



GOVERNMENT OF ODISHA

**PROPOSED PROJECT PLAN FOR
DEVELOPMENT OF HIGH DENSITY NURSERY,
PANPOSH**

Under RKVY for the Year 2017-18

Project Cost: Rs. 65.350 lakh.

Submitted by:

Asst. Director of Horticulture, Panposh.

**Directorate of Horticulture, Odisha,
Bhubaneswar**

EXECUTIVE SUMMARY

	Name of the Project	Proposed Project for Development of High Density Nursery, Panposh as a Model Farm	
	Implementing Agency	Directorate of Horticulture, Odisha, Bhubaneswar	
	Name and address of executants	Assistant Director of Horticulture, Panposh	
	Proposed Work		
Sl. No.	Items	Amount	Norm followed
1	Cleaning of forest growth reclamation of land and soil conservation bonding 3 ha.	150000	PWD
2	Plantation of mother plants of fruit crops in 1 ha. Cashew, 1 ha. K.Lime, 0.5 ha. Guava	737637	Departmental
3	Boundary wall with column structure along river side 342 rmt.	1368000	PWD
4	One cow catcher to prevent entry of stray cattle & two gates	350000	PWD
5	2 units of Vermi Compost unit	200000	MIDH
6	Lift Irrigation with 10 H.P. pump pipe fittings, one Pump House and Electrification	1300000	OLIC
7	Drip Irrigation with extra fittings as per actual	100000	PMKSY
8	Rejuvenation of old orchard 1ha.	40000	MIDH
9	Mulching 2.5 ha.	80000	MIDH
10	High tech poly house 1000 sqmt. (Tubular structure)	935000	MIDH
11	Const. of RCC roofed watchman-cum-Store room (600Sq.ft.)	600000	PWD
12	Floriculture inside Poly house 610/ sqmt.	610000	MIDH
	Total:-	6470637	
	Contingencies (1%)	64706	
	Total:-	65,35,343	
	Or say	65,35,000	

(Rupees Sixty five lakh thirty five thousand) only

Source of Fund: **RKVY**
Project Cost: **Rs. 65,35,000**
Project duration: **3 years**

Relevant schemes whose cost norms are applied to the project : Central Govt. & State Govt.
Details of the cost norms and pattern of assistants : Attached
Component of the Projects with cost : Attached

PROJECT PROPOSAL FOR DEVELOPMENT OF HIGH DENSITY NURSERY, PANPOSH.

1. CONTEXT/ BACKGROUND

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.

At national level horticulture sector has emerged as a potential player in the Indian economy contributing 30% to GDP in agriculture from more 8.5% area under horticultural crops as well as a means of diversification in overall development of agriculture. The contribution of agriculture to NSDP in Orissa has declined significantly from 67 per cent in 1951 to around 28% in 2005 but the workforce engaged in agriculture has remained relatively unchanged (57%).

Horticulture invariably improved the economic status of our farmers. The earlier seasonal availability of fruits and vegetables has now extended to all the year round, increasing the per capital consumption of fruits and vegetables. It has also played a significant role in women empowerment, providing employment opportunities through mushroom cultivation, floriculture, processing, nursery raising, vegetable seed production etc. The national goal of achieving 4% growth in agriculture can be achieved through the major contribution in growth from horticulture.

For development of Horticulture Quality Planting Materials is a most important factor. High Density Nursery, Panposh has potential to produce different quality planting materials of fruits, vegetable & flower with modern technology and infrastructure development it will act as an centre for good quality planting materials and technology dissemination to the farming community.

2. PROBLEMS TO BE ADDRESSED

Quality Planting Material (QPM) is the key input for successful crop production in terms of both quality and quantity. In case of perennial fruit crops it is more so required as perennial crops have long gestation period. Under National Horticulture Mission (NHM) Programme, there is adequate provision for area expansion under various fruit plants like mango, cashew, litchi and flower crop like rose. Thus there is requirement of sizeable quantity of quality planting materials. To meet such demands, emphasis should be given to produce sizable quantity of QPM both in public and private sectors. Besides, there is great demand of quality planting materials of horticultural plants in other states like Chhattisgarh, West Bengal, Jharkhand, Tripura, Nagaland etc. The soil and climatic condition of Odisha, Panposh in particular is quite suitable for growing different horticultural plants as well as production of quality planting materials. Through the farm is situated on the bank of river Brahmani, there is shortage of water for irrigation during summer. So pre maintenance irrigation source is to be established. The boundary wall should be strengthened to protect the plants & fruits & trespassing of local bodies. There is severe shortage of manpower for management & to carry out day to day activities. As it is situated in an urban area there prevails labour problem. So engagement of one manager & full staffing pattern with high-tech infrastructures should be developed for successful implementation.

3. AIMS & OBJECTIVES

The project has multifarious objectives.

1. To maintain farm sanitation by cleaning forest growth, reclamation of land, soil conservation measures like bonding etc.
2. Creation of mother block by plantation of mother plants in fallow area.
3. Production of quality planting materials of Mango, Cashew, K.Lime, Guava, Gerbera, Marigold & many vegetable seedlings.

4. To utilize the inter space of old plantation area of mother plants by taking inter crops.
5. Rejuvenation and replacement of very old and declined mother plants.
6. To provide accommodation to farm man power by construction of quarters.
7. Repair of temporary sheds.
8. To create congenial condition for QPM at initial stage for better success by erection of shed net structures.
9. Employment generation for the rural youth.
10. To increase horticultural produce.
11. To increase the production of QPM success rate under controlled conditions.
12. Act as an technology dissemination to the farming community.

4. STRATEGY

Sl. No	Name of Mouza	Khata No	Kissam	Plot No	Area in Ac.
1	Rourkela Town Unit No.41	111 109 109	Patiata Patiata Patiata	355/P 409/P 407/P	20.10

N.B.- 20.10 acre is under occupation of HDN, Panposh.

Location: The H.D.N, Panposh is situated on the bank of river of Brahmani and Brahmani Club at Rourkela and is well communicated with Cuttack, Sambalpur and Bhubaneswar. It is located only at 322 kms. from Cuttack, 185 kms. from Sambalpur and 350 kms. from Bhubaneswar. All weather roads are available at the proposed site facilitating marketing of the produce.

Climate and soil: The climate is sub tropical with average annual rainfall of 1451.2 mm. The soil type is sandy loam in some area, laterite in some locality with moderate fertility, porous and suitable for growing various kinds of fruit and flower crop plants.

Present land utilization pattern:

Item	Area in ha.
Mother plants	4.0
Nursery area	0.50
Road, Building, Irrigation structure etc.	0.54
Total land under use	5.04
Unused area	3.00

Proposal for Land Utilization

Item	Area in Ha.		
	Old	New	Total
Mother Plant	4	2.5	6.5
Nursery area	0.5	0.3	0.8
Road, Building, Irrigation structure etc.	0.54	0.2	0.74
Total area:-	5.04	3.0	8.04

Report on mother plants

Sl. No	Name of the mother plants	No of mother plants			Area in ha	Remarks
		Old	NHM	Total		
1	Mango	239	1200	1439	4	

