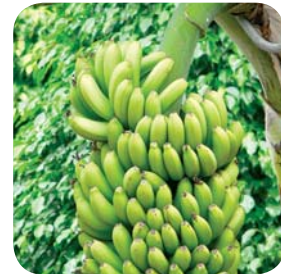




# MISSION FOR INTEGRATED DEVELOPMENT OF HORTICULTURE

OPERATIONAL GUIDELINES  
April, 2014





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# MISSION FOR INTEGRATED DEVELOPMENT OF HORTICULTURE

## OPERATIONAL GUIDELINES

April, 2014



### **Horticulture Division**

Department of Agriculture & Cooperation  
Ministry of Agriculture, Krishi Bhavan, New Delhi  
[www.midh.gov.in](http://www.midh.gov.in)

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## Abbreviations

<b>A &amp; C</b>	Agriculture & Cooperation
<b>AAP</b>	Annual Action Plan
<b>AEZ</b>	Agri-Export Zone
<b>APC</b>	Agricultural Production Commissioner
<b>APEDA</b>	Agricultural & Processed Food Export Development Authority
<b>APMC</b>	Agricultural Produce Marketing Committee
<b>AYUSH</b>	Ayurveda, Unani, Sidha & Homeopathy
<b>BDA</b>	Bamboo Development Agency
<b>BTSG</b>	Bamboo Technical Support Group
<b>CA</b>	Controlled Atmosphere
<b>CDB</b>	Coconut Development Board
<b>CEO</b>	Chief Executive Officer
<b>CIH</b>	Central Institute for Horticulture
<b>CSIR</b>	Council of Scientific & Industrial Research
<b>DAC</b>	Department of Agriculture & Cooperation
<b>DASD</b>	Directorate of Arecanut & Spices Development
<b>DCCD</b>	Directorate of Cashew & Cocoa Development
<b>DFU</b>	Disease Forecasting Unit
<b>DHMD</b>	District Horticulture Mission Document
<b>DMC</b>	District Mission Committee
<b>DMI</b>	Directorate of Marketing & Inspection
<b>DONER</b>	Development of North Eastern Region
<b>DPR</b>	Detailed Project Report
<b>EC</b>	Executive Committee
<b>EMC</b>	Empowered Monitoring Committee
<b>FAO</b>	Food & Agriculture Organization
<b>FDA</b>	Forest Development Agency
<b>FHEL</b>	Fresh & Healthy Enterprises Ltd.
<b>FI</b>	Financial Institution
<b>FICCI</b>	Federation of Indian Chambers of Commerce & Industry
<b>FIG</b>	Farmer interest Group
<b>FLD</b>	Front Line Demonstration
<b>FPO</b>	Farmer Producer Organization
<b>GC</b>	General Council
<b>GFR</b>	General Financial Rules
<b>GOI</b>	Government of India
<b>GS</b>	Gram Sabha
<b>HIL</b>	Hindustan Insecticides Ltd.
<b>HMNEH</b>	Horticulture Mission for North East & Himalayan States
<b>HRD</b>	Human Resource Development
<b>IASRI</b>	Indian Agricultural Statistical Research Institute
<b>ICAR</b>	Indian Council of Agricultural Research
<b>ICFRE</b>	Indian Council of Forestry Research & Education

<b>ICT</b>	Information Communication Technology
<b>INM</b>	Integrated Nutrient Management
<b>IPM</b>	Integrated Pest Management
<b>KVK</b>	Krishi Vigyan Kendra
<b>MA</b>	Market Aggregator
<b>MANAGE</b>	National Institute for Agricultural Extension Management
<b>MFPI</b>	Ministry of Food Processing Industries
<b>MIDH</b>	Mission for Integrated Development of Horticulture
<b>MNREGS</b>	Mahatma Gandhi Rural Employment Guarantee Scheme
<b>NABARD</b>	Nation Bank for Agriculture & Rural Development
<b>NBB</b>	National Bee Board
<b>NBM</b>	National Bamboo Mission
<b>NCDC</b>	National Cooperative Development Cooperation
<b>NCPAAH</b>	National Committee on Plastics Applications in Agriculture & Horticulture
<b>NHB</b>	National Horticulture Board
<b>NHM</b>	National Horticulture Mission
<b>NHRDF</b>	National Horticulture Research & Development Foundation
<b>NLA</b>	National Level Agencies
<b>NMPB</b>	National Medicinal Plant Board
<b>NMSA</b>	National Mission on Sustainable Agriculture
<b>NRCC</b>	National Research Centre for Citrus
<b>NSC</b>	National Seeds Corporation
<b>PFDC</b>	Precision Farming Development Centre
<b>PHM</b>	Post Harvest Management
<b>PRI</b>	Panchayati Raj Institution
<b>PSU</b>	Public Sector undertaking
<b>R &amp; D</b>	Research & Development
<b>RCC</b>	Reinforced Cement Concrete
<b>RKVY</b>	Rashtriya Krishi Vikas Yojana
<b>SAU</b>	State Agricultural University
<b>SBDA</b>	State Bamboo Development Agency
<b>SBMD</b>	State Bamboo Mission Document
<b>SC</b>	Sub-Committee
<b>SFAC</b>	Small Farmers Agri-Business Consortium
<b>SFCI</b>	State Farms Corporation of India
<b>SHM</b>	State Horticulture Mission
<b>SHMD</b>	State Horticulture Mission Document
<b>SLEC</b>	State Level Executive Committee
<b>TC</b>	Tissue Culture
<b>TSG</b>	Technical Support Group
<b>TSP</b>	Tribal Sub Plan
<b>UGC</b>	University Grant Commission
<b>UTF</b>	Unilateral Trust Fund

# OPERATIONAL GUIDELINES

## Mission for Integrated Development of Horticulture During XII Plan

### 1. INTRODUCTION

1.1 Mission for Integrated Development of Horticulture (MIDH) is a Centrally Sponsored Scheme for the holistic growth of the horticulture sector covering fruits, vegetables, root & tuber crops, mushrooms, spices, flowers, aromatic plants, coconut, cashew, cocoa and bamboo. While Government of India (GOI) contributes 85% of total outlay for developmental programmes in all the states except the states in North East and Himalayas, 15% share is contributed by State Governments. In the case of North Eastern States and Himalayan States, GOI contribution is 100%. Similarly, for development of bamboo and programmes of National Horticulture Board (NHB), Coconut Development Board (CDB), Central Institute for Horticulture (CIH), Nagaland and the National Level Agencies (NLA), GOI contribution will be 100%. Guidelines regarding implementation of the scheme are described hereunder.

1.2 MIDH will have the following sub-schemes and area of operation:

Sl. No.	Sub Scheme	Target group / area of operation
1.	NHM	All states & UTs except states in NE and Himalayan Region.
2.	HMNEH	All states in NE and Himalayan Region.
3.	NBM	All states & UTs
4.	NHB	All states & UTs focusing on commercial horticulture
5.	CDB	All States and UTs where coconut is grown.
6.	CIH	NE states, focusing on HRD and capacity building.

1.3 MIDH will work closely with National Mission on Sustainable Agriculture (NMSA) to wards development of Micro-Irrigation for all horticulture crops and protected cultivation on farmers' field.

1.4 MIDH will also provide technical advice and administrative support to State Governments/ State Horticulture Missions (SHMs) for the Saffron Mission and other horticulture related activities like Vegetable Initiative for Urban Clusters (VIUC), funded by Rashtriya Krishi Vikas Yojana (RKVY)/NMSA.

### 2. MISSION OBJECTIVES

2.1 Main objectives of the Mission are:

- Promote holistic growth of horticulture sector, including bamboo and coconut through area based regionally differentiated strategies, which includes research, technology promotion, extension, post harvest management, processing and marketing, in consonance with comparative advantage of each State/region and its diverse agro-climatic features;
- Encourage aggregation of farmers into farmer groups like FIGs/FPOs and FPCs to bring economy of scale and scope.
- Enhance horticulture production, augment farmers, income and strengthen nutritional security;
- Improve productivity by way of quality germplasm, planting material and water use efficiency through Micro Irrigation.
- Support skill development and create employment generation opportunities for rural youth in horticulture and post harvest management, especially in the cold chain sector.



### 3. STRATEGY

- 3.1 To achieve above objectives, the mission will adopt the following strategies:
- Adopt an end-to-end holistic approach covering pre-production, production, post harvest management, processing and marketing to assure appropriate returns to growers/producers;
  - Promote R&D technologies for cultivation, production, post-harvest management and processing with special focus on cold chain infrastructure for extending the shelf life of perishables;
  - Improve productivity by way of quality through:
    - Diversification, from traditional crops to plantations, orchards, vineyards, flowers, vegetable gardens and bamboo plantations.
    - Extension of appropriate technology to farmers for high-tech horticulture including protected cultivation and precision farming.
    - Increase of acreage of orchards and plantation crops including bamboo and coconut, particularly in states where total area under horticulture is less than 50% of agricultural area.
  - Improve post harvest management, processing for value addition and marketing infrastructure.
  - Adopt a coordinated approach and promote partnership, convergence and synergy among R&D, processing and marketing agencies in public as well as private sectors, at the national, regional, state and sub-state levels;
  - Promote FPOs and their tie up with Market Aggregators (MAs) and Financial Institutions (FIs) to support and adequate returns to farmers.
  - Support capacity-building and Human Resource Development at all levels, including, change in syllabus and curriculum of graduation courses at Colleges, Universities, ITIs, Polytechnics, as appropriate.

### 4. MISSION STRUCTURE

#### (I) NATIONAL LEVEL

##### a) General Council

- 4.1. The Mission will have a General Council (GC) at National level under Chairmanship of Union Agriculture Minister. The composition of GC will be as follows:

Minister of Agriculture	Chairman
Ministers of Commerce, Health, Finance, Food Processing Industries, Panchayati Raj, Science & Technology, Rural Development, Environment & Forest, Textiles, Development of North Eastern Region (DONER), Micro, Small and Medium Enterprises.	Members
Member, (Agriculture) Planning Commission	Member
Secretaries - Ministry/Department of Agriculture & Cooperation, Commerce, AYUSH, Finance, Food Processing Industries, Panchayati Raj, Rural Development, Environment & Forest, Textiles, DONER, Bio-Technology, Micro, Small and Medium Enterprises	Members
Chairperson, NABARD	Member
Director General, ICAR	Member
Additional Secretary (I/C of Horticulture, DAC)	Member
Managing Director, NHB	Member
Chairman, CDB	Member
Horticulture Commissioner	Member
Deputy Director General (I/C Bamboo)	Member
Adviser (Horticulture)	Member

Joint Secretary( I/C NMSA)	Member
Growers' representatives & Experts from Confederation of Indian Horticulture (CIH), Federation of Indian Chambers of Commerce & Industry (FICCI),etc., (14 Members)	Members
Joint Secretary, DAC & Mission Director	Member Secretary

- 4.2. GC will be the formulation body giving overall direction and guidance to Mission, monitor and review its progress and performance. Without affecting the approved programmes, cost norms and pattern of assistance as approved by CCEA, GC will be empowered to lay down and amend operational guidelines. GC will meet at least twice a year. Tenure of non official members of GC will be for three years from the date of nomination.

**b) Executive Committee:**

- 4.3. Executive Committee (EC), headed by Secretary, Department of Agriculture & Cooperation (DAC), will oversee activities of the Mission and approve Action Plans of SHMs and NLAs. The EC will comprise of the following:

Secretary (A&C)	Chairperson
Secretaries - Ministry/Department of Commerce, AYUSH, Food Processing Industries, Panchayati Raj, Rural Development, M/o DONER, Bio-Technology, Environment & Forests; Principal Adviser (Agriculture), Planning Commission	Members
Institutions – Director General, ICAR; Director General ICFRE, Director General, CSIR; Chairperson, NABARD; Additional Secretary (In charge of Horticulture, DAC); Additional Secretary & FA, DAC; Joint Secretary(Plant Protection), Joint Secretary(I/C NMSA). Horticulture Commissioner; Adviser (Horticulture); Deputy Director General (I/C Bamboo). Chairman, APEDA; Managing Director, NHB; Managing Director, NCDC; Managing Director, Small Farmer's Agribusiness Consortium, Chief Executive Officer, National Medicinal Plants Board; Chairman, CDB; Agriculture Marketing Advisor, DAC; Joint Secretary, National Committee on Plastics Applications in Agriculture & Horticulture(NCPAAH) ; CEO (NCCD).	Members
Three Experts (Production, Post Harvest Management and Marketing)	Members
Joint Secretary, DAC & Mission Director	Member Secretary

- 4.4. EC is empowered to reallocate resources across States and components and approve projects on the basis of approved subsidy norms. EC is also empowered to approve special interventions for tackling emergent/ unforeseen requirements. EC can also constitute Empowered Monitoring Committee (EMC)/Sub-Committee (SC) and delegate powers to EMC/ SC/Mission Director, as well as to State Governments / State Horticulture Missions / State Bamboo Development Agencies (SBDA) for approving projects in accordance with approved cost norms and pattern of assistance. Tenure of the experts will be for three years from the date of nomination.
- 4.5. Horticulture Division in DAC will provide the necessary support to GC/EC/EMC and will administer NHM, HMNEH, NBM and CIH Scheme. Managing Director (NHB) will oversee the programmes of NHB while Chairman, CDB will oversee the CDB programmes. The existing structure of the Boards and Missions will be maintained to provide general direction for these programmes. EC/EMC will ensure smooth functional linkages among different agencies and meet as frequently, as required.

## (II) STATE LEVEL

### State Level Executive Committee

- 4.6. For NHM, HMNEH and NBM, State Level Executive Committee(s) (SLEC) under Chairmanship of Agricultural Production Commissioner or Principal Secretary Horticulture/Agriculture/Environment & Forests, (in the absence of APC) having representatives from other concerned Departments of State Government including Forests, the State Agricultural Universities (SAU), Institutes under Indian Council of Agricultural Research (ICAR), Growers' Associations/FPOs, etc will oversee the implementation of programmes of the respective States. Central Government will nominate its representative to the SLEC. State Mission Director NHM, HMNEH and NBM will be Member Secretary of the concerned SLEC. At operational level, State Governments will have freedom to establish State Horticulture Mission (SHM) and/ or SBDA as a suitable autonomous agency, to be registered under Societies Registration Act for implementing Mission programmes at State and District levels. Panchayati Raj Institutions (PRI) existing in the State will be involved in the implementation of the programme.
- 4.7. State and sub-state level structures will be established keeping in view the specific requirement of the states. Formation of Farmer Groups/ Cooperatives of farmers and their tie-up with Financial Institutions and Market Aggregators would be encouraged.
- 4.8. State level agency will have the following functions:
- a) Prepare Strategic/Perspective and annual State Level Action Plan in consonance with Mission's goals and objectives and in close co-ordination with Technical Support Group, SAUs and ICAR institutes and oversee its implementation;
  - b) Clear project based proposals requiring approval of EC/EMC and approve projects within power vested.
  - c) Organize base-line survey and feasibility studies for distinct areas/clusters (District, sub-District, or a group of Districts) to determine status of horticultural/ bamboo production, potential and demand, and tailor assistance accordingly. Similar studies would also be undertaken for other components of the programme;
  - d) Receive funds from National Mission Authority, State Government and other sources for carrying on Mission's activities, maintain proper accounts thereof and submit utilization certificate to concerned agencies;
  - e) Review the progress of formation of FPOs/FPCs to achieve economies of scale and scope and mobilize credit requirement of farmers through FIs;
  - f) Release funds to implementing organizations and oversee, monitor & review implementation of the programmes;
  - g) Assist and oversee implementation of schematic activities in the states through farmers, societies, grower associations, self-help groups, state institutions and other similar entities;
  - h) Organize workshops, seminars and training programmes for all interest groups/associations at state level, with the help of SAUs, ICAR Institutes, KVKs and other institutions having technical expertise;
  - i) Furnish monthly progress reports to DAC and also upload the same by 5th of each month, on the Mission's web sites ([www.nhm.nic.in](http://www.nhm.nic.in)), ([www.tmnehs.gov.in](http://www.tmnehs.gov.in)), ([www.nbm.nic.in](http://www.nbm.nic.in)). Uploading of progress reports would be done both at the district and state level, and
  - j) Operationalize Information Communication Technology (ICT) enabled Management Information System (MIS) up to grass root level through Hortnet. Each State will develop and host its own web site.

### (III) DISTRICT LEVEL

- 4.9. At District level, District Mission Committee (DMC) will be responsible for carrying forward the objectives of the Mission for project formulation, implementation and monitoring. The DMC may be headed by the Chief Executive Officer (CEO) of Zila Parishad/CEO of District Rural Development Agency (DRDA)/CEO of Forest Development Agencies (FDA)/ District Development Officer, having as members, representatives from concerned line Departments, growers' associations, Marketing Boards, local banks, Self Help Groups and other Non- Governmental organizations. In the case of HMNEH States, Deputy Commissioner/ District Collector could function as Chairman of DMC. District Horticulture Officer/District Agriculture Officer will be Member Secretary of DMC.

### (IV) PANCHAYATI RAJ INSTITUTIONS

- 4.10. District Planning Committee and Panchayati Raj Institutions (PRI) will be involved in implementing the programme commensurate with their expertise and available infrastructure. They will have a role in implementation of MIDH with regard to:-
- a) Identification of crops/species and beneficiaries in consultation with District Panchayats.
  - b) Training, Extension and Awareness creation through Panchayats and Gram Sabhas (GS).
  - c) Organization of PRI and GS meetings and giving feed back to the concerned officials with regard to implementation of MIDH.
- 4.11. Activity mapping with regard to devolution of Funds, Functions and Functionaries is given at **Annexure I**.

### (V) TECHNICAL SUPPORT GROUP (TSG)

- 4.12. The Mission will have a strong technical component and domain experts will be salient to the management of the Mission. As per extant practice, NHM and NBM will be supported by NHB and HMNEH and VIUC by SFAC. For post harvest management and cold chain projects across NHM and HMNEH, technical support will be provided by NCCD. Service providers could also be engaged for providing technical services in accordance with Terms of Reference laid for the purpose and approved by EC. Horticulture Commissioner/ DDG (I/C), DAC will advise the TSGs on all issues relating to planting material, area expansion, rejuvenation, canopy management, INM/PM and organic farming. TSG would comprise personnel at different levels, who will provide technical services and their honorarium will be commensurate with their qualifications and experience. Fresh graduates having knowledge in horticulture and agro-forestry, computer professionals, MBA graduates and young professionals could also be a part of TSG.
- 4.13. TSG will have the following role and functions:
- a) Visit States regularly and provide guidance in organizational and technical matters.
  - b) Compile material for conduct of regional workshops in respect of different horticulture/bamboo crops and different aspects viz. production, post-harvest management, processing, marketing etc. They will also prepare Annual Calendar for capacity building, promotional events, workshops/ seminars on different subjects in different regions of the country in consultation with (SHMs)/SBDAs.
  - c) Conduct studies on different aspects of horticulture/bamboo in all regions.
  - d) Document and disseminate case studies of success stories.
  - e) Assist States in capacity building programmes.
  - f) Provide monthly feed-back reports.

- 4.14. State Missions can also set up State level TSG on the pattern of national level TSG for project formulation, appraisal and concurrent monitoring. State Missions will have freedom to hire consultants for providing technical support at State as well as District level and for this purpose, funds will be provided from States' TSG component. For NBM, zone wise Bamboo Technical Support Groups (BTSG) are to be formed. These BTSGs will have to submit their Annual Action Plans to NBM Cell. Broad function of BTSGs will be same as of TSGs. The BTSG will be housed at the National/Regional level institutions located in different regions, which will have flexible norms for recruiting professionals on contract.
- 4.15. Indicative composition of TSG at National, State and District level is given in **Annexure-II**.
- 4.16. Delegation of powers for approving projects by EC, EMC, Mission Director and SLEC is given in **Annexure-III**.

## 5. PROCEDURE FOR APPROVAL AND IMPLEMENTATION

### STRATEGY AND ROADMAP

- 5.1 States will prepare the existing perspective/strategic plan and road map for overall development of horticulture crops including Bamboo in respective state, duly projecting the targets to be achieved during the XII Plan period. This will form the basis for preparing Annual Action Plan (AAP). The Strategy & Road Map formulated by States should invariably contain information on geography & climate, potential of horticulture/bamboo development, availability of land, SWOC analysis, strategy for development and plan of action proposed to be taken to achieve goals in each district of the State. The document should focus on crops having comparative advantage and natural potential for development in the State, adoption of cluster approach for production and linking with available infrastructure, or to be created, for post harvest management, processing, marketing and export. While selecting the cluster, preference should be given to those areas where natural resource base and water resources have been developed under watershed development programmes, Rashtriya Krishi Vikas Yojana (RKVY), Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), etc. Priority should be given for development of such crops, which are required to meet current and future demands.

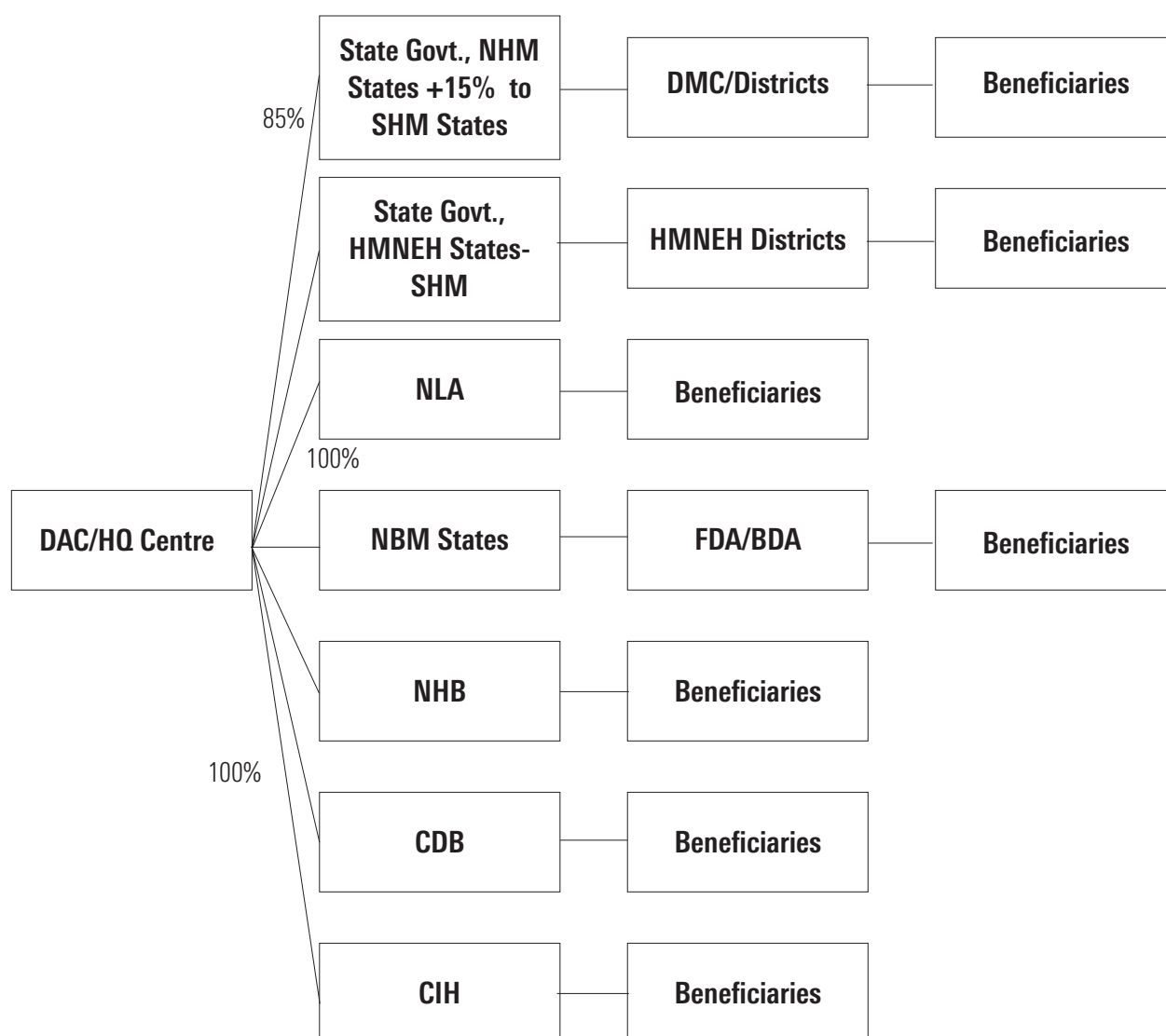
### ANNUAL ACTION PLAN

- 5.2 In this context, AAP needs to be supported with data/write up on outcome of past interventions covering the details of area expansion (variety/species introduced, increase in productivity achieved and number of clusters created), water resource development as per felt need of the State (amount of irrigation potential created, whether linked with micro irrigation, maintenance etc), INM/IPM (including requisite infrastructure created and how these are being utilized for benefit of farmers) and organic farming. Area expansion should be determined based on availability of planting material and a seed/planting material sub-plan shall be prepared separately as part of AAP.
- 5.3 Ministry of Agriculture will communicate the tentative outlay for the year to each State / NLA, which in turn will indicate sector-wise/district-wise allocation. Agencies at District level will prepare AAP keeping in view their priority and potential and submit the plan to State Horticulture/Bamboo Mission within the allocated sum. The States may engage TSG/Consultancy services for preparation of Perspective/Strategic/Annual Action Plans. State Horticulture/ Bamboo Mission in turn will prepare a consolidated proposal for State as a whole, get it vetted by the respective State Level Executive Committee (SLEC) and furnish the same, including copy in electronic format, to Ministry of Agriculture (MoA) for consideration by National Level Executive Committee (EC). All issues relating to horticultural/Bamboo development, covering production, post harvest management and marketing will be covered by SHMs/SBDAs. Formats for submission of Annual Action Plan to DAC are specified in **Annexure IV (a) & (b)**.

5.4 While finalizing the AAPs, due attention will be paid for earmarking specific targets for Scheduled Caste, Scheduled Tribe and women beneficiaries. As an inbuilt provision under MIDH scheme, higher rates of subsidy have been envisaged for taking up activities like creation of infrastructure for post harvest management and marketing of horticulture produce along with area expansion by beneficiaries in the North Eastern States, Himalayan States, Tribal Sub Plan areas, Andaman & Nicobar and Lakshadweep Islands.

## 6. FUND FLOW MECHANISM

6.1. Flow of funds and the utilization by the Implementing Agencies / SHMs / SBDA/ NLAs / PRIs etc from Government of India and utilization of funds shall be governed by extant financial norms. Funds will be released to the State Governments. State Government will release funds to the SHMs / State Level Implementing Agencies, who in turn would make funds available to DMC/ District Implementing Agency. As far as possible, efforts to make on-line payment to all Implementing Agencies would be ensured, which in turn will make arrangements for making payment to beneficiaries through electronic transfer, preferably to their respective bank accounts. Flow chart for release of funds under MIDH is given below



6.2. Implementing agencies would be required to undertake activities within the funds released by the GOI and corresponding state share in respect of NHM. No claims of pending liabilities relating to expenditure over and above released funds will be entertained by DAC.

## 7. MISSION INTERVENTIONS

- 7.1. The Mission will be demand and need based in each segment. Technology will play an important role in different interventions. Technologies such as Information Communication Technology (ICT), Remote Sensing and Geographic Information System will be widely used for planning and monitoring purposes including identification of sites for creating infrastructure facilities for post harvest management, markets and production forecasts.
- 7.2. The interventions envisaged for achieving desired goals would be varied and regionally differentiated with focus on potential crops to be developed in clusters by deploying modern and hi-tech interventions, duly ensuring backward and forward linkages. Revised cost norms and pattern of assistance, as given in **Annexure-V to VIII**, will be adopted. Detailed guidelines in respect of NHB, CDB and CIH schemes, including modalities of approval of projects will be issued separately for effective implementation of these schemes

### Key Elements of MIDH

- ❖ Base line survey (Format at **Annexure-IV**)
- ❖ Involvement of PRI (para 4.10)
- ❖ Area based Annual and Perspective Plans (Para 3 & 5.1).
- ❖ Applied Research with focus on Region (HMNEH) and crop (Para 7.3)
- ❖ Demand driven production based on cluster approach (Para 7.4).
- ❖ Availability of quality seeds and planting material (Para 7.5).
- ❖ Technology driven programmes to improve productivity and quality, e.g.
  - Introduction of improved varieties.
  - Rejuvenation with improved cultivars.
  - High Density Plantations.
  - Use of Plastics.
  - Bee-keeping for crop pollination (para 7.41)
  - Capacity building of farmers and personnel (Para 7.33).
  - Mechanization (Para 7.43)
  - Demonstration of latest technologies (Para 7.44, 7.32)
- ❖ Post Harvest Management and cold chain– (Para 7.46)
- ❖ Marketing infrastructure development (Para 7.53).
- ❖ FIGs/FPCs/FPOs (Para 8.4)
- ❖ Data base generation, compilation and analysis (Para 8.5).
- ❖ Technical Support by NLAs (Para 9)

### RESEARCH & DEVELOPMENT (R & D)

- 7.3. Programmes on horticulture and bamboo R & D will be based on applied research in the areas of (i) Seed & Planting material, including import of planting material, (ii) Technology standardization, (iii) Technology acquisition and (iv) imparting training & Front Line Demonstration in a project mode. While R&D on horticulture crops will be confined to NE & Himalayan states, R&D on Bamboo will be on pan India basis.

Research Institutes under Indian Council of Agricultural Research (ICAR), Council of Scientific & Industrial Research (CSIR), Indian Council of Forestry Research & Education (ICFRE) and its institutes, State Forest Research Institutes, State Agricultural Universities and other Research institutes/organizations in the Public sector will be eligible for assistance in R&D. Project proposals, in this regard, will be submitted through the State Horticulture Mission/ State Horticulture Department. In case of Bamboo R & D projects are to be submitted to NBM directly and research programme should be guided by the Working Group on R & D. Projects will be approved by the EC/EMC.

### PRODUCTION AND PRODUCTIVITY IMPROVEMENT

- 7.4. The Mission will focus primarily on increasing both production and productivity through adoption of improved and appropriate technologies for ensuring quality, including genetic upgradation of all horticultural crops and addressing challenges of climate change. Special emphasis will also be given for adoption of area based cluster approach towards developing regionally differentiated crops, which are agro-climatically most suitable for the State/region. Cluster approach will also help in aggregation of farmers into FPOs/FPCs. Availability of good quality planting material will receive focused attention. Efforts will also be made to establish and upgrade nurseries and TC Units. This will be supplemented through plantation development programmes through addition of new areas under improved varieties to meet market demand. **Planting material of seed origin for fruit crops which can be vegetatively propagated will not qualify for subsidy assistance.**

### PRODUCTION & DISTRIBUTION OF PLANTING MATERIAL

#### Nurseries

- 7.5. Production and distribution of good quality seeds and planting material will receive top priority. States will have a network of nurseries for producing planting material, which were established through Central or State assistance. To meet the requirement of planting material (for bringing additional area under improved varieties of horticultural crops and for rejuvenation programme for old/senile plantations), assistance will be provided for setting up new hi-tech nurseries and small nurseries under the Public as well as Private sector. Hi-tech nurseries will have an area between 1 to 4 ha with a capacity to produce 50,000 plants per ha of mandated perennial fruit crops / tree spices / aromatic trees / plantation crops per year. The plants produced will be duly certified for their quality. In case of bamboo, the size of the Hi- Tech nursery will be restricted to 2 ha. The support includes:
- (i) Proper fencing.
  - (ii) Scion / Mother block of improved varieties.
  - (iii) Root stock block (Rhizome bank in case of bamboo).
  - (iv) Net house
  - (v) Irrigation facilities
  - (vi) Hi-tech green house having insect proof netting on sides and fogging and misting systems.
  - (vii) Hardening/maintenance in insect proof net house with light screening properties and sprinkler irrigation system.
  - (viii) Pump house to provide sufficient irrigation to the plants and water storage tank to meet at least 2 days requirement.
  - (ix) Soil solarization - steam sterilization system with boilers.
- 7.6. Small nurseries with an area of upto 1.00 ha, will have provision for naturally ventilated green houses and net houses. Small nurseries will produce 25,000 plants of the mandated perennial vegetatively propagated fruit plants / tree spices / plantation crops aromatic plants per year, duly certified for its quality.



- 7.7. Nurseries will also be regulated under legislation in force relating to seeds and planting material. Efforts will be made to establish nurseries at production cluster itself.
- 7.8. Nurseries will be encouraged to go in for accreditation. Planting material for MIDH will be procured only from accredited nurseries. The AAP would have area expansion target only upto the level of availability of good quality planting material from accredited nurseries. SHM will also ensure that all nurseries set up under MIDH are accredited within period of eighteen months through designated agencies like National Horticulture Board, State Agricultural Universities, ICAR institutes etc.
- 7.9. Nurseries in the Public and Private sector can avail assistance to upgrade nursery infrastructure to meet accreditation norms. Moreover, NHB will take up projects for setting up mother block and root stock nursery, as well as nursery accreditation with 100% assistance to public sector as per norms given in **Annexure VII**.
- 7.10. CDB will arrange production and distribution of quality planting material for coconut through Demonstration cum seed production farms, Regional Nurseries and Nucleus coconut seed farm, as per norms given in **Annexure VIII**.
- 7.11. The support to Bamboo nurseries will be provided as per norms at **Annexure-VI**.

#### **Tissue Culture Units**

- 7.12. New Tissue Culture (TC) units will be established and assistance will be provided for rehabilitation/ strengthening of existing TC Units. New TC units will produce 25 lakh plants of the mandated crop for which protocols are available for commercial use, except Date palm. In the event of production of lesser number of plants, cost of lab will be reduced on a pro rata basis ( subject to its viability). New TC unit projects for public sector will be sanctioned to only those agencies, which have requisite technical manpower. No recurring expenditure for the manpower and contingencies will be borne under MIDH. Each TC unit would get itself accredited as per standards and norms of Department of Bio Technology within eighteen months from the date of receiving funds, failing which the assistance provided under the scheme will have to be returned.

#### **Vegetable Seed Production**

- 7.13. Estimated cost of vegetable seed production is Rs. 35,000 per ha for open pollinated crops and Rs. 1.50 lakh per ha for hybrid vegetable seeds. Assistance will be provided @ 100% of total cost to public sector. In the case of Private sector, assistance will be 50% of cost as credit linked back ended subsidy. Assistance will be available for a maximum area of 5 ha @ per beneficiary.
- 7.14. Production of 'disease-free vegetable seedlings' will be encouraged for hybrid cultivars. Wherever necessary, 'plug technology' and environment control for germination, growth and hardening of vegetable seedlings may be introduced. The infrastructure facilities will include a green house with maximum area of 10,000 sq. meter, including hardening facilities, designed for tropical conditions, with insect netting on sides and rolling poly sheets. The plants will be propagated in plastic trays having small plugs of varying sizes for different crops. Sprinkler irrigation system will be installed. The infrastructure for media sterilization i.e. steam boiler, holding bins, etc will also be provided. Total cost will not exceed Rs. 104.00 lakh for a unit with one ha or Rs. 1040 per sq.m. Assistance will be 100% of cost to Public sector and 50% as credit linked back ended subsidy to Private sector.

#### **Import of Planting Material**

- 7.15. With a view to procuring best quality planting material of latest varieties of horticultural crops, a component of providing assistance for meeting cost of planting material imported from abroad has been included. For this, assistance will be provided @ 100% of cost to State Government/ PSUs, under NHM, HMNEH and NHB sub schemes of MIDH.

- 7.16. The State Horticulture Mission/State Bamboo Development Agency will ensure timely availability of good quality seeds and planting material to farmers.

### **DOs & DON'Ts WITH REGARD TO PLANTING MATERIAL**

#### **DOs**

- i. Make a variety wise assessment of requirement and availability.
- ii. Nurseries to have mother blocks and required infrastructure.
- iii. Planting material should be checked and certified for its quality.
- iv. Disease-free material to be supplied to farmers through accredited nurseries.
- v. Nurseries established under MIDH to be accredited within one year.

#### **DON'Ts**

- i. Use planting material of seedling origin for perennial fruit crops.
- ii. Transport planting material over long distances.

### **Seed Infrastructure**

- 7.17. To facilitate proper handling, storage and packaging of seeds, assistance will be provided for creating infrastructure like drying platforms, storage bins, packaging unit and related equipments. Public sector will receive 100% assistance, while assistance to Private sector will be credit linked back ended subsidy @ 50% of cost norms.

### **ESTABLISHMENT OF NEW GARDENS**

- 7.18. The Mission envisages coverage of area under improved varieties of horticultural crops. Norms for area expansion of fruits, vegetables, plantation crops and other crops including flowers, spices and aromatic plants are also given in **Annexure-V**. Area expansion will be done in conjunction with Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) under which cost on labour component of work such as digging, fencing etc could be met with. Details of assistance for bringing new areas by NBM,CDB scheme are given in **Annexure-VI** and **Annexure VIII** respectively. NHB will take up commercial horticulture development in open field condition on project mode as per norms given in **Annexure VII**. Cost of raising new plantations will, however, vary from crop to crop which will be taken into consideration while providing assistance to the beneficiary. Indicative unit cost of area expansion of selected fruit crops is given in **Appendix I**.

### **DOs & DON'Ts WITH REGARD TO NEW GARDENS**

#### **DOs**

- i. Focus on high yielding varieties for productivity enhancement.
- ii. Planting material to be sourced from accredited nurseries.
- iii. New areas to be taken up in identified clusters of mandated crop.
- iv. Micro Irrigation to be integrated for better survival.
- v. Payment to be released to the beneficiary as per norms prescribed.

#### **DON'Ts**

- i. Take up new gardens in isolated patches in less than 10 ha. blocks.

### MUSHROOM PRODUCTION

- 7.19. In case of mushroom, assistance will be provided for setting up of individual mushroom production, spawn production and compost making units, as per the details given in **Annexure V**.

### REJUVENATION / REPLACEMENT OF SENILE PLANTATIONS / CANOPY MANAGEMENT

- 7.20. Rejuvenation programme will address orchards and plantations which have low productivity. It will be implemented through individual farmers, farmers' cooperatives, Self-Help Groups, growers' associations and commodity organizations. Assistance for rejuvenating/replanting senile plantations will be @ 50% of the cost limited to 2 ha per beneficiary (**Annexure V**). Assistance will be available only in respect of rejuvenating/replanting senile and unproductive plantations through proven technologies. However, assistance will depend on the nature and requirement of particular crop. Canopy management will address maintenance of tree architecture as a means for productivity enhancement, particularly for fruit crops and high density plantations. In case of seedling origin, uneconomical orchards will be considered for replanting with improved varieties.
- 7.21. In the case of bamboo, improvement of existing stock in non forest areas will be taken up as per norms given in **Annexure VI**.
- 7.22. Similarly, in the case of coconut, replanting and rejuvenation of old norms coconut gardens will be taken up as per norms given in **Annexure VIII**.

### CREATION OF WATER SOURCES

- 7.23. Under the Mission, assistance will be provided for creating water sources through construction of community tanks, farm ponds/reservoirs with plastic / RCC lining to ensure life saving irrigation to horticulture crops (**Annexure V and Annexure VI**). This will be in conjunction with MNREGS and wherever possible adequate convergence has to be ensured. These water bodies may be linked with Micro Irrigation facility for judicious use of water. Assistance under NHM will be limited to cost of plastic / RCC lining. Lining material should conform to BIS standards. However, where MGNREGS assistance is not available, 100% assistance, including the cost of plastic / RCC lining will be provided. Maintenance of the water source will be the responsibility of the community.
- 7.24. Assistance would also be provided for creating water source through construction of farm ponds/tube wells/dug wells for individuals. For smaller size of the ponds/tube wells/dug wells, cost will be admissible on pro rata basis depending upon the command area. This will also be in conjunction with MGNREGS. However, for non MGNREGS beneficiaries, assistance @ 50% of cost will be provided including the cost of plastic / RCC lining. Lining material should conform to BIS standards. Maintenance of the asset will be the responsibility of beneficiary.

### PROTECTED CULTIVATION

- 7.25. Activities like construction of green houses, shade net house, plastic mulching, and plastic tunnels, anti bird/hail nets would be promoted under the Mission (**Annexure V**). NHB will implement projects having area above 2500 sq. m (**Annexure VII**). Provision has been made for selecting a variety of construction material for green houses and shade net houses. Preference will be given to using locally available material to minimize cost of construction of such structures. However, for availing/subsidy assistance, all material/technologies should conform to BIS standards

## PRECISION FARMING DEVELOPMENT AND EXTENSION THROUGH PFDCS

- 7.26. Existing Precision Farming Development Centres (PFDC) will be involved to develop regionally differentiated technologies for their validation and dissemination. Twenty two PFDCs are anchored in SAUs, ICAR Institute and IIT, Kharagpur. On account of their experience in conducting applied research on plasticulture application, they have expertise in terms of manpower and equipment. PFDCs will be equipped with necessary hardware and software needed for generating information on precision farming techniques on the farmers' field. The ultimate goal is to provide requisite information to farmers so that they are in a position to apply necessary inputs. Other organisations like ICAR Institutes and Institutes in Private sector will also be involved in technology development. For this purpose financial assistance would be provided to PFDCs from MIDH on project basis through the SHMs. PFDCs will take up the activities such as trials, demonstrations for plasticulture and precision farming technologies for horticulture crops, survey to ascertain field adoption of the technology, training of farmers/ officials, display centre, publicity etc. PFDCs will submit annual plan for their activity to SHM with a copy to NCPAAH, well in advance.

## PROMOTION OF INTEGRATED NUTRIENT MANAGEMENT (INM) AND INTEGRATED PEST MANAGEMENT (IPM)

- 7.27. Assistance for Integrated Nutrient Management (INM) and Integrated Pest Management (IPM) measures will be provided for horticultural crops as well as bamboo, as indicated in **Annexure-V** and **Annexure-VI** respectively. Assistance will also be available for developing facilities like Disease Forecasting Units (DFUs), Bio Control Labs, Plant Health Clinics and Leaf/Tissue Analysis labs, both under Public and Private sector except for DFUs, which will be only in Public sector. It will be the responsibility of the beneficiary to get the bio control agents registered for commercial sale.
- 7.28. Under INM component, subsidy can be availed for use of liquid biofertilizers of N, P and K such as Rhizobium/ Azospirillum/Azotobactor, Phosphate Solubilising Bacteria (PSB) and Potash Mobilizing Bacteria (KMB), to be applied in combination, in demonstration and other programmes, for which total assistance will be limited to 50% of cost, or Rs. 300.00 per ha., for a maximum area of four ha per beneficiary

## ORGANIC FARMING

- 7.29. Organic farming in horticulture will be promoted to harness environmental and economic benefits by way of adoption of organic farming techniques along with its certification.
- 7.30. For adopting organic farming for perennial and non perennial fruit crops, vegetables, aromatic plants, spices etc., additional assistance will be given @ 50% of cost over and above the area expansion programme for a maximum area of 4 ha per beneficiary, spread over a period of three years. For organic cultivation of vegetables, assistance will be limited to Rs. 10,000/- per ha spread over a period of three years. Assistance will be used for generating on-farm inputs. NHM will also provide financial assistance for establishing vermi compost units and HDPE Vermibeds @ 50% of cost subject to a maximum of Rs. 50,000/- per beneficiary for a unit having size of 30' x 8' x 2.5'. For smaller units, assistance will be on prorata basis. For HDPE Vermibed of 96 cft size (12'x4'x2'), the cost will be Rs. 16,000/ per bed and assistance will be limited to 50% of cost. Specification and design parameters of Agro Textiles - HDPE woven beds for vermiculture will conform to BIS standards (IS 15907:2010). Organic certification will be guided by service providers and certification agencies accredited by APEDA.

## DOs & DON'Ts WITH REGARD TO ORGANIC FARMING

### DOs

- i. Only take up such crops which command a premium.
- ii. Ensure market linkages for the organic produce
- iii. Organic certification by accredited agencies to be ensured.

### DON'Ts

- i. Take up organic farming in isolated patches.
- ii. Limit interventions to procurement and supply of organic inputs.

### GOOD AGRICULTURE PRACTICES (GAP)

- 7.31. GAP certification has been introduced to encourage farmers to adopt good agricultural practices in line with global GAP, so that farmers are able to get better price for their produce in domestic as well as international market. Assistance for this purpose will be @ 50% of cost for maximum area of four ha per beneficiary (**Annexure V**). Certification agencies to be involved for this will be as per list approved by APEDA.

### CENTRE OF EXCELLENCE FOR HORTICULTURE

- 7.32. Centres of Excellence may be established for different horticultural products which will serve as demonstration and training centres as well as source of planting material and vegetable seedlings under protected cultivation.

### HUMAN RESOURCE DEVELOPMENT (HRD) IN HORTICULTURE

- 7.33. Under HRD programme, training of farmers, entrepreneurs, field level workers and officers will be taken up. Programme for providing appropriate training to farmers for adoption of high yielding varieties of crops and farming system will be taken up at state level and outside the state. Programme for training of officials concerned with implementation field level workers who will in turn train/guide farmers will also be taken up (**Annexure V & Annexure VI**).
- 7.34. Assistance for organizing training courses for Supervisors, Entrepreneurs, Gardeners and Field Functionaries will be continued during XII Plan.
- 7.35. Training programme for Supervisors, Entrepreneurs will be organised through selected State Agricultural Universities (SAU), ICAR Institutes, Deemed Universities/Private Universities recognized by UGC having faculty in horticulture and Gardeners training through Krishi Vigyan Kendras and SAUs/ Deemed Universities/Private Universities recognized by UGC recognized by UGC having faculty in horticulture, while departmental staff will be trained under various ongoing training programmes. Training expenses will be met by the Mission.
- 7.36. Minimum qualification for Supervisory & Entrepreneurs training programme would be Higher Secondary and for Gardeners it would be Class-VIII (Middle) standard.
- 7.37. Institutions identified for training should have minimum infrastructure facilities including class rooms, staff, hostel facilities etc.
- 7.38. The courses will be of one year duration for Supervisors and of six months for Gardeners and of three months for Entrepreneurs. In order to attract the candidates and more importantly retain them and prevent their drop out, a monthly stipend will be provided in form of boarding & lodging charges. These courses will be

residential. At the end of the training, Supervisors will be awarded a Diploma in horticulture, while Gardeners and Entrepreneurs will be awarded a Certificate of training in horticulture. At least 25 Supervisors, 50 Gardeners and 25 Entrepreneurs will be trained in each participating institution annually.

- 7.39. In case States wish to organize specialized training courses on horticulture related subjects, assistance will be provided for the same to concerned Institutes directly, based on recommendation of concerned State (s). Such training would generally be of short duration of 7 - 10 days for 20 to 25 participants.
- 7.40. Trainers, who are required to train others, can be deputed abroad for training, for which assistance would be made available for meeting the travel cost and course fee. Concerned State Departments of Horticulture/ Agriculture/SHM function as nodal agency for this purpose. Funds will be made available to SHMs for meeting expenses of candidates involved in implementation of Mission programmes based on their specific proposal.

### **POLLINATION SUPPORT THROUGH BEE-KEEPING**

- 7.41. In order to maximize agricultural production, honey-bee can be used as an important input. The responsibility of coordinating the bee-keeping development programme in State will be vested in the identified State Designated Agency (SDA) or any institution/society having capability. National Bee Board (NBB) will be responsible for coordinating beekeeping activity in states.
- 7.42. Assistance will be available for activities on development of nucleus stock of honey bees, bee breeding, distribution of honey bee colonies hives and bee keeping equipments (**Annexure V**).

### **HORTICULTURE MECHANIZATION**

- 7.43. Horticulture mechanization is aimed to improve farm efficiency and reduce drudgery of farm work force. Assistance in this regard will be provided for activities such as procurement of power operated machines & tools, besides import of new machines (**Annexure V**). Assistance for horticulture mechanization will also be available to such grower associations, farmer groups, Self Help Groups, women farmer groups having at least 10 members, who are engaged in cultivation of horticultural crops, provided balance 60% of the cost of machines and tools is borne by such groups. SHM will enter in to MoU with such association/groups to ensure proper upkeep, running and maintenance of the machines and tools.

### **TECHNOLOGY DISSEMINATION THROUGH DEMONSTRATIONS/ FRONT LINE DEMONSTRATION**

- 7.44. Latest technologies will be promoted on crop specific cultivation, use of IPM/INM, protected cultivation, organic farming through farmer participatory demonstration in a compact area of one ha, which will be organized at strategic locations in farmer's field for which assistance will be limited to 75% of cost. For green house cultivation, area will be limited to 500 sq. meter. Farms in public sector, SAUs, Deemed Universities having faculty in horticulture, could be sites for Front Line Demonstrations, for which 100% assistance will be provided, and maximum assistance will not exceed Rs. 25 lakh per project.
- 7.45. Demonstration on bamboo will be taken up as per norms indicated in **Annexure VI** and on coconut as per norms given in **Annexure VIII**.

### **INTEGRATED POST HARVEST MANAGEMENT**

- 7.46. Under post-harvest management, including that for Medicinal plants, activities like handling, grading, pre-conditioning, packaging, transient storage, transportation, distribution, curing and ripening and where possible long term storage can be taken up. Existing schemes of the Directorate of Marketing and Inspection (DMI) and National Cooperative Development Corporation (NCDC) will be leveraged to the extent possible. MIDH would include projects relating to establishment of pre-cooling units, 'on-farm' pack houses, mobile pre-cooling units, staging cold rooms, cold storage units with and without controlled atmosphere capability,

integrated cold chain system, supply of refrigerated vans, refrigerated containers, primary/mobile processing units, ripening chambers, evaporative/low energy cool chambers, preservation units, onion storage units and zero energy cool chambers. These projects will be entrepreneur driven and provided credit linked back-ended subsidy. PSUs/Government agencies/ Cooperatives/growers' association recognized/registered by the DMCs, having at least 25 members, will also be entitled to avail assistance for such activities. They may avail back ended subsidy without credit link, subject to condition that they are able to meet their share of the project cost.

### **COLD CHAIN INFRASTRUCTURE**

- 7.47. Assistance for setting up of new cold storage infrastructure will be available only to multi-chamber cold storage units with technologies which are energy efficient with provision for thermal insulation, humidity control, advanced cooling systems, automation, etc., having specifications and standards approved by the Ministry. While Cold storages (Long term storage and distribution hubs) upto 5000 MT capacity will be promoted under NHM/HMNEH sub-schemes (**Annexure V**), capacity above 5000 MT upto 10000 MT will be promoted under NHB sub-scheme (**Annexure VII**). In this context, for cold storages, 3.4 cubic metres (cum.) (120 cubic feet (cft.) of chamber volume shall be considered equivalent to one MT of storage capacity. Similarly, for refrigerated transport, 3 cum (106 cft) of chamber volume shall be equivalent to one MT of storage capacity and for ripening chambers, 11 cum of chamber volume shall be equivalent to one MT of storage capacity. Assistance for pre cooling unit will be linked to pack-houses and cold rooms (staging). Similarly assistance for staging cold room will be linked to existing & new pre-coolers.
- 7.48. Extant specifications standards and protocols on cold storage and cold-chain components will be adhered to while approving cold storage projects. Revisions to technical standards and adherence protocols shall be updated by National Centre for Cold-chain Development (NCCD) as necessary when improved technologies and efficiencies are introduced/understood/approved.
- 7.49. Assistance can also be availed for a combination of PHM infrastructure components by a beneficiary, within the prescribed norms of individual items. Assistance will be available to individuals, Group of farmers/ growers/ consumers, Partnership/ Proprietary firms, Self Help Groups (SHGs), Farmers Producer Organization (FPOs), Companies, Corporations, Cooperatives, Cooperative Marketing Federations, Local bodies, Agricultural Produce Market Committees (APMC) & Marketing Boards and State Governments.
- 7.50. Assistance will also be available for taking up cold chain components so as to integrate the activities into a single project, as a new component during XII Plan.
- 7.51. In the case of bamboo, PHM will include post harvest storage and treatment facilities for bamboo, as per norms given in **Annexure VI**.
- 7.52. Proposals on long distance transport solutions on project basis shall be supported under NHB sub-scheme.

### **CREATION OF MARKET INFRASTRUCTURE**

- 7.53. Main objectives of providing assistance under this component are (a) to encourage investments from private and cooperative sectors in the development of marketing infrastructure for horticulture commodities (b) strengthen existing horticulture markets including wholesale and rural markets; (c) focus on promotion of grading, standardization and quality certification of horticulture produce at farm/market level to enable farmers to realize better price; and (d) create general awareness among farmers, consumers, entrepreneurs and market functionaries on market related agricultural practices.
- 7.54. Assistance under the Scheme will be provided as credit linked back ended subsidy for setting up whole sale markets, rural markets/apni mandis and retail markets. In case of Terminal markets, assistance will be provided in accordance with approved norms, for which guidelines have been issued separately ,and

available on the NHM website. Assistance will also be provided for setting up static / mobile vending cart/ platform with cool chamber. Assistance will also be extended for setting up functional infrastructure as credit linked back ended subsidy.

- 7.55. Assistance for setting up markets will only be given to those States/UTs which have amended their State Agricultural Produce Marketing Committee (APMC) Act and have also notified the amended rules there under to implement the provisions for:
- Setting up of new markets in private and cooperative sector;
  - Direct marketing (sourcing of horticulture produce directly from growers by wholesalers/ bulk retailers/ processors/ exporters/ end users). (If trade transaction of horticulture perishables takes place outside the market-yard, no market fee should be levied)
  - Doing away with requirement of having a premises within the market yard for grant of license.
  - Contract farming and.
  - Waiver of market fee on perishable horticulture produce.
- 7.56. Assistance will be available to individuals, Group of farmers/growers/consumers, Partnership/ Proprietary firms, Self Help Groups (SHGs), Farmers Producer Organization (FPOs), Companies, Corporations, Cooperatives, Cooperative Marketing Federations, Local bodies, Agricultural Produce Market Committees (APMC) & Marketing Boards and State Governments. Projects submitted by only those APMCs will be considered for assistance, which do not levy market cess on horticulture produce.
- 7.57. Cost of land involved in infrastructure projects will be restricted to 15 percent of project cost in rural areas and 25 percent in urban areas. The entrepreneur will not alienate land during period of loan for any purpose other than the purpose for which project is sanctioned. A separate undertaking from entrepreneur is required to be included in this regard in the DPR. Size of project will be determined on basis of economic viability and commercial considerations;
- 7.58. Quality control / analysis lab has been included under the Mission wherein assistance will be provided for setting up quality control labs having necessary infrastructure and manpower facility to check quality of horticultural produce vis-à-vis international standards (**Annexure V**).
- 7.59. In the case of bamboo, assistance will be extended for setting up Bamboo Bazaars, Bamboo wholesale retail markets near villages and retail outlets as per norms indicated in **Annexure VI**.

### **PROCESSING & VALUE ADDITION**

- 7.60. Processing of horticultural produce and value addition is an important activity. While primary/ minimal processing units will be promoted under NHM, large scale processing units will be promoted by Ministry of Food Processing Industries (MFPI), out of their ongoing Schemes. However, food processing units in Himachal Pradesh, Jammu & Kashmir and Uttarakhand will be promoted under HMNEH sub scheme as per norms indicated in **Annexure V**.
- 7.61. The NHB will take up projects on product promotion, market information and market intelligence services for horticulture crops. CDB will take up similar services for coconut.

### **INSURANCE SCHEMES ON COCONUT**

- 7.62. The CDB will implement schemes on (i) Coconut Palm Insurance and (ii) Kera Suraksha Insurance for the benefit of Coconut growers, as per norms given in **Annexure VIII**.
- 7.63. The MIDH will encourage organization of farmers into FPOs/FPCs and guidelines issued by Small Farmers' Agribusiness Consortium (SFAC) from time to time for aggregation of FPOs will prevail.



## **8. MISSION MANAGEMENT**

### **SUPPORT TO STATE HORTICULTURE MISSION/IMPLEMENTING AGENCIES**

- 8.1. For managing various activities of Mission at State & District Mission offices and implementing agencies for administrative expenses, Consultants at State & District level, project preparation, computerization, contingency etc, 5% of total annual expenditure will be provided to State Horticulture Missions/implementing Agencies. State/ implementing agencies will make provision for this in their Annual Action Plan.
- 8.2. Separate provision will be available for awareness generation and promotional programmes on horticulture, as per prescribed norms.

### **INSTITUTIONAL STRENGTHENING / FPO FORMATION**

- 8.3. Mission Head Quarter at National & State level and that of NHB and CDB will be strengthened for database creation and collection, use of Information Technology, development of software and procurement of hardware, hiring of vehicle etc, for which funding will be made under TSG component of the Mission.
- 8.4. Assistance will be available for strengthening / promoting Farmer Interest Groups (FIG), Farmer Producer Organizations (FPO) and Growers Associations involved in development of Horticulture crops.

### **HORTICULTURE DATABASE**

- 8.5. Provision has been made for strengthening horticulture statistical database, which will be implemented through active involvement of SHMs, Directorate of Horticulture and Institutes like Indian Agricultural Statistical Research Institute etc. on a project mode. Institutions like IASRI will be engaged as NLA for undertaking specific project on horticulture statistics.

### **SUPPORT TO NATIONAL LEVEL ORGANIZATIONS FOR INFRASTRUCTURE DEVELOPMENT**

- 8.6. The MIDH, within the ambit of sub missions, shall provide funds to National level organizations including cooperatives and FPOs for taking up innovative projects in the area of horticulture development, post harvest management, processing and marketing depending upon the soundness of its financial position and previous experience. Funding will be provided under the relevant components of the Mission.

### **COLLABORATION WITH INTERNATIONAL AGENCIES**

- 8.7. Attempts will be made to collaborate with international agencies like FAO, World Bank, Asian Development Bank and countries which have a developed modern horticulture sector for taking up programmes for development of horticulture. FAO has a Unilateral Trust Fund (UTF) programme under which there is provision to operate projects on mutually agreed terms and conditions. Under collaborative programme, activities to be undertaken would include import of planting material, hiring of International Domain Experts, organize study tours and organize training programmes under aegis of MIDH. Funds for this purpose will be earmarked in Annual Budget of Department of Agriculture and Cooperation, Ministry of Agriculture, Government of India (DAC), under TSG component of the Mission. However for implementing project under bi-lateral agreement or multi-lateral agency undertaking, programme funds shall be utilized.

### **EVALUATION & OTHER STUDIES**

- 8.8. Term end evaluation will be conducted at the end of the XII Plan. Concurrent evaluation will also be carried out by engaging suitable agencies. Assistance for such studies will be on project basis. The MIDH will commission short term studies on various aspects of horticulture depending on need and emerging requirements. Such studies will also be on project basis. Monitoring Missions, comprising of experts will be sent to States from time to time by National Mission, which will be organized through the TSG. States will also conduct evaluation studies on project basis under State level TSG component.

## 9. ROLE OF NATIONAL LEVEL AGENCIES

### 9.1. National Horticulture Board (NHB), Gurgaon

NHB will implement programmes as sub-scheme of MIDH (**Annexure VII**). NHB will also house the national level TSG besides the TSG for NHM and NBM and extend administrative, logistical and personnel support towards the implementation of NHM and NBM. Details about NHB are available on its web site ([www.nhb.gov.in](http://www.nhb.gov.in)).

### 9.2. Coconut Development Board, Kochi

CDB will implement programmes as sub-scheme of MIDH (**Annexure VIII**). It will also house the TSG for coconut related programme. Details about CDB are available on its web site ([www.coconutboard.nic.in](http://www.coconutboard.nic.in)).

### 9.3. Small Farmer's Agri-Business Consortium (SFAC), New Delhi

Small Farmers Agri-business Consortium (SFAC) ([www.sfacindia.com](http://www.sfacindia.com)) will provide necessary handholding with regard to the NE and Himalayan States. It will be lead agency for the formation of Farmers' Associations/ Groups and their tie-up with financial institutions and market aggregators. It will also house the TSG for HMNEH, CIH and VIUC schemes.

### 9.4. Directorate of Cashew and Cocoa Development (DCCD), Kochi

DCCD ([www.dccd.gov.in](http://www.dccd.gov.in)) will be responsible for implementing, coordinating and monitoring activities relating to plantation crops, excluding coconut and arecanut and will also be responsible for organizing National level training programmes, seminars & workshops on cashew and cocoa on regular intervals (**Annexure V**).

### 9.5. Directorate of Arecanut and Spices Development (DASD), Calicut

DASD will be responsible for implementing, coordinating and monitoring the activities on development of arecanut, spices, and aromatic plants and will be responsible for organizing National level training programmes, seminars and workshops on Arecanut, spices and medicinal & aromatic plants on regular intervals (**Annexure V**).

### 9.6. National Committee on Plasticulture Applications in Agriculture & Horticulture (NCPAAH), New Delhi

NCPAH ([www.ncpahindia.com](http://www.ncpahindia.com)) will be responsible for coordinating and monitoring activities relating to micro irrigation, precision farming and hi-tech horticulture implemented through SHMs and Precision Farming Development Centres (PFDCs) (**Annexure V**).

### 9.7. National Horticulture Research & Development Foundation, Nashik

National Horticulture Research & Development Foundation (NHRDF), Nashik ([www.nhrdf.com](http://www.nhrdf.com)) will be responsible for implementing programmes relating to development of vegetables including production and supply of quality seeds (**Annexure V**).

### 9.8. National Bee Board (NBB)

National Bee Board (NBB) ([www.nbb.gov.in](http://www.nbb.gov.in)) will be responsible for providing technical support as well as implementation of promotional programmes relating to beekeeping (**Annexure V**).

### 9.9. National Seeds Corporation, New Delhi

National Seeds Corporation (NSC) ([www.indiaseeds.com](http://www.indiaseeds.com)) will be responsible for taking up programmes for production and supply of good quality seed and planting material (**Annexure V**).

### 9.10. National Research Centre for Citrus, Nagpur

National Research Centre for Citrus (NRCC), Nagpur ([www.nrccitrus.nic.in](http://www.nrccitrus.nic.in)) will be implementing the mission mode programme on Technology Mission on Citrus (**Annexure V**).

- 9.11. State Farm Corporation of India, New Delhi**  
State Farms Corporation of India (SFCI), New Delhi will be responsible for development and supply of good quality seed and planting material (**Annexure V**).
- 9.12. Hindustan Insecticides Ltd. (HIL)**  
HIL ([www.hil.gov.in](http://www.hil.gov.in)) will be responsible for production and supply of good quality vegetable seeds (**Annexure V**).
- 9.13. National Institute for Agricultural Extension Management (MANAGE), Hyderabad**  
MANAGE ([www.manage.gov.in](http://www.manage.gov.in)) will be responsible for taking up HRD related programme for training field functionaries under NHM and HMNEH (**Annexure V**).
- 9.14. Fresh & Healthy Enterprises Ltd. (FHEL), New Delhi**  
FHEL ([www.fhel.co.in](http://www.fhel.co.in)) will be responsible for carrying out feasibility studies and preparing DPRs for integrated cold chain for horticulture commodities, involving long distance haulage by Railways (**Annexure V**).
- 9.15. Agricultural and Processed Food Products Export Development Authority (APEDA), New Delhi**  
APEDA, ([www.apeda.gov.in](http://www.apeda.gov.in)) Ministry of Commerce will be involved in promoting coordinated development of Agri-Export Zones (AEZ) for horticultural crops and coordinate with MIDH, for promoting export of horticulture crops.
- 9.16. Directorate of Marketing & Inspection (DMI), New Delhi**  
DMI will be responsible for providing market intelligence and monitoring of programmes relating to marketing of horticulture crops ([www.agmarknet.nic.in](http://www.agmarknet.nic.in)).
- 9.17. Ministry of Food Processing Industries (MFPI), New Delhi**  
MFPI ([www.mofpi.nic.in](http://www.mofpi.nic.in)) will extend its support to establishment of Food Processing units in clusters promoted in MIDH and offer its technical support and assistance, especially in HMNEH areas.
- 9.18. National Medicinal Plants Board (NMPB), New Delhi**  
NMPB ([www.nmpb.nic.in](http://www.nmpb.nic.in)) would implement its scheme relating to development of medicinal plants in coordination with MIDH.
- 9.19. Central Institute of Horticulture (CIH), Nagaland**  
CIH will be responsible for coordinating the activities of technology generation, transfer and dissemination of improved production technologies available in North Eastern Region.
- 9.20. National Centre for Cold Chain Development (NCCD)**  
NCCD (<http://nccd.gov.in>) will guide policy and set standards for development of integrated cold chain in the country, for perishable fruits, vegetables and other allied agricultural commodities to link with markets and also work in close collaboration with industry and other stake holders (**Annexure V and Annexure VII**).
- 9.21. National Institute of Food Technology Entrepreneurship and Management (NIFTEM), Sonapat, Haryana**  
NIFTEM ([www.niftem.ac.in](http://www.niftem.ac.in)) will assist in setting up food standards, businesses incubation including knowledge sharing in the field of food technology and management, networking and coordinating with other institutions in the field.

# ANNEXURE I

## Activity mapping for effective devolution of funds, functions and functionaries under Mission for Integrated Development of Horticulture (MIDH)

A. MIDH FUNDS									
S.No.	Scheme sub-component/ funding stream	Allocation (Rs. Cr.)	Percent Allocation based on function (s)					User group/ civil society	Remarks
			Centre	State	Local government				
					District Panchayat	Intermediate Panchayat	Village Panchayat		
1.	NHM	As per annual budget	85	15	0.50-1.00		0.50-1.00		For community tanks, capacity building through HRD, FPO formation.
2.	HMNEH		100	-					
3.	NBM		100	-					
4.	NHB		100	-					Since projects will be implemented by the beneficiaries directly without routing funds through State Government, participation of local government will be to a limited extent in respect of these 3 sub schemes.
5.	CDB		100	-					
6.	CIH		100	-					

## B. MIDH FUNCTIONS

S. No.	ACTIVITY DESCRIPTION Activity Category	Union Government	State Government	District Planning Committee	LOCAL GOVERNMENT AND PLANNING BODIES			User Groups. SHGs. etc.
					Panchayati Raj System			
					District Panchayat	Intermediate Panchayat	Village Panchayat	
1.	Setting Standards	Formulate guidelines and cost norms for implementation of MIDH scheme	Disseminate guidelines and norms at District level, preferably in local language	Disseminate guidelines of MIDH.	Disseminate guidelines at block level and below.			
2.	Planning	Provide framework for preparing State Horticulture Mission Document (SHMD) and Annual Action Plan.	1. Prepare strategic plan. 2. Prepare State Horticulture Mission Document. 3. Prepare State Annual Action Plans (AAP)	Formulate District Horticulture Mission Document (DHMD) and District Annual Action Plan (DAAP) Contribute in preparing DHMD and DAAP.	Contribute in selection of crop and activities			
3.	Implementation of sub schemes and components. Planting material, production & productivity improvement programmers, HRD, infrastructure for PHM and Marketing formation of FPO etc.	Release of funds to States/ Agencies by DAC.	Release of funds to District level and State level implementing Agencies.	Prioritize projects as per requirement of district	Select location of activity within the district, select beneficiaries, implement specific projects		Contribute in selection of beneficiaries and implement specific projects, as allocated	Maintain assets created
4.	Monitoring & Evaluation of Projects	1. Review monthly progress through web enabled progress monitoring system. 2. Conduct midterm end Impact Evaluation	1. Furnish monthly progress through web. 2. Conduct concurrent evaluation		1. Review progress at panchayat level on specific activities. 2. Provide feed-back to State Government.		Provide feed back on progress to District Panchayat	

<b>C. MIDH FUNCTIONARIES</b>						
<b>S. No.</b>	<b>Union Government</b>	<b>State Government</b>	<b>District Planning Committee</b>	<b>LOCAL GOVERNMENT &amp; PLANNING BODIES</b>		
				<b>Panchayati Raj System</b>		
				<b>District Panchayat</b>	<b>Intermediate Panchayat</b>	<b>Village Panchayat</b>
1.	Horticulture Division Staff, DAC	Staff of : a) State Horticulture Department, b) State Horticulture Mission c) State Implementing Agencies d) Contractual staff	As constituted by the State Government	State Govt. to devolve functionaries as per activities to be implemented under MIDH.		State Govt. to devolve functionaries as per activities to be implemented under MIDH.

## ANNEXURE- II

### Indicative Composition of Technical Support Group under MIDH

A. NATIONAL LEVEL				
S.No.	Items	Total	Honorarium Per month ( In Rs )	Remarks
1.	Chief Consultant	15	70,000/-	
2.	Consultant (Need based)	5	3000/day	
3.	Resource Person	4	30,000/-	
4.	Senior Programmer	3	42,000/-	
5.	Stenographer	10	15,000/-	Should not be less than the Minimum wages as notified by Delhi Government's/ Labour Department/ State Government.
6.	Data Entry Operator	10	15,000/-	
7.	MTS	10	12,000/-	

B. STATE LEVEL				
S.No.	Items	Total	Honorarium Per month ( In Rs )	Remarks
1.	State Horticulture/ Bamboo Consultant	31	50,000/-	
2.	Horticulture/ Bamboo Assistant	60	20,000/-	
3.	Programmer	30	30,000/-	Should not be less than the Minimum wages as notified by Labour Department of State Government.
4.	Data Entry Operator	30	10,000/-	

C. DISTRICT LEVEL				
S.No.	Items	Total	Honorarium Per month ( In Rs )	
1.	District Horticulture/ Bamboo Consultant	400	30,000/-	
2.	Field Consultant	2000	20,000/-	

## ANNEXURE- III

### DELEGATION OF POWERS FOR APPROVING PROJECTS UNDER MIDH SCHEME

(Sub-Schemes of NHM, HMNEH, NBM and CIH)\*

#### A. BY EXECUTIVE COMMITTEE (EC)

S. No	Component/Category of Items	Cost limit as per MIDH Scheme (Rupees in lakh)
1.	R & D Projects	Above 50.00 / project up to 100.00/ project
2.	Marketing infrastructure	Above 99.00 up to 15,000.00
3.	Post Harvest Management infrastructure, including Cold Chain Supply System, Food Processing Industries	Above 500.00
4.	INM/IPM Infrastructure	Above 500.00
5.	Centre of Excellence	Above 500.00
6.	Special Interventions	Above 100.00
7.	Need based projects (Seminars/workshops/ Exhibitions / Training & Study Tours abroad, etc)	Above 50.00/project
8.	Mission Management/ TSG, Data base, Survey, FPO	Above 300.00
9.	Other components not covered above	Project based

#### B. BY EMPOWERED MONITORING COMMITTEE (EMC)

S. No	Component/Category of Items	Cost limit as per MIDH Scheme (Rupees in lakh)
1.	R & D Projects	Up to 50.00/ project
2.	Planting material Infrastructure (Hi-tech Nursery, TC Unit, Seed Infrastructure, import of planting material	Above 25.00 up to 250.00
3.	Organic farming, Certification & GAP	Above 200.00
4.	INM/IPM Infrastructure	Above 50.00 up to 500.00
5.	Post Harvest Management infrastructure, including Cold Chain Supply System, Processing, including projects related to reefer transport, ripening and add-on technology components.	Above 200.00 up to 500.00
6.	Marketing infrastructure	Above 25.00 up to 99.00
7.	Centre of Excellence	Up to 500.00
8.	Special Interventions	Up to 100.00
9.	Need based projects (Seminars/ Workshops/ Exhibitions/ Training & Study Tours abroad, etc)	Above 20.00 up to 50.00/project
10.	Mission Management/ TSG, Data base, survey, FPO	Up to 300.00

#### C. BY MISSION DIRECTOR (MIDH)

S. No	Component/Category of Items	Cost limit as per MIDH Scheme (Rupees in lakh)
1.	If costs are as per norms specified in <b>Annexure V/ VI.</b>	Up to 10.00



**D. BY STATE LEVEL EXECUTIVE COMMITTEE (SLEC)**

S. No	Component/Category of Items	Cost limit as per MIDH Scheme (Rupees in lakh)
1.	Planting material Infrastructure (Hi-tech Nursery, TC Unit, Seed Infrastructure)	Up to 25.00
2.	Mushroom	Up to 20.00
3.	Protected cultivation	Up to 70.00
4.	Organic farming, Certification & GAP	Up to 200.00
5.	INM/IPM Infrastructure	Up to 50.00
6.	Horticulture Mechanization	Up to 7.00
7.	HRD	Up to 20.00
8.	Demonstration	Up to 25.00
9.	Post Harvest Management infrastructure, including Cold Chain Supply System, Processing, excluding projects related to reefer transport, ripening and add-on technology components.	Up to 200.00
10.	Marketing infrastructure	Up to 25.00
11.	Need based projects (Seminars/ Workshops/ Exhibitions)	Up to 20.00/project

**E. BY STATE MISSION DIRECTOR, SHM/ HMNEH/NBM**

S. No	Component/Category of Items	Cost limit as per MIDH Scheme (Rupees in lakh)
1.	By State Mission Directors, if costs are as per norms specified in <b>Annexure V &amp; VI.</b>	Up to 5.00

\*Note: Projects of NHB and CDB will be approved by the respective Committees of these Boards

## ANNEXURE-IV (a)

### FORMAT FOR SUBMITTING ACTION PLAN FOR NHM / HMNEH SUB-SCHEMES UNDER MIDH

**Name of State:**

**Name of Sub-Scheme:**

**Year of Action Plan:**

**Summary Indicators:**

AREA, PRODUCTION & PRODUCTIVITY (APP) (YEAR 200)*				
Sl.No	Crop	Area (000 ha)	Production (000 MT)	Productivity (t/ha)
1.	Fruits (a) Name of Perennial fruits (i) (ii) (b) Name of Non perennial fruits (i) (ii)			
2.	Vegetable Crops Name (i) (ii)			
3.	Spices (a) Name of Seed Spices (i) (ii) (b) Name of Rhizomatic Spices (i) (ii) (c) Name of Tree Spices (i)			
4.	Flowers (i) Loose flowers (ii) Bulbous flowers (iii) Cut flowers			
5.	Aromatic Plants Name (i) (ii)			
6.	Plantation crops / BambooName (i) (ii)			
7.	Mushroom			
	<b>Total</b>			

(\* This should be supported with the APP data for each district in the State.) Summary of Action Plan:

### Summary of Action Plan

Financial		(Rupees on Lakh)		
Sl.No	Activity	Balance as on 01.04.200	Outlay as per action plan	Percentage of total
1.	Research & Development (Project)			
2.	New Nurseries (No)			
3.	Additional coverage of area to be given crop wise (ha)			
4.	Rejuvenation (ha)			
5.	INM/IPM (ha)			
6.	Protected cultivation (ha)			
7.	Organic farming (ha)			
8.	Water sources (no)			
9.	Horticulture Mechanization (No)			
10.	Training of farmers (no)			
11.	PHM Infrastructures (no)			
12.	New Markets (no)			
13.	New Processing units (no)			
14.	Formation of FPOs			
15.	Monitoring/TSG			
	<b>Total</b>			

### PHYSICAL: (QUANTIFIABLE MAJOR OUTPUTS) FOR THE YEAR:

Sl.No	Activity	Ha. / No.	Sl.No	Activity	Ha. / No.
1.	Research & Development (Project)		8.	Water sources (no)	
2.	New Nurseries (No)		9.	Horticulture Mechanization (No)	
3.	Additional coverage of area to be given crop wise (ha)		10.	Training of farmers (no)	
4.	Rejuvenation (ha)		11.	PHM Infrastructures (no)	
5.	INM/IPM (ha)		12.	New Markets (no)	
6.	Protected cultivation (ha)		13.	New Processing units (no)	
7.	Organic farming (ha)		14.	Formation of FPOs	
	<b>Total</b>			<b>Total</b>	

# Annexure-IV (a) (contd.)

## FORMAT FOR SUBMITTING DETAILED ACTION PLAN

### Description

#### 1. BACKGROUND INFORMATION

- 1.1 Geography & Climate
- 1.2 Potential of Horticulture
- 1.3 Land Availability
- 1.4 Strength, Weakness, Opportunity and Challenges (SWOC) Analysis
- 1.5 Nursery subplan indicating requirement and availability of planting material with mechanism in place to ensure quality and accreditation

#### 2. PROJECT DETAILS

- 2.1 Objectives, Strategy & Road Map
- 2.2 Implementation Agency with contact address, phone & email ID
- 2.3 Salient aspects of the Annual Action Plan
- 2.4 Plantation Development including Supporting Infrastructure
- 2.5 Research & Development
- 2.6 Post Harvest Infrastructure and Management
- 2.7 Production of Planting Material
- 2.8 Establishment of New Gardens / Area Expansion
  - 2.8.1 Fruits (Perennial)(a) Without integration(b) With integration
  - 2.8.2 Fruits (NonPerennial)(a) Without integration(b) With integration
  - 2.8.3 Spices and Aromatic Plants (a) Without integration(b) With integration
  - 2.8.4 Flowers (a) Without integration(b) With integration
  - 2.8.5 Plantation crops(a) Without integration(b) With integration
  - 2.8.6 Bamboo(a) Forest Areas / Public land(b) Non Forest Areas

2.9 Rejuvenation/Replacement of Senile Plantation / Improvement & Existing stock (bamboo)

2.10 Protected Cultivation

2.11 Promotion of INM/IPM

2.12 Organic Farming with certification

2.13 Creation of water sources

2.14 HRD in Horticulture

2.15 Post Harvest Management Infrastructure

2.16 Marketing Infrastructure

### **3. MISSION MANAGEMENT**

3.1 Technical Support Group

3.2 Promotion of FPO

3.3 Base Line Survey

### **4. ANNEXURES**

- I. Map of State and Districts indicating potential belt and location of existing infrastructure facilities like nurseries, TC units, seed infrastructure, INM/IPM infrastructure, pack houses, precooling units, ref. vans, ripening chambers, cold storage units, markets, processing units etc and location of proposed infrastructure to be created.
- II. District wise area, production and productivity for major horticulture crops from 2004/05 onwards.
- III. District wise breakup of physical programme with identified cluster and crops.
- IV. Technical backstopping with identified institutes/agency.

## Annexure-IV (b)

### FORMAT FOR SUBMITTING ANNUAL ACTION PLAN FOR NBM SCHEME

STATE: \_\_\_\_\_ YEAR \_\_\_\_\_

Sl.No.	Components	Estimated cost	Targets Proposed	
			Phy	Fin (in Rs. Lakh)
1.	Hi-tech Nurseries in public sector (in nos.)			
2.	Hi-tech Nurseries in private sector (in nos.)			
3.	Small Nurseries in public sector (in nos.)			
4.	Small Nurseries in private sector (in nos.)			
5.	Rehabilitation of existing TC units in public sector (in nos.)			
6.	Rehabilitation of existing TC units in private sector (in nos.)			
7.	Plantation in forest areas/ public land (through JFMC/ Panchayati Raj Institutions/ SHGs, Women group etc.) (in ha.)			
8.	Plantation in non-forest areas (in ha.)			
9.	Maintenance for Plantation upto 2013-14 in forest area			
10.	Maintenance for Plantation upto 2013-14 in non-forest area			
11.	Maintenance for Plantation upto 2013-14 in non-forest Govt. land			
12.	Maintenance for Plantation w.e.f. 2014-15 in forest area/Public land			
	First Year 25%			
	Second Year 25%			
13.	Maintenance for Plantation w.e.f. 2015-16 in non-forest area			
	First Year 25%			
	Second Year 25%			
14.	Improvement of existing stock (in ha.)			
15.	<b>Transfer Technology &amp; HRD</b>			
	(a) Training of farmers (in nos.)			
	(i) Within state			
	(ii) Outside state			
	(b) Training of field functionaries/ artisans (in nos.)			
	(i) Within state			
	(ii) Study tour to progressive states/ units (group of minimum 5 participants)			
	(d) Demonstration of Technology (in nos.)			
	(e) Workshop/Seminars/ Training at:			
	(i) International Level			
	(ii) National Level			
	(iii) State Level			

16.	<b>Pest and Disease Management (in ha.)</b>			
17.	<b>Creation of Water resources (in unit)</b>			
	(i) Community tanks/on farm ponds/on farm water reservoirs with use of plastic/RCC lining			
	(ii) Water harvesting system for individuals- for storage of water in 20mx20mx3m ponds/wells @ Rs.100/- cum			
18.	<b>Integrated Post Harvest Management</b>			
	(i) Post harvest storage & treatment facilities for bamboo (in nos.)			
19.	<b>Establishment of marketing Infrastructure</b>			
	(i) Bamboo Wholesale and Retail Markets near villages (in nos.)			
	(ii) Bamboo Bazaars (in nos.)			
	(iii) Retail Outlets (Showroom) (in nos.)			
	(iv) Retail Outlets near villages (in nos.)			
	(v) Participation in Domestic Trade Fairs / Exhibition etc.			
20.	<b>Innovative Interventions</b>			
21.	<b>Implementation Monitoring Mechanism</b>			
	(i) Evaluation and Monitoring			
	(ii) Bamboo Technical Support Group			
	(iii) Coloured brochures and leaflets			
	(iv) Promotional campaigns through Electronic/ Audio-visual/ Media/ Newspapers			
	(v) Database generation & Management (Information, Web Based Database)			
	(vi) Baseline survey			
22.	Mission Management and administration costs			
	<b>Total</b>			

## Annexure-V

### COST NORMS AND PATTERN OF ASSISTANCE UNDER MISSION FOR INTEGRATED DEVELOPMENT OF HORTICULTURE (MIDH) DURING XII PLAN FOR NHM AND HMNEH SUB SCHEMES

S. No.	Item	Cost Norms*	Pattern of Assistance#
<b>A.</b>	<b>RESEARCH</b>	<b>Rs. 100.00 lakh/Project</b>	Central Government Institutes under ICAR, CSIR, SAUs, National level Govt. agencies and others location specific Institutes will take up need based applied research & development works in the areas of (i) Seed & Planting material including import of planting material (ii) Technology standardization and (iii) Technology acquisition and (iv) imparting training and FLD, on project mode, with 100% assistance.
<b>B.</b>	<b>PLANTATION INFRASTRUCTURE DEVELOPMENT</b>		
<b>B. 1</b>	<b>Production of planting material</b>		
	i) Hi-tech nursery (4 ha)	Rs. 25.00 lakh/ha.	100% to public sector limited to Rs 100 lakh/unit and in case of private sector, credit linked back-ended subsidy @ 40% of cost, subject to a maximum of Rs. 40 lakh/unit, for a maximum of 4 ha. as project based activity on prorata basis. Each nursery will produce a minimum of 50,000 numbers per hectare of mandated perennial fruit crops/ tree spices/ aromatic trees/plantation crops per year, duly certified for its quality.
	ii) Small Nursery (1 ha)	Rs. 15.00 lakh/ha	100% to public sector and in case of private sector, credit linked back-ended subsidy of cost, subject to a maximum of Rs. 7.50 lakh/unit, as project based activity. Each nursery will produce a minimum of 25,000 numbers of mandated perennial vegetatively propagated fruit plants/tree spices/plantation crops per year, aromatic plants, duly certified for its quality.
	iii) Upgrading nursery infrastructure to meet accreditation norms	Up to Rs. 10.00 lakh/nursery of 4 ha	100% to public sector and 50% of cost to private sector subject to a maximum of Rs. 5.00 lakh/nursery. The infrastructure facilities will include establishment of hot bed sterilization of media, Working shed, Virus indexing facility (for citrus & apple), Hardening chamber/net house, Mist chamber, Establishment of Mother Block, Irrigation and fertigation facility/unit.
	iv) Strengthening of existing Tissue Culture (TC) units	Rs. 20.00 lakh /unit	100% of cost to public sector and in case of private sector, credit linked back ended subsidy @ 50% of cost
	v) Setting up of new TC Units.	Rs. 250.00 lakh/unit	100% of total cost to public sector and in case of private sector, credit linked back ended subsidy @ 40% of cost. Each TC unit will produce a minimum of 25 lakh plants/year of mandated crops, duly hardened, for which protocols are available for commercial use.
	vi) Seed production for vegetables and spices		



	a) Open pollinated crops	Rs. 35,000/ha	For public sector 100%, for private sector 35% in general areas and 50% in NE & Himalayan States, Tribal Sub Plans (TSP) areas, Andaman & Nicobar & Lakshadweep Islands, limited to 5 ha. Output target of seed for each crop will be fixed by the individual state
	b) Hybrid seeds	Rs. 1.50 lakh/ha	For public sector 100%, for private sector 35% in general areas and 50% in NE & Himalayan States, TSP areas, Andaman & Nicobar & Lakshadweep Islands, limited to 5 ha. Output target of seed for each crop will be fixed by the individual state for each beneficiary, before releasing funds.
	vii) Import of planting material	Rs. 100.00 lakh	100% of cost for State Govt. / PSUs, as project based activity.
	viii) Seed infrastructure (for handling, processing, packing, storage etc. of seeds meant for use as seed material for cultivation of horticulture crops)	Rs. 200.00 lakh	100% of cost to public sector and in case of private sector, credit linked back subsidy @ 50% of cost of project.
<b>B 2.</b>	<b>Establishment of new gardens (Area expansion - for a maximum area of 4 ha per beneficiary)</b>		
	<b>I. Fruits</b>		
	(a) Cost intensive crops		
	i) Fruit crops like Grape, Kiwi, Passion fruit etc.		
	a) Integrated package with drip irrigation and trellis.	Rs. 4.00 lakh/ha.	Maximum of Rs. 1.60 lakh/- per ha. (40% of cost) for meeting the expenditure on planting material and cost of material for drip irrigation, trellies and INM/IPM, in 3 installments of 60:20:20 subject to survival rate of 75% in 2nd year and 90% in 3rd year).
	b) Without integration	Rs. 1.25 lakh/ha	Maximum of Rs. 0.50 lakh/ha (40% of cost) for meeting the expenditure on planting material and cost of INM/IPM in three installments of 60:20:20 subject to survival rate of 75% in 2nd year and 90% in 3rd year.  For (a) and (b) above, in the case of NE and Himalayan States, TSP areas, Andaman & Nicobar and Lakshadweep Islands, assistance will be @ 50% of cost.
	ii) Strawberry		
	a) Integrated package with drip irrigation & mulching	Rs. 2.80 lakh/ha	Maximum of Rs. 1.12 lakh/ per ha. (40% of cost) for meeting the expenditure on planting material and cost of material for drip irrigation, mulching and INM/IPM, in one installment.
	b) Without integration	Rs. 1.25 lakh/ha	Maximum of Rs. 0.50 lakh/ha (40% of cost) for meeting the expenditure on planting material and cost of INM/IPM one installment.  For (a) and (b) above, in the case of NE and Himalayan States, TSP areas, Andaman & Nicobar and Lakshadweep Islands, assistance will be @ 50% of cost.
	iii) Banana (sucker)		
	a) Integrated package with drip irrigation.	Rs. 2.00 lakh/ha	Maximum of Rs. 0.80 lakh/ha (40% of the cost) for meeting expenditure on planting material, drip irrigation and cost of material for INM/IPM, in 2 installments (75:25).

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b) Without integration	Rs.87,500/ha	Maximum of Rs. 0.35 lakh/ha (40% of cost) for meeting the expenditure on planting material and cost of INM/IPM in 2 installments (75:25). For (a) and (b) above, in the case of NE and Himalayan States, TSP areas, Andaman & Nicobar and Lakshadweep Islands, assistance will be @ 50% of cost in 2 installments.
iv) Pineapple (sucker)		
a) Integrated package with drip irrigation.	Rs. 3.00 lakh/ha	Maximum of Rs. 1.20 lakh/ha (40% of the cost) for meeting expenditure on planting material, drip irrigation and cost of material for INM/IPM, in 2 installments.
b) Without integration	Rs.87,500/ha	Maximum of Rs. 0.35 lakh/ha (40% of cost) for meeting the expenditure on planting material and cost of INM/IPM in 2 installments (75:25). For (a) and (b) above, in the case of NE and Himalayan States, TSP areas, Andaman & Nicobar and Lakshadweep Islands, assistance will be @ 50% of cost in 2 installments (75:25).
v) Banana (TC)		
a) Integrated package with drip irrigation.	Rs. 3.00 lakh/ha	Maximum of Rs. 1.20 lakh/ha (40 % of cost) for meeting the expenditure on planting material and cost of material for drip system, INM/IPM etc., in 2 installments (75:25).
b) Without integration	Rs. 1.25 lakh/ha.	Max. of Rs. 0.50 lakh per ha, (40% of cost) for meeting the expenditure on planting material and cost of INM/IPM in 2 installments (75:25). For (a) and (b) above, in the case of NE and Himalayan States, TSP areas, Andaman & Nicobar and Lakshadweep Islands, assistance will be @ 50% of cost in 2 installments (75:25).
vi) Pineapple (TC)		
a) Integrated package with drip irrigation.	Rs. 5.50 lakh /ha.	Maximum of Rs. 2.20 lakh/ha (40 % of cost) for meeting the expenditure on planting material and cost of material for drip system, INM/IPM etc., in 2 installments (75:25).
b) Without integration	Rs. 1.25 lakh/ha.	Max. of Rs. 0.50 lakh per ha, (40% of cost) for meeting the expenditure on planting material and cost of INM/IPM in 2 installments (75:25). For (a) and (b) above, in the case of NE and Himalayan States, TSP areas, Andaman & Nicobar and Lakshadweep Islands, assistance will be @ 50% of cost in 2 installments (75:25).
vii) Papaya		
a) Integrated package with drip irrigation.	Rs. 2.00 lakh/ha.	Maximum of Rs. 0.80 lakh/ha (40% of the cost) for meeting expenditure on planting material, drip irrigation and cost of material for INM/IPM, in 2 installments (75:25).
b) Without integration	Rs. 60,000/ha	Maximum of Rs. 0.30 lakh/ha (50 % of cost) for meeting the expenditure on planting material and cost of INM/IPM in 2 installments (75:25). For (a) and (b) above, in the case of NE and Himalayan States, TSP areas, Andaman & Nicobar and Lakshadweep Islands, assistance will be @ 50% of cost in 2 installments (75:25).
viii) Ultra high density (Meadow orchard)		

a) Integrated package with drip irrigation	Rs. 2.00 lakh/ha.	Maximum of Rs. 0.80 lakh/ ha. (40% of cost) for meeting the expenditure on planting material and cost of material for drip system, INM/IPM, and canopy management in 3 installments of 60:20:20 subject to survival rate of 75% in 2nd year and 90% in 3rd year).
b) Without integration	Rs. 1.25 lakh/ha	Maximum of Rs. 0.50 lakh/ha., (40% of cost) for meeting the expenditure on planting material and cost of INM/IPM in 3 installments.  For (a) and (b) above, in the case of NE and Himalayan States, TSP areas, Andaman & Nicobar and Lakshadweep Islands, assistance will be @ 50% of cost in 3 installments.
ix) High density planting (mango, guava, litchi, pomegranate, apple, citrus etc).		
a) Integrated package with drip irrigation	Rs. 1.50 lakh /ha	Maximum of Rs. 0.60 lakh per ha. (40% of cost) for meeting the expenditure on planting material, cost of drip system, INM/IPM, canopy management etc., in 3 installments of 60:20:20 subject to survival rate of 75% in 2nd year and 90% in 3rd year).
b) Without Integration.	Rs. 1.00 lakh/ha.	Maximum of Rs. 0.40 lakh/ha (40% of the cost) for meeting the expenditure on planting material and cost of INM/IPM in 3 installments (60:20:20).  For (a) and (b) above, in the case of NE and Himalayan States, TSP areas, Andaman & Nicobar and Lakshadweep Islands, assistance will be @ 50% of cost in 3 installments of 60:20:20 subject to survival rate of 75% in 2nd year and 90% in 3rd year)
(b) Fruit crops other than cost intensive		
i) Fruit crops other than cost intensive crops using normal spacing		
a) Integrated package with drip irrigation	Rs. 1.00 lakh/ha	Maximum of Rs. 0.40 lakh/ ha. (40% of cost) for meeting the expenditure on planting material, cost of drip system, INM/IPM, canopy management etc in 3 installments of 60:20:20 subject to survival rate of 75% in 2nd year & 90% in 3rd year for perennial crops and for non perennial crops in 2 installments of 75:25.
b) Without Integration	Rs. 60,000/ha	Maximum of Rs. 0.30 lakh/ha (50 % of cost) for meeting the expenditure on planting material and cost of INM/IPM in 3 installments, in all States.  For (a) and (b) above, in the case of NE and Himalayan States, TSP areas, Andaman & Nicobar and Lakshadweep Islands, assistance will be @ 50% of cost in 3 installments.
<b>II. Vegetable (For maximum area of 2 ha per beneficiary)</b>		
i) Hybrid	Rs.50,000/ ha	40% of cost in general areas and in the case of NE and Himalayan States, TSP areas, Andaman & Nicobar and Lakshadweep Islands, assistance will be @ 50% of cost.
<b>III. Mushrooms</b>		
i) Production unit	20 lakh /unit	100% of the cost to public sector and 40% of cost for private sector, for meeting the expenditure on infrastructure, as credit linked back ended subsidy.
ii) Spawn making unit	Rs. 15 lakh/unit	100% of the cost to public sector and 40% of cost for private sector, for meeting the expenditure on infrastructure, as credit linked back ended subsidy.

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	iii) Compost making unit	Rs. 20.00 lakh/unit	100% of the cost to public sector and 40% of cost for private sector, for meeting the expenditure on infrastructure, as credit linked back ended subsidy.
<b>IV. Flowers (For a maximum of 2 ha per beneficiary)</b>			
	i) Cut flowers	Rs. 1.00 lakh/ha	40 % of the cost for S&M farmers and 25% of cost to other category farmers in general areas, 50% of cost in NE & HS, TSP areas, A&N and Lakshadweep Islands.
	ii) Bulbulous flowers	Rs. 1.50 lakh/ha	40 % of the cost for S&M farmers and 25% of cost to other category farmers in general areas, 50% of cost in NE & HS, TSP areas, A&N and Lakshadweep Islands.
	iii) Loose Flowers	Rs. 40,000/ha	40 % of the cost for S&M farmers and 25% of cost to other category farmers in general areas, 50% of cost in NE & HS, TSP areas, A&N and Lakshadweep Islands.
<b>V. Spices (For a maximum area of 4 ha per beneficiary)</b>			
	i) Seed spice and Rhizomatic spices	Rs.30,000/ha	Maximum of Rs. 12,000/- per ha. (40% of cost) for meeting the expenditure on planting material and cost of material for INM/ IPM etc).
	ii) Perennial spices (black pepper, cinnamon, clove and nutmeg)	Rs. 50,000/ha	Maximum of Rs. 20,000/- per ha (@40% of cost) for meeting the expenditure on planting material and cost of material for INM/ IPM etc.  For (i) and (ii) above, in the case of NE and Himalayan States, TSP areas, Andaman and Lakshadweep Islands, assistance will be @ 50% of cost.
<b>VI. Aromatic Plants (For a maximum area of 4 ha per beneficiary)</b>			
	i) Cost intensive aromatic plants (patchouli, geranium, rosemary, etc)	Rs. 1,00,000/ha	40% of cost, subject to a maximum of Rs.40,000/- per ha, for meeting the expenditure on planting material and cost of material for INM/IPM etc.
	ii) Other aromatic plants	Rs. 40,000/ha	40% of cost, subject to a maximum of Rs.16,000/- per ha, for meeting the expenditure on planting material and cost of material for INM/IPM etc.  For (i) and (ii) above, in the case of NE and Himalayan States, TSP areas, Andaman & Nicobar and Lakshadweep Islands, assistance will be @ 50% of cost.
<b>VII. Plantation crops (For a maximum area of 4 ha per beneficiary)</b>			
	i) Cashew and Cocoa		
	a) Integrated package with drip irrigation	Rs. 1.00 lakh/ha	Rs. 0.40 lakh per ha (40% of cost) for meeting the expenditure on planting material and cost of material for drip system, INM/IPM etc) in 3 installments of 60:20:20 subject to survival rate of 50% in second year and 90% in third year.
	b) Without integration	Rs. 50,000/ha	<b>Rs.0.20 lakh per ha (40 % of cost)</b> for meeting the expenditure on planting material and cost of material for INM/IPM in 3 installments of 60:20:20 subject to survival rate of 75% in second year and 90% in third year for a maximum area of 4 ha per beneficiary.  For (a) and (b) above, in the case of NE and Himalayan States, TSP areas, Andaman & Nicobar and Lakshadweep Islands assistance will be @ 50% of cost in 3 installments.
<b>B.3.</b>	<b>Rejuvenation / replacement of senile plantation, canopy management</b>	Rs. 40,000/ha	50% of the total cost subject to a maximum of Rs. 20,000/ha limited to two ha per beneficiary.

<b>B.4.</b>	<b>Creation of Water resources</b>		
	i) Community tanks/on farm ponds/on farm water reservoirs with use of plastic/RCC lining	Rs. 20.00 lakh in plain areas and Rs. 25 lakh/ unit for Hilly areas.	100% of cost to irrigate 10 ha of command area, with pond size of 100m x 100m x 03m or any other smaller size on prorata basis depending upon the command upon the command area either use of minimum 500 micron plastic films or RCC lining, owned & managed by a community/ farmer group.  Cost for non-lined ponds/tanks (only in black cotton soils) will be <b>30%</b> less. Assistance will be restricted to the cost of plastic/RCC lining. However, for non MNREGS beneficiaries, assistance on entire cost including construction of pond/tank as well as lining can be availed under the scheme.
	ii) Water harvesting system for individuals- for storage of water in 20mx20mx3m ponds/tube wells/dug wells @ Rs.125/- cum,	Rs. 1.50 lakh/unit in plain areas and Rs. 1.80 lakh/unit in hilly areas	50% of cost including 300 micron plastic/RCC lining. Cost for non-lined ponds/tanks (only in black cotton soils) will be 30% less. For smaller size of the ponds/dug wells, cost will be admissible on pro rata basis depending upon the command area. Maintenance will be ensured by the beneficiary
<b>B. 5</b>	<b>Protected cultivation</b>		
	1. Green House structure		
	(a) Fan & Pad system	Rs. 1650/Sq.m (up to area 500 Sq. m) Rs. 1465/Sq. m (>500 Sq.m up to 1008 Sqm) Rs. 1420/Sq. m (>1008 Sq. m up to 2080 Sq.m) Rs. 1400/Sq. m (>2080 Sq. m upto 4000 Sq.m) Above rates will be 15% higher for hilly areas.	50% of cost for a maximum area of 4000 sq. m per beneficiary.
	(b) Naturally ventilated system		
	i) Tubular structure	Rs.1060/Sq.m (up to area 500 Sq. m) Rs. 935/Sq.m (>500 Sq. m up to 1008 Sq. m)Rs. 890/Sq. m (>1008 Sqm up to 2080 Sq. m)Rs. 844/Sq. m (>2080 Sq. m up to 4000 Sq. m) Above rate will be 15% higher for hilly areas.	50% of cost limited 4000 sq. m. per beneficiary.
	ii) Wooden structure	Rs. 540/Sq. m and Rs. 621/Sq. m for hilly areas	50% of the cost limited to 20 units per beneficiary (each unit not to exceed 200 sq.m).
	iii) Bamboo structure	Rs. 450/Sq. m and Rs. 518/Sq. m for hilly areas	50% of the cost limited to 20 units per beneficiary (each unit should not exceed 200 sq.m).
	2. Shade Net House		

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	(a) Tubular structure	Rs. 710/Sqm and Rs. 816/Sqm for hilly areas	50% of cost limited to 4000 sq.m. per beneficiary.
	(b) Wooden structure	Rs. 492/Sqm and Rs. 566/Sqm for hilly areas	50% of cost limited to 20 units per beneficiary (each unit not to exceed 200 sq.m) .
	(c) Bamboo structure	Rs.360/Sqm and Rs.414/Sqm for hilly areas	50% of cost limited to 20 units per beneficiary (each unit not to exceed 200 sq.m).
	3. Plastic Tunnels	Rs. 60/Sqm and Rs.75/Sqm for hilly areas.	50% of cost limited 1000 sq.m. per beneficiary.
	4. Walk in tunnels	Rs. 600/ sqm	50% of the cost limited to 5 units per beneficiary (each unit not to exceed 800 Sq. m).
	5. Anti Bird/Anti Hail Nets	Rs.35/Sqm	50% of cost limited to 5000 sq.m. per beneficiary.
	6. Cost of planting material & cultivation of high value vegetables grown in poