

PROJECT PROPOSAL FOR DEVELOPMENT OF CENTRE
OF EXCELLENCE ON HORTICULTURE, DERAS



Under RKVY for the Year 2016-17 to 2017-18
Project Cost: Rs. 140.625 Lakh

Submitted by:
Asst. Director of Horticulture, Deras

Director of Horticulture
Odisha, Bhubaneswar

PROJECT SUMMARY

Name of theProject: **PROPOSAL FOR DEVELOPMENT OF CENTRE OF EXCELLENCE ON HORTICULTURE, DERAS**

1. Civil work : Construction of RCC Drainage & Compound wall.
2. Modification of design of existing poly house and walk-in tunnel

Name and address: **Asst. Director of Horticulture, CoE, Deras, Khordha**
Of executant

Proposed Work : Construction of RCC drainage channel with RCC for drainage, boundary wall at CoE, Deras, modification of design of protected structures etc.

Source of fund : RKVY 2016-17 & 2017-18

Project cost : **Rs. 140.625 Lakh**

Project duration : 2 Years

1. Back ground / Introduction

The project proposal for establishment of Centre of Excellence on Horticulture with training centre at Deras was decided in the National Horticulture Conference at New Delhi during the year 2012-13. Accordingly the project was established under RKVY during the year 2012-13 to 2014-15 with a financial allocation of Rs. 22.9413 Crore. The objective of the project has been achieved with production of the vegetables, flowers and seedlings of vegetables and papaya under the protected structures and open condition as well (So far profit of Rs. 1.20 Crore generated). Also, by conducting the training programme in the Training Institute at Centre of Excellence, Deras, the objective of dissemination of knowledge on management of micro irrigation & protected cultivation, Orchard management etc. to the farmers and Horticulture staffs etc. has been achieved.

Protected structures available in Centre of Excellence, Deras

Type of Structure	Unit area (Sq.mt)	Nos. of structures	Total Area (Sq.mt)	Remark
Poly-Greenhouses	4000	3	12000	High yielding varieties of vegetables
Poly-Greenhouses	4000	1	4000	High yielding varieties of Rose
Poly-Greenhouses	2000	1	2000	High yielding varieties of Gerbera.
Shade net House	4000	7	28000	High yielding varieties of vegetables & semi perennial fruit.
Poly-Tunnel houses	1000	24	24000	High yielding varieties of vegetables & flowers.
Greenhouse nurseries	2000	3	6000	Production of high quality vegetable & flower seedlings.
Total		39	76000	

Other Infrastructures available;

- I. Computerized Fertigation and micro-irrigation system
- II. Modern pack house with cool chamber
- III. Automatic weather Station
- IV. Semi-automatic greenhouse nursery
- V. Well-furnished training centre with audio video facilities
- VI. Own website for helping the farmers i.e. www.coederas.com

The crops grown under protected structures at CoE, Deras with computerized Fertigation, Micro Irrigation system and plant protection system. The vegetable seedling are raised ideal condition of temperature and humidity in semi condition green house has been highly appreciated and accepted by the farmers. So far 1, 50, 00,000nos. seedlings of hybrid vegetables are raised in the soilless media and supplied to the farmers of Odisha. The vegetables and flowers are grown with modern technology under protected conditions to reduce labour cost and prolong self-life and quality. Water conservation system has been adopted with storage of water in polythene lined farm pond. A model grading and packing unit has been established with fully equipped pre-cooling unit and grading platform. The produce is marketed with brand name of Centre of Excellence (CEO) with proper sorting, grading and packing. The entire project is monitored with CC TV surveillance. Solar Fencing has been done to avoid elephant menace. The training centre has been established for on-farm demonstration of modern technologies in the horticulture sector.