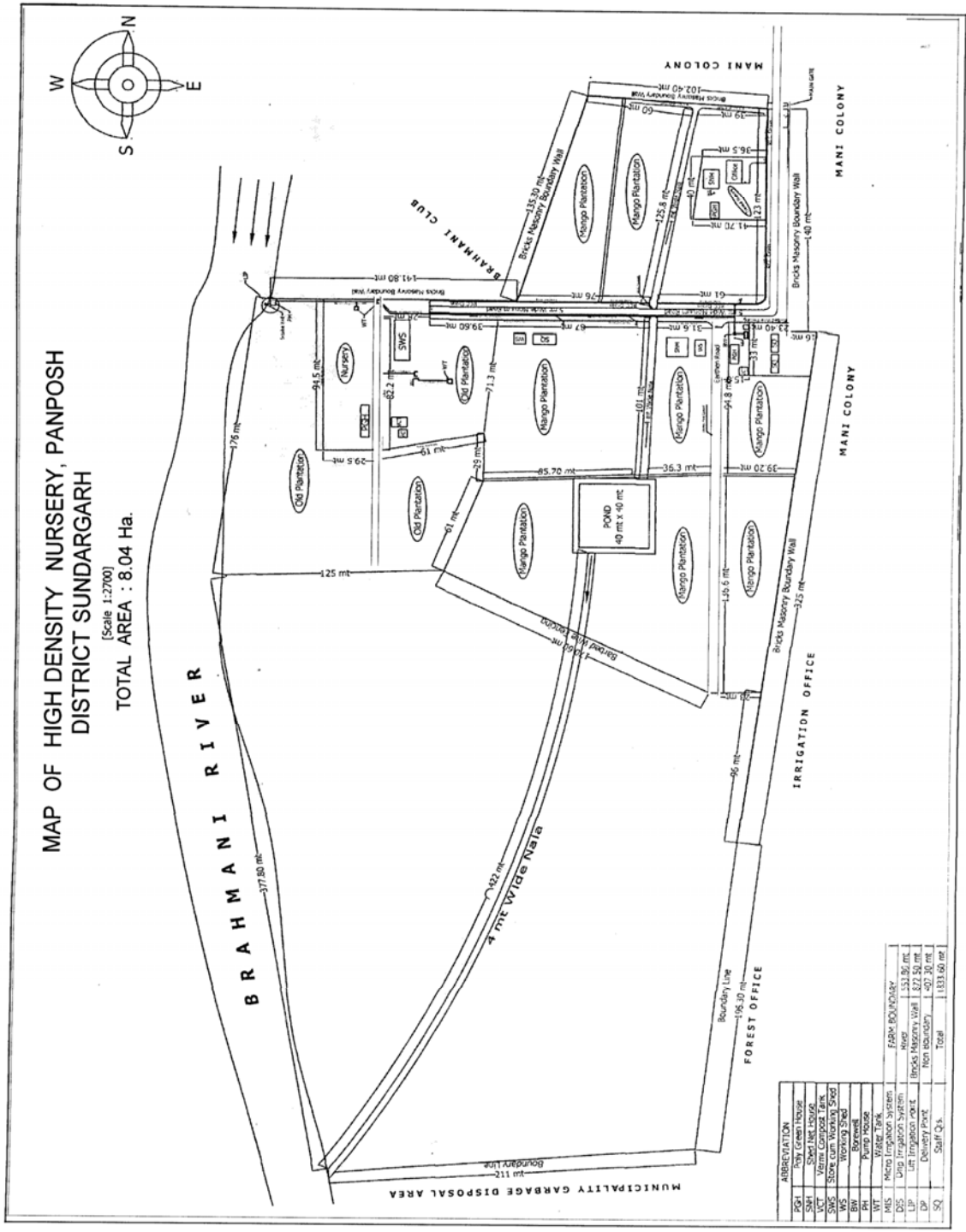
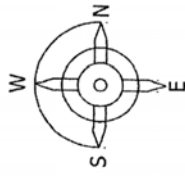
Grafts /Flower & Fruit seedling Production status

Existing Production			Proposed production		
Year	Crop	Nos.	Year	Crop	Nos.
2014-15	Mango	25000	2018-19	Mango	50000
	Others	Nil		Gerbera	1 lakh
2015-16	Mango	20000		Other fruit seedling	5000
	Others	Nil	2019-20	Mango	50000
2016-17	Mango	25000		Gerbera	1 lakh
	Others	Nil		Other fruit seedling	5000
			2020-21	Mango	50000
				Cashew	1800
				Gerbera	1 lakh
				Other fruit seedling	5000
			2021-22	Mango	50000
				Cashew	4800
				Other fruit seedling	6000
				Vermi Compost	100 qtl.
			2022-23	Mango	50000
				Cashew	9600
				K.Lime Seedling & fruits	6000
				Guava seedling & fruits	4000
				Vermi Compost	100 qtl.
				Other fruit seedling	6000

MAP OF HIGH DENSITY NURSERY, PANPOSH DISTRICT SUNDARGARH

[Scale 1:2700]

TOTAL AREA : 8.04 Ha.



