the floriculture is planned at the individual farmer's level, it is necessary to study the local retail market and district level retail and wholesale market. The main purpose of this study is to understand the consumption pattern of the nearby consumer segment so that the types and varieties of the flowers may be planned accordingly. In floriculture, it is considered that nearer the supply destination, better the value realization as the shelf-life of flowers are very limited. Hence, it is better to target the local markets for supply and therefore the production planning should incorporate the varieties accordingly. Basic flower parameters to study are: flowers, their varieties, colors in demand, disc-size of flowers and stem-length. For institutional production planning, the nearby two-three big trading centers should be studied to understand the demand profile for different varieties.

---

### MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



### 5.3 Project Report Preparation

Once the previous two steps are completed, flowers to be grown are finally selected and project report is prepared towards the same. This step is more important for the commercial cut-flowers aimed floriculture as it is very expensive and hence there is a need to tap the external finance. For growing the traditional flowers, the incremental costs over the other mainstream crops may not be very significant. However, given the informal credit linkages operating for even the sustenance agriculture, mainstream finance may be required to be accessed as unlike other crops, floriculture is not an annual activity and informal financial linkages are more suitable to serve them.

Professional Consultants are available to help prepare the Project Proposal for cut-flowers based floriculture and also in completing the various formalities inherent therein. Important section in the project proposal is the arrangement of technology (specifically the green-house and associated equipments). Their commission is usually not fixed as some of them are also the technology provider and hence it varies as per their level of engagement with the project.

### 5.4 Technology

Greenhouse structure is the most important part to focus on the technology requirement as it is a long term investment and it affects the quality of production directly. Other components of technology arrangements are the post production sorting and packaging apparatus. Minimum feasible area for greenhouse investment is 1000 sq. mt. (0.25 acre) and minimum good size is considered as 2000 sq. mt. (0.50 acre). In case of artificial bed (Hydroponics) facility in place of soil bed (if the Ph and electrical conductivity conditions are not met), the cost of bed preparation becomes double.

### 5.5 Availing Subsidy

Government of India has identified floriculture as a sunshine segment within agriculture and hence various promotional measures have been put in place. One of these is the back-end subsidy scheme being channelized through National Horticultural Board (NHB). Completed project proposal is submitted to its head office in Gurgaon (NCR) for subsidy approval. Extent of subsidy available is 20% of total project cost to be given directly to the financing institution post project implementation. Important documents sought are the Letter of Intent and the Sanction Letter. Usually there are acceptable levels of project cost figures for different flowers which have been arrived as per the financing experience so far. If the cost in the submitted project proposal exceeds these acceptable levels, discussions take place to ascertain the justification. The acceptable limits for various flowers are:

---

MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



#### NORMATIVE LIMITS OF SUBSIDY FLOWER-WISE

Flowers	Normative Limits (in Rs. Per acre)
Dutch Rose	40 lacs
Gerbera	46 lacs
Carnation	50 lacs
Anthurium	67 lacs
Orchids	70 lacs

However, if the costs involved are managed well, it requires 75%-80% of the above figures to match the project investment requirement. Hence, the initial investment requirement will be:

#### INDICATIVE INVESTMENT REQUIREMENT

Flowers	Indicative Investment Requirement (in Rs. Per acre)
Dutch Rose	32 lacs
Gerbera	37 lacs
Carnation	40 lacs
Anthurium	54 lacs
Orchids	56 lacs

Subsidy is also provided for the production of some traditional flowers. Details on the schemes and procedures of availing subsidy are provided in Annexure VI.

#### NORMATIVE LIMITS OF SUBSIDY FLOWER-WISE

Flowers	Normative Limits (in Rs. Per acre)
Gladiolus	3.5
Jasmine	1.5
Tube Rose	2.0

---

MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



### 5.6 Project Proposal Submission to Financing Institutions

Once the subsidy approval from NHB is obtained, the project financing structure is finalized and the Project Proposal is submitted to the financing institutions. The financing institutions already active in the sector are all National Banks, Cooperative Banks and Regional Rural Banks. As per the guidelines issued to them, 75% of the total project cost is financed by these institutions whereas rest 25% has to be the project promoter share.

### 5.7 Project Implementation

After the project receives sanction from the financing institution, implementation phase starts with the polyhouse establishment. Various components within it are greenhouse erection, drip Irrigation facility installation, bed preparation and planting of flower saplings. Post-planting it takes about 70-90 days (depending upon the flowers) for the plants to mature and start giving flowers. It takes the full time labor employment of 10-12 manpower/acre round the year to carry out the various operations involved in cut-flower floriculture. Estimates on economics involved are given below:

#### REVENUE PROSPECTS FOR SOME CUT-FLOWERS

	Plant Life (Yrs)	Plants/ sq. mt.	Flowers/ Plant/ annum	Avg. Price (Rs)/Flower	Total Revenue (Rs)/acre/annum
Gerbera	3	6.2	40	2	1984000
Dutch Rose	7	7.5	26	2.25	1755000
Carnation	2.5	22	12	3.5	3696000
Anthurium	9	9	12	9	3888000

It should be noted that the revenue figures given in the table assumes that there is no deterioration of quality over plant life (a fair assumption with Pune based projects). Also, costs involved in the production are not adjusted against these revenue figures.

## 6. UNDERSTANDING THE MARKET

Floriculture production in India is facing good opportunity in terms of expanding domestic market, owing to the augmentation in the income levels of middle-class population and increasing penetration of cosmopolitan lifestyles in the large urban centers. One of the main drivers of this demand is again the youth segment which is becoming more refined in its tastes and fashion-oriented. It may be safely assumed that with very high proportion of young population supported by sustained 15-20% p.a. growth in salaries in the corporate sector, the demand for flower business will increase appreciably.

---

### MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



Flower market in India is centered heavily upon rose and gerbera in the cut-flower segment, along with carnation and orchid in limited supply. Most of the specialized flowers and new varieties of existing flowers are being imported from abroad. With the easy availability of high-end technology employed in foreign production system and supportive government policies on this front, production of these 'still-exotic' flowers presents a good option. Even the new flowers which are grown domestically on a limited scale are found to command premium in the market. A simple pricing rule being observed in the flower market is the specificity and rarity of flowers because of the increasing orientation to spend for uniqueness and novelty.

### 6.1 Domestic Market

Large trading centers of flowers nearby Gujarat are Dadar Market in Mumbai, Gultekri Market in Pune, and the flower market in Delhi. Of these, Mumbai serves as the supply sources for a wide nearby geographical region whereas the Pune market serves largely the local region only.

Retail market in upcoming cities may be divided in two broad segments: Product market and Services market. Within Product market, two categories are discernible – Retail bouquet based customers and the bulk order customers. Product market is mainly catered by the road-side vendors across the city. Services market constitutes event decorations, marriage decorations and institutions servicing and it remains with a select group of florists that operates on a large scale.

As is stated elsewhere in the report, individual buyers for cut-flower are predominantly from the youth segment and the relatively affluent groups. It is mainly purchased in the form of bouquet – prepared as an assortment of flowers – to gift on special occasions. For traditional flowers, most of the individual purchase is in the form of garlands or loose flowers for religious offering. At institutional level, traditional flowers attracts high level of business from temples and a comparatively small volume from marriage halls, and traditional festivities.

Cut-flowers segment has marriage halls, hotels and corporate offices as its institutional client base. Of these, marriage halls provide the largest share of business. Hotels and corporate offices have a regular level of demand on a daily basis.

In regional context, it is observed that the local city markets within Gujarat are heavily dependent upon the Dadar Market in Mumbai. With increasing entrepreneurs in the cut-flower segment, this dependency has started to decrease. It presents an interesting opportunity to large scale floriculture within Gujarat to serve these markets directly, if assured supply volume may be achieved.

As is observed in the study, two main drivers of floriculture business are modernizing culture and the traditional institutions. Hence, the markets may be classified along this parameter to determine the relative importance of traditional flowers vs. cut flowers market.

---

### MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



Flowers in the market invariably reach the end-consumers in the form of some hand-made products. Market for single flowers or a bunch of same flower is almost negligible. In the case of traditional flowers, it is often in the form of garlands, chain or obeisance packets. Within cut-flowers segment, it is sold as bouquet, decoration chain or packets. Large share of cut-flower business comes from the decoration work wherein various combinations of flowers are used depending upon the decorator’s skills and imagination.

**MARKET CLASSIFICATION DIAGRAM**

		Engagement with Traditional & Religious Institutions	
		Low	High
Level of Modernisation	Low	Poor Flower Market	Good market for Traditional Flowers, Poor market for Cut-Flowers
	High	Moderate to poor market of traditional flowers; Good market of cut-flowers	Good market for both traditional and cut-flowers

**6.2 Export Market**

It was found that Dutch Rose is primarily being exported from India. Main export destinations are European countries & Japan. Bangalore is considered export hub with many export-oriented units in the nearby regions. Minimum area required to achieve feasible operation to serve export market is approximately 6 hectares. Peak export period is the winter season (December-February) targeting Christmas to Valentine Day festivities.

However, export-oriented production has to experience two additional cost-heads. If the units are classified as Export Oriented Unit (EOU), no revenues are obtained for sub-standard quality outputs/wastage as by rule, 100% of the produce should be channelized only in the export. Second additional cost head is the royalty on specific varieties of cut flowers. However, this issue was not explored in detail in this study.



## **7. SUPPLY CHAIN/ LINKAGES**

The supply linkages are intermediated by the transporters cum commission agents in the trade. Farmers or the intermediary aggregator have direct linkage with the wholesale traders. Depending upon the supply agreement with the wholesaler, cartons, crates or bags of flowers are sent by these intermediaries with the name and the shop number of wholesaler attached to it. Mostly, transportation vans are also owned by these aggregating intermediaries only.

It is generally observed that different channel arrangement exists for the traditional flower business and the cut-flower business. The farmers involved in the traditional flowers production are grouped together for ease of interaction with the market intermediaries. This grouping is either voluntary in the form of a cooperative like structure or under an individual aggregator. These groups have direct linkages with traders in the big wholesale markets within a distance equivalent to 24 hrs of road transportation. The road transportation network is operated by the aggregating intermediary themselves which is also open to access by self-organised cooperatives against the transportation fee. The flowers are packed in plastic and normal sacs by the aggregator with the name of the trader for whom it is targeted and his shop number pasted on it. These sacs are then transported in mini-vans (owned by aggregator-transporter) to the important wholesale markets.

Cut-flower segment normally does not see this aggregation of farmers because of the comparatively low-volume and high-value of product. Farmers are directly in touch with large wholesale players in big trading centers like Mumbai and Delhi. Flowers are first packed in polythene sheets and then are encased in carton for dispatch to target locations.

Study of this supply chain has revealed that establishing new linkages with the wholesalers are easy for the new production entities, if the quality along with volume may be assured.

## **8. KEY FINDINGS**

### **8.1 Wholesale Market, Mumbai**

The largest floriculture market in Mumbai is located in Dadar. It supplies flowers to nearby regions in addition to meeting the local requirements. Additional markets are in Kalyan and Kalbadevi (traditional flowers). Flower markets have been established and run by Municipal Corporation as they need not have to be routed through APMCs. There are about 700 outlets in Dadar traditional flower market being operated by approximately 300 active traders. The outlet size is 24 sq. ft. and monthly rent paid by the traders is Rs. 160. Main sources of supply of flowers to this market are Bangalore, Sangli, Kolhapur, Pune, Ujjain and Navsari. Large volumes are seen in flowers of Genda, Gulchhadi (or Nishigandha), Chandani, White Sewanti (almost entirely from Ujjain), Desi Gulab (mainly from Sangli, Kolhapur and Jasgaon (Satara)), Dutch Rose (in packed condition from Nasik), Aastar and White Raja. Desi Gulab has a large market in Surat.

---

MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



### 8.1.1 Supply Information and Price Behavior

Dadar market receives a supply of 2-5 vans supply of flowers per day. Each vans contains around 300-350 crates of 12 Kg each. These figures indicate that this market deals in 8 tons to 20 tons of flowers daily depending upon the arrival in the market. These supplies are largely from Bangalore and Pune and flowers specific to Sangli, Kolhapur, Navsari etc. As roughly estimated by two traders of average size in this market, average turnover of a trader in this market is in the range of Rs. 50-70 lacs (with 300 active traders around).

The traditional flowers are similar to agriculture commodity in its supply character and are not available throughout the year with strong seasonality of supply. Even within season, there is no deterministic behavior of prices observed by market over a long period as the prices are governed by day-to-day supply. Hence, prices in the markets for traditional flowers are quite frequently observed to fluctuate by even 200-300% around the annual average within the span of a few days. However, prices show a very sharp upward spike during the season of Ganapati festival when traditional flowers command considerably higher prices depending upon the arrivals in the market.

### 8.1.2 Credit Terms/ Arrangements

A credit cycle of 15 days or 1 month have been observed on a case to case basis except for Nishigandha for which there is a credit cycle of 7 days owing to its relatively higher value and short shelf-life. The payments are made by wholesalers to the aggregating intermediaries at these time intervals. However, it emerged from the interviews that personal relations have a significant bearing on the credit period and payment terms.

The information given above is summarized in the table below:

Mumbai Wholesale Market	
Number of Trading Shops	700
Number of Active Traders	300
Daily Supply of Flowers	80-200 tons
Average Estimated Turnover per annum	Rs. 180 crores
Usual Credit Period	15-30 Days
Credit Period for Nishigandha	7 Days

Important information like supply locations, average price ranges, seasonal months, shelf-life etc. is given flower-wise below. The shelf-life details given herein are at the wholesale level as clients downstream (florists, retail shop-keepers etc.) do not take old flowers because of the time lag involved in selling these to the end-consumers. Average price details are the prices at which the flowers are available to secondary consumers clients from the wholesalers.

---

### MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)





**Genda:** This is the most important flower traded in the traditional flower market in terms of volume. It is not affected significantly by seasonality and is available throughout the year. Average price of Genda is in the range of Rs 16/kg. It has a shelf-life of 2-3 days and is kept under normal sacks packaging in room conditions. Genda production yields around 12-13 tons of flowers per hectare over a 3 month season (from a particular plantation). The approximate cost involved is Rs. 75,000 per hectare with rough revenue estimate of Rs. 1, 25, 000 per hectare.

**Nishigandha:** Also known as Gulchhadi, it is produced throughout the year from the same plantation. The average price of Nishigandha remains near Rs. 12/kg whereas during peak demand season, it goes as high as Rs 150/ kg. This flower has a shelf-life of 1 day. Nishigandha production gets a yield of 20 kg/day/acre. The plant life is around 3 years and by a rough estimate 2 years production is considered as profit with one year production equivalent to cost involved in its production. Total revenue from a plantation over 3 year period is approximately in the range of Rs. 2.6 lacs per acre

**Chandani:** This flower generally arrives in the market during the months of November to December. The supply starts in November from Bangalore and the prices remains in the range of Rs. 45/kg for about a month. During peak season, the prices touch a high of Rs. 70/kg. In December, supply from the Pune starts and the price falls significantly to around Rs. 10 - 15/ kg. Shelf-life of Chandani is about 2 days. Chandani production yields around 5 tons per hectare over a period of 1.5 month.

**White Sewanti:** White Sewanti is supplied in the Dadar market for two months each from Bangalore, Pune and Ujjain starting October and hence it is available in the market till March (i.e. in October-November it is supplied from Bangalore, December-January from Pune and February-March from Ujjain). The price fluctuates in the range of Rs. 160 - Rs. 10 per kg depending upon the arrivals in the market and the demand on that particular day. Shelf-life of this flower is around 4-5 days at the wholesaler level.

**Gulab:** It is available throughout the year with supply mainly from Sangli, Kolhapur and Jasgaon (Satara) regions. The average price remains in the range of Rs. 10 per dozen and it has a shelf-life of 2-3 days at the wholesale level. Rahuri Krishi Vidyapeeth is considered a good research and extension support institution for Gulab production.

**Aastar:** This flower is supplied from Bangalore and Pune in the months of August to February. Average price seen in this flower is at the level of Rs. 35/ kg and the flower have a shelf life of 2 days.

---

### MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



The flower-wise information has been summarized in the table below:

	Source	Availability	Selling Price (Rs/ kg)			Shelf life
			Highest	Lowest	Average	
<b>Genda</b>		Round the Year			16	2-3
<b>Gulchhadi/ Nishigandha</b>		Round the Year	150		12	1
<b>Chandani</b>	Bangalore, Pune	Nov-Dec	70	10		2
<b>White Sewanti</b>	Bangalore, Pune, Ujjain,	Oct-March	160	10		4-5
<b>Gulab</b>	Sangli, Kolhapur, Jasgaon	Round the Year			10 (per dozen)	2-3
<b>Aastar</b>	Bangalore, Pune	Aug-Feb			35	2

## 8.2 Wholesale Market, Surat

Wholesale market in Surat caters to only the local demand within the city and nearby semi-urban areas. However, at the same time it was claimed by the wholesalers that it is the largest wholesale market within Gujarat. The wholesale market deals in desi flowers as well as cut flowers and remains operational for ten months in a year. It has to remain closed for two months during monsoon season as the market still continues to operate from a makeshift structure beneath a large flyover. The efforts by the Surat Municipal Corporation to relocate the market to a suitable, permanent location have proved futile so far because of wholesalers' fear of losing business at a less convenient location for clients. Wholesalers are grouped along the regional lines of kathiawad, kutchh and east-India with leaders representing them on various platforms. Although cut-flower wholesale business has around 200 players in Surat, the entire market is centered around two wholesalers belonging to the east-India group. This market receives cut flowers mainly from Mumbai & some volume from regional producers and Pune. Desi flowers are supplied from Bharuch, Baroda, Ujjain and Indore. Cut-flowers wholesale market chiefly constitutes of Gerbera & Chinese Rose whereas the desi-flowers market is composed of Genda, White Sewanti and Desi Gulab.

Cut-flower production in Gujarat has seen new-age entrepreneurs starting the ventures at many locations. They have received preliminary training at Horticulture Training Center (HTC), Pune and thereafter started floriculture with the assistance of financial institutions. In total there are about 56

---

### MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



greenhouses in Gujarat involved in cut-flowers production. Some of the main farmers owning these greenhouses are Suresh Parmar (Tundi, Palsana-Surat), Mehul Patel (Chaar Rasta, Godhra), Dharmesh Bhai (Kathod), Kaushikbhai (Bajipura), Rajendra Bhagat (Orna, Kamrej), Neeraj Bhai (Kadod) and Rakesh Bhai (Kathod). Surat wholesale market receives 80% of the annual supplies of cut-flowers from Mumbai whereas rest 20% is supplied almost entirely by the farmers owing greenhouses in Gujarat. They may act as repository of valuable entrepreneurial experience for any floriculture venture to be planned with farmers.

Surat wholesale market of desi flowers receives supply from Bharuch, Anand, Ankaleshwar, Surat, Nizampur, Sangamner, Nasik, Pune, Mumbai, Ratlam, Ajmer, Ujjain and Indore. Desi Gulab being consumed in Surat is produced in Jalgaon, Maharashtra. Double-circled Gerbera is mainly produced at Navsari whereas production of Single-circled Gerbera takes place at various locations. As per the rules of the business, Malis of the city places advance order with the wholesalers on a daily basis who in turn arrange the consolidated quantity from their links at these supply centers and also tap the independent arrivals in mandi. A second type of arrangement is also observed in the Mandi and it is known as commission based selling. Wholesalers receive the flowers over and above their regular requirement from the nearby farmers-suppliers to sell them at a certain commission. There are about 100 wholesalers of traditional flowers in Surat Mandi, out of which 20 are big players. The wholesalers consider farmers direct access to wholesale business as detrimental to their interests.

The wholesalers enjoy a credit-period of 7-10 days from the suppliers in Mumbai whereas they extend a credit period of 10-20 days to the local retailers. However, the credit period arrangement with local retailers increases substantially depending upon the duration and intensity of business relations.

Important information on the Surat wholesale Market has been summarized in the following table:

Surat Wholesale Market	
Total traders of Cut-Flowers	200
Traders holding almost entire Cut-Flower Business	2
Total traders of Desi-Flowers	100
Traders holding almost entire Desi-Flowers Business	20
% of total Cut-Flowers Supply from Mumbai	80%
% of total Cut-Flowers Supply from Local Producers	20%
Number of Cut-Flower Production Greenhouses in Gujarat	56
Credit-Period with the Suppliers	7-10 Days
Credit-Period with the Retailers	10-20 Days

MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



At the wholesale level, the selling price of Dutch Rose (per 20 pcs) goes as high as Rs100 and also dips to around Rs. 10 - Rs. 20. However, the average price range remains in the range of Rs. 50 - Rs. 60 per bunch (of 20 pcs). Similar figures for Gerbera (per 20 pcs) show a high of Rs. 60 -Rs. 70 with the lowest of Rs. 5. Its average price remains in the range of Rs. 30 - Rs. 40 per bunch (20 pcs). Shelf-life of cut-flowers is 4-5 days at the level of wholesalers.

Flower	Wholesale Market Prices (Rs)			Shelf-life
	Average	Highest	Lowest	
Dutch Rose (per 20 pcs)	50-60	100	10-20	4-5 Days
Gerbera (per 20 pcs)	30-40	60-70	5	4-5 Days

Details on desi flowers along with their important attributes are provided below:

**Genda:** Also locally called Galgota, this flower witnesses highest level of trading among the desi flowers, averaging almost 50% of total business round the year. It shows no seasonality in supply (as the supply keeps taking place from different locations at different time of year) and is available throughout the year. Selling price of Genda remains in the range of Rs. 15 - Rs. 5 per kg depending upon the demand-supply scenario and occurrence of seasonal events.

**Sevanti:** This flower is available in the market starting from September till January. Most popular colors in demand are red, yellow and white. During its supply months, it attracts almost 20% volume of total desi flower business. Its prices also remain in the range of Rs. 15 - Rs. 5 per kg.

**Bijli:** Bijli arrives in the months of November to February in Surat market. It is available in two colors - yellow and white. It also gives almost 20% of total business during its supply season. Its prices remain in the range of Rs.15 - Rs. 5 kg per in the wholesale market.

**Goti:** Goti is available in the Surat wholesale market in the months of November to February. During this season, it gives almost 15-20% of total business to traders. It is available in two popular colors - Red and Yellow. Its price witnesses a range of Rs. 10 - Rs. 5 per kg.

**Gladia:** This flower starts arriving in large quantities in market during the month of February and continues till May. During these months, it provides large volume of business - almost in the range of 50% of total trade. It also remains in the price band of Rs. 10 - Rs. 5 per kg.

**Mogra:** Mogra arrives in the months of May to August in the market and is traded in small quantities. Its price remains in the range of Rs. 50 - Rs. 30 per kg.

---

### MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune - 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi - 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



**Paras:** Paras comes twice a year in the market – first in the months of May to July and then again from September to January. However, its share in the total business remains low. It is traded in the price band of Rs. 100 – Rs. 20 per kg.

**Lilies:** This flower remains available throughout the year in the Surat market. However, it is traded in relatively very small quantities. The supply of this flower is quite different from others as its business is directly served by the farmers of nearby regions (mainly Navsari). They come with the stock in “Tokri” in the morning and sells directly to the customers without the intermediation of wholesale traders. Price of lilies witnesses a range of Rs. 100 – Rs. 20 per 1000 flowers.

**Desi Gulab:** Desi Gulab is available throughout the year and it is traded in the price range of Rs. 50 – Rs. 20 per kg.

Information on Desi-Flowers has been summarized in the table below:

Flowers	Main Colors	Season	% Share in the total Business during Season	Sales Price Range (per Kg)	
				High	Low
<b>Genda (Galgota)</b>		Round the Year	50	15	5
<b>Sevanti</b>	Red, Yellow, White	Sep - Jan	20	15	5
<b>Bijli</b>	Yellow, White	Nov - Feb	20	15	5
<b>Goti</b>	Red, Yellow	Nov - Feb	20	10	5
<b>Gladia</b>		Feb - May	50	10	5
<b>Mogra</b>		May - Aug	Small Quantities	50	30
<b>Paras</b>		Sep - Jan; May-Jul	Small Quantities	100	20
<b>Lili</b>		Round the Year	Small Quantities	100 (per 1000)	25 (per 1000)
<b>Desi Gulab</b>		Round the Year		50	20

### 8.3 Retail Market, Surat

Desi flowers business is owned almost entirely by Mali community which is their traditional occupation. Cut-flower business takes place through new-age entrepreneurs with shops at market locations. Big retailers within the city directly access the supplies from mainly Dadar market in Mumbai. The reasons of direct access by these retailers are close location, availability of variety and

---

#### MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



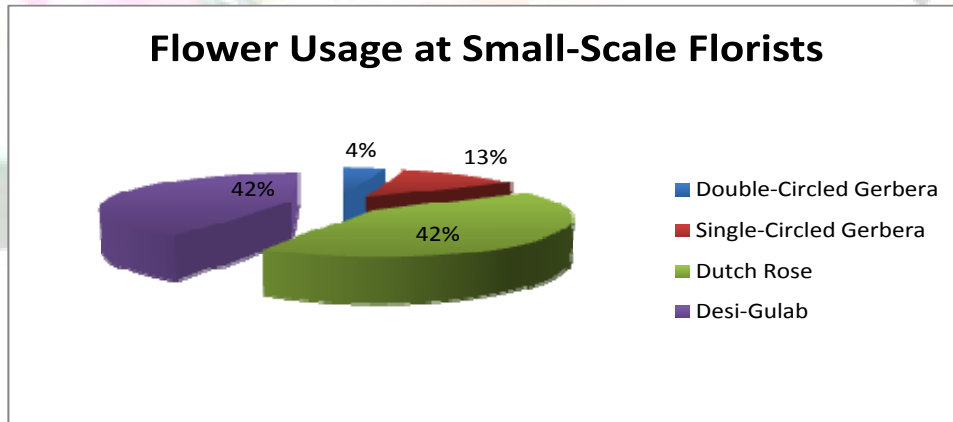
quality of flowers and prevalent comparatively cheaper prices. A few large retailers in cut-flowers segment in the city see a market share of more than 80% among themselves. Exzora Flower Shop, Bageecha and Bombay Florists are the big players among them. Other than these, the retail clients are also served by numerous road-side small shops. In Desi flowers business, there are more than 150 Mali's shops involved in the business in Surat.

Cut-flowers business in Surat is primarily centered around two flowers – Rose (Desi and Chinese Rose) and Gerbera. Carnation and Orchids are other two flowers with noticeable consumption on a limited scale. Within rose also, Desi Gulab (DG) has a significantly higher consumption as compared to Chinese Rose (CG). Within Gerbera also, two prominent varieties are consumed – Double-Circled Gerbera (DCG) and Single-Circled Gerbera (SCG).

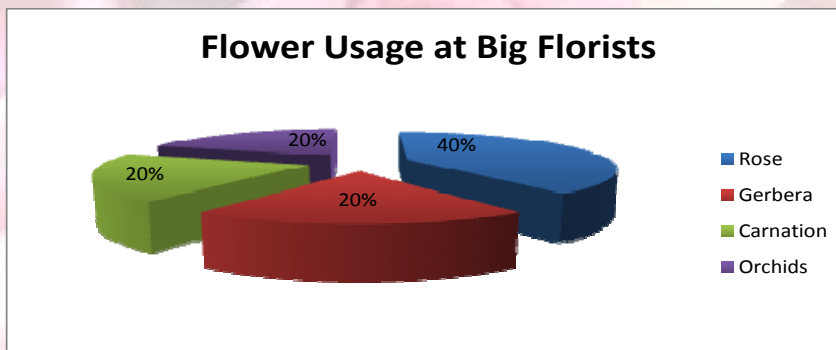
Average price of Desi Gulab (DG) remains around Rs. 80 per 10 pcs. Specifically, the average price of Double-Circled Gerbera (DCG) hovers around Rs. 50 per 10 pcs and of Single-Circled Gerbera (SCG) it is around Rs. 70 per 10 pcs. These information are summarized in the table below:

Flower	Avg. Price at the Retail Level
Desi Gulab (per 10 pcs)	80
Dutch Rose (per 20 pcs)	NA*
Double-Circled Gerbera (per 10 pcs)	50
Single-Circled Gerbera (per 10 pcs)	70
<b>*Seldom sold as single flower (Used only in Bouquet)</b>	

Product market in Surat is catered mainly by the numerous road-side vendors across the city. These small flower shops in the city witnesses the sales in the range of Rs. 1000 – Rs. 3000 per day in high demand season. The approximate usage ratio of important flowers at these small scale vendors may be given as “DCG: SCG: BG: DG::1: 3: 10: 10” where the numbers denote the number of flowers. These numbers are arrived on the basis of responses received from the road-side small shop-owners in the month of November.



Service market constituting of event decorations, marriage decorations and institutions servicing is with three-four large florists in the city. With these large florists, consumption proportion of four important flowers Rose, Gerbera, Carnation and Orchids are in the ratio of approximately 2:1:1:1. These florists also utilize Anthurium, Liliium, Birds of Paradise, Helicornia, Tuberose, Chrysanthemum and Gladiolus to service the high value clients in addition to the four important cut flowers.



Traditional flowers are mainly used for religious purposes and to a limited extent in marriages, ceremonies, domestic functions etc. Because of this, its demand does not witness sharp fluctuations during the year. Even the low level of movement in demand is predictable which coincides with periods of religious significance. The demand displays a fairly consistent pattern on a weekly basis because of the invariable 2-3 auspicious days in each week. However, shelf life of traditional flowers

---

**MarketPulse Knowledge Networks (P) Ltd.**

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



at the level of Surat Mandi is highly limited – to just one day as they remain in the usable form within 3 days from plucking.

Supply/ Logistics: Large florists in the city access the Dadar market in Mumbai directly on a daily basis. During slack season, the purchase is made once every 2-3 days. Occasional sourcing is also done from Aurangabad and Delhi. Among other flowers, Birds of Paradise and Anthurium comes from Bangalore, Heliconia, Tuberose, Chrysanthemum and Gladiolus from Pune and Carnation is supplied from both Bangalore and Pune. Anthurium, Orchids, Liliium, Birds of Paradise and Chrysanthemum are also imported from outside through agents located in Mumbai. The orders are usually placed once a week with the importers and delivery is received twice a week for these flowers.

### *8.3.1 Marketing Efforts*

No special marketing efforts are employed by the florists as the larger ones are popularly known by virtue of word-of-mouth publicity within the city. However, emerging internet based orders requires web-advertising. Although, efforts at advertising or other marketing aspects are minimal, it is observed that tie-ups with marriage halls, hotels and corporate offices are frequently employed to maintain the service-oriented and bulk business among the larger florists.

### *8.3.2 Storage Requirements/ Conditions*

The flowers are generally kept in normal room conditions with 2 days of shelf-life with small florists. Within this period, the flowers doesn't experience appreciable price fall owing to oldness. However, large florists also see the stock remaining for 6-7 days at times and it see the price depreciation of almost 50%.

### *8.3.3 Market Characteristics*

The flower market of Surat exhibits strong seasonality in demand. The marriage season acts as the single most important driver of demand for flowers throughout the year. However, even during the months covering the marriage season, demand observes steep hike on the more coinciding dates for marriages with slackened market on other days. Other important periods contributing to escalation in demand are festivals and events like Navratri, Christmas, New Year, Valentine Day and a host of other special days.

Because of this, price at consumer levels generally increases from December onwards till March when it starts declining and is lowest during the monsoon period of June-August.

Floriculture planning in Gujarat should consider this seasonality of demand if the local markets are to be targeted for the supply linkages. The high demand months should be checked to overlap with the likely production cycle as per the regional climate and in case of a match, the venture should be pursued further.

---

### MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)





As per the response received from the players in the retail segment, it may be safely concluded that the expenses on decorations during any functions and occasions has increased with the increase in income base. Also, the flower choice and specificity has grown leading to the increasing import of special flowers. Rough estimates by these players have been that the flower market in Surat has shown an increase of approximately 20% y-o-y for past 5 years. Among various new flowers, Carnation and Chrysanthemum holds good potential in the years to come.

Surat flower market has seen another interesting trend in the past few years. It has been the specialization of florists to service a particular customer segment i.e. creation of a niche segment. Hence, small florists service largely the individual bouquet customers and there are different large florists servicing marriage decorations, corporate offices and inauguration (and similar) functions.

Some of the important information on Surat Retail Market has been summarized below:

Particulars	Values
Total Number of Big Retail Florists	4-5
Approximate number of Road-Side small Florists	25-30
Total Number of Mali-Shops in the business of Desi-Flowers	200
Average Daily Income of Small Florists in Peak Season	Rs1000-Rs3000
Slack Season	Monsoon Period
Estimated Growth Rate per annum	15-20%

### 8.4 Wholesale Market, Vadodara

Wholesale market of Vadodara operates from a permanent structure and it chiefly deals in traditional flowers. Of late the effort has been by Vadodara APMC to regulate this market but traders here feel that it is leading to unnecessary cost addition for them (because of involved tax). Cut-flowers wholesalers in the market are comparatively few in numbers and they serve to only a limited chunk of retail business in the city. Road-side vendors and small retail shops are their main clients. Almost all large retail shops in the city have their direct linkages with the Pune market and hence they bypass the local wholesale market to cater to their requirement.

Traditional Flowers Traders: Important traditional flowers traded in the wholesale market are Sevanti, Marigold, Desi Rose, Aster and Lilies. Market here is particularly famous for Jasmine flowers.

---

### MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



There are about 35-40 wholesale traders in the market out of which 8-10 have the large part of business. The market operates primarily on commission basis with direct linkages with the producers. The prevalent commission rate is of 10% of sales realisation. The producers of the traditional flowers are largely located in the nearby locations of Khacroad, Pajra, Karjan, Vitola, Daboli, Vajoria, Ratpipla, Nyaneshwar, Vasad and Mogargaon with some areas specializing in a few flowers (flower-wise details are given in the table below). In addition to these nearby centers, Vadodara also receives traditional flowers from Nasik, Surat, Bhavnagar, Khambat, Ahmedabad and important markets of Madhya Pradesh. It was observed that this market in particular is well connected with the producers/ market of Madhya Pradesh i.e. Ratlam, Ujjain and Indore. Regardless of the locations, the commission based trading is practiced.

In addition to regular traders, as in Surat, Vadodara market also sees the participation of farmers from nearby villages directly in trading activity. However, their percentage is low in comparison to total market size.

Although the market deals in a variety of flowers, the volume come mainly from Marigold, Sevanti and Goti and these three flowers together roughly contributes 80-85% of total business. Marigold is the again the largest traded flower however its arrival is down in the months of April-June. As the traditional flowers are used mainly in religious purposes, its demand does not see drastic fall most of the year. Generally the demand is very high during Navratri and Diwali period and low during the monsoon months (after Sawan) and periods considered inauspicious as per Hindi calendar. However, due to the same reason the demand see variation intra-week with Thursday as the weakest day in the market. Two day shelf-life of flowers is there as it was observed that old-looking flowers were also being traded (especially it being high-demand period).

Flowers	Volumes (per day in season)	High Supply Months	Main Supply Centers
Sevanti	7-8 tons	Dec-Jan	Khachrod, Padra, Karjan, Vitola, Indore, Ratlam, Ujjain
Marigold	15-20 tons	Throughout	Padra, Daboli, Vajoria, Karjan, Nasik, Indore, Ratlam, Ujjain
Astar	100 kgs	Dec-Jan	Indore, Ratlam, Ujjain
Rose	200-300 kgs	Throughout	Nyaneshwar
Bijli	1-2 tons	Dec-Feb	Padra
Goti	5-6 tons	Dec-Jan	Vasad
Paras	1-2 tons	Oct-Jan	Nearby areas
Lili	4000-5000 pcs	Throughout	Vasad and Mogargaon
Rajnigandha	50-60 dzn	Throughout	Nearby areas

### MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



Price-wise Vadodara market is found to be more stable as compared to Dadar market in Mumbai. Average, highest and lowest prices observed for important flowers are given in the table below.

Flowers	Average (Rs)	Highest (Rs)	Lowest (Rs)
Sevanti (per Kg)	12-15	30-35	12
Marigold (per Kg)	15-20	30	8
Astar (per Kg)	20-25	25-30	20
Gulab (per Kg)	15-20	30-40 (60 in diwali)	5
Lili (per Jadi)	2-3	6-7	0.25
Bijli (per Kg)	15-20	25	5
Goti (per Kg)	12-15	20-15	
Paras (per Kg)		20-25	60

Cut-Flower Traders: Wholesale market in cut-flowers at Vadodara is concentrated largely with one trader only although some others too deal in small quantities. Cut-flowers business at this market is almost entirely composed of Gerbera and Dutch Rose with very small proportion by other flowers.

Similar to Surat, the wholesale market of Vadodara is primarily accessed by road-side vendors only. Almost all the retail shops in the city directly source the flowers from Pune and other production centers. However, the largest wholesale agent also owns two retail shops in the city. Besides Pune, Gerbera is also supplied from Navsari, Nasik and Vadodara producers, Dutch Rose from Nasik and Navsari, and Carnation from Nasik-based producers. Orchid, as observed in other locations is imported from outside (Thailand) and it reaches in Vadodara through Mumbai-based traders. In Gerbera, it is to be noted that mostly double-circle variety goes into market through wholesale traders. As in traditional flowers market, it also runs on 10% percentage commission from the producers rather than traders putting their money in it.

Following is the estimation of average business at wholesale mandi during the high-demand months. However, it should be noted that it results in only a part of total business at retail level as most of the big-shops source flowers directly from producers based at Pune.

Flowers	Shelf-Life	Avg. Volume (per day)	High-Demand Months	High-Price Months	Low-Price Months
Gerbera	5	300-365 packets	Nov-Jan-May, Jun-Oct	Nov-Dec	Jun-Oct
Rose	5-7	Same			
Carnation	8-10	75-90 packets			
Orchid	10	Same			

### MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



Consistent with the characteristic of the cut-flowers business, Vadodara wholesale market also observes sharp fluctuations in prices. The details on prices at the wholesale level are provided below:

Flowers (Rs/ pc)	Avg. Price	Highest Price	Lowest Price
Gerbera	2	10	0.10
Gulab	2-3	5	1-0.5
Carnation	4-5	10-12	2
Orchid	6-15	15-20	6

### 8.5 Retail Market, Vadodara:

Vadodara retail cut-flowers market is served by a small number of retailer shops, with 5-6 big names like J.K.Florists, A.K.Florists, Ivy – The Flower Boutique, Shrinathji Florist, Fragrance Florist, etc. Typical consumption requirement per retail shop remains in the range of 30 bundles to 40 bundles each of gerbera and rose per day. In Vadodara, the retail shops get major supply of cut-flowers directly from Pune through their direct linkages with producers. The supply is generally stable to retailers and it takes place twice or thrice in a week. To cater high demand days, retailers have to place advance demand with the suppliers. In terms of sales value, on an average gerbera and rose each generates about Rs50000 of business per month. However, unlike Surat here the retailers also keeps full range of artificial flowers, decorative bamboos etc. to supplement the business.

Retailers view cut-flowers business as high-risk, high-volatility business with marriage as the single largest driver of demand. In the institutional clients segment, it was observed that the relationship is not very strong and institutional clients make purchases from more than one retailer.

It should be mentioned that unlike Surat, where Mumbai market is the sourcing location for the retailers, Vadodara retail shops have primary linkages with Pune.

Requirement by big retail shops of Vadodara is estimated to be:

Flower	Avg. Daily Requirement	Annual Requirement
Gerbera	200	72000
Rose	900	324000
Carnation	200	72000
Gladiola	200	72000



Important colors in roses are red, white, orange, pink and yellow. It is generally sold at the retail shops in the following ratio:

Colors in Rose	% Share
Red	40%
White	22%
Orange	22%
Pink	7%
Yellow	7%

Value-wise, it is estimated that the retail shops in the city generates a business of Rs60 lacs p.a. together. Crude estimate by retail shops suggest that the road-side vendors constitute about 30% of total retail market. Adding the road-side vendors business, total cut flowers market size of Baroda is in the range of Rs80 lacs to 1 crore. Calculations indicate that wholesalers at the Vadodara Mandi supply exclusively to roadside vendors and to some extent small retail shops also. Gerbera supplied by them to small retail shops constitutes about 30-40% of their business in this flower. Whereas, their rose business is centered only on roadside vendors as even small retailers prefer to tap Pune for this flower owing to its high consumption in decoration business.

Average price observed at the retail shops level are:

Flowers	Avg. Price (per pc)
Rose	6
Gerbera	12
Gladiola	15
Carnation	10

Price variation at the level of retailers is very low irrespective of demand scenario. Retailers feel it helps in creating trust among the customers and minimizes the chances of confusion and unnecessary bargaining hassles in the selling process. However, in consequence to this retailing norm, the spoilage rate is as high as 15-20% of total supply. Against this, the road-side vendors adopt the practice of flexible pricing to minimize the spoilage.

### 8.6 Wholesale Market, Ahmedabad

Flowers wholesale market at Ahmedabad is regulated by local APMC for many years now and it attracts a tax of 0.5% of total sales applicable on the wholesalers/ commission agents. The market is well developed with spacious infrastructure in place. There are about 40 traders in this market and

---

#### MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



there is no apparent specialization with respect to traditional flowers and cut-flowers (i.e. traders of cut-flowers also deals in traditional flowers unlike Vadodara).

Cut-flowers are supplied mainly from Pune (almost 95% of total) along with small quantities from Bangalore, Kolkata and Mumbai. This market also supplies regularly to Rajasthan markets and occasionally to Mumbai and Delhi markets, beside serving the local city. Again, there is no export activity taking place through Ahmedabad Wholesale market.

Cut-flower business in this market involves two prominent supply chain models:

- **Direct linkage with the Producers:** Here the traders are directly in agreement with producers located at different locations – mainly with non-Pune and nearby suppliers. Thereafter the sales process involves a flat commission fee of 7% (as against the prevalent commission rates of 10-15% in Pune & Mumbai) for wholesale traders. However, of late the business on commission basis is being discouraged by the APMC authorities as they see it against the interests of producers.
- **Via Middleman:** This is another (and more prominent) operating model in this market whereby traders are connected with the Pune wholesale market traders and it involves purchase and resale process. In another words, this model provides unlimited opportunity to traders with profit realisation along with the associated risks of carry. The average margin accrued to traders in this model is in the range of 10-15%. Payment terms of traders with the suppliers in Pune are of daily basis if relationships are not old enough. However, once the trust built in, a credit period of 15 days are applied.

Average sales volume in this market remains in the range of 600-700 packets/ day for Dutch Rose and 1000 packets/ day for Gerbera in the lean season. However in high demand season, it reaches a level of 3500 packets/ day and 15000 packets/ day for Dutch Rose and Gerbera respectively.

### 8.7 Retail Market, Ahmedabad

It is estimated that Ahmedabad cut-flowers retail market is served by around 30-35 big retail shops in the city in addition to more than hundred road-side vendors. The retail shops in the city source their flower requirement directly from Pune based producers. However, the nature of arrangement was observed to vary from retailer to retailer. As per one arrangement the contract is signed between the retailer and producer-supplier as to the minimum level of supply and the price for a defined period of time which is periodically revised. In this arrangement the retailer has the benefits of stable sourcing price and tapping producers located anywhere in the country. However there are also two important drawbacks associated with it. First is the incidence of occasional low-quality arrival (when the producer is fetching higher price somewhere else) and second is the high spoilage percentage arising because of the obligation to receive a minimum quantity irrespective of customer demand scenario.

---

### MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



However, because of high cost of establishing a trustworthy agreement, the variability in quality remains low (figuratively it may be said 5-10%). Second arrangement involves price mapping and negotiations with the producer-supplier whenever the requirement arises on the part of retailers. Hence, this arrangement sees the whole process being put to use two to three times a week. The benefit of this arrangement is matching supply with requirement with very low chances of spoilage and better control on quality (there are no long term obligation in place as in contractual agreement breaking contract may be costly for retailers). However, the severe drawback of this arrangement is high cost of the supply, unavailability of flowers in the very-high demand periods (like Valentine's Day) and singular reliance on Pune market as producers located elsewhere are not served by nearby large market-hubs. It was observed by the retailers that barring certain days, the demand remains predictable. In this context, first arrangement is more desirable in our view.

Retailers in Ahmedabad have suppliers based out of Pune, Bangalore, Delhi and Mumbai because of the good connectivity of these cities via railways and air. However, Mumbai is not preferred choice as it increases the time involved (flowers does not remain fresh as at the Producer's greenhouse at Pune) and cost without any value addition as compared to Pune. Generally, there are no middlemen in between the retailers and producers. The frequency of supply is on an average twice a week whereas in high demand season it happens every two days. It was observed by retailers that the average margin at their level is in the range of 50%. In the arrangement where wholesalers are involved, latter's margin remain in the range of 15%.

The flowers reach Ahmedabad retailers within 24-36 hrs of cutting. Reducing this time-lag may be one value addition by prospective future producers as more fresh the flowers are, better are its chances of fetching higher price from customers and more is the storage period.

Prices at the retail shop level remains largely fixed and uniform irrespective of demand and supply scenario. Again the reasons are same as observed in Vadodara - to prevent the unnecessary bargaining and confusion in terms of highly fluctuating price so as to create a regular and loyal customer base.

On being queried on the potential of cut-flowers production in Gujarat, retailers were skeptical and a few past experiments by way of examples in the past came to the fore. It has been the experience with the growers in and around Gujarat (as reported by them) that quality of produce in initial few seasons remains very good however thereafter it starts deteriorating. In another words, climate of Gujarat may not be conducive for consistent high quality production of cut-flowers.

### **8.8 Retail Market, Modasa**

Modasa is a taluka within Sabarkantha district of Gujarat. Prospective farmers to be initiated into flower cultivation are located nearby this taluka. Hence, retail flower market of this place was also studied to examine the prospects of supplying the output.

---

#### MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



Traditional flowers retail market in Modasa is being served by fifteen entities belonging to Mali community families. Flower business is the traditional occupation of Mali community. Market of this place too is heavily dependent on marriage decoration and hence is highly seasonal in nature. Modasa, being a small town, does not present any alternative avenues for flower consumption. Generally the months of November to April experiences high trading activity in flowers.

Marigold and Rose are the two most important flowers traded in the market. Average total consumption per day in the high demand season is approximately 300kgs and 60kgs for marigold and rose respectively. As against this, the same figures in the off-season months stands at 80kgs and 12kgs for marigold and rose respectively. Shelf life of marigold is of 3 days and for rose it is 1 day.

