



PROJECT PROPOSAL

FOR THE

INTEGRATED
DEVELOPMENT OF
FLORICULTURE UNITS

IN

GANJAM DISTRICT OF ODISHA

Prepared By

Deputy Director of Horticulture, Ganjam.
and Flower Growers Association, Ganjam.

PROJECT PROPOSAL A GLANCE

Name of the Project	:	Integrated development of floriculture units in Ganjam district.
Proposed Work	:	Cultivation of ornamental crops, capacity building of farmers, entrepreneurs, etc.
Project Area	:	Ganjam District
Project Duration	:	3 Years
Sources of fund	:	R.K.V.Y
Project Cost	:	Rs. 134.84 Lakh
Executing agency	:	Department of Horticulture and Flower Growers Association, Ganjam

PROJECT PROPOSAL FOR THE INTEGRATED DEVELOPMENT OF FLORICULTURE UNITS IN GANJAM DISTRICT

1. INTRODUCTION & BACKGROUND:

Odisha is the tenth largest and eleventh populous state accounting for about 5% of the geographical area and 4% of the population of the country. It has about 64 lakh ha i.e. about 40% of its land fit for agriculture. Agriculture provides direct or indirect employment to about 64% of the total population and contributes to 28% of the net state domestic product. Kharif is the main cropping season and rice is the principal crop of the state. Food grains constitute about 76% of the gross cropped area and rice alone shares about 67% of all food grains taken together. The average fertilizer consumption in the state is very low (54kg/ ha as against national average of 104kg/ha). The state has a large population of scheduled castes and tribes.

Horticulture plays an important role in Indian economy as well as nation's health. A nation is recognized by its horticulture development index.

Horticulture consisting of fruits, vegetables, spices, floriculture, root & tuber crops, mushrooms, medicinal & aromatic plants as well as plantation crops as a pleasantry before independence, has emerged as a core sector in agriculture. Today horticulture has established its credibility in improving income through increased productivity, generating employment and in enhancing export, besides providing house hold nutritional security.

The growing economic importance of horticultural crops especially fruits, vegetables and flowers could be attributed to the increasing demand arising from domestic as well as overseas market. The increasing domestic demand could be attributed to the increase in income, population growth, changing consumption pattern and growing awareness for better nutrition.

Ganjam district is the first district in Odisha to cultivate flower crops commercially since 1990s. The people have a fashion towards growing ornamental crops and using floricultural products. This district is the major natural Kewda (*Pandanus* sp.) growing area of the world.

Scope for floriculture in Ganjam

The agro-climatic diversity in the district with its high rain fall distributed over a four-month monsoon and a reasonably moderate winter allows for growing a variety of floricultural crops. The agro-climatic conditions are immensely suitable for perennial floriculture crops like rose, jasmine, crossandra; biennial crops like tuberose and a number of annual crops like gladiolus, aster, chrysanthemum, sunflower and filler plants like *ferns, asparagus, cycus, palms, bird's of paradise, Heliconias, Alstromera, Gypesophila, Phalaenopsis* etc. The district thus enjoys a natural comparative advantage for floriculture with possibilities for growing a diversified basket of flowers and ornamental foliage; whose potential has not been fully exploited.

Land Availability:

The district has a total cultivable area of 1.65 lakh hectares. Out of this, 35057 lakh hectares area low lands, 69014 lakh hectares are medium lands and 60940 hectares are high lands. Out of the high lands, most of the area is being used for rice cultivation in most traditional manner which is highly un-remunerative and the crop is always at risk. These high lands are most suitable for growing floricultural crops to enhance the incomes of the agricultural households.

Flower Crop coverage:

Flowers like Jasmine, crossandra, rose, tuberose marigold are the major commercial ornamental crops grown in the over an area of 307ha. However, the productivity of most of the ornamentals in the district is quite low as compared with all India average as well as some of the agriculturally importance states of India. The area and production of major ornamental crops in Ganjam district are given in table-1

Table -1

Crop	Area	Production
Rose	20ha	1 lakh stems
Gladiolus	15ha	33 lakh spikes
Tuberose	120ha	6000 qtl
Marigold	130ha	19500 qtls

The vagaries of climate such as flood, drought etc. in one or other year has hindered the growth potential of horticulture in the area preventing year round open field cultivation of lower crops. That's why prices of flowers during their normal as well as off season remain high in different markets of the whole state. Protected cultivation technology now being implemented may be a boon for the production of high-value, low volume ornamental crops in their off-season.

