

CENTRAL INSTITUTE OF HORTICULTURE

ACTION PLAN *2011-2012*



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Recognizing the potential for development of horticulture in Northeast region, and in order to provide adequate institutional support to tap this potential, Government of India has set-up the “Central Institute of Horticulture” at Medziphema, Nagaland in year 2005-06 under the Central Sector Scheme. The institute would provide technical support on different aspects of horticultural development. The main focus of the institute is on refinement/demonstration of identified technologies specific for the region; production and supply of quality seed and planting material of improved/high yielding varieties, demonstration of proven technologies and training of State department officials and field functionaries on different aspects of horticulture development including post-harvest management, processing and value addition. The institute is being developed in an area of 43.50 ha at Medziphema in the district of Dimapur, Nagaland, which is 35 km away from the capital city Kohima.

The Central Institute of Horticulture (CIH) set up at Medziphema, Nagaland under the umbrella of Department of Agriculture & Cooperation, Ministry of Agriculture, Government of India, New Delhi has completed three years in the service of the North East region.

Objectives of the Institute

- Capacity building – training of trainers & farmers/ beneficiaries
- Demonstration of improved technologies
- Follow-on extension support in the field of horticulture.
- Promotion of organic cultivation of horticultural crops.
- Establishing convergence and synergy among programmes in the field of horticulture
- Monitoring of Centrally Sponsored Programmes in the area of horticulture.

Mission

To provide excellent, innovative and relevant trainings to all stakeholders of horticulture sector to empower them and enable the industry to bring socio economic development in NER and to act as a center for training for upgradation of skill in modern technologies for horticulture production.

Vision

To emerge as the pioneering, innovative, farmer focused and self supporting horticulture Institute.

Action Plan (2011-2012)

Sl/no.	Components	Physical Targets	Permissible Cost Rs. (in lakh)	Financial Implication (Rs. In lakh)
A.	CAPACITY BUILDING & HRD ACTIVITIES			
	1) Trainers Training	10 nos. (300 beneficiaries) (Annexure I)	2.50 per training (Annexure II)	25.00
	2) Training of Farmers	40 nos. (2000 farmers) (Annexure III)	0.60 per training (Annexure IV)	24.00
	3) Capacity Building at National & International Institute for CIH staff & state officials	12 nos. (Annexure V)	(Annexure VI)	21.20
	4) Impact factor analysis	7 states of NER	@ 0.50/state	03.50
Sub Total				73.70

B. PRODUCTION OF QUALITY PLANTING MATERIALS

Sl/no.	Components (Annexure VII)	Physical Targets	Financial Implication (Rs. In lakh)
1.	Establishment of Scion block (gap filling)	10 crops	5.00
2.	Raising of rootstocks (citrus, cashew, mango, guava & rose)	60000 nos.	1.00
3.	Plant multiplication through grafting, budding & suckers etc.	44000 nos.	3.60
Sub Total			9.60

C. FARM DEVELOPMENT

Sl/no.	Components	Area (in ha)	Financial Implication (Rs. In lakh)
1.	Land Development for plantation of fruit crops (clearing of jungle, uprooting of stumps , leveling and division of block)	3.5	3.50
2.	Creation of Infrastructure Facilities (Minor works)		
	i. Construction of drying floor for ginger & turmeric produce (20' x 30')	1 unit	2.00
	ii. Construction of farm warehouse (20' x 25')	1 unit	2.00
	iii. Construction of propagation benches	6 nos.	5.00
	iv. Soil filling in polyhouse	1 no.	0.50
	v. Pathway construction between poly house	600 mt	5.00
	vi. Repair/ renovation of barbed wire fencing with chain link	2.0 km	5.00
	vii. Trellising in passion fruit block (plastering of pole	1.0 ha	8.00

	base and wiring of trailing frame etc.)		
	viii. Construction of ring well	6 nos.	3.00
	ix. Construction of steps from pump house to passion fruit block		3.00
3.	Maintenance of Poly houses (replacement of drippers, laterals, misters, farm block etc.)	11 nos. (1000 sq. ft)	4.00
4.	Fertilizers, Manures, Chemicals etc.		4.00
Sub Total			45.00

D. TECHNOLOGY REFINEMENT & DEMONSTRATIONS

Sl/no.	Components	Area (in ha)	Financial Implication (Rs. In lakh)
I.	Display of improved production technologies On farm		
	i. Pollination support through beekeeping for enhancing production in fruit & vegetables (20 boxes)	1 unit	0.80
	ii. Off season production of Onion	0.25 ha	0.25
	iii. Performance of Black Pepper with silver oak as std. plant (silver oak plantation)	1.0 ha	0.30
	iv. Performance of Black Pepper in established teak plantation	60 plants	0.15
	v. Inter cropping of okra with French Bean	0.20 ha	0.30
	vi. Performance of high value vegetable crops (100 sq. m each)	2 units	1.00
	vii. Plantations in buffer zone in organic model blocks	1200 sq. m	0.20
	viii. Model citrus orchard (Khasi mandarin)	1 ha	1.25
	ix. Performance of orchids under poly house	100 sq.m	1.50
	x. Performance of different banana cultivars	2 ha	0.95
	xi. Low cost storage structure	1 unit	1.00
	xii. Establishment of organic model farm (3 nos)	1 ha each	6.00
Sub Total			13.70
II.	Display of improved production technologies Off farm		
	i. High density planting & canopy management of cashew	10 ha	8.0 (as per HM-NEH Norms)
	ii. High density planting & canopy management in citrus	1 ha	0.40 (as per HM-NEH Norms)
	iii. Adoption of village as model organic village	1 no	10.0
	iv. Low cost storage structure for onion	2 unit	2.0
	v. Establishment of organic model farms (4 nos)	1 ha each	9.0
	vi. Organic cultivation of turmeric	5 ha	5.0
Sub Total			34.40
Sub Total (I+II)			48.10

E. PHM/ MARKETING/ AGRI BUSINESS PROMOTION

Sl/no.	Components (Annexure VIII)	Physical targets (Nos.)	Financial implication (Rs. In Lakh)
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			(Annexure IX)
1.	Exposure trips for officials/ farmers/beneficiaries (Regional/National)	8	19.20
2.	Participation in exhibitions/trade fair/meets (Regional/National/International)	2	26.00
3.	Buyers & sellers meet	2	2.00
4.	Market Linkage Initiatives	2	4.00
5.	Creation of Market Information System (MIS)		5.00
Sub Total			56.20

F. PUBLICATIONS

Sl/no.	Components	Physical targets	Financial implication (Rs. In Lakh)
1.	Annual report/ training manuals /extension bulletins/ folders/ pamphlets/brochures etc.	(Annexure IX - a & b)	12 .00

G. SEMINAR / WORKSHOP/ CONFERENCE/ MEETINGS

Sl/no.	Components	Physical targets	Financial implication (Rs. In Lakh)
1.	Seminar / workshop/ conference/ meetings	(Annexure X)	25 .00

H. EQUIPMENTS & MACHINERIES

Sl/no.	Components	Physical targets	Financial implication (Rs. In Lakh)
1	Equipments & Machineries	(Annexure XI)	30.00

I. MOTOR VEHICLES

Sl/no.	Components	Physical targets	Financial implication (Rs. In Lakh)
1.	Motor vehicles	Tata mobile/tractor/ power tiller/ mini bus & motor bike	20 .00

J. VIDEO CONFERENCING FACILITY

Sl/no.	Components	Physical targets	Financial implication (Rs. In Lakh)
1.	Video Conferencing facility		20 .00

K. LANDSCAPING

1.	Landscaping		3.00
	Grand total		342.60

Budget Projection for the year-2011-12

Sl. No.	Head Of Account	BE proposed by CIH (Rs. In Lakh)	BE approved by DAC (Rs in lakh)
A.	Major Head -2552		
	1. Salaries	20.0	20.0
	2. Wages	25.0	15.0
	3. Medical	05.0	2.0
	4. Rate , Rent and taxes	00.5	1.0
	5. Advertisement & publicity	05.0	5.0
	6. Domestic Travelling Expenses (DTE)	25.0	35
	7. Office expenses (OE)	45.0	100
	8. Other Administrative Expenses(OAE)	144.5	162
	9. Motor Vehicle	20.0	15
	10. Machinery and Equipment	30.0	20
	11. Publication	12.0	20
	12. Minor Works	41.0	20
	13. Professional services	17.0	15
	14. Other charges	110.0	100
	Sub Total	500.0	530
B.	Major head-4552 Works*	1000.0	970.0
	Grand total	1500.0	1500.0

- Action plan has been prepared as per proposed BE , DAC has modified BE , however, changes if required will be done at RE stage

Strategic Plan (Component wise)

In order to execute the action plan of 2011-2012, the following strategies are indicated here under;

SL/ NO.	COMPONENTS	STRATEGY
A.	CAPACITY BUILDING & HRD ACTIVITIES	<p>(a) Trainers training Training on identified topics (Annexure I) will be imparted to the State Govt. Officials and field extension functionaries in all the eight states of the North East Region. These trainees will be the Master Trainer's who will train the farmers in their respective states.</p> <p>(b) Training of farmers Location and crop specific trainings (Annexure III) will be organized in all the states of NER by the Master Trainer's. Training materials, hands out, audio visuals, flipcharts in local languages will be prepared and distributed to the state functionaries involved in training of beneficiaries/ farmers.</p> <p>(c) Capacity building at National & International Institute for CIH staffs & Officials The staff of CIH and Officers of State Horticulture Departments will be trained on-site for various skill developments in reputed institutes at National and International level. Technical staffs will be trained in various institutes on specific areas to develop expertise. The Head and Administrative staffs will be trained in financial and administrative matters.</p> <p>1) At National level Capacity building is considered to be an integral part of organizational development, for strong HRD base. CIH proposes for capacity building at National level in reputed institutes like CIMAP, Lucknow; CISH, Lucknow; FMTTI, Haryana; HTC, Pune; IARI, New Delhi; IIHR, Bangalore; IIM, Ahmedabad; IIPA, New Delhi; IVRI, Varanasi; NCOF, Ghaziabad; NIAM, Jaipur; NPTTI, Hyderabad etc.</p> <p>2) At International level</p> <p>i) FIBL, Switzerland With one of CIH mandates being promotion of organic farming, capacity building at such premier institute on organic farming, will help the officials concern in the field to update their knowledge for the betterment of the region.</p> <p>ii) CINADCO, Israel Israel being one of the most advanced countries in the world in Hi Tech Agri./ Horti sector, capacity building of officials in such countries will be very beneficial for them in implementing various schemes in the region. The CINADCO organizes training programmes under the Ministry of Agriculture and External Affairs, Israel located at Kibutzshefayim, Israel.</p> <p>(d) Impact Factor Analysis The main mandate of CIH being trainings, it is important to analyze the impact</p>

		<p>factor so as to provide a gross approximation of the prestige of trainings which have been conducted individually. This will help and provide information which will act as a tool for training management considering the trainings already imparted and trainings under consideration for acquisition. For carrying out this analysis, the institute will coordinate with NIRD, Guwahati.</p>
<p>B.</p>	<p>PRODUCTION OF QUALITY PLANTING MATERIALS</p>	<p>(a) Establishment of Scion block (gap filling) The plant for raising scion will be procured from reliable and reputed sources. The scion already existing in CIH farm will be procured and raised for gap filling.</p> <p>Citrus: Scion materials of Olinda Valencia and Daisy Tangerine will be collected from CIH farm and Khasi Mandarin from State Horticulture farm, Longnak, Nagaland.</p> <p>Cashew: Scion materials of VR1, VR2, VR3 and BBSR1 AND H1608 will be collected from CIH farm and VR4 will be procured from SHN, Dimapur.</p> <p>Guava: the scion materials Lucknow-49, Allahabad Safeda, Lalit and Shweta will be procured from CISH, Lucknow.</p> <p>Litchi: Scion material will be collected from NRCL, Muzaffarpur and SHN, Dimapur.</p> <p>Mango: Scion materials of Langra, Bombay Green, Mallika and Sinduri will be collected from CISH, Lucknow.</p> <p>Passion fruit: Cuttings will be collected from CIH farm and local sources.</p> <p>Bael: Scion material will be collected from CISH, Lucknow</p> <p>Aonla: Scion material will be collected from CISH, Lucknow</p> <p>Peach: Scion material will be collected from ICAR, Barapani</p> <p>Rose: Scion for rose will be collected from CIH farm.</p> <p>(b) Raising of Rootstocks Rootstocks for citrus, cashew, mango, guava and rose will be collected from reliable sources and raised.</p> <p>Citrus: seeds will be procured from NRCC, Nagpur; State Hoti. Farm, Longnak and CIH farm.</p> <p>Cashew: seeds will be procured from Assam and Nagaland.</p> <p>Mango: seeds will be collected from local sources.</p> <p>Guava: seeds will be collected from local sources.</p>

		<p>Rose: rootstock var. Natal Bear will be procured from Govt. Institutions.</p> <p>(c) Plant multiplication through budding, grafting and suckers etc. The plant materials with compatible rootstocks and scion will be collected and procured from reliable and reputed sources like CISH, Lucknow; NRCC, Nagpur; SHN, Dimapur, State Horti. Farm, Longnak and CIH for multiplication through budding, grafting in appropriate time. Flowers like carnation and gerbera will be multiplied by vegetative means like cuttings and sucker, division from mother plants already established at CIH farm.</p>
C.	FARM DEVELOPMENT	<p>(a) Land development With a total area of 43.50 hectares under CIH, 12 ha are cultivable. Therefore CIH proposes another 3 hectare area under land development through plantation of fruit crops, with initial investment on jungle clearing, uprooting of stumps, leveling and block division etc.</p> <p>(b) Creation of Infrastructures</p> <p>(i) Construction of drying floor for ginger and turmeric Drying of spices in proper drying floor ensures clean, safe and quality product. Drying floor is more convenient and facilitates quicker drying as compared to drying in bamboo mats or plastic sheets. The drying floor will be constructed mainly for drying of, farm produce at CIH.</p> <p>(ii) Construction of farm warehouse Warehouses are intended for the storage and physical protection of goods. Construction of a warehouse at the institute will serve several purposes of the farm needs such as storage bagged produce, materials and equipments required for packing and handling and storage for pest control.</p> <p>(iii) Construction of propagation benches One of the main mandates of CIH is production of quality planting materials, which can be met if only there is successful propagation. Construction of propagation benches will ensure successful germination and protection of small seeds under germination.</p> <p>(iv) Soil filling in polyhouse Water stagnation/logging in polyhouses especially in nursery/propagation block becomes a hindrance to carry out activities during the rainy season as a result, the plants are also affected. Soil filling in polyhouse will therefore ease the problem ensuring continuous activity during the rainy season also.</p> <p>(v) Pathway construction between polyhouses In order to facilitate easy access in-between poly houses from all directions, pathway construction is essential. The construction will not only ease supervision during rainy season but also enhance beautification in the area.</p> <p>(vi) Repair/renovation of barbed wire fencing with chain link</p>

		<p>The main purpose is to create a barrier for animals and human intrusion. An area of 2km is to be covered with the chain linked barbed wire fencing which may otherwise serve as an entry point for nuisance in the premises.</p> <p>(vii) Trellising in passion fruit block CIH has an area of 1 ha under passion fruit cultivation. Being a climber, the crop requires trellis for support during its growth. Trellising in passion fruit during initial stage of its growth which will include plastering of pole base and wiring of trailing frame will ensure its proper growth and fruiting during later stages.</p> <p>(viii) Construction of ring well Water is the most important component for any horticultural activity. Construction of ring well within the premises will add to the available water capacity in the farm and in turn activate the farm activities.</p> <p>(ix) Construction of steps from pump house to passion fruit block Pump house is the heart for drawing water from the main river source to CIH farm. The road leading to pump house is outside CIH premises which creates inconveniences during supervision. Hence, construction of steps from pump house to passion fruit block will greatly shorten the distance and ease supervision in case of any technical failure.</p> <p>(c) Maintenance of polyhouses Polyhouses at the institute is confined mainly for cultivation of rose, gerbera, carnation, anthurium, tomato, capsicum, citrus scion block which need special care and controlled conditions for its proper growth. Sometimes these structures fall subjected to natural calamities like strong winds, heavy rains and also damages by animals or human intervention. Replacement of foggers, drippers, PVC pipes etc. should be looked into with top most priority in case of any casualty so as to ensure running activity. Therefore repair and maintenance of these polyhouses against such inconveniences is very important.</p> <p>(d) Fertilizers, manures & chemicals Nutrition to plants is important for its proper growth and development. The vast acreage of plantations under fruits, vegetable, spices and flowers at CIH requires balanced nutrition, protection from pests and diseases for its proper growth and development. Therefore, CIH proposes for procurement of fertilizers, manures and chemicals for the overall well being of the farm.</p>
D.	TECHNOLOGY REFINEMENT & DEMONSTRATIONS	<p>I. ON FARM</p> <p>(a) Pollination support through beekeeping for enhancing production in fruits and vegetables Crop failures due to inadequate pollination possess new challenges for improving and maintaining quality and productivity to commercial cultivation.</p>

Bee boxes will be procured from reputed sources and introduced in fruit plantation blocks in CIH farm with the aim to enhance pollination as a part of demonstration.

(b) Off season production of onion

Off season production ensure year round availability of a particular crop and fetches better remuneration. An area of 0.25 ha will be subjected to off season onion cultivation to evaluate its performance i.e. growth and yield with different organic manures like poultry manure, vermicompost etc.

(c) Performance of black pepper with silver oak as standard plant (silver oak plantation)

Black pepper requires standard plant for support for its normal growth and development. CIH proposes plantation of silver oak initially which will be used as a standard plant for black pepper in later stage and evaluated.

(d) Performance on black pepper in established teak plantation

Performance of black pepper with teak as its standard plant will be evaluated for the third year.

(e) Intercropping of Okra with French bean

For a successful intercropping, crop compatibility is one most important factor to be considered. French bean being a leguminous crop will be intercropped with Okra and its performance (growth and yield) and degree of compatibility will be evaluated as a part of technology refinement.

(f) Performance of high value vegetable crops

High value vegetable crops like tomato, capsicum, cucumber will be planted under polyhouse and open condition for performance evaluation i.e. quality and yield.

(g) Plantations in buffer zone of organic model blocks

A buffer zone is a physical border in an organic production area. Suitable plant species will be selected and planted in buffer zone in organic model blocks to check chances of contamination from adjacent activities and areas.

(h) Model citrus orchard (Khasi Mandarin)

Khasi Mandarin is one of the most important fruit crops of the North east Region. CIH proposes to set up a model orchard equipped with the latest improved production technologies under an area of 1 ha as a part of demonstration activity.

(i) Performance of orchids under polyhouse

The planting materials will be procured from reliable and reputed source. The performance of different varieties under polyhouse will be evaluated.

(j) Performance of different banana cultivars

Banana suckers will be collected from reputed source and planted in an area of 2 ha. The performance of different cultivars will be evaluated.

		<p>(k) Low cost storage structure Lack of proper storage incurs loss to a considerable portion of the harvest. Low cost storage structures involving low investment which will be feasible to the farmers will be explored and set up on farm as a part of technology refinement and demonstration.</p> <p>(l) Establishment of Organic Model Farm Organic agriculture is one of the fastest growing segments in India and worldwide. Setting up of organic model farms will act as a tool for creating models of economic success for farmers to witness and encouraging crop diversification based on available resources. Therefore, CIH has already initiated the process establishing the 3 organic model farms of 1 ha each in collaboration with ICCOA, Bangalore and the main crop to be taken up are pineapple, ginger and turmeric.</p>
		<p>II. OFF FARM</p> <p>(a) High Density Planting and Canopy Management in Cashew Cashew is suitable for fairly steep slopes with shallow top soil. Due to its large canopy and surface root system, cashew acts as a protective soil conservation crop in high rainfall areas where surface run off causes soil erosion. In High Density Planting , higher number of plants can be accommodated in the same unit area as compared to the conventional method of planting and Canopy Management will optimize production potential with excellent fruit quality enabling higher returns during the initial times up to 10 years . In the present demonstration, cashew grafts will be planted at a spacing of 5m x 5m accommodating 400 plants/ha, adopting square system of planting. The cashew grafts will be planted in pits of 60cm x 60cm x 60cm size. Planting material maybe collected from reliable source HRC, Nagichera and NRCC, Putur, Karnataka.</p> <p>(b) High Density Planting and Canopy Management in Citrus Citrus fruits especially Mandarin orange have upright growth habit. Citrus are considered a light loving plant, the trees are sensitive to shading. In High Density Planting , higher number of plants can be accommodated in the same unit area as compared to the conventional method of planting and Canopy Management will optimize production potential with excellent fruit quality enabling higher returns during the initial times up to 10 years . In the present demonstration, grafts will be planted at a spacing of 5m x 5m adopting square system of planting. The grafts will be planted in pits of 60m x 60m x 60m size. Planting material will be collected from NRCC, Nagpur; State Horticulture Farm, Longnak and CIH farm.</p> <p>(c) Adoption of village as model organic village Organic farming promotes cultivation of crops in an efficient and sustainable way for a continuous and steady production enabling the community to understand the potential and long term benefits of sustainable organic with efficient use of natural resources. CIH proposes to adopt one village as model</p>