ABBREVIATION	DESCRIPTION	AREA (sq. mt)
PGH	Pony Green House	111
SMH	Stone Masonry House	102
WCT	Water Conservation Tank	102
SWS	Stone cum Working Shed	102
WS	Working Shed	102
BW	Borewell	102
WT	Water Tank	102
MIS	Micro Irrigation System	102
DIS	Long Irrigation System	102
LIP	Line Irrigation System	102
DP	Delivery Point	102
SQ	Staff Qtrs.	102
	Total	1133.60

Water: Water is essential for the survival of the plants. Plenty and cheap source of water makes a nursery more profitable. The farm is blessed with a small capacity lift irrigation from the river Brahmani as well as a deep bore well.

Power: Power is essential for the lifting of water for irrigation purposes. This is also essential for illumination of the farm. The farm is electrified. Future extension is required for the 2nd LI point cater water to the proposed new plantation.

Man power: Nursery involves plenty of work force for the performance of the day to day nursery works such as maintenance of mother plants, potting, repotting, sowing of seeds, intercultural operations etc. Though the site is located in the urban area, plenty of labour force is available for the purpose at minimum labour rate. Besides, employment is being generated for the local youths. Both skilled, semi skilled and unskilled workers are being engaged. For propagation purpose skilled personnel in this sector are being engaged on contractual basis.

Machineries & equipments: Various farm machineries and equipments like secateurs, budding and grafting knives, ladders, axes, crowbar, sprayers, hoes, spades, khurpies, etc. are essential for day to day activities of the farm & nursery which are available easing the nursery work. Regarding Farm Power it is having one Power tiller (12HP) in running condition, 4 water pumps of (one 5 Hp. Elect. Pump, 5 Hp. Submersible Pump) Tree pruner, other regular farm equipments and implement

5. TARGET BENEFICIARIES

This will cover the requirement of QPM of Govt. Schemes of Horticulture & allied sectors. It will also train the beneficiary of Panposh & nearby areas.

6. MANAGEMENT

Asst. Director of Horticulture-	Financial Power & Authority
↓	
Horticulture Overseer- (1no.)	In Charge of the Farm
↓	
Manager-(1no.)	To be engaged to look into day to day affairs from the scheme for 1 st 5yr.then salary will be met from profit of revolving fund.
↓	
Attendant- (2nos.)	To work in the farms.

7. FINANCIAL:

PROPOSED PROJECT COST (COMPONENT-wise)

Sl. No.	Items	Amount	Norm followed
1	Cleaning of forest growth reclamation of land and soil conservation bonding 3 ha.	150000	PWD
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5	2 units of Vermi Compost unit	200000	MIDH
6	Lift Irrigation with 10 H.P. pump pipe fittings, one Pump House and Electrification	1300000	OLIC
7	Drip Irrigation with extra 21fittings as per actual	100000	PMKSY
8	Rejuvenation of old orchard 1ha.	40000	MIDH
9	Mulching 2.5 ha.	80000	MIDH
10	High tech poly house 1000 sqmt. (Tubular structure)	935000	MIDH
11	Const. of RCC roofed watchman-cum-Store room (600Sq.ft.)	600000	PWD
12	Floriculture inside Poly house 610/ sqmt.	610000	MIDH
	Total:-	6470637	
	Contingencies (1%)	64363	
	Total:-	6535000	