2. Aims & Objectives

The main objectives can be summed up as:

- To realize the potential of ornamental cultivation by the new comers.
- Commercialization of hi-tech floriculture in the state.
- Expansion of commercial floriculture for sustainable crop production.
- To educate farmers and entrepreneurs in the principle of 'Seeing is believing' though exposure visit inside and outside the state.
- Best utilization of floriculture wastes.
- To introduce new commercial varieties floriculture to enhance the crop production.
- To practice ornamental farming in a profitable way.
- To improve the economic condition of the rural farmers.
- Production of quality planting materials of ornamental crops in the locality to cater the need of the farmers.
- To attract rural mass towards flori-farming, a highly remunerative crop.

- Development of aesthetic value of common people and balancing of ecosystem.
- Create avenues for export of floricultural products from the state.
- Storage of perishable ornamental products.
- Transport of perishable ornamental products through cool chain management.
- Creation for large scale employment.

3. Feasibility and basic information of the project

SWOT Analysis

STRENGTH

- Favorable soil and climate.
- Farmers have inclination towards floriculture.
- Availability of Hard working work force.
- Existence of flower market infrastructure in Berhampur
- Adequate availability of ground water for irrigation facility.
- Well connectivity of road rail and air .
- Our Domestic and export market are having demand for floriculture products.
- Existence of one flower growers association
- Existence of flower essence extraction units.
- Existence of Technology Support from GOI research institutes situated in Berhampur (**Fragrant And Flavour Development Centre Extension Unit Berhampur, Technology Support Centre Kewda, Ministry Of Micro And Small Medium Enterprisers New Delhi**) . and local **Krusha Vigyan Kendras**
- Scope for short / long term storage units in PHM component under MIDH for temporary storage of ornamental crops
- Change in the fashion of people for adoption of flower decoration and increasing demand for floriculture products.

WEAKNESS

- The production and productivity of floricultural crops in the district is quite low.
- Large numbers of farmers are illiterate / low literate to gather technology for implementation in their fields.
- Low scope for post harvest management of floricultural products causing distress sale at the time of harvest and higher rate of wastage.
- Insufficient availability of quality planting materials of ornamental crops

OPPORTUNITY

- Higher profitability of floriculture while diminishing annual return from traditional agricultural crops.
- Inflow of rural youth to cities and towns can be checked due to higher profitability with cultivation of ornamental crops .
- Large scale employment opportunity in rural areas.
- The large gap between production and demand leads to higher return from floriculture
- Availability of established infrastructure and market linkage
- Existence of floriculture clusters

THREATS

- Frequent occurrence of natural calamities involves risk on crop productivity.
- Exploitation of flower growers by vendors.
- Higher level of wastage of flowers.

Major floriculture blocks of Ganjam district

Hinjilikatu,
Seragada,
Purusottampur ,
Kukudakhandi ,
Sanakhemundi ,
Digapahandi
Dharakot ,
Kavi surya nagar
Aska
Ganjam
Khalikot
Chatrapur
Rangeilunda



Location: Odisha is situated in the east coast of India and lies between 17°.49' N & 22°.34' N latitudes and 81° 27' & 87° 29' E longitudes. Its eastern border fronts the Bay of Bengal and shares borders with Jharkhand to the North, West Bengal to the North East, Chhatisgarh to the west and Andhra Pradesh to the south. It spreads over an area of 155,707sq. kms (4.74% of India) and is the 10th largest state in the country. In Odisha Ganjam is situated in the east coast of India and lies between 18°.43' N & 19°.39' N latitudes and 83° 44' & 85° 01' E longitudes and bounded by floricultural potential districts like Khurda, Phulbani, Rayagada and Gajapati.

Physiography: Odisha is mostly an extensive plateau sloping gently towards the coastal plain along the Bay of Bengal. It has a long coastline of 480 kms. Odisha can be divided into 10 physiographic zones.