		<p>organic village with the aim of making the village 100% organic, augment farmers income through providing support to develop markets for organic produce and promotion of organic farming.</p> <p>(d) Low cost storage structure for onion Storage structure for onion involving low investment will be explored and established in selected farmer's field for demonstration so that it can be replicated.</p> <p>(e) Establishment of Organic Model Farms Organic agriculture is one of the fastest growing segments in India and worldwide. Setting up of organic model farms will act as a tool for creating models of economic success for farmers to witness and encouraging crop diversification based on available resources. Therefore, CIH has already initiated for establishing four organic model farms of 1 ha each in selected farms at Assam and Meghalaya in collaboration with ICCOA, Bangalore. The main crops to be demonstrated are ginger and turmeric.</p> <p>(f) Organic cultivation of Turmeric Unlike other fruit crops, the commercial part of turmeric is rhizome which comes in direct contact with the soil. Hence the chances of produce contamination with fertilizers, chemicals and pesticides etc. Encouraging organic cultivation of turmeric will ensure food safety and fetch premium price in the market. CIH proposes an area of 5 ha under organic cultivation of turmeric which will act as a model live demonstration center for dissemination of organic farming system to the organic growers.</p>
E.	<p>PHM/MARKETING/AGRI BUSINESS PROMOTION</p>	<p>a) Exposure trips for officials/farmers/beneficiaries The beneficiaries/ progressive farmers will be exposed to successful entrepreneurial activities through motivational tours. This is a new activity introduced by Govt. of India under Technology Mission. Exposure trips will help the framers/ beneficiaries to witness the practices followed in other states and would bring to light ground realities. The trips would include field visits, counseling/ guidance etc. which would further help them develop a new way of thinking and to bring into practice.</p> <p>b) Participation in exhibitions/trade fairs/meets (at National and International level) Exhibition/ trade fairs/ meets are to showcase one's Unique Selling Proposition (USP). Participations in such events would give a better platform to our produce/ products. Participants in such events will witness a variety of other product and their market potential.</p> <p>c) Buyers/Sellers meet Buyers/ Sellers meets will create a platform for market stake holders to discuss over the issues of the market and how to channelize production. Such meets would help each party to understand and solve the complicacies of the</p>

		<p>market, so as to create an environment of transparency and better participations by producers/ farmers.</p> <p>d) Market Linkage Initiatives The Market Linkages Initiative will be a program to promote growth in horticultural crops and food security, working alongside partners such as NHB – ICCOA – CIH to integrate smallholder farmers into more efficient national and regional markets. To create a long term capacity for farmers, support organizations and business association to make use of domestic and international markets for their products/produce through increased knowledge and networks so as to establish practical market linkage between institutional buyers, business chains, trade facilitation institutes etc., and producers/farmers.</p> <p>e) Creation of Market Information System (MIS) MIS is a computer based system intended for use by particular marketing personnel at any functional level for the purpose of solving marketing problems. MIS will provide everyday information about developments in changing marketing environment that will help in smooth execution of marketing plans. This service will greatly improve the quality of information available to the marketing personnel in the service of the farming community.</p>
F.	PUBLICATION	<p>The institute will publish training manuals/technical bulletins for all the trainings conducted, for the master trainers where these materials will aid them in further extension trainings. Folders/flipcharts/flowcharts will be a source of information material to the farmers which will be translated into local dialects for of respective states and published. A half yearly newsletter will also be published for updating activities of CIH.</p>
G.	SEMINARS/WOR KSHOPS/CONFER ENCES/MEETING S ETC.	<p>In order to evolve feasible developmental strategies and make policy decisions, to popularize the scientific technologies available from research works among the extension workers of the state departments and progressive farming community on different aspects of horticulture, CIH proposes to organize International/National/Regional seminar/conference/summit. Besides these, CIH will also conduct BOM and TAC meetings.</p>
H.	EQUIPMENTS & MACHINERIES	<p>Important farm and office equipments to be procured in order to carry out various activities of the institute.</p>
I.	MOTOR VEHICLES	<p>In order to execute the works of CIH efficiently, provision for motor vehicle is also of utmost importance. Therefore CIH proposes motor vehicle for efficient management of the institute.</p> <p>Tata mobile: with the existence of only one tractor at the institute which performs all the major and minor works, it becomes difficult to carry out farm activities on time, as it remains engaged in varied works in a day. A tata mobile can relieve various farm works like carrying of planting materials from one block to another, carrying of harvested farm produce, water carriage and other transportation works which otherwise is perform by tractor or done</p>

		<p>manually by farm labors consuming a lot of time and energy.</p> <p>Tractor/power tiller: The institute spreads over an area of 43.50 ha where farm works are assigned in different blocks usually far from each other. With the increase developmental activities, it becomes difficult for a single tractor/power tiller to meet the days required tasks. Therefore, CIH proposes for an additional tractor and power tiller so that the farm works can be performed efficiently.</p> <p>Mini bus: One of the key mandates of CIH is imparting trainings. This requires transportation of participants at all times, which involves a lot of expenditure. Hence, purchase of a mini bus will save a lot of resources and also facilitate proper and efficient management of the training programme.</p> <p>Motorbike: The institute proposes for purchase of a motorbike as there are many small errands of the office to be attended at every point of time like post office and bankings etc.</p>
J.	VIDEO CONFERENCING FACILITY	<p>Video conferencing is a concept of interactive telecommunication allowing interactions in two or more locations via two way video and audio transmission simultaneously. The facility in the institute will enhance the quality of training programmes especially conducted for state govt. officials and extension functionaries. Since CIH is every far away from reputed like IARI, IVRI, IIHR, CISH etc. the facility will help in getting the experts lectures delivered to the participants during the training thereby reducing the burden on the institute in coordinating with the renowned resource persons.</p>
K.	LANDSCAPING	<p>The institute has an area of 43.50 ha out of which 5 ha is proposed for infrastructure development that includes construction of administrative office, reception, farmer's hostel cum training hall, residential block and polyhouses. Landscaping of the area is important for overall beautification. With the approval of farmer's hostel cum training hall, CIH proposes landscaping of the area and along the main road.</p>

ANNEXURE-I

PROPOSED AREA OF TRAINER'S TRAINING

Sl/no.	Topics	No. of trainings
1	Good Agriculture Practices (GAP)	1
2	Post Harvest Management of focus horticulture crops	1
3	Protected cultivation of ornamentals	1
4	High Density Planting and Canopy Management of important fruit crops	2
5	Value addition of horticulture crops	2
6	Nursery management and quality planting material	2
7	Organic farming and Certification	1
Total		10