TRAINING PROGRAMME ORGANISED SO FAR

Sl. No.	Training programme	Scheme	Period of Training	Physical (No.)		
				Target	Admitted	Successfully completed
1	Micro Irrigation & Protected Cultivation Management (one month duration)	RKVY	March 2016	75	42	35
			June 2016		33	29
			Sept 2016		26	25
Sub-Total				75	101	89
2	Six months HRD Gardeners' Training for self-employment	NHM (MIDH)	From July'2016 to Decmber'2016	50	29	20
3	One year diploma course training for Contractual HEWs	State Plan	1st phase (20th Dec'15 to 19 th May'16) 2 nd phase (20th July'16 to 20th Oct'16)	33	33	33
4	Orchard Management Training (One Month duration)	MGNREG S	October 2015	100	75	71
			November 2015	100	73	65
			December 2015	100	67	60
			January 2016	100	42	38
			February 2016	100	61	46
Sub-Total				500	318	313
Grand Total				658	481	455

Problems for cultivation of vegetables and flowers under protected structures at Centre of Excellence, Deras

The Deras dam is at the upper reach for which there has been water logging during rainy season. Poor drainage condition in the other season particularly at lower reach of the project has made it difficult in raising crops in some of the shade net structures and green house structures.

Again, it is observed that the temperature inside all types of structures remain higher than the outside temperature in all seasons. Though there is no problem regarding raising crops in winter, there has been problem in raising in crops in summer. Some modifications in design of the structures are necessary, so that the inside temperature can be reduced. So, modification of structures to limit temperature limit in summer is required, so that crop can take up round the year.

2. Aim and objective of the new proposal

- To improve the crop productivity in the existing protected structures by reducing the inside temperature of the structures.
- To take steps to reduce the temperature inside the structures by modifying the structural designs as follows.
 - i) Provision of rolling of side wall bio-nets.
 - ii) Ventilators to be fixed for moving the air inside the structure.
 - iii) Foggers may be installed in structures where not fixed.
 - iv) Sprinklers may fixed on the roof of the structures like poly houses & poly tunnels.
- To improve the soil drainage by establishment of sub-surface drainage system and breaking of the sub-surface water flow (seepage line) by construction of deep drainage system at the upper reach across the slope.
- To impart training on modern technologies of horticulture to the farmers, entrepreneurs as well as refresh the knowledge of staffs.
- To improve problematic soil by replacing with the good quality soil.
- To act as demonstrative farm on hi-tech production of vegetables, semi perennial fruits and flowers under protected structures supported with micro irrigation and mulching.

3. Feasibility / Basic information

Centre of Excellence, Deras is situated in the Deras Agriculture farm over an area of 36.6 Ac. and is situated at Haridamada village near Mendhasal of Khorda district. The site is connected with all-weather blacktop road. The project is situated near Deras dam.

4. Implementing agency:

Asst. Director of Horticulture headed the Centre of Excellence, Deras, who is assisted by 3 Asst. Horticulture Officers, 1 Asst. Agriculture Engineer, 3 Horticulture Overseers, 3 Horticulture Extension Workers, 3 Gardeners, 1 Attendant and Junior clerk.

5. Sector / sub sector:

Infrastructure and Assets.

6. Anticipated benefits:

- a. Persistent poor drainage problem will be overcome.
- b. Improvement of the soil structure suitable for horticulture crops.
- c. Production of vegetables and flowers in all seasons.
- d. Increase the productivity of the crops under protected structure.
- e. Increasing the accommodation capacity of the hostel and secured accommodation of the lady-trainees in separate hostel.
- f. Beautification of the campus.
- g. Engaging rural unemployed youth and check migration through training and engagement.

7. Output and outcome

- a. Improve the capacity building of the farmers, entrepreneurs, agricultural / horticultural extension agencies on modern technologies of horticulture industry.
- b. Demonstration and sustainable production of vegetables and flowers in the existing protected structures.
- c. Provide quality vegetables and papaya seedlings all around the year.
- d. Centre will be act as a bread-butter for the local un-employed skilled / casual laborers.
- e. Centre will emerge as a model centre for hi-tech horticulture.
- f. Campus of the Centre will be well protected.
- g. Quality of training and accommodation of the trainees will be improved.

8. Proposed work / activities with detail narration;

In this project, it has been proposed for soil amendment, improvement of drainage system, improvement of protected structure and construction of a gents hostel along with other requirements as follows;