SL. No.	Physiographic zone	Undivided districts
1	North western plains	Sundargad Banaigad Panposh Kuchinda
2	North mid plane	Rairangpur Baripada Karanjia Keonjhar Champua
3	North east costal	Anandpur Balasore Bhadrak Jajpur (Except Sukinda)
4	<i>East south east coastal</i>	Cuttack Jagatsingpur Kendrapara Banki Puri Berhampur Chatrapur
5	<i>North east ghats</i>	Khurda Nayagad Bhanjanagar Gunupur Rayagada Gajapati Phulbani Boudh
6	Eastern ghat high lands	Koraput Nabrangpur
7	South east ghats	Jaypur Malkangiri
8	Western planes	Bhawanipatna Dharmagada Padmapur Khariar Dabugaon
9	Western central plane	Sambalpur Bergarh Bolangir Sonapur
10	Mid central plane	Dhenkanal Angul Banki Athagarh Kamakhya Nagar Jajpur Sukinda

Climate: Ganjam district comes under north Eastern Ghats south eastern coastal and physiographic zone. The climate of the district is tropical, characterized by medium temperature, high humidity, medium to high rainfall and a mild winter. The normal rainfall is 1451.2mm of which 75-80% is normally received from June to September from South-West monsoon. The mean annual temperature is 26.89⁰ C with mean annual maximum of 32.56⁰ C and mean annual minimum of 21.30⁰ C.

Soil: Soils of ganjam have mainly developed under the influence of relief, parent material and climatic factors and have been divided into 8 broad soil groups. The majority of soils in Ganjam are light textured red soils, which have low water holding capacity, low fertility and are highly readable.

Irrigation: Out of the total cultivable area of Ganjam, about 41% is under irrigated condition and 59% is non-irrigated.

4. Implementing Agency

The project will be implemented by the deputy director of horticulture through the field officers and extension functionaries of the department with the help of the flower growers association and FPO of floriculture farmers .

5. Sector / subsector

The project comes under production growth stream of RKVY

6. Anticipated benefit

After implementation of this project the average income of the farmers will be increased by 20-30 %. The farmers will be trained with modern package of practices including post harvest management in Centre of Excellence, Deras . 600 Nos. of farmers will be trained on hitech floriculture and post harvest management.

7. Output and Outcome

Sl. No	Crop	Present status of production				Average Income generated after implementing the proposed flori project			
		Area	Qty production		Produce value	Area	Quantity production		Produce value
			in Ha.	Nos			Qtls	in Ha.	
1	Rose	20	10000000	2000	13025033	15	9000000	1500	9768774
2	Tube rose	120		6000	35878440	75		5625	22424025
3	Gladiolus	15	3300000	1320	6936000	20	4400000	1760	12548000
4	Marigold	130		19500	28179450	120		18000	26011800
5	Jasmine	10		500	1964350	10		500	1964350
6	Crossendra	6		180	2303010	10		300	3838350
7	Aster	1	350000	35	195230	5	1750000	175	195230
8	Chrysanthemum	0.5		37	135232	20		1500	5409700
9	Goldenrods	2	350000	35	557220	9	3150000	315	2507490
10	Cycus					10	400000	160	373885
11	Asparagus	2		36	522195	10		180	2610975
12	Heliconia					12	22545	400	3455901
13	Bird of paradise					12	22545	400	3455901
14	Double tube rose					12	3000000	600	5489340
15	Alstroemera					1	98000	19	1245966
16	Lilium					1	98000	19	1245966
17	Ornamental palm					10	1050000	525	1636350
18	Fern					10		130	2610975
19	Annual Chrysanthemum	1		150	216765	10		1500	2167650
	Total	307.5		29793	89912925	372		33608	108960628

8. Strategy for Development of The Project

For the development of floriculture and allied activities in Ganjam district as well as sustainability of crop production **INTEGRATED DEVELOPMENT OF FLORICULTURE UNITS IN GANGAM DISTRICT** has been proposed. This will look after

1. Training of farmers
2. Cultivation of flori crops
3. Exposure visit

9. Proposed work/activities with detail narration

It has been proposed take up following activities under this project

i. Cultivation of flower crops in farmers fields:

Although floricultural crops are being cultivated in about 307 ha in the Ganjam district, it is quite inadequate to meet the state's demand. The productivity of various floricultural crops is very low and irregular. At the same time all the flower crops and filler plants are not available throughout the year in large quantities to meet the market demand. Hence commercial floriculture will be taken up in farmer's fields with assistance for profitable cultivation by supply of key inputs like quality planting materials, nutrition and plant protection measures. The proposed target and financial requirements of flori-project for demonstration are as under.