(Rupees Sixty five lakh thirty five thousand) only

8. TIME FRAME:

Year wise Expenditure Statement

Sl. No.	Items	Phases of execution of work				
		2017-18	2018-19	2019-20	2020-21	2021-22
1	Cleaning of forest growth reclamation of land and soil conservation bonding 3 ha.	150000	0	0		
2	Plantation of mother plants of fruit crops in 1 ha. Cashew, 1 ha. K. Lime, 0.5 ha. Guava	394035	180792	162810		
3	Boundary wall with column structure along river side 342 rmt.	1368000	0	00		
4	One cow catcher to prevent entry of stray cattle & two gates	350000	0	0		
5	2 units of Vermi Compost unit	100000	100000	0		
6	Lift Irrigation with 10 H.P. pump pipe fittings, one Pump House and Electrification	1300000	0	0		
7	Drip Irrigation with extra fittings as per actual	100000	0	0		
8	Rejuvenation of old orchard 1ha.	40000	0	0		
9	Mulching 2.5 ha.	80000	0	0		
10	High tech poly house 1000 sqmt. (Tubular structure)	0	935000	0		
11	.Floriculture inside Poly house 610/ sqmt.	0	0	610000		
12	Const. of RCC roofed watchman-cum-Store room (600Sq.ft.)	0	600000	0		
13	Contingencies (1%)	64363				
	Total:-	3946398	1815792	772810		

Cost of plantation and 2 years maintenance

Crop	Area (Ha.)	Total Cost
Cashew	1	267636
K.Lime	1	326897
Guava	0.5	143104
Gerbera (inside Poly house)	0.1	610000

GRAND TOTAL:- Rs.64,70,637/-+Rs. 64,363/-= Rs.65,35,000/-

9. COST BENEFIT ANALYSIS

Sl. No	Item of work	1st yr			2nd yr			3rd yr			4th yr			5th yr			6th yr onwards		
		Cost	Return	Profit/loss	Cost	Return	Profit/loss	Cost	Return	Profit/loss	Cost	Return	Profit/loss	Cost	Return	Profit/loss	Cost	Return	Profit/loss
1	Mango graft production	910000	1275000	365000	910000	1275000	365000	910000	1275000	365000	910000	1275000	365000	910000	1275000	365000	910000	1275000	365000
2	Cashew graft production	146168			64295			57173	45900		58190	122400		56430	244800		59400	408000	
3	K.Lime fruit and seedling	162487			85703			78707			90600				400000		106576	600000	
4	Guava fruit and seedling	85380			30794			26930			27780			28118	80000		29304	166000	
6	Gerbera plantation inside poly house 15000/ month @Rs3/fl	610000	300000	310000	35000	600000	565000	35000	600000	565000									
7	Vermi compost (production 1000qtl/yr @Rs 5/kg	200000	500000	300000	40000	500000	460000	40000	500000	460000	40000	500000	460000	40000	500000	460000	40000	500000	460000
8	Sale of fruit seedlings(Papaya, Drumstick, etc) @Rs.4/plant - production cost and @Rs. 7 / plant - sale rate on an avg for 5000 plants	20000	35000	15000	20000	35000	15000	20000	35000	15000	20000	35000	15000	25000	42000	17000	25000	42000	17000
	Total:-			370000			1405000			1405000			840000			842000			842000

RISK ANALYSIS:- The farm is situated in Rourkela Municipality which is facing dust problem of Rourkela steel plant. The new plantation will create a green belt which will help in controlling environmental pollution. There is no legal or revenue risk as the land belong to Asst. Director of Horticulture, Panposh. For good management there is proposal for engagement of one manager for 1st 5 year which will subsequently met out of the profit of revolving funds.

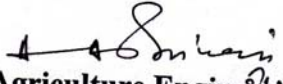
OUTCOME:- There is great demand for various quality planting materials of Mango grafts inside & outside the State. The quality materials of different fruits, flowers & vegetable produced from this project can be supplied to the local farmers. The quality planting materials of Mango, Litchi, K.Lime, Guava, Cashew can be utilised in different schemes like MIDH, State Plan, RKVY of Horticulture department & also in other departments like KVK, ITDA, Watershed, NGOs etc.

It will act as a training centre & in future it will create many trained personnel in the field of Horticulture.


EVALUATION:- The evaluation will be done after completion of the project i.e. after 5 year. If any future expansion will be required then third party evaluation can be done.

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.


Asst. Agriculture Engineer,
O/o Dy. Director of Horticulture,
Sundargarh.


Asst. Horticulture Officer,
O/o Asst. Director of Horticulture,
Panposh


Asst. Director of Horticulture,
Panposh.