ANNEXURE II

ANTICIPATED BUDGET FOR TRAINER'S TRAINING (50 persons per training for 3 days duration)

Sl/no.	Particulars	Amount (in Rs.)
1.	Conduct of training (working lunch/refreshment/ honorarium/ conference hall etc.) @Rs.200/person/day) as per norms	30,000
2.	TA /DA for participants @ Rs. 1000 x 50 nos. x3days as per norms	1,50,000
3.	TA/DA of resource persons (two) as per norms	60,000
4.	Vehicles Hiring (for field trips & local conveyance during training)	10,000
Total		2,50,000

ie. Rs. 2.5 lakh/ training (For 10 trainings = 10x2.5 lakh=**25 lakh**)

ANNEXURE III

PROPOSED AREA OF FARMERS' TRAINING

Sl/ no.	Topics	Nos. of trainings
1.	Awareness programme on Agriculture Marketing	4
2.	Improved Production Technologies in fruit crops	8
3.	Improved Production Technologies in vegetables & spices	8
4.	High Density Planting & Canopy Management in fruit crops	2
5.	Organic Farming & Certification	2
6.	Nursery management & propagation techniques in fruit crops	2
7.	Protected cultivation of ornamentals/vegetables	2
8.	Value Addition in horticultural crops	3
9.	Post Harvest Management of horticultural crops	4
10.	Farm Mechanization	2
11.	Banana Fibre Extraction and Value Addition	2
12.	Rejuvenation of senile/unproductive orchards	1
Total		40

ANNEXURE IV

ANTICIPATED BUDGET FOR FARMERS' TRAINING (60 persons per training for 1 (one) day duration)

Sl/no.	Particulars	Amount (in Rs.)
1.	Conduct of training (working lunch/refreshment/ honorarium/ conference hall etc.) @Rs.400/person/day) as per norms	24,000
2.	TA for participants @Rs.100 x 60 (as per actual)	6,000
3.	TA/DA for resource persons (as per norms)	30,000
Total		60,000

ie. Rs. 60,000/training (For 40 trainings = 40 x 60,000 = **24 lakh**)

ANNEXURE V

PROPOSED INSTITUTION FOR CAPACITY BUILDING OF CIH STAFF/STATE GOVT. OFFICIALS

Sl/no.	Designation	Nos.	Institutes
1.	Director	2	IIM, Ahmedabad/ IIPA, New Delhi/CINADCO, Israel
2.	Marketing Specialist	1	NIAM, Jaipur, Rajasthan
3.	Horticulture Specialist (2)	1	NCOF, Ghaziabad/NPPTI, Hyderabad/CISH, Lucknow/CIMAP, Lucknow/IARI, Delhi /IVRI, Varanasi
4.	Assistant Horticulture Specialist (3)	1	IARI, Delhi /IIHR, Bangalore/ CISH, Lucknow
5.	Post Harvest Technologist	1	HTC, Pune/ CIPHET Ludhiana/ CFTRI, Mysore/IARI, Delhi
6.	Senior Technical Assistant (2)	1	IARI, Delhi / IIHR, Bangalore
7.	Senior Farm Manager	1	IARI, Delhi / IIHR, Bangalore/ CISH, Lucknow
8.	Field Assistant (2)	1	Farm Machinery Training & Testing Institute, Hissar, Haryana / IIHR, Bangalore/ CISH, Lucknow/ ICAR, Barapani
9.	State Govt. Officials/ CIH staffs	1	FIBL, Switzerland/CINADCO, Israel

ANNEXURE VI

ANTICIPATED BUDGET FOR CAPACITY BUILDING

Sl/no.	Particulars	Amount (in Rs.)
1.	National	
	Training cost @ 10,000/trainingx10 Nos. (TA/DA as per actual to be borne under Inst. under DTE Head)	1,00,000

2.	International	
	FIBL, Switzerland on “Organic farming” & CINADCO, Israel on “High tech horticulture production technology	
	TA/ DA inclusive of all other expenses (training fees, Insurance, visa, etc as per norms) @ Rs. 2,00,000/participant for 10 participants	20,00,000
	Total	21,00,000

ANNEXURE VII

ANTICIPATED BUDGET FOR PRODUCTION OF QUALITY PLANTING MATERIALS

(I) Establishment of Scion blocks (for gap filling)

Sl/no.	Crops	Variety	Quantity (nos.)	Rate (Rs.)	Amount (Rs.)
1.	Mango	Langra, Bombay Green, Mallika & Sinduri	50	50.00	2,500
2.	Guava	Lucknow-49, Allahabad safeda, Lalit & Shweta	340	50.00	17,000

3.	Citrus	Olinda Valencia, Itaborai, Daisy Tangerine, W. Murcott, Beans lime, Mexican lime, Eureka lemon-1, Lisbon lemon-2, STG Nagpur mandarin, Acid lime, sweet orange, Khasi mandarin, Sikkim mandarin, Cleopatra mandarin, Rangpur lime, Kachai lemon & Rough lemon	300	50.00	15,000
5.	Cashew	VRI,VR2, VR3, VR4, BBSR-1 &H-1608	90	50.00	4,500
6.	Bael	B-2, NB-5 & NB-6	50	50.00	2,500
7.	Peach	Shan-e-Punjab	50	30.00	1,500
8.	Aonla	Kanchan, NA-6, Krishna, NA-7, NA-10 & Laxmi-52	50	40.00	2,000
9.	Litchi	Shahi, China, Bombai & Rose scented	100	50.00	5,000
10.	Carnation	Master, Domingo, Kero, Baltico, Verna & Dumas	15000	20.00	3,00,000
11.	Rose	Upper class, Bordeaux, Sphinx Gold & Avalanche	5000	30.00	1,50,000
Total					5,00,000