A PROPOSED PROJECT AREA OF CUT FLOWERS

Sl. No	Name of the Crop	Cost of cultivation per ha (Rs.)	Projected area (ha)		Project assistance per ha (Rs.) @ 40% & 25%		Projected amount (Lakh Rs.)		
			Small /marginal farmer	Other Farmers	Small /marginal farmer (40%)	Other Farmers (25%)	Small /marginal farmer	Other Farmers	Total
1	Rose	788797	10	5	40000	25000	400000	125000	525000
2	Gladiolus	787600	15	5	60000	37500	900000	187500	1087500
3	Astor	154770	3	2	40000	25000	120000	50000	170000
4	Golden rod	229515	6	3	40000	25000	240000	75000	315000
5	Bird's of Paradise	288365	9	3	40000	25000	360000	75000	435000
6	Heliconias	288365	8	4	40000	25000	320000	100000	420000
7	Tuberose double	292600	8	4	60000	37500	480000	150000	630000
8	Alstromera	2665025	0	1	60000	37500	0	37500	37500
9	Lillium	2665025	0	1	60000	37500	0	37500	37500
	Total		59	28	440000	275000	2820000	837500	3657500

B PROPOSED PROJECT AREA OF ORNAMENTAL FOLIASE

SL NO	Name of the Crop	Cost of cultivation per ha (Rs.)	Projected area (ha)		Project assistance per ha (Rs.)		Projected amount (Lakh Rs.)		
			Small /marginal farmer	Other Farmers	Small /marginal farmer (40%)	Other Farmers (25%)	Small /marginal farmer	Other Farmers	Total
1	Cycus	288365	7	3	16000	10000	112000	30000	142000
2	Asparagus	200640	7	3	16000	10000	112000	30000	142000
3	Palms	189365	7	3	16000	10000	112000	30000	142000
4	Ferns	200640	7	3	16000	10000	112000	30000	142000
	Total		28	12	64000	40000	448000	120000	568000

C. PROPOSED PROJECT AREA OF LOOSE FLOWERS

Sl. No	Name of the Crop	Cost of cultivation per ha (Rs.)	Projected area (ha)		Project assistance per ha (Rs.) as per new cost @ 40% & 25%		Projected amount (Lakh Rs.)		
			Small /marginal farmer	Other Farmers	Small /marginal farmer (40%)	Other Farmers (25%)	Small /marginal farmer	Other Farmers	Total
1	Tube rose	185119	50	25	16000	10000	800000	250000	1050000
2	Marigold	158235	80	40	16000	10000	1280000	400000	1680000
3	Jasmine	188155	6	4	16000	10000	96000	40000	136000
4	Crossandra	232815	7	3	16000	10000	112000	30000	142000
5	Annual chrysanthemum (Chery)	158235	7	3	16000	10000	112000	30000	142000
6	Chrysanthemum	270765	15	5	16000	10000	240000	50000	290000
	Total		165	80	96000	60000	2640000	800000	3440000

NB: The detailed cost of cultivation is attached in the annexure

ii. Capacity Building

Human resource found to be the most effective resource in every sector. The farmers will be trained at field level and they will be exposed to other farmers within the district as well as in outside the state to acquire knowledge and latest technology. The flower sellers also be trained for value addition at their level

Item				
Three days training & exposure visit (Within State) to 600 nos. farmers	25 nos in each group (25 x 24 group)	Rs.1000 day/farmer	600 nos of Farmers	18,00,000
Exposure visit outside the state (5 days)	153 nos farmers selected from each group	Rs.5000/farmer	153 nos of farmers	7,65,000
Training to farmers	24 nos of farmers	Rs.5000/ farmer	24 nos of	1,20,000

on hi tech horticulture at Pune (5 days)	from each group		farmers	
TOTAL				26,85,000

iii. Market Infrastructure

EXISTING MARKETING INFRASTRUCTURE

RMCs of Digapahandi and Chatrapur provide marketing infra infrastructures to our farmers which are to be used for this project are as follows

1. Flower market and training centre at Ambapua Berhampur
2. Ralab RMC market at Hinjili katu
3. H burudi RMC market Rambha

1 Flower market and training centre at Ambapua Berhampur

Ambapua flower market is the central hub of the state dedicated for collection and marketing of flowers and floriculture training .To facilitate these works in smooth manners RMC Digapahandi have provided the following infrastructures

- Receiving dock to receive the flower
- Sorting and grading room
- Auction hall
- Cool chamber for temporary storage
- Packing and disposing unit
- Training hall
- Farmers retiring room

2 RMC market at Ralab Hinjili katu

It is one primary collection unit where The flowers of Hinjilikatu, Seragada, Purusottompur ,Kukudakhandi ,Dharakot ,Ksnagar Aska are collected for disposal in Ambapua flower market

3 H burudi RMC market Rambha

It is one primary collection unit where the flowers of Ganjam, Khalikot ,Chatrapur and a part of Purusottom pur are collected for disposal in Ambapua flower market.