Because of the strong seasonality factor, there is strong fluctuation in prices. During the high demand season, prices remain in the range of Rs40-Rs50/ Kg and Rs150-Rs200 per Kg for marigold and rose respectively. However, during off-season the same flowers are available at Rs8-Rs15/ Kg and Rs40-Rs50/ Kg respectively.

The flowers in this market are largely supplied by Rojar village, located nearby to Modasa. Five farmers are involved in the production of flowers in this village. Average supply quantity from this village is 100 Kgs and 30 Kgs during in-season and off-season respectively. However, the supply price at this level remains stable at Rs7-Rs8/ Kg throughout the year.

Beside this village, rest of the supply takes place from Ahmedabad market. The State Transport Bus is the common mode of transportation for the flowers reaching in this town. Usually, flower sellers of Modasa travels to Ahmedabad for buying their requirement through Mandi appointed commission agents.

### 9. PROCESSING INDUSTRY

A visit was undertaken to Kannauj (Uttar Pradesh), the pre-eminent centre for production of floral extracts and essential oils. The Ministry of Small and Medium Enterprises has established an institute named “Fragrance and Flavor Development Centre (FFDC) at Kannauj. During the visit to FFDC Kannauj, a discussion was carried out with Deputy Director of the institute, Mr. Shakti Vinay Shukla on the potential of floriculture processing in Gujarat. The major findings emanating from the discussion can be summarized as:

- i. High-value products like rose oil or fragrances require finesse and domain-expertise along with geographical conduciveness. Even between two proximate production centers for floriculture produce, there can be marked differences in suitability for processing high-value products. In the absence of niche expertise for dealing with the minor differences in flavor,





- fragrance, consistency, appearance and other attributes; floriculture processing for high-value floriculture products is a risky proposition
- ii. Proper exploitation of by-products and residues is an essential condition for success in processing of floriculture produce. This would call for setting up ancillary processing infrastructure (unit for agarbatti making etc.) for utilizing the by-products and residues
  - iii. In addition to the ability to process floriculture produce, there is also an associated need for good command over product marketing and/or branding as they are key prerequisites for realizing benefits from conversion of floriculture produce into standard products like rose jam and rose water. In case of high-value products, due to the specialized nature and the existence deep-entrenched players & business cartels, it is difficult to ensure good price realization or assured buyers for running a large processing unit successfully
  - iv. FFDC can provide turnkey project implementation support for preparation of rose jam (*Gulkand*) and rose water (*Gulaabjal*)

### 10. RECOMMENDATIONS

Although cut-flowers market may be a promising segment emerging within the commercial agriculture, it may qualify to be an optimal livelihood option for small & marginal farmers on a substantial scale only with the help of institutional guidance and support. The various roadblocks to be considered to better prepare for initiating this segment into cut-flower production are:

- i. Very high volatility in demand pattern: There are only a few but dominant demand drivers (like marriage and festivals) in the flowers industry and these drivers have their sources among the retail segment. As against institutional buyers, retail segment creates more volatility in demand pattern. This volatility is countered by farmer-producers by creating a broad-based customer markets along with the export market – which may be difficult for medium & small farmers.
- ii. Limited role and profiles of middlemen: As compared to traditional marketing channels of agriculture commodities, where middlemen have strong linkages within the chain up to end-consumers, flowers market observes different chain characteristics. In this commodity, many a times there is no middlemen in between the farmer and retailer or in the cases where middlemen are there, they operate on a margin basis without taking the responsibility of spoilage in the event of low level of end-sales. As a result, the bargaining power of farmers in the latter system is more limited. Also, the alternative of creating direct linkages with retailers may not be easy for middle and small farmers as it requires good and sophisticated marketing understand.

---

MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



- iii. **Highly Perishable Characteristics:** A very short shelf-life of flowers (especially traditional flowers) results in low scope for inventory management. Although the transportation requirement and storage requirement is not capital intensive unlike other perishable commodities, short shelf-life leads to high level of loss occasionally. As the risk-bearing capacity for middle and small farmers are less, this is another obstacle to consider while replacing staples.
- iv. **High capital-intensive production:** This point is relevant for cut-flowers production where the capital requirement is very high. Although availability of institutional finance and subsidy from government reduces the promoter's margin substantially, still the high debt burden makes the entire proposition for average farmers very risky.
- v. **More attractive alternatives like cultivation of medicinal and aromatic plants**
- vi. **Past results in the state:** As have been observed at various places in the report, the experience in cut-flowers production in Gujarat have been very mixed in nature. All the efforts undertaken till 3-4 years ago led to discouraging results as it was seen that after initial few years the quality of output used to deteriorate at a fast pace. However, specialized pocket of Navsari and a few other green-houses in South Gujarat in last 2-3 years have shown good results and consistent quality output. As a result, these production centers have established linkages with important markets of Delhi and Mumbai, in addition to export markets.

As the past results have not been consistent, a more rigorous analysis from the production perspective along with the advanced level of agricultural expertise is required before recommending it to the average size farmers. Without successfully locating the reasons of quality deterioration in the past projects, it is not advisable to encourage the farmers to adopt the same on a large scale.

In this context, following are the recommendations towards future course of action.

- i. To rigorously examine if the incidence of quality deterioration is likely in proposed regions or not, a small scale pilot may be undertaken for cut-flowers production. Again, it is recommended that rose should be selected only if quality expert guidance may be ensured to the farmers. Otherwise, Gerbera is safest of the option to start, although not the most profitable one.

Alternative, small scale-pilots may be undertaken by Development Support Center (DSC) for both Rose and Gerbera to assess the suitability of both the crops from farmer's perspectives.



- ii. Among the traditional flowers, surprisingly Rajnigandha has presented a scenario of unmet demand – especially in Vadodara market. However, its prices have been observed to be remarkably stable in all the market studied. Because of this detail information were collected from Shri Nikunj Mali in Vadodara on Rajnigandha production. Shri Mali grows Rajnigandha on 2 acres of land owned by him and he also owns a prominent flower retail shop (Shrinathji Florist) – one among the four biggest shops in Vadodara.

Interaction with this producer reveals that cultivation of Rajnigandha requires low level of labor requirement, less care and moderate level of capital. From market aspects, the arrival of this flower in wholesale market is very low against the demand and it represents good opportunity for flower producers as long as the balance is not disturbed. Following are the broad economic details on the Rajnigandha production:

<b>Average Plant Life:</b>	21	months
<b>Duration between planting and flowering in plant:</b>	3	months
<b>Calculation: Per Acre</b>		
<b>Cost Estimate</b>		
<b>Particular</b>	<b>Total Amount</b>	<b>Per Annum</b>
<b>Plant Cost</b>	17500	8750
<b>Fertiliser</b>	17500	17500
<b>Pesticides</b>	875	875
<b>Labor Requirement (1 person per acre)</b>	60000	60000
<b>Estimated Irrigation and Other Costs</b>	20000	20000
<b>Total Annual Cost</b>		107125
<b>Revenue Estimate</b>		
<b>High Production Days</b>	150	
<b>Low Production Days</b>	200	
<b>High Production Days Output</b>	175	Dzn
<b>Low Production Days Output</b>	35	Dzn
<b>Gross Annual Production</b>	33250	Dzn

MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



Average Annual Price per Dozen (in Rs)	8
Total Revenue	266000
Profit per acre	158875

This preliminary calculation have taken a very conservative estimate of high production days, production level of flowers during high as well as low production days, average annual price available in the market, and at the same time have taken an inflated level of costs. The information was obtained on a per bigha basis (in Vadodara) which was later converted to per acre basis by multiplying the figures by 1.75.

In this light, it is recommended that the production of Rajnigandha may be undertaken by farmers on a pilot basis and moderate scale. However, a primary survey of near most market to the site of production should be undertaken to evaluate the consistency of observation with the markets covered in this report.

- iii. Exposure visits to successful floriculture polyhouses in Surat and Navsari should be undertaken for better understanding of the cut-flowers production and marketing aspects. Also, the consultants and experts interacted for completion of this study should be consulted for any pre-production doubts and apprehension as well as the guidance during the implementation phase.

For Rajanigandha production also, an exposure visit on the farm of Shri Nikunj Mali of Vadodara may be arranged to gather first hand understanding necessary to plan future course of action.



## **Annexure I**

### **Checklist Used for the Semi-Structured Interview with Wholesalers**

- Supply Sources (Distance, Stability, Quality issues)
- No. of links in the channel/ Intermediaries for Different Models
- Composition of market flower-wise (Volumes & Percent Market Share)
- Pricing of Different Flowers (for Downstream Players)
- Seasonality in Demand, Supply & Pricing
- Factors influencing handling ability (Volumes)
- Major Players in Wholesale Market
- Impact of Distance of Procurement Sources
- Degree of Perishability in Important Flowers (Storage requirements and facilities)
- Rules of the Game
  - Credit Period
  - Personal Considerations
  - Geographical Market Coverage within the Overall Market
  - Pricing Rules & Price-Setters
- Credit terms/ Payment Structure
- Export Demand & Constitution
- Export Destinations
- Price Differentials b/w Export & Domestic Markets (Margin-wise)
- Demand across different types of retailers (type & location of outlet-wise)
- Typical Sourcing Prices
- Procurement Price Determination Factors/Price Elasticity
- Key Market Risks (Volatility in Demand) & Mechanisms to Mitigate them
- Composition of consumption (Retailers, Exporters & Processers)
- Players handling Institutional Demand
- Key Institutional Buyers (Volatility in Demand)
- Market Growth Rates (Flower-wise, Total Volume, Prices)
  - Past years data
- Potential new flowers with expected demand in next few years
- State govt. support, schemes, programmes and facilities

---

### **MarketPulse Knowledge Networks (P) Ltd.**

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



## Annexure II

### Checklist Used for the Semi-Structured Interview with Retailers

- Supply Sources, major wholesale players
- Means, timings and process of supply to them
- Composition of market - flower and variety-wise, volume and value-wise
- Necessary storage conditions and facilities requirement (for inventory and on the shelf products)
- Shelf-life; Price variation at different level of freshness
- Important types of competitors and their profiles, competitive advantage
- Credit terms, cycles and relevance of personal factors
- Attractiveness of Different Buyers (End Consumers)
- Pricing rules, driving factors and process for Different Flowers
- Marketing efforts, schemes etc, their periods, flower-wise
- Seasonality in Demand, Supply & Pricing
- Factors influencing handling ability (Volumes)
- Degree of Perishability in Important Flowers (Storage requirements and facilities)
- Typical Sourcing Prices
- Supply Price Determination Factors/Price Elasticity
- Market Growth Rates (Flower-wise, Total Volume, Prices)
- Innovation opportunities, ideas and future estimation

---

MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



### Annexure III

#### List of Individuals Interviewed as Part of the Study

1. Mr. Rajkumar Deodhare, Floriculture Consultant, Talegaon
2. Mr. Vishwas Jogdand, Floriculture Consultant, Talegaon
3. Mr. Appasheth Madhav Chowdhari, Shop No, 206, 112, Dadar Wholesale Market
4. Mr. Vithal Kaluram Yadav, Shop No. 432, Dadar Wholesale Market
5. Ms. Ekta Soni, Bageecha, Surat
6. Mr. Kumar Bhai, Exzora: The Flower Shop, Surat
7. Mr. Gaurav Bhai, Mahalaxmi Florist, Surat
8. Mr. Sapan Bhai, Flower World, Surat
9. Mr. Anilbhai ShriGulabsingh Rajput, Surat Wholesale Market
10. Mr. Raju Bhai, Surat Wholesale Market
11. Mr. Kantibhai Chimanlal Mali, Surat Wholesale Market
12. Mr. Panubhai Bhagwanbhai Bamta, Surat Wholesale Market
13. Mr. Vinodbhai, Vadodara Wholesale Market
14. Mr. Ajay (urf Pappu) Yadav, Ganga Flowers, Vadodara Wholesale Market
15. Mr. Imraan/ Mr. Sanjay Patnayak, Fragrance Florist, Vadodara
16. Mr. Nikunj Mali, Shrinathji Florist, Vadodara
17. Mr. Ketu Shah, Emotions, Ahmedabad
18. Mr. Vivek Sultania, Buds n Roses, Ahmedabad
19. Mr. Ahmedbhai Haji, Ahmedabad Wholesale Market
20. Mr. Shakti Vinay Shukla, Deputy Director, FFDC, Kannauj
21. Mr. Laxman Bhai Mali, Modasa
22. Mr. Shivram Bhai Mali, Modasa

---

MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



## Annexure IV

## STATE-WISE AREA, PRODUCTION AND PRODUCTIVITY OF FLOWERS

STATE/UTs	AREA (IN HA)				PRODUCTION (Loose in MT and Cut in lakh No.)							
	1993-94	2003-04	2004-05	2005-06	1993-94		2003-04		2004-05		2005-06	
					LOOSE	CUT	LOOSE	CUT	LOOSE	CUT	LOOSE	CUT
TAMIL NADU	12	20274	23233	24750	61704	-	161655	-	187342	-	201905	-
KARNATAKA	15243	18182	20400	21060	87999	-	143286	5591	150225	5038	156257	5239
ANDHRA PRADESH	5778	12902	13909	16083	17334	-	49130	44	57875	71	79788	89
MAHARASHTRA	2275	8422	8660	9250	18188	-	48538	-	51705	-	56078	-
WEST BENGAL	12610	17328	17925	17886	9020	4790	43575	8767	44674	8963	42292	9348
GUJARAT	-	4917	6956	7118	-	-	30187	-	41811	1969	42182	4392
SIKKIM	-	6	80	100	-	-	-	9	-	28	33100	-
HARYANA	1200	4296	4810	5418	22400	327	58333	461	55583	508	26320	623
ORISSA	100	282	314	592	460	4	78	11	17252	12	19275	130
UTTAR PRADESH	-	6325	7968	8250	-	-	9753	2650	11905	3527	12180	3668
DELHI	801	4490	4490	5538	4056	-	25007	-	25007	-	5666	1038
PUNJAB	332	600	615	800	549	-	3000	-	3075	-	4100	-
CHATTISGARH	-	11	1508	1551	-	-	60	-	2829	-	3302	-
HIMACHAL PRADESH	30	311	407	400	110	429	1504	380	2243	476	3010	434
BIHAR	85	103	103	190	1430	2	1757	11	1757	11	2303	11
RAJASTHAN	1207	1949	3312	3008	-	-	2161	-	2604	-	2255	-
MADHYA PRADESH	915	-	1829	1869	900	-	-	-	1097	-	1122	-
JAMMU & KASHMIR	-	98	226	226	-	-	207	3	922	110	922	110
MANIPUR*	56	535	535	535	23	-	701	-	701	-	701	-
UTTRANCHAL	-	96	525	562	-	-	545	-	558	-	640.53	-
ANDAMAN & NICOBAR	-	-	-	6	-	-	-	-	-	-	3	2537
MIZORAM*	-	56	56	56	-	-	0	1	0	1	0	1
DAMAN & DIU*	5	2	2	-	51	-	7	-	7	-	-	-
ASSAM	280	-	-	987	37	-	-	-	-	-	-	-
JHARKHAND	-	-	-	-	-	-	-	-	-	-	-	-
MEGHALAYA	-	-	-	-	-	-	-	-	-	-	-	-

MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune - 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi - 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)





NAGALAND	-	-	-	-	-	-	-	-	-	-	-	-
PONDICHERRY	40	-	-	-	177	-	-	-	-	-	-	-
TOTAL	40969	101185	117863	126235	224437	5552	579484	17926	659172	20714	693401	27618