(II) Raising of Rootstocks

Sl/no.	Particulars	Quantity	Amount (Rs)
1.	Mango stone	5000 nos.	9,000
2.	Guava seeds	2 kg	1,000
3.	Citrus seeds	10 kg	50,000
4.	Cashew nut seeds	150 kg	30,000
5.	Rose cuttings	10000 nos.	10,000
Total			1,00,000

(III) Propagation Activities

Sl/no.	Crops	Quantity (nos.)	Approximate cost (Rs.)
A.	Procurement of scion materials		
a)	Mango	5000	10,000
b)	Guava	5000	10,000
c)	Citrus (additional requirement)	20000	10,000
d)	Cashew (additional requirement)	20000	10,000
e)	Rose (from CIH farm)	5000	
f)	Gerbera (from CIH farm)	5000	
g)	Carnation (from CIH farm)	5000	
	Sub Total		40,000
B.	Hiring charge of budder/ grafter		60,000
C.	Materials for propagation		
a)	Transfer/planting & filling in poly bags	80000	1,40,000

b)	Coco peat brick/ Polybag/ Vermiculite/ Perlite		35,000
e)	FYM	3 trucks	15,000
f)	Sand	2 trucks	10,000
g)	Other materials (Polystrip/ Polycap/ Plugs/ Mulching sheet)		60,000
	Sub Total		2,60,000
Total			3,60,000

Grand Total (I + II + III) = Rs.9, 60,000 Lakhs

ANNEXURE – VIII

DETAILS OF PHM/MARKETING/AGRIBUSINESS PROMOTION ACTIVITIES

1. Exposure Trips

Sl/ no.	Place for Exposure Trips	Subject Matter	Target Participants
1.	Bangalore-IIHR, Delhi-IARI, HTC, Pune, IIHTC Jaipur, HARP, Plandu, Ranchi, NRC Litchi	Fruit/ Flower	State Officials
2.	NER state - Sikkim & Mizoram	Fruit/ Flower	Progressive Farmers
3.	Trupty Orchard, Orissa for Cashew	Nursery management	Regd. Nursery
4.	NRC Citrus, Nagpur	Citrus	State Govt. officials/ progressive farmers
5.	IIVR Varanasi/ UHF Solan	Vegetable Crops	Vegetable Growers
6.	IISR, Calicut, Kerela	Spices	Spices Growers
7.	Mahagrape, Maharastra	Marketing	Fruit Growers
8.	Ludhiana, Punjab	Farm mechanization	Progressive Farmers

2. Participations in exhibitions /trade fair/meets

Sl/no.	Place of Exhibitions	Date & place	Subject matter	Target participants
1.	National			
	a. Food & Tech. Expo	28 th – 30 th July, 2011 at New Delhi, India	Agriculture	Farmers/beneficiaries
	b. Agri. tech India	9 th -11 th September, 2011 at Bangalore, India	Agriculture	Farmers/beneficiaries
2.	International			
	a. Biofach, Germany	15 th – 18 th February at Nuremburg, Germany	Organic agriculture	Farmers/beneficiaries

ANNEXURE IX

ANTICIPATED BUDGET FOR PHM/MARKETING/AGRIBUSINESS PROMOTION ACTIVITIES

1. Exposure trips

Sl/no.	Particulars	Approx. Cost (Rs)	Total (Rs)
A	National/ Regional trip (40 nos. of Beneficiaries)		
	i) TA/DA (@ Rs. 600/day/person excluding transport) for 40 participants for 10 days	2,40,000.00	
	For 8 (eight) Exposure trips Rs. 2,40,000 x 8		19,20,000.00

2. Participations in exhibitions /trade fair/meets Approx. Cost (Rs. 26 lakhs)

Sl/no.	Particulars	Approx. Cost (Rs)	Total (Rs)
A	National/ Regional		
	1. Stall booking & arrangement	2,00,000.00	
	2. Miscellaneous expenses (Carriage Charges, Taxes, etc)	50,000.00	
	3. Publications (folders, pamphlets. etc)	50,000.00	
		Sub total: 3 Lakh x 2 times	6, 00,000.00
B	International trips (10 persons)	20,00,000.00	20,00,000.00
	i)TA/DA inclusive of other expenses (stall booking, fees, insurance, visa, etc) @ Rs. 2,00,000/participant		
Grand Total			26,00,000.00

3. Buyer Sellers meet Approx. Cost (Rs. 2 lakhs)

Sl/no.	Particulars	Approx. cost (Rs)
1	Development of Meets' materials (Keynote, presidential address, agenda, notes, kits, etc.)	25,000.00
2	Printed Materials (Invitation cards, badges, folders, banners, literature, etc.)	15,000.00
4	TA/DA for participants (as per norms)	20,000.00
6	Working lunch & Refreshment @Rs. 120 for 100 participants	12,000.00
7	Honorarium	3,000.00
8	TA/DA to Experts/ Facilitators	20,000.00
9	Miscellaneous (hall arrangements, mementos etc.)	5,000.00
	Total	1,00,000.00

Therefore, for 2 (two) Buyers Sellers meet: Rs. 1, 00,000 x 2 nos = **Rs. 2, 00,000**

4. Market linkage initiatives

Sl/no.	Particulars	Rate	Amount (Rs)
1.	Food & Lodging for participants	Rs. 600/day/farmer for 10 farmers for 10	60,000

		days	
2.	Travelling (train)	Rs. 1500/farmer (onward & return)	15,000
3.	Local transportation		10,000
4.	Stall booking & arrangement		1,00,000
5.	Miscellaneous		15,000
	Total		2,00,000

Therefore, for 2 (two) market linkage initiatives : Rs. 2, 00,000 x 2 nos. = **Rs. 4, 00,000.00**

ANNEXURE X (a)

LIST OF PUBLICATIONS FOR 2011-2012

Sl/no.	TOPIC
1.	Annual Report & Brochures
2.	Training manual on Post Harvest Management of Horticultural crops
3.	Practical manual for Soil Analysis
4.	Bulletins
	i. Nursery Management of horticultural crops
	ii. Drip Irrigation System
	iii. Value Addition in horticultural crops
5.	Folders
	A. English
	i. Package of practices for Naga Mircha
	ii. Production Technology of Aloe vera
	iii. Propagation techniques in Citrus
	iv. Propagation Techniques in Cashew
	v. Post Harvest Management of Naga Mircha
	vi. Post Harvest Management of Kiwi
	vii. Post Harvest Management of Pineapple
	viii. Value addition in Strawberry
	ix. Status of Processing Unit and Cold Storages in NER
	x. Terminal Market
	B. Local dialect
	xi. Package of Practices for Citrus
	xii. Package of Practices for Passion Fruit
	xiii. Package of Practices for Banana
	xiv. Package of Practices for Organic Ginger
	xv. Package of Practices for Organic Turmeric
	xvi. Package of Practices for Organic Pineapple
	xvii. Production Technology of Anthurium
	xviii. Production Technology of Lilium
	xix. Production Technology of Onion
	xx. Package of Practices for Naga Mircha
	xxi. Post Harvest Management of Naga Mircha
	xxii. Post Harvest Management of Pineapple
6.	Flipcharts
	i. Nutrient Deficiency Symptoms in horticulture crops

	ii.	Production Technology of Anthurium
	iii.	Production Technology of Rose
	iv.	Production Technology of Gerbera
	v.	Production Technology of Carnation
	vi.	Training and Pruning in Cashew
	vii.	Plant Protection Measures in Citrus
	viii.	Pest and Disease Management in Ginger
	ix.	Pest and Disease Management in Turmeric
	x.	Protected Cultivation of Tomato
	xi.	Protected Cultivation of Capsicum
	xii.	Propagation Techniques in Citrus
	xiii.	Propagation Techniques in Cashew
	xiv.	HDP & Canopy Management in Guava
	xv.	HDP & Canopy Management in Cashew
	xvi.	Nursery Management in Cashew
	xvii.	Nursery Management in Citrus
	xviii.	Citrus Rejuvenation
	xix.	Vermicomposting
	xx.	Preparation of Cow Pat Pit
	xxi.	Preparation of Bio Dynamic Pesticide
	xxii.	Group Marketing/ Farmers Association
7.	Flowcharts	
	i.	Marketing Channel in Agri/Horti crops
	ii.	Preparation of Jam
	iii.	Preparation of Juice
	iv.	Preparation of Jelly
	v.	Preparation of Squash
	vi.	Preparation of Pickle
	vii.	Preparation of Marmalade
	viii.	Preparation of RTS
8.	Newsletter (half yearly)	

ANNEXURE X (b)

ANTICIPATED BUDGET FOR PUBLICATION

Sl/no.	Types	Particulars	Amount (lakhs)
1.	Annual reports & Brochures	Multicolor, 500 copies, A4 size, art paper, 50 pages	1.00
2.	Training manual	Multicolor, paper qly 170 gsm, multicolor, 500 copies, 50 pages, 7/9 ^{1/2} size	0.60
3.	Practical manual	Multicolor, paper qly 90 gsm, 500 copies, 50 pages, 7/9 ^{1/2} size	0.60
4.	Bulletins	500 copies, paper qly 170 gsm, art paper, 30 pages, 1/8 size	2.50
5.	Folders	500 copies, 6 pages, multicolor, 1/3 size	1.80

6.	Flipcharts/ Flowcharts	4 x3 size,6 page	0.40
7.	Newsletter (half yearly)	Multicolor, paper qly 90 gsm, 500 copies, 50 pages, 7/9 ^{1/2} ,"size	0.60
	Total		7.50
8.	Printing of 67 folders (i.e. 57 Local dialects and 10 English) which was ready from last year's publication, 2010-2011		4.50
	Total		12.00

ANNEXURE XI

SEMINAR / WORKSHOP/ CONFERENCE/ MEETINGS, ETC.

- International seminar on “Organic farming of Agri./horti. crops”
- National seminar on “Protected cultivation” of Horticultural crops.
- Regional workshop on “ Supply chain and marketing of spices”

ANNEXURE XII

EQUIPMENTS & MACHINERIES

Sl/no.	Particulars	Quantity (nos.)	Approx. Rate (in lakhs)
1	Distillation Unit	2	2.00
2	Flame Photometer	2	1.00
3	Spectro Photometer	1	4.00
4	Kelplus (Nitrogen)	1	2.00
5	Thermo Hygrometer	4	0.20
6	Hot Plate	2	0.50
7	Soil Auger	6	0.30
8	Electronic Pan	1	0.40
9	Magnifying Glass	5	0.15
10	Ginger turmeric Drier	2	2.00
11	Soil Moisture Meter (Digital)	1	0.20
12	Vernier Calliper	5	0.05
13	Refrigerator	1	0.20
14	Stereo Microscope with camera	1	4.50
15	Photosynthesis meter	1	7.50
16	Farm tools & implements		5.00
	Total		30.00