However, it has been decided to establish 2 nos. of static Vending Outlets in Municipal area of Berhampur for which maximum subsidy @ 50% up to Rs. 15.00 Lakhs each will be provided to the farmers groups, who will run the outlets. The lands of size 60ft. x 40 ft. will be selected jointly by the farmers group and Dy. Director of Horticulture, Ganjam. The lands will handed over to the farmers group as per the terms and conditions to be laid down for erection of pre-fabricated temporary structure for opening of vending outlets.

ABSTRACT OF THE PROJECT COST

1. Cultivation of Flowers	Area in Ha.	Total Assistance
a. Cut Flowers	87	Rs. 36,57,500 /-
b. Ornamental Foliage	40	Rs. 5,68,000 /-
c. Loose Flower	245	Rs. 34,40,000 /-
2. Capacity Building	No of Farmers	Total Assistance
a. Training and Exposure Visit	600 nos	Rs. 18,00,000 /-
b. Exposure visit outside the state 8 days	153 nos	Rs. 7,65,000 /-
c. Training to farmers on hi tech horticulture at Pune	24 nos	Rs. 1,20,000 /-
3. Market Infrastructure		Total Assistance
a. Static Vending Outlet with Cool Chamber (Out of the total cost of Rs. 30.00 Lakhs 50% cost will be borne by the farmers group and 50% subsidy maximum up to Rs. 15.00 Lakhs will provided as subsidy.)	2nos	Rs. 30,00,000/-
4. Contingencies (1%)		Rs. 1,33,500/-
Total		Rs. 1, 34, 84,000.00

(Rupees One Crore Thirty Four Lakh and Eighty Four Thousand) only.

1. Time Line

The project will be implemented in 3 years as follows;

Sl.No	Items	Unit	Year wise amount to be spent								
			2016-17		2017-18		2018-19		Total		
			Unit	Amount	Unit	Amount	Unit	Amount	Unit	Fin.	
1	Cultivation of Flowers										
	Cut Flowers	ha	33	13.6	29	12.225	25	10.75	87	36.575	
	Ornamental Foliage	ha	12	1.68	12	1.68	16	2.32	40	5.68	
	Loose Flower	ha	99	13.68	86	12.26	60	8.46	245	34.4	
2	Capacity Building										
	Training and Exposure Visit	nos	200	6	200	6	200	6	600	18	
	Exposure visit outside the state 5 days	nos	51	2.55	51	2.55	51	2.55	153	7.65	
	Training to farmers on hi tech horticulture at Pune	nos	8	0.4	8	0.4	8	0.4	24	1.2	
3	Market Infrastructure										
	Static Vending Outlet with Cool Chamber	nos	1	15	1	15			2	30	
Total				52.91		50.115		30.48		133.505	
4	Contingencies (1%)	LS		0.5291		0.5011		0.3048		1.335	
G. Total				53.4391		50.6161		30.7848		134.84	


 Dy. Director of Horticulture,
 Ganjam

10. Time Line

The project will be implemented in 3 years as follows;

Sl.No	Items	Unit	Year wise amount to be spent							
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Market Infrastructure										
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G. Total				53.4391		50.6161		30.7848		134.84

**Dy. Director of Horticulture,
Ganjam**

11. Project Co-ordinator details

	Name	Designation	Mobile No.	Email
State Level	Sri K.B. Mishra	Asst. Horticulture Officer, (Hq.)	9861191172	ahorkvy@orihot.in
Dist. Level	Sri Bhagaban Dash	Dy. Director of Horticulture	9437182081	ddhganjam.od@nic.in

12. Check list

- a) Funds available under other schemes of the State / Govt. of India for the proposed projects have been accessed and utilized before it is proposed under RKVY.
- b) There will be no duplication or overlapping of assistance / area coverage through other State / Central Govt. Schemes.
- c) The funds under the project is not proposed as additional or top-up subsidy to other ongoing schemes/programmes of State / Central Govt.
- d) DPRs includes contingency.


25.10.2016
Dy. Director of Horticulture
Deputy Director of Horticulture
Ganjam, Beroampur

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**Dy. Director of Horticulture
Ganjam, Berhampur**