# Source: National Horticultural Board Database, 2007

MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



Annexure V

COUNTRY WISE EXPORT STATISTICS FOR FLORICULTURE

Country Name	2002-03		2003-04		2004-05		2005-06	
	Qty (Kg)	Value (Rs)	Qty(Kg)	Value(Rs)	Qty(Kg)	Value(Rs)	Qty(Kg)	Value(Rs)
U.S.A.	9663466	472229303	11921649	731375656	7897001	516901604	13175828	758833386
JAPAN	3011137	227693529	1494297	254794645	1739004	158545037	3384508	564120339
U.K.	2096947	141974433	3810640	280228132	3379259	265659471	3791802	308506852
NETHERLANDS	3487080	198711477	2513598	269794700	2527420	289488145	2233163	274101493
GERMANY	1525031	153890817	2668151	213579332	2437096	220021810	2986432	243341051
ITALY	837110	53448098	1802128	115533227	1345090	94518110	1224601	90783489
U.A.E.	424351	39616763	368859	34932964	516050	52456032	651452	62917314
FRANCE	715998	63601500	875874	81386702	613165	55848817	602913	61725632
BELGIUM	471126	42339939	245150	25349604	539816	49931844	557449	53189053
SPAIN	246347	21559274	512060	33308227	349730	31615990	481649	47747517
AUSTRALIA	422004	22894927	373608	51608487	233817	46057486	226955	46504596
CHINA	59652	5122671	79905	6231645	1492228	41753006	1658076	43699767
AUSTRIA	47516	4461125	189003	17426587	420498	42526015	344760	39879178
POLAND	477759	27990634	748653	67749641	378882	35693607	384950	38945060
ETHIOPIA	0	0	0	0	700	24229	55010	32259446
GREECE	105521	9523640	200864	17189372	154625	17862696	372290	30327057
SOUTH AFRICA	51633	3093873	37086	3830447	165681	17480431	185851	23181429
SINGAPORE	212218	24102439	217850	24531635	285378	17944035	363644	19463006
NEW ZEALAND	276924	4202575	43657	18539877	42410	12828408	82495	18948136
SLOVENIA	1650	341174	23478	2082047	17142	1955803	182610	18523851
SAUDI ARABIA	96022	8572000	93787	7116735	153250	11236539	202622	16944422
SWITZERLAND	542852	18433020	125639	18831197	184630	13907883	165573	15453517
SWEDEN	65883	12824942	129010	17271315	208353	23228527	113080	13218853
RUSSIA	23242	846416	68618	9427839	112840	13294594	113158	12945551
CANADA	108828	11550701	237513	23483933	238290	22599512	135176	12823342
THAILAND	21360	628082	15358	681762	114317	5962694	201451	10319766
PORTUGAL	56570	6391253	217779	19033971	176280	18769829	89590	10313221
MALAYSIA	120949	8819714	99871	9071121	68897	7890798	100547	10106274
DENMARK	60934	5572788	132090	10262210	101386	8941620	81650	9598725
ISRAEL	129873	5686924	191160	14048630	72238	5778782	75693	7047606
KOREA REPUBLIC	23887	1577084	19088	3718613	16730	1815517	24002	4894818

MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



SRI LANKA	351133	7062245	142082	9684940	153469	4786727	70844	4852707
HUNGARY	32403	4191279	120379	11119785	17600	1896483	49274	4825236
HONG KONG	180602	11761250	82731	5067031	287382	11349448	170235	4598183
MEXICO	2000	355994	9113	557344	73807	8410178	10485	4387555
LEBANON	18704	2282334	25884	3473795	27304	9350099	13402	4215785
MALDIVES	13762	1191471	20948	2491700	107471	15123091	16537	4177233
TAIWAN	0	0	46835	5914039	0	0	26768	4043714
FINLAND	2000	166579	9300	226699	8470	1021592	69519	3995947
CZECH REPUBLIC	47100	3726999	62212	5567739	38780	3944569	32814	3714548
PANAMA	0	0	4040	55200	5500	653936	24200	3480881
IRELAND	80	11677	24988	1710700	14182	1495536	44543	3288110
NEPAL	1202	88745	22124	2322460	66178	1715639	20923	3230100
CYPRUS	6550	1330324	32055	9105020	4474	939448	30686	3175237
QATAR	161	27703	7543	811076	6947	839241	13651	3109364
EGYPT	33600	2278103	11250	1272813	2800	115788	34214	3075290
BANGALADESH	187040	888708	83604	2275952	554660	975656	22464	2582842
PUERTO RICO	0	0	225	42040	0	0	20000	2401427
ROMANIA	1000	103644	550	178713	43121	4082472	24131	2359058
ARGENTINA	1400	130688	50565	4929309	43904	3538947	24900	1999683
GUATEMALA	0	0	0	0	117	176823	7047	1808491
KUWAIT	7217	1685651	35027	2565892	26671	3289859	14031	1796879
KENYA	1080	143115	300	39809	273	340300	1195	1731792
BULGARIA	0	0	315	190638	2400	344584	19940	1521383
SLOVAK REP	0	0	27310	2177141	15400	1857038	14900	1474050
BAHARAIN IS	0	0	23056	1289607	0	0	21613	1202446
BRAZIL	65870	2222774	5254	298197	1357	208834	13307	1065263
MAURITIUS	2700	245931	2448	671609	1905	1161121	885	1020909
DOMINICAN REPUB	0	0	147	19413	245	62338	6200	973916
CHILE	4700	944263	7800	1466573	0	0	6248	825489
MYANMAR	20357	1509723	0	0	0	0	2638	816987
KOREA DEM. REP.	450	18730	1150	994054	716	516178	1460	787924
UKRAINE	0	0	95788	9040455	25217	3108786	6164	768216
MOROCCO	0	0	110	93642	2	102283	5700	720036
LATVIA	0	0	6565	876211	27300	575611	12452	669597
OMAN	2477	563662	3983	772781	5167	490351	6429	658421
BOSNIA-HRZGOVIN	0	0	8196	1392583	1725	435557	4607	635406

MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



PAKISTAN	80523	654574	290	113015	60	53286	9210	628480
UNSPECIFIED	0	0	50	571	0	0	3158	622605
SERBIA MONTNGRO	0	0	0	0	0	0	6090	614942
INDONESIA	2160	433686	1714	397765	12110	520303	3590	547379
TUNISIA	16000	1351597	13500	1649100	6713	1169393	9000	507138
TURKEY	12260	301852	29721	2930859	52660	3524290	5018	482107
COSTA RICA	0	0	110	43166	0	0	7620	450070
PHILIPPINES	230	48443	12233	777055	6205	1106181	428	407027
CROATIA	330	34959	11650	1351828	9600	912428	1500	373142
IRAN	0	0	0	0	0	0	4000	353817
PERU	0	0	225	42040	0	0	4200	341247
ESTONIA	0	0	0	0	3500	340458	2000	279841
COLOMBIA	200	22442	0	0	0	0	1450	274856
LIBYA	0	0	0	0	0	0	1109	233273
VENEZUELA	0	0	0	0	0	0	2800	201768
JORDAN	0	0	234	24495	823	125144	1019	146150
MARSHALL ISLAND	0	0	0	0	0	0	1700	140866
KYRGHYZSTAN	0	0	1200	55321	0	0	2000	120795
CAMBODIA	0	0	0	0	70	111862	62	83620
BURUNDI	0	0	0	0	0	0	500	82873
YEMEN REPubLC	3007	243490	21705	831991	0	0	3300	80679
RWANDA	0	0	0	0	0	0	20	73010
LAO PD RP	0	0	0	0	0	0	23	71323
BHUTAN	0	0	0	0	400	1062880	500	61916
UGANDA	0	0	0	0	56	16166	100	51826
NIGERIA	37880	290660	17000	185491	0	0	500	48943
SUDAN	0	0	0	0	2328	1896880	25	31465
ST. HELENA	1570	224102	46017	5580485	0	0	324	29580
TRINIDAD	0	0	0	0	0	0	500	29320
UZBEKISTAN	3988	495617	1183	111815	130	22963	230	23744
REUNION	0	0	0	0	120	105422	125	21508
BRUNEI	130	13294	0	0	64	6682	100	21075
AFGHANISTAN	0	0	4200	380754	1350	159135	100	10000
FIJI ISLANDS	1550	56224	0	0	0	0	180	8793
TAJIKISTAN	0	0	0	0	530	51291	70	7570
ANTIGUA	0	0	0	0	0	0	30	7375

MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



LIBERIA	0	0	0	0	0	0	30	3648
ALBANIA	0	0	0	0	0	0	0	0
AMERICAN SAMOA	2050	321653	0	0	620	97135	0	0
ANGOLA	0	0	0	0	0	0	0	0
ANGUILLA	0	0	1300	396658	0	0	0	0
ANTIGUA & BARBUDA	0	0	0	0	0	0	0	0
ARMENIA	400	66595	0	0	0	0	0	0
BAHAMAS	0	0	0	0	0	0	0	0
BAHRAIN	4896	326920	0	0	31720	4023131	0	0
BARBADOS	0	0	1800	203400	0	0	0	0
BENIN	0	0	0	0	0	0	0	0
BOTSWANA	0	0	0	0	0	0	0	0
BYELORUSSIA	0	0	0	0	0	0	0	0
CAMEROON	0	0	72	5599	0	0	0	0
CENTRAL AFRICAN REPUBLIC	0	0	0	0	0	0	0	0
CHAD	0	0	0	0	0	0	0	0
CHANNEL ISLAND	0	0	0	0	0	0	0	0
CHINESE TAIPEI	88184	8974682	0	0	22568	4185820	0	0
DJIBOUTI	45	8175	375	35676	0	0	0	0
DOMINICA	0	0	221	23959	0	0	0	0
EAST TIMOR	0	0	100	99330	0	0	0	0
ECUADOR	0	0	0	0	3	15336	0	0
EL SALVADOR	0	0	9323	3062750	370	143668	0	0
FAEROE ISLANDS	0	0	0	0	0	0	0	0
GEORGIA	0	0	0	0	900	75531	0	0
GHANA	0	0	0	0	0	0	0	0
GIBRALTAR	0	0	0	0	0	0	0	0
GUAM	0	0	0	0	24	51172	0	0
GUYANA	0	0	0	0	0	0	0	0
HAITI	32	8356	0	0	0	0	0	0
HONDURAS	0	0	140	19884	0	0	0	0
IRAQ	0	0	0	0	0	0	0	0
JAMAICA	0	0	9	67745	0	0	0	0
KAZAKISTAN	0	0	0	0	800	61485	0	0
KIRGHIZIA	0	0	0	0	1150	108236	0	0

MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



LITHUANIA	0	0	0	0	20952	1830749	0	0
LUXEMBOURG	0	0	0	0	0	0	0	0
MACAO	2399	251062	0	0	0	0	0	0
MALAGASAY REP	0	0	0	0	0	0	0	0
MALAWI	0	0	0	0	0	0	0	0
MALI	4000	37538	30	9642	450	47996	0	0
MALTA	0	0	0	0	0	0	0	0
MAURITANIA	700	57240	250	261343	0	0	0	0
MOLDOVA	0	0	180	10848	0	0	0	0
MOZAMBIQUE	0	0	0	0	2500	39240	0	0
NEW CALEDONIA	0	0	0	0	160	22989	0	0
NICARAGUA	0	0	0	0	0	0	0	0
NIGER	100	4575	313	49417	1500	144240	0	0
NORWAY	0	0	22220	1231284	19427	1494900	0	0
OTHER COUNTRY	0	0	0	0	0	0	0	0
PANAMA CANAL ZONE	0	0	0	0	0	0	0	0
PARAGUAY	0	0	0	0	0	0	0	0
SENEGAL	0	0	100	7874	0	0	0	0
SIERRA LEONE	0	0	0	0	40	38117	0	0
SLOVAKIA	0	0	0	0	0	0	0	0
SOLOMON ISLANDS	0	0	0	0	0	0	0	0
SOMALIA	0	0	0	0	0	0	0	0
ST. KITTS NEVIS	0	0	0	0	10	1894	0	0
SWAJILAND	39337	756206	7170	1449483	5732	511112	0	0
SYRIA	0	0	760	82633	0	0	0	0
SYRIAN ARAB REP	0	0	0	0	1013	332148	0	0
TANZANIA REP	0	0	600	36897	100	7645	0	0
TOGO	0	0	0	0	0	0	0	0
TOKELAU	0	0	0	0	0	0	0	0
TRINIDAD AND TOBAGO	0	0	0	0	0	0	0	0
TURKMENISTAN	1575	726421	0	0	0	0	0	0
URUGUAY	5000	493227	16750	1393806	0	0	0	0
VIETNAM	500	119027	420	416059	700	103369	0	0
VIRGIN IS US	0	0	51	127570	0	0	0	0
YAMEN ARAB REPU	0	0	0	0	9204	444225	0	0
YUGOSLAVIA F RP	5600	555192	5610	568706	4900	645929	0	0

MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



ZAIRE	0	0	0	0	750	40300	0	0
ZAMBIA	0	0	400	328024	0	0	0	0
ZIMBABWE	0	0	0	0	0	0	0	0
<b>Total</b>	<b>26682104</b>	<b>1657510516</b>	<b>30659526</b>	<b>2495479551</b>	<b>27769059</b>	<b>2211098515</b>	<b>35185997</b>	<b>2994127623</b>

#Source: National Horticultural Board Database, 2007

MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



Annexure VI

DEVELOPMENT OF COMMERCIAL HORTICULTURE THROUGH PRODUCTION AND POST-HARVEST MANAGEMENT

CONTENTS

S.No.	Description	Page No.
1.	Operational Guidelines of Scheme Development of Commercial Horticulture Through Production	1-11
<b>Annexures</b>		
1 (A-i)	Application Form	13-21
1 (A-ii)	Affidavit	22-23
1 (A-iii)	List of NHB Offices where the Applications are to be sent	24-26
1 (A-iv)	Normative Cost Per Acre for Various Crops	27-28
1 (B)	Fact Sheet	29
C	List of NHB Offices	30-32
D	NHB – Head Quarter	33-34





## 1. Objectives

- a. To develop high quality horticultural farms in identified belts and make such areas vibrant with horticultural activity which in turn will act as hubs for developing commercial horticulture by adopting high-tech horticulture techniques;
- b. To develop post-harvest management infrastructure;
- c. To improve linkages between horticulture producers and marketers;
- d. To create integrated network for marketing of horticulture produce;
- e. To increase producer's share in consumer price;
- f. To encourage networking of schemes for resource mobilisation with all other related agencies/organizations; both of Govt. of India and the respective States/UT's Govts., Financial Institutions and private agencies engaged in the field of horticulture promotion in the country (also refer Scheme 3 Technology Development and Transfer items 5&6)

## 2. Eligible Projects

Projects with any of the following broad criteria pertaining to high quality commercial production of horticulture produce shall be eligible for financial assistance from NHB as back-ended capital investment subsidy:-

- a. High density plantations, which include adoption of appropriate plant density/canopy management, quality planting material, support and management system with appropriate inputs;
- b. Hi-tech cultivation under controlled climatic conditions i.e. in Poly houses, Green houses, net-houses, etc.;
- c. Rainfed Production through efficient water management techniques, mulching for soil moisture conservation, use of barriers in soil to reduce percolation, irrigation by drip, sprinklers, fertigation, and water harvesting structures etc.
- d. Nursery management for quality seed/plant production of vegetables, flowers, ornamentals, fruit etc.;
- e. Hybrid Seed production;
- f. Organic farming;
- g. Hydroponics for year-round quality production;
- h. Use of plastics in horticulture;
- i. Bio-technology;
- j. Genetically Modified Organisms (GMOs)

Projects based on further scientific advancements in various related fields will also be eligible for finance.

---

### MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



In addition, projects falling under the following other broad categories shall also be eligible to avail the capital investment subsidy of NHB:-

- a. Development of infrastructure for production, post-harvest handling, processing and marketing;
- b. Development of markets and introduction of new primary processing of products
- c. Development of horticulture ancillary industry for improved packaging, equipments, plastics, corrugated boxes, horticulture machinery/ tools, etc

### 3. Components

#### A) Production related

- a. High quality commercial horticulture crops
- b. Indigenous crops/ produce, herbs
- c. Aromatic plants
- d. Seed & Nursery
- e. Bio-technology, Tissue culture
- f. Bio-pesticides
- g. Organic Foods
- h. Establishment of Horti. Health clinics/laboratory
- i. Consultancy services
- j. Beekeeping

#### B) PHM/Primary Processing related

- a. Grading/packing/washing/waxing/sorting/drying centres
- b. Pre-cooling unit/Cool Stores
- c. Reefer Van/Containers (with multi-chamber, multi-product facility)
- d. Specialised Transport Vehicle
- e. Retail outlets
- f. Auction platform
- g. Ripening/curing chamber
- h. Market yards/rope ways
- i. Radiation unit/Dehydration Unit/Vapour Heat Treatment Unit
- j. Primary processing of products fermentation, extraction, distillation, juice vending pulping, dressing, cutting, chopping etc.
- k. Horticulture ancillary industry e.g. tools, equipment's, plastics, packaging, etc.
- l. Plastic Crates, Cartons, Baskets, Aseptic Packaging & Nets (50% Subsidy). The subsidy @ 50% as per prescribed norms shall be available for crates and nets (shade and anti-hail only) as a part of integrated commercial projects only. However, assistance in case of CFB Cartons and Aseptic Packaging shall be available on merit for launching a new product during its first year and for introduction of such products in a given horticulture area, as a one time assistance.

---

### MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



#### **4. Priority Areas**

- a. Export Oriented Units/Projects
- b. Project from cooperative sector
- c. Projects in North Eastern Region, Hilly and Tribal areas
- d. Introduction of new processes, products or markets including new technology/equipment
- e. Project involving women entrepreneurs and ex-serviceman

(Projects in areas other than the above priority areas shall also be considered on merit).

#### **5. Pattern of Assistance**

- a. Back-ended capital investment subsidy @ not exceeding 20% of the total project cost with a maximum limit of Rs 25 lakh per project shall be provided under the scheme to these projects which are found technically and financially viable. However, for the North-Eastern/Tribal/hilly Areas, maximum limit of subsidy would be Rs 30.00 lakh per project.
- b. Subsidy would be sanctioned and released under the scheme somewhat on the pattern of cold storage scheme which is as under :-
  - i. Through participating banks/FIs
  - ii. Through NCDC in the case of cooperative sector
- c. The Financial Institutions/Bank shall include NABARD, IDBI, SIDBI, ICICI, State Financial corporations, State Industrial SC-ST/Minorities/Backward-Classes Financial and Development Corporation, other designated loaning institutions of the States/ UTs. Commercial/Cooperative Banks, etc.
- d. Cost of Land will not exceed 10% of the project cost, if purchased. Cost of Land will not exceed 10% of the project cost
- e. Concerned banks/State Financial Institutions/NCDC may adhere to their own appraisal norms while sanctioning projects under the scheme. The appraisal note submitted to NHB for sanction/claim of subsidy should invariably be the same which formed the basis for sanction of term loan.



**6. Submission of proposals for Letter of Intent (LOI) and Release of subsidy**

**A. Submission of Proposal for Letter of Intent (LOI)**

- a. The entrepreneurs/farmer/eligible applicant will make an application to NHB on a prescribed form about his intent to set up a unit/project. A copy of application for seeking letter of Intent (LOI) from the Board is enclosed at **Annexure 1 (A-i)**.
- b. On receipt of application by NHB's Head Office/Centres for (LOI), the proposals will be considered at NHB, H.Q./ Centres as the case may be.
- c. Applicant should also enclose a copy of duly signed and filled up Application Form for Term Loan sanction on the format of Bank/FI of his choice along with LOI Application Form.
- d. **Application with project cost up to Rs. 20.00 lakhs may be sent directly to respective state office of NHB {See Annexure 1 (A-iii)} and applications with cost above 20.00 lakh may be sent to NHB, H.Q. at Gurgaon.**
- e. NHB will examine the application as per prescribed procedure and guidelines of the scheme and, if found prima-facie eligible, NHB will issue a Letter of Intent (LOI) to the applicant.
- f. The LOI will be valid for one year from its date of issue. The promoter should accordingly approach to the bank/FI of his choice immediately and get his term loan sanctioned by Bank/FI within a period of one year from the date of issuance of LOI.
- g. The project would be implemented within a period of two years from the date of sanction of loan. The payment of back-ended subsidy will be made after project has been successfully completed according to the terms and conditions of the loan/or as per the approved feasibility cum project report, as the case may be.
- h. The percentage of term loan should be at least 25% the project cost where the project cost is upto Rs. 30.00 lakh and in case of proposal above Rs. 30.00 lakh, the term loan should be at least 40% of the project cost.
- i. Proposals involving "Take over Loan" from one bank to other shall be allowed only one time.
- j. It is clarified that the projects will not be considered by NHB under this scheme where cultivation of seasonal/short duration horticulture crops is envisaged in open field.
- k. Cultivation of organic vegetable is allowed to be covered under the scheme even if it is grown in the open field provided the beneficiary has obtained a valid certification. Further, production of floriculture where planting cost is very high and suitable for cultivation in open field such as gladiolus and tuberose and considered under NHB scheme.
- l. Mere issuance of the LOI wouldn't guarantee the grant of subsidy to the beneficiary unless the proposal is implemented in accordance with the information given in the profile and within overall guidelines of the scheme.



- m. NHB will not entertain any cost escalation over and above the expenditure shown in the LOI/fact/sheet/Bank appraisal note. Additional cost, if any, will have to be borne by the promoter/entrepreneur.
- n. While deciding the subsidy, the Board will consider lowest cost out of appraisal note/actual or as verified by the inspection team. NHB will, however, have the right to restrict expenditure on any component/project to the limit as considered justified. (Please also refer NHB's cost norms at **Annexure 1 (A-IV)**).
- o. The project will not be eligible to receive subsidy under NHB scheme in case benefits of subsidy/grant-in-aid for the same from another agency of the Central Government has been availed expect NHB. However, subsidy assistance of the State Govt. may be availed/ claimed by the promoter receiving/claiming subsidy under NHB scheme.
- p. Husband and wife could be considered as separate beneficiaries for availing the benefit of subsidy provided that both of them are separately and individually the income tax payers/assesses.
- q. Any beneficiary could establish any number of projects without any restriction of place or time gap, subject to the condition that projects was pertaining to infrastructure like PHM, cool chain infrastructure and value addition. The only rider/condition would be that the earlier project(s) must be operational and not abandoned by the promoter. Crop production related projects would not get subsidy beyond level of ceiling.
- r. Tractor is not an eligible component, if the area under the project is less than five acre.

**B. Submission of proposals for release of subsidy**

After completion of the project for which LOI is issued by the Board, the Bank/FI will furnish a Brief Profile/Fact Sheet on the project along with a copy of sanction letter, appraisal note, statement of release of term loan and proof of land records to NHB Headquarters at Gurgaon with a copy to Assistant Director/Centre In charge of NHB posted in the respective States. The information to be indicated in the brief profile/fact sheet is given here below:

- i. **Name, address and location of the project/beneficiary;**
- ii. **Promoter's profile;**
- iii. **Name of the associate bank(s) FIs;**
- iv. **Nature/main activities under the projects;**
- v. **Item-wise Financial projections and expenditure incurred (as per appraisal note) and actual;**



- vi. Means of finance including NHB subsidy/other assistance (subsidy) from any other organisation (as per appraisal note) and actual;
  - vii. Brief coverage one technical feasibility and financial viability;
  - viii. Any other information relevant to the project;
7. Procedure for sanction of project and release of subsidy by NHB

Board may consider of part of full subsidy as under:-

- A. Release of part/advance subsidy to projects costing upto Rs. 20.00 lacs only.
  - a. Wherever the project outlay is upto Rs. 20.00 lacs and Public Sector Bank/FI has sanctioned and released Term loan to projects approved by NHB for LOI, Board may consider releasing part subsidy in advance. Part subsidy would be released on receipt of request from the Bank alongwith sanction letter.
- B. Release of full and final subsidy
  - a. Upon completion of the projects, the concerned Bank/FI/NCDC would inform NHB that the project has been completed within the over all guidelines of NHB and shall make a request to NHB for joint inspections of project which will be conducted in the presence of promoter.
  - b. However, for the projects of Public Sector Bank/FIs with projects outlay upto Rs. 20.00 lakh, instead of Joint Inspections the inspection will be done by the concerned Bank/FI only and report in the prescribed format would be submitted to NHB for release of subsidy.
  - c. **Submission of Utilization Certificate:** Bank/FI/NCDC as the case may be would submit to NHB utilization certificate of the subsidy released by NHB.
  - d. **Adjustment in Borrowers' Account:** The subsidy released by NHB to Bank/FI/NCDC on behalf of the individual units that are sanctioned assistance will be kept in the separate account. The adjustment of subsidy will be on the pattern of back-ended subsidy. Accordingly, the full project cost including the subsidy amount but excluding the margin money contribution from the beneficiary would be disbursed as loan by the banks. The repayment schedule will be drawn on the loan amount in such a way that the subsidy amount is adjusted after the bank loan portion (excluding subsidy) is liquidated. **The subsidy amount in the borrower's Term Loan account should be adjusted only as a part of the recovery of last installment which should not be prior to 36 months period from the date of release of Term Loan.**
  - e. **No interest chargeable on subsidy portion:** The subsidy admissible to the borrower under the scheme will be kept in the Subsidy Reserve Fund A/c – borrower-wise in the books of the



financing banks. No interest should be applied on this by the bank. In view of this, for the purpose of charging interest on the loan, the subsidy amount should be excluded. The balance lying to the credit of the Subsidy Reserve Fund A/c will not form part of Demand and Time Liabilities for the purpose of SLR/CRR. Suitable instructions issued in this regard by the RBI from time to time would be followed.

**8. Networking of the schemes:** With a view to achieve the stipulated objectives, the district authorities, other concerned states/UT, Financial Institutions and Private Associations etc. may encourage the networking of their activities/schemes with the NHB. The subsidy would be released through the Financial Institutions/Banks on the lines suggested in the preceding paragraphs. **However the projects where subsidy/grant from other central government agencies is involved, will not be eligible for NHB subsidy. Such proposals where the assistance is/has been provided by other organization(s) of Govt. of India only for some specific component(s) of the project, the full cost of such component(s), however, shall be deleted by the Board out of the project cost while examining the project for approval of subsidy.**

**9. Other Conditions**

- a. The project proposals may have vertical or horizontal integration.
- b. A signboard entitled “NHB Assisted Project” will also be exhibited at the site.
- c. NHB reserves the right to modify, add, and delete any term/condition without assigning any reason thereof
- d. NHB’s interpretation of various terms will be final.
- e. As and when required, pre & post inspection would be undertaken by NHB representative(s) to find out the physical & financial progress.
- f. NHB shall have a right to inspect/monitor the project and verify the related records at any time during the economic life of the project.
- g. The period of land lease should be minimum for 10 years. In case of plantation crops/fruit orchards having larger gestation period, the lease period should be for 15 years.
- h. Maximum subsidy limit per beneficiary, including expansion activity, would not exceed Rs. 25 lacs.
- i. Approved cost norm for various crops/produce is given at **Annexure-1 (A-iv)**.



10. Processing Fee: Processing Fee/Institutional charges will be applicable as under:

S. No.	Project cost	Rate of processing	Mode of fee/ Institutional Payment charges
I	Projects with cost upto Rs 10.00 lakh	0.1% of the project cost	20% of the processing fee may be charged at the time of application and balance 80% at the time of first/full amount of subsidy
II	Projects with cost above Rs 10.00 lakh and upto Rs 20.00 lakh	0.25% of the project cost	- do -
III	Projects with cost above Rs 20.00 lakh	i) 0.5% of the project cost subject to maximum of Rs. 70000/- for North Eastern/ Tribal/Hilly areas where maximum limit of subsidy is Rs. 30.00 Lakhs ii) 0.5% of project cost subject to maximum of Rs. 62,500/- for plains other than North Eastern Tribal/ Hilly areas where maximum limit of subsidy is Rs. 25.00 Lakhs	- do -

MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)





**Application Form for Letter of Intent (LOI)  
under Scheme, “Development of Commercial Horticulture through Production and  
Post-Harvest Management”**

**IMPORTANT INSTRUCTIONS**

1. LOI Applications with project cost upto Rs. 20.00 Lakh may be sent to Centre-In-charge of the respective State as per address given at **Annexure 1 (A-iii)**.
2. LOI Application with project outlay above 20.00 lakhs may be sent directly to Managing Director, National Horticulture Board, plot No. 85, Institutional Area, Sector-18, Gurgaon-122015 (Haryana).
3. All relevant columns of the applications may be filled up and application should be duly signed by the beneficiary on each page.
4. Cutting and overwriting should be avoided and duly attested.
5. Applications must attach all enclosures such as affidavit, proof of land records, processing fee, project report, term loan application farm etc.
6. The affidavit should in the prescribed format only.
7. The LOI will not be revalidated.
8. Lease/ Tenancy/Contract be duly registered with the competent Registration Authority.



**Annexure-I (Ai)**

- 1) Date of application
- 2) Control No. :  
(to be given by NHB)

To,  
**The Centre In-Charge  
National Horticulture Board**

.....  
.....

(only projects above Rs. 20.00 Lakh may be sent to this address)

To,  
**The Managing Director  
National Horticulture Board  
Plot No. 85, Sector-18, Institutional  
Area, Gurgaon-122015  
(Haryana)**

(only projects above Rs. 20.00 Lakh may be sent to this address)

**Application for Letter of Intent (LOI) under the scheme “Development of Commercial Horticulture through production and post Harvest Management” of National Horticulture Board)**

**A. GROWER/ENTREPRENEUR**

1. Name, address of the beneficiary

---

**MarketPulse Knowledge Networks (P) Ltd.**

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



2. Category: SC/ST/OBC/Ex-Service Man

3. Promoters/beneficiary profile

i) Principal Promoter/Beneficiary

ii) Others

**B. PROPOSED ACTIVITY**

(Cultivation/PHM/Primary Processing/Horticulture ancillary)

1. Name of the Project

2. Location

3. Details of activity under the proposed project

(a) Area under cultivation

Name of the Crops    Area (in acres)    No. of plants

i) .....

ii) .....

iii) .....

iv) .....

v) .....

b) PHM Activity

- Grading & packing/Pre-cooling/Refer Van

c) Primary processing

- Activity in brief: -

d) Horticulture ancillary industry e.g. tools, equipments, plastics, packaging etc.

- Activity in brief:-

e) Misc. activities (Not covered in a to d)

---

**MarketPulse Knowledge Networks (P) Ltd.**

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



- Activity in brief:-

**B.II (a)** Whether proposed activity in application is Yes/No

a completely a new activity

**(if NO, the details of pre-existing activity or any component thereof included in the application should be indicated clearly)**

.....  
.....  
.....  
.....

**(b)** Whether any subsidy has been availed Yes/No

for the proposed proposal/activity from Central Govt. or any of its Agencies

**(if YES, please indicate clearly in detail**

.....  
.....  
.....  
.....

**C. PROPOSED PROJECT COST (Component-wise)**

**Component/Item (Proposed Cost)**

**(a) Cultivation (Amount in Rs.)**

---

**MarketPulse Knowledge Networks (P) Ltd.**

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



**1) Cost of Cultivation**

- (i) Cost of planting material .....
- (ii) Cost of fertilizer & manure .....
- (iii) Cost of insecticide & pesticides .....
- (iv) Cost of labour .....
- (v) Other expenditure, if any (pl. specify) .....

**2) Irrigation**

- (i) Bore-well .....
- (ii) Tube-well .....
- (iii) Cost of pipeline .....
- (iv) Water harvesting (pond) .....
- (v) Other expenditure, if any (pl. specify) .....

**3) Drip irrigation**

- (i) Cost of drip irrigation .....
- (ii) Cost of sprinkler .....
- (iii) Other expenditure, if any (pl. specify) .....

**4) Infrastructure**

- (i) Pump House .....
- (ii) Store .....
- (iii) Labour quarter .....

---

**MarketPulse Knowledge Networks (P) Ltd.**

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



- (iv) Generator room .....
- (v) Grading/packing house .....
- (vi) Other expenditure, if any (pl. specify) .....
- 5) Cost of Tractor & accessories** .....

[If area under cultivation (project) is above 15 acres]

- 6) Land development (including digging of pit & fencing).....
- 7) Cost of Land, if purchased .....
- 8) Creation of controlled atmosphere   Area (sq. mtrs)   Cost
  - a) Green house/poly house .....
  - b) Shade net .....

**Total** .....

**(b) Post Harvest Infrastructure**

- 1. Cost of grading/packing house .....
- 2. Cost of grading/packing line .....
- 3. Cost of pre-cooling unit .....
- 4. Cost of refrigerated van .....
- 5. Other components, if any (pl. specify) .....

**Total** .....

**(c) Primary Processing**

- 1. Cost of civil constructions .....

---

**MarketPulse Knowledge Networks (P) Ltd.**

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



2. Cost of plant & machinery .....

3. Other components, if any (pl. specify) .....

**D. PROPOSED MEANS OF FINANCE** .....

(i) Promoter's share .....

(ii) Bank/FI term loan .....

(iii) NHB subsidy (Bridge loan contribution .....

made either by Promoter through Bank finance)

(iv) Subsidy from other sources, if any .....

a) From State Govt. ....

b) From Central Govt. ....

**Total** .....

**(e) Expected return/income from the proposed project.**

a) In case the project cost is above Rs. 10.00 lakh, a brief project report containing technical feasibility and financial viability should be enclosed alongwith application.

.....

b) In case of project cost is up to Rs. 10.00 lakh. the information pertaining to income to be generated from the proposed project may be given as under : -

(Amt. in Rs.)

1. Year	2. Expected Gross Income	3. Expected Expenditure on fixed/ capital assets	4. Expected Working operating expenditure(excluding repayment of loan + interest)	5. Total expenditure(3+4)	6. Estimated Net Income(2+5)
1 <sup>st</sup> year					

**MarketPulse Knowledge Networks (P) Ltd.**

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



2 <sup>nd</sup> year					
3 <sup>rd</sup> year					
4 <sup>th</sup> year					
5 <sup>th</sup> year					

**E. EXISTING STATUS OF PROJECT**

(Please give details about the activities of the proposed project already completed at the time of submission of application of Letter of Intent (LOI))

.....  
 .....  
 .....

**G. Whether any assistance in the form of soft loan and subsidy has been availed by the beneficiary earlier from the National Horticulture Board? If yes, give details thereof.**

.....  
 .....

**H. Whether any subsidy has been availed from the Board for the same activity on same piece of land?**

.....  
 .....

**I. Name of the Bank/FI from where the term loan is to be availed by the Beneficiary (Please enclose a copy of the July filled up text up Application/Proad of the Application already filled).**

.....

---

**MarketPulse Knowledge Networks (P) Ltd.**

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)





.....

**J. DETAILS OF LAND**

- I) Whether own land (ancestral)
- ii) Whether ownland purchased
- iii) Whether lease/tenancy/contract

If so, how many year lease/tenancy/contract)

- iv) Whether lease/tenancy/contract is registered with the **Competent** **Registration**  
**Authority**

(copy of the proof of each title be enclosed)

**K. IMPLEMENTATION SCHEDULE OF PROPOSED ACTIVITY**

- I) Proposed month for undertaking + land development
- ii) Proposed month for plantation
- iii) Expected date/month of first commercial crop
- iv) Proposed date for start of unit in case of processing

**L. MARKETING OF PRODUCE**

Details of marketing tie-up (Backward/forward linkage)

**M. Processing Fee/Institutional Charges to be remitted alongwith the application for Letter of Intent**

(LOI). The details of quantum of processing fee in respect of project cost is as under :-

Project cost	Quantum of processing fee/ Institutional Charges	Mode of payment
Projects with	0.1% of the	20% of the processing fee



cost up to Rs. 10.00 lakh project cost may be charged at the time of application and balance 80% at the time of release of first/full amount of subsidy.

Project with cost above Rs. 10.00 lakh and up to Rs. 20.00 lakh 0.25% of the project cost -do-

Project with cost Above Rs. 20.00 lakh 0.5% of the project cost -do-

Please remit the processing fee/institutional charges along-with application by Demand Draft in favour of National Horticulture Board payable at Gurgaon (Haryana).

Name of the issuing Bank Branch	Date	Amount
.....	.....	.....

Certified that the information/contents as above furnished by me/us in the application are true to the best of my/our knowledge & belief and nothing material has been concealed. In case, any information furnished in the application is found false, my/our application may be rejected out rightly at any stage by the Board.

(Signature of the Beneficiary)

Name & Address: .....

Telephone/Fax No. ....

Place:

Date:

---

MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



**Note:**

- i) Attach proof of land record
- ii) Affidavit in prescribed format only
- iii) Processing fee
- iv) Project cost (wherever applicable)
- v) **Duly filled up and signed back term loan applicable form**

**Important Instructions**

1. LOI application with project cost up to Rs. 20.00 lakh may be sent to Center In charge of the respective State as per address given at Annexure-I (A-iii)
2. LOI application with project outlay above Rs. 20.00 Lakh may be sent directly to managing director, National Horticulture Board, Plot No. 85, Sector 18, Institutional Area, Gurgaon - 122 015 (Haryana)
3. All relevant columns of the applications may be filled up and application should be duly signed by the beneficiary on each page.
4. Cutting and overwriting should be avoided.
5. Application must attach all enclosures such as affidavit, proof of land records, processing fee, project report, bank term loan application form, etc.
6. The affidavit should be in the prescribed format only.
7. The LOI will not be revalidated.
8. Lease/tenancy/contract be dully registered with the competent Registration Authority.

---

**MarketPulse Knowledge Networks (P) Ltd.**

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



**Annexure 1 (A-ii)**

**AFFIDAVIT**

(on stamp paper of Rs. 20)

I/we ..... (Name of the promoter/Director son of Mr. ....  
(father's name) resident of..... (residence address) do  
hereby solemnly affirm and declare as under:

1. That I am director/partner/proprietor of M/s/ ..... (name of beneficiary) having its registered office at ..... (office address of beneficiary) and am fully aware of the facts relating to the setting up to the project at ..... (location of the project) for ..... (activities to be undertaken by project) and application made of NHB for seeking Letter of Intent (LOI) under the scheme "Development of Commercial Horticulture through Production and Post Harvest Management".
2. That the term and conditions of the scheme of NHB under which an application is made by the applicant have been properly read and understood by me and I affirm that the project/proposal/scheme comply with the terms and conditions of NHB and the application is made in the correct applicable scheme.
3. That the proposed activities to be undertaken by the project/proposal scheme are covered under the above scheme of NHB and no part of the scheme/infrastructure of the project is designed or assigned to be used for any activity other than the horticulture activities specified in the application at present or in the near future.
4. That the information provided in the application of Letter of Intent (LOI) is true and correct to the best of my knowledge and belief. The estimate of the cost of project/proposal/Scheme, financial viability and operating results have been worked out/computed as per the rule and generally accepted principle and norms in this regard.
5. No subsidy/grant-in-aid has been availed/is to be availed by the promoters/directors/partners/proprietors for this new project and component thereof from Central Govt. or any of its agencies Except the NHB.
6. I/we also solemnly affirm that the proposal activity in the application for LOI is a completely new activity and not a pre-existing activity or any component thereof.

---

**MarketPulse Knowledge Networks (P) Ltd.**

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



In case of concealment of any facts in this regards, the Board would have right to reject my application out right at any stage.

**DEPONENT**

**DEPONENT VERIFICATION**

Verified on solemn affirmation at ..... (place) on this ..... (date) of, ..... (month), 20 .....(year) that the content of the above affidavit are true to the best of my knowledge and belief and nothing material has been concealed.

**DEPONENT/COMPETENT AUTHORITY**



**LIST OF NHB OFFICES WHERE THE PROSPOSALS/APPLICATION ARE TO BE  
SENT FOR PROJECT  
UPTO 10.00 LAKH**

<b>State(s)</b>	<b>NHB Field Office</b>
Andhra Pradesh	National Horticulture Board Market Information Centre 202, 2nd Floor, Shantiketan Apartments, Chirag Ali Lane, ABIDS HYDERABAD - 500001 Tel/Fax : 040-23201140
Assam, Arunachal Pradesh, Meghalaya, Manipur, Nagaland, Mizoram	National Horticulture Board Chhibber House, 4th Floor, G.S. Road GUWAHATI - 781005 Tel/Fax : 0612-2228218
Bihar	National Horticulture Board Verna Centre, 5th Floor Room No. 501-502, Boring Canal Road, PATNA - 800001 Tel/Fax : 0612-2228212
Chhattisgarh	National Horticulture Board C/o Director of Horticulture & Farm Forestry, Katela Bhawa, Civil Lines

---

**MarketPulse Knowledge Networks (P) Ltd.**

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



	RAIPUR - 492001 Tel/Fax : 0771-2423991
Delhi	National Horticulture Board 19-20, Garage, Krishi Bhawan, DELHI - 110001 Tel/Fax : 011-23073019, 23097015
Goa, Karnataka	National Horticulture Board No. 14/43, 2 <sup>nd</sup> Floor, (Above Canara Bank) Industrial Suburab, 1 <sup>st</sup> & 2 <sup>nd</sup> State, Tumukur Road, Yeshwanthapur, BANGALORE - 560022 Tel/Fax : 080-23371935
<b>State(s)</b>	<b>NHB Field Office</b>
Gujarat, Daman & Diu	National Horticulture Board Sardar Patel Market, Jamalpur Gate, Opposite Calico Mills, AHMEDABAD - 380022 Tel/Fax : 079-5321922
Himachal Pradesh	National Horticulture Board HPMC, Nigam Vihar SHIMLA - 171002 Tel/Fax : 0177-2623801

---

**MarketPulse Knowledge Networks (P) Ltd.**

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



Jammu & Kashmir

National Horticulture Board

Hall No. 307, A-2, 3rd Floor

South Block, Bahu Plaza

Rail Head Complex

JAMMU - 180004

Tel/Fax : 0191-2474349

Jharkhand

National Horticulture Board

Laxmi Niwas, Krishi Bhawan

Kankey Road,

RANCHI - 834008

Tel/Fax : 0651-230132

Kerala, Lakshdweep

National Horticulture Board

Dadar Nagar Haveli

TC-41-1989, Meena Bhavan Manacaud

THIRUVANANTHAPURAM- 09

Tel/Fax : 0471-467943

Madhya Pradesh

National Horticulture Board

32, Purjor House, Ist Floor

Indra Press Complex-I

BHOPAL - 462011

Tel/Fax : 0755-2561741

Maharashtra

National Horticulture Board

C/o Office of Director of Horticulture

Commisionerate of Agriculture/Horticulture

Govt. of Maharashtra, Shivaji Nagar, K.B. Marg,

---

**MarketPulse Knowledge Networks (P) Ltd.**

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)





	Near Krishi Bhawan, PUNE - 411005 Tel/Fax : 020-25530582-83
<b>State(s)</b>	<b>NHB Field Office</b>
Orissa	National Horticulture Board NI-303, Lottery Plot Nayapalli BHUBANESHWAR - 751015 Tel/Fax : 0674-2558134
Punjab, Haryana & Chandigarh (UT)	National Horticulture Board 3309, Ist Floor, Sector 32-D CHANDIGARH - 160047 Tel/Fax : 0172-648073
Rajashtan	National Horticulture Board C/o APMC Lal Kothi Tonk Road, JAIPUR - 302001 Tel/Fax : 0141-2742733
Sikkim	National Horticulture Board Travel Lodge Building, Behind Election Office, Tiber Road, GANGTOK - 7371
Tamilnadu, Pondicherry	National Horticulture Board Module No. 37, 2nd Floor,

---

**MarketPulse Knowledge Networks (P) Ltd.**

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



Uttar Pradesh

SIDCO, Readymade Garment Complex

Industrial Estate Gunidy,

CHENNAI - 600032

Tel/Fax : 22323865

National Horticulture Board

C/o Director of Horticulture

Udyan Bhawan, 2 Sapru Marg,

LUCKNOW - 226001

Tel/Fax : 0522-2280374

Uttaranchal

National Horticulture Board

188/1, Vasant Vihar,

DEHRADOON - 248001

Tele/Fax : 0135-2761922

West Bangal, Tripura

National Horticulture Board

Andaman & Nicobar

Mayuk Bhavan, 2nd Floor

Island

Salt Lake Sector-II

KOLKATA - 700091

Tel/Fax : 033-23377182

---

MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



Annexure-I (A-iv)

**NORMATIVE COST PER ACRE  
FOR VARIOUS GROUPS (Rs. in Lakh)**

S.No.	Crops	Cost per Acre
		Fruits
1.	Almond	1.50
2.	Aonla	1.25
3.	Apple	1.50
4.	Banana	1.25
5.	Ber	1.00
6.	Citrus (Kinnow, Lemon, Lime) Sweet Lime, Mosambi, Orange	1.75
7.	Custard Apple	1.25
8.	Fig	1.50
9.	Grapes	3.20
10.	Guava	1.25
11.	Jack Fruit	1.00
12.	Kiwi	2.50
13.	Litchi	1.50
14.	Mango	1.50

MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



15.	Papaya	1.25
16.	Passion Fruit	2.50
17.	Pineapple	1.50
18.	Pomegranate	1.75
19.	Sapota	1.75
20.	Stawberry	4.00
21.	Apricot	1.60

Flower (Protrected Cultivation Under Green House)

1.	Anthurium	61.00
2.	Carnation	50.00
3.	Gerbera	47.00
4.	Lillium	60.00
5.	Orchid	70.00
6.	Rose	40.00

Flower (Open Cultivation)

1.	Gladiolus	3.50
2.	Jasmine	1.50
3.	Tube Rose	2.00

Tissue Culture Laboratory

1.	Tissue Culture (Capacity 10 Lakh)	91.50
----	-----------------------------------	-------

Aromatic & Medicinal

1.	Aloevera	1.50
2.	Patcholi	2.20
3.	Stevia	3.00

---

MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



4.	Vanilla (Under shadnet)	8.50
5.	Mint	1.60
6.	Lemon Grass	1.50
7.	Celery	1.25

Nuts

1.	Cashew	2.00
2.	Coconut	1.50
3.	Walnut	1.50
4.	Other Nuts	1.50

Vegetable (only under protected hi-tech cultivation)

1.	Capsicum	24.00
2.	Tomato	22.00

Spices

1.	Cardamon	2.30
2.	Pepper (Black Pepper)	1.50
3.	Tamarind	1.00
4.	Olive	2.00

Others

1.	Raisin per tonnes capacity	0.60
2.	Button Mushroom 200 tonnes annual capacity	107.00
3.	Fruit Ripening (50 MT capacity)	80.00
4.	Multi-purpose Grading-Packing Centre	100.00

(Capacity 500 MT, cold storage 50 MT)

MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

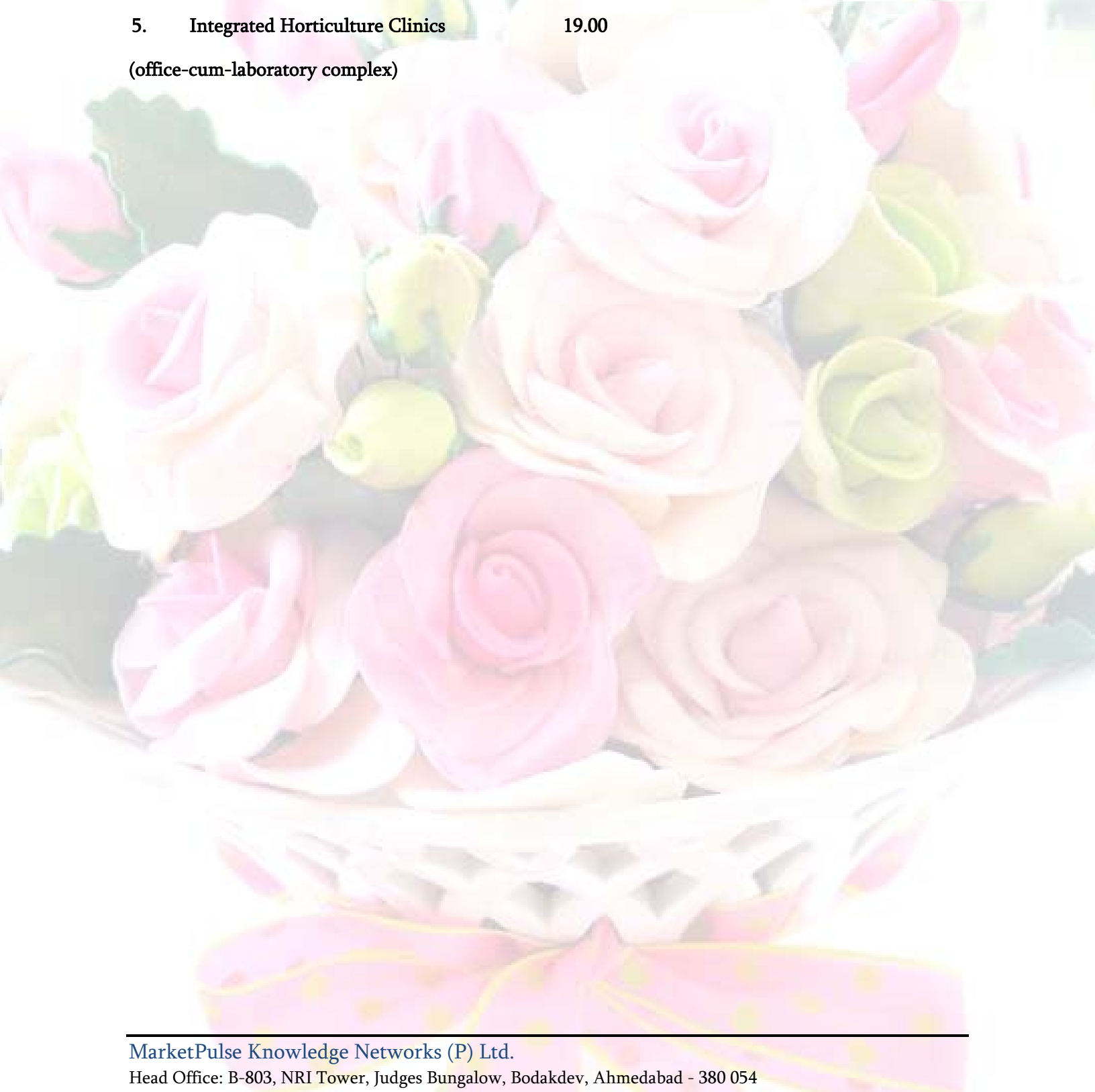
Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



and pre-cooling 2 MT

5. Integrated Horticulture Clinics 19.00

(office-cum-laboratory complex)



---

MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



Annexure-I (B)

**FORMAT OF  
FACT SHEET/BRIEF PROFILE**

1. Name, address and location of the project/beneficiary
2. Promoter's profile
3. Name of the associate bank(s)/FIs
4. Nature/main activities under the projects
5. Item-wise financial projections (as per appraisal note) and expenditure incurred
6. Means of finance including NHB subsidy (as per appraisal not and actual)
7. Brief coverage on technical feasibility and financial viability
8. Any other information relevant to the project.



**LIST OF NATIONAL  
HORTICULTURE BOARD OFFICES**

**1. AHMEDABAD**

Sardar Patel Market, Jamalpur

Gate, Opposite Calico Mills

**Tele/Fax : 079-25321922**

**E-mail : nhbhd@yahoo.co.in**

**2. BANGALORE**

No. 14/43, 2<sup>nd</sup> Floor,

1<sup>st</sup> & 2<sup>nd</sup> State, Industrial Suburab, Tumukur Road, Yeshwanthapur

Pin Code - 560022

**Tel/Fax : 080-23371935, 23374149**

**E-mail : nhbblr@yahoo.com**

**3. BHOPAL**

32, Purjor House, 1st Floor,

Indira Press Complex - I

Pin Code - 462011

**Tele/Fax : 0755-2761741**

**E-mail : nhb\_bpl@sify.com**

**4. BHUBANESHWAR**

N-2/82, Lottery Plot, Nyapali,

---

MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)





Pin Code - 751015

Tele/Fax : 0674-2558134

E-mail : rkdash99@yahoo.com

#### **5. MUMBAI**

National Horticulture Board

Room No. 317, 4th Floor

Central Facility Building,

APMC Fruit Market Complex,

Sector-19, Turbhi, Vashi,

Pin Code – 400703

#### **6. KOLKATA**

Mayukh Bhawan, 2nd Floor,

Salt Lake, Sector - II

Pin Code - 91

Tele/Fax : 033-23211259, 23377182

E-mail : nhbwb@vsnl.net

#### **7. CHANDIGARH**

3309, 1st Floor, Sector-32-D

Pin Code - 160047

Tele/Fax : 0172-2648073

E-mail : nhb\_chd@yahoo.com

---

#### **MarketPulse Knowledge Networks (P) Ltd.**

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



**8. NEW DELHI**

19-22 (Garage),

Krishi Bhawan,

Pin Code - 110 001

**Tele/Fax : 011-23073019, 23097015**

**E-mail : [ssnijhaar@yahoo.com](mailto:ssnijhaar@yahoo.com)**

**: [nhbldi@rediffmail.com](mailto:nhbldi@rediffmail.com)**

**9. GANGTOK**

Travel Lodge Building,

Behind Election Office,

Tibet Road,

Pin Code - 737101

**Tele/Fax : 03592-228453**

**E-mail : [nhbgangtok@yahoo.com](mailto:nhbgangtok@yahoo.com)**

**10. GUWAHATI**

Chhibber House, 4th Floor,

Dispur P.O.,

Pin Code - 781005

**Tele/Fax : 0361-2599141, 2340695**

**E-mail : [nhbgmic@yahoo.co.in](mailto:nhbgmic@yahoo.co.in)**

**11. HYDERABAD**

202, 2nd Floor, Shantiniketan Apartment, Chirag Ali Lane ABIDS,

---

MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



Pin Code - 500001

Tele/Fax : 040-23201140

E-mail : nhboard806\_hyd@ dataone.in

## 12. JAIPUR

C/O APMC, Subzi Mandi,

Lal Kothi, Tonk Road

Pin Code - 302001

Tele/Fax : 0141-2742733

E-mail : surendra\_tmr@yahoo.com

## 13. JALANDHAR (PUNJAB)

C/o Director of Horticulture,

Horticulture Complex, Cantt. Road,

Tele/Fax : 0181-223048

## 14. LUCKNOW

C/o Director of Horticulture,

2, Sapru Marg, Udyan Bhawan,

Pine Code - 226001

Tele/Fax : 0522-2280374, 2202420

E-mail : nhblko@rediffmail.com

## 15. CHENNAI

Module No. 37, II Floor

SIDCO Readymade Garment

---

**MarketPulse Knowledge Networks (P) Ltd.**

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



Complex Industrial Estate Guindy,

Pin Code - **600032**

**Tele/Fax : 044-22323865, 22323151**

**E-mail : tbalasudhahari@yahoo.com**

**16. NAGPUR**

C/o Secretary, APMC,

Kalmana Market Yard

Pin Code - **440008**

**Tele/Fax : 0712-2680528**

**17. PATNA**

Verma Centre, 5<sup>th</sup> Floor,

Room No. 501-502,

Boring Canal Road,

Pin Code - **800001**

**Tele/Fax : 0612-2228218/2207128**

**E-mail : nhb\_patna@sify.com**

**18. SHIMLA**

HPMC, Nigam Vihar,

Pin Code - **171002 (H.P.)**

**Tele/Fax : 0177-2623801, 2622908**

**E-mail : nhbhp2004@yahoo.com**

---

**MarketPulse Knowledge Networks (P) Ltd.**

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



**19. SRINAGAR**

Horticulture Complex

Rajbagh,

Pin Code - **190008**

**20. TRIVANDRUM**

TC-41/1989, Meena Bhawan Manacaud,

Pin Code - **695009**

**Tele/Fax : 0471-2467943**

**E-mail : nhbtvm@vsnl.net**

**21. VIJAYAWADA**

Municipal Stadium Complex

Pin Code - **520010**

**Tele/Fax : 0866-2473351**

**22. JAMMU**

Hall No. 307, A-2, 3rd Floor,

South Block, Bahu Plaza,

Rail Head Complex,

Pin Code - **180004**

**Tele/Fax : 0191-2474349**

**E-mail : nhbjammu@rediffmail.com**

**23. NASIK**

“A” Wing, New Shopping Complex, APMC, Market Yard, Panchwati,

---

**MarketPulse Knowledge Networks (P) Ltd.**

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



Pin Code - 422003

Tele/Fax : 0253-2512542

E-mail : [come2meetraj@yahoo.com](mailto:come2meetraj@yahoo.com)

**24. PUNE - (MS)**

C/o Office of Director Horticulture

Commissionerate of Agriculture

Govt. of Maharashtra

Shivaji Nagar, K.B. Marg

Pin Code - 411005

Phone : 020-25530582-83

E-mail : [jbsingh6@rediffmail.com](mailto:jbsingh6@rediffmail.com)

**25. AGRA**

C/o Superintendent Garden,

Shahjan Park, Tajganj,

Pin Code - 282001

Tele/Fax : 0562-331470

**26. KANPUR**

133/54, 'O' Block,

Kidwai Nagar,

Tele/Fax : 0512-2607631

**27. INDORE**

Residency Kothi (Complex)

Pin Code - 452001

Tele/Fax : 0731-701522

---

**MarketPulse Knowledge Networks (P) Ltd.**

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



**28. RANCHI**

Laxmi Niwas,

Krishi Bhawan

Kankey Road,

Pin Code - **834008**

**Tele/Fax : 0651-2230132, 2233832**

**E-mail : nhbranchijh@rediffmail.com**

**29. SURAT**

310/311, 3rd Floor,

I.D. Shopping Centre,

Near, Shivaji Statue,

Sahara Darwaja,

Pin Code - **395003**

**Tele/Fax : 0261-2311343**

**30. MADURAI**

Plot No. 142, 1st Floor,

Seikkilar, Street Extension,

Bibikulam

Pin Code - **625002 (T.N.)**

**Tele/Fax : 0452-531195**

**31. KARNAL**

Diwan Colony,

Pin Code - **132001**

**Tele/Fax : 0184-24295**

---

**MarketPulse Knowledge Networks (P) Ltd.**

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



**32. AMRITSAR**

C/o Directorate of Horticulture,  
Room No. 13, 2nd Floor,  
Kheti Bhawan, Ranjeet Avenue,  
Pin Code - 143001  
**Tele/Fax : 0183-2500236**

**33. ABOHAR**

Vikas Bhawan, Fazilka Road,  
Pin Code - 152116  
**Tele/Fax : 01634-230822**

**34. DEHRADOON**

179, Phase-2 Vasant Vihar,  
Pin Code- 248001  
Tele/Fax : 0135-2761922  
E-mail : [nhb\\_dehradun@yahoo.com](mailto:nhb_dehradun@yahoo.com)

**35. RAIPUR (CHATTISGARH)**

Market Information Centre,  
Katela Bhawan, Civil Lines,  
Pin Code - 492001  
**Tele/Fax : 0771-2423992**  
**E-mail : [nhbraipur@yahoo.co.in](mailto:nhbraipur@yahoo.co.in)**

**36. BARAUT, DISTT. BAGHPAT**

C/o Regional Institute of Rural Dev., Delhi - Saharanpur Road,  
**Tele/Fax : 01234-268685**

---

**MarketPulse Knowledge Networks (P) Ltd.**

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)





Annexure-9-A

NATIONAL HORTICULTURE BOARD (HEAD QUARTERS)

Sl.No.	Name and designation	Office	Residence
1.	<b>Dr. J.N. Chamber</b> Managing Director	0124-2342992	29230117 29230118
2.	<b>Shri N.C. Mistry</b> Additional Managing Director	0124-2347441	2381693
3.	<b>Dr. R.K. Sharma</b> Deputy Director	0124-2347441	011-26121404
4.	<b>Shri P.K. Singh</b> Dy. Director	0124-2343416	2383701
5.	<b>Shri Brajendra Singh</b> Dy. Director	0124-2342989	3951414
6.	<b>Shri S.C. Jain</b> Dy. Director	0124-2347440	011-27945173
7.	<b>Shri Dheerpal Singh</b> Dy. Director	0124-2341239	011-27943064
8.	<b>Dr. A.K. Das</b> Asstt. Director	0124-2341225	3099571
9.	<b>Shri Pushpendra Arya</b> Asstt. Director	2343776	011-27884480

MarketPulse Knowledge Networks (P) Ltd.

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)



- |     |  |                        |              |
|-----|--|------------------------|--------------|
| 10. | <b>Shri Lal Singh</b><br>Asstt. Director                   | 2343414                | 011-25833517 |
| 11. | <b>Shri B.R.K. Murthy</b>                                  | 2349285 (Extn. 152)    |              |
| 12. | Dr. S.C. Panwar  | 2349285 (Extn.141)     |              |
| 12. | <b>Shri S.N. Srivastava</b><br>Asstt. Director             | 2347439                | 0124-2346088 |
| 13. | <b>Shri Bani Singh</b><br>Asstt. Director                  | 2343776                | 011-27932292 |
| 14. | <b>Shri H.K. Dabas</b><br>Asstt. Director                  | 2347442                | 01262-296649 |
| 15. | <b>Shri R.K. Singh</b><br>Asstt. Director                  | 2341225                | 3958242      |
| 16. | <b>Shri B.R. Deoghare</b><br>Asstt. Director               | 2349285<br>(Extn. 132) | -            |
| 17. | <b>Shri Chander Gandhi</b><br>Technical Officer (computer) | 2343348                | 2766363      |

---

**MarketPulse Knowledge Networks (P) Ltd.**

Head Office: B-803, NRI Tower, Judges Bungalow, Bodakdev, Ahmedabad - 380 054

Pune Office: A-3, Gourish Apartments, Right Bhusari Colony, Paud Road, Kothrud, Pune – 411 038

NCR Office: F-41, RBI Officers Flats, Poorvi Marg, Vasant Vihar, New Delhi – 110 057

Phone: 93502 30915, 93765 08020 Email: [raghav.irma@gmail.com](mailto:raghav.irma@gmail.com), [lal.neeraj@gmail.com](mailto:lal.neeraj@gmail.com)