A. Construction of civil work (RCC Drainage & Compound wall)

SI No.	Proposed Item of work	Unit	Size	Rate per unit (Rs.)	Total amount required (Rs.)
1	Construction of RCC drainage channel with RCC common ground wall for drainage channel & compound wall	RMT	400	12400/-	49,60,000/-
2	Construction of boundary wall with provision of RCC pillar and RCC plinth band, designed MS grill at the super structure from office main gate to CoE boundary in different reaches	RMT	80	6000/-	4,80,000/-
3	Construction of boundary wall along the main road from IDCO / Food park boundary wall to Haridamada road with the provision of RCC pillar, plinth band, RCC tie bund and brick work with fly ash brick masonry wall complete	RMT	400	5500/-	22,00,000/-
4	Constriction of safety toilet tank near existing CoE, Building	C.ft	20'x10'x6'	LS	3,50,000/-
5	Construction of end point RCC drainage channel with provision of 3 ft dia RCC underground Hume pipe				
	a. RCC drainage channel	RMT	100	8500/-	8,50,000/-
	b. RCC underground Hume pipe with chamber	RMT	200	4500/-	9,00,000/-
6	Solar photo voltaic cells operated pump sets and water heating facility.	1 nos		LS	5,00,000/-
	Grand Total				1,02,40,000/-

(Rupees One CroreTwo lakh Forty thousand) only.

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B. Modification of design of existing poly house and walk-in tunnel.

SI No .	Proposed Item of work	Unit	Quantity per acre	Total area (Acre)	Total qnty.	Rate per unit (Rs.)	Total amount required (Rs.)	
1	Installation of 50" size exhaust fan, having 20000 to 25000 cfm in the poly house	Nos.	16	4.5	72	22,000/-	15,84,000/-	
2	Installation of insect proof net having 20-25 mesh size of width 2mt	Sqm	300 for 1 acre of GH & 400 for 0.25 acre walk in tunnel	4.5 Acre GH & 6 Acre of walk in tunnel	3750	40/-	1,50,000/-	
	GI rolling pipe of ¾" dia & 2.3 mm thick ness for rolling of net	RMT	150 for 1 acre of GH & 200 for 0.25 acre of walk in tunnel	4.5 Acre GH & 6 Acre of walk in tunnel	5500 RMT (7700 kg)	50/- per kg	3,85,000/-	
	Accessories (Profile sheet, spring, C-clamp), nut bolt, GI wire / fiber rope, labour etc.	Sqm	300 for 1 acre of GH & 400 for 0.25 acre walk in tunnel	4.5 Acre GH & 6 Acre of walk in tunnel	3750	100/-	3,75,000/-	
3	Filling of poor drainage areas with garden soil	Cum	4000 x 0.4	1 Acre GH	1600	283/-	4,52,800/-	
4	Solar photo voltaic cells operated pump sets	No	3HP each		2 nos	3,00,000	6,00,000/-	
	Total							35,46,800/-

(Rupees Thirty Five lakh Forty Six thousand Eight hundred) only.

Abstract of Work:

Components	Items	Total amount required (Lakh Rs.)
Construction of civil work (RCC Drainage, Compound wall etc)	Drainage	49.60
	Boundary	26.80
	RCC Drainage with Hume pipe, safety Toilet tank	21.00
	Solar photo voltaic cells operated pump sets and water heating facility	05.00
	Total -1	102.400
Modification of design of existing poly house and walk-in tunnel	Installation of 50" size exhaust fan	15.84
	Installation of rolling pipe and insect proof net	9.10
	Filling of poor drainage areas with garden soil	4.528
	Solar photo voltaic cells operated pump sets	6.00
	Total -2	035.468
Total 1 + 2		137.868
Contingency		002.757
Grand Total		140.625

(Rupees One Crore Forty lakh Sixty two thousand Five thousand) only.

9. Definite time line: 2 Years duration

Components	2016-17	2017-18	Total
Construction of civil work (RCC Drainage, Compound wall, Safety toilet tank etc)	26.000	76.400	102.400
Modification of design of existing poly house and walk-in tunnel	35.468	0	035.468
Total	61.468	76.400	137.868
Contingencies	01.229	01.528	002.757
Grand Total	62.697	77.928	140.625

AAE
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AHO
Deras

ADH
CoE, Deras

10. **District wise target** : Departmental Farm

11. **Nos. of beneficiaries: Not Required**

12. **Project co-coordinator details:**

Level of Execution	Name	Designation	Mobile No.	Email
State Level	Sri K.B. Mishra	Asst. Horticulture Officer, (Hq.)	9861191172	ahorkvy@orihot.in
Dist. Level	Dr. Jayanta Ku. Nayak	Asst. Director of Horticulture, Deras	9438298971	coederas.hort@gmail.com

13. **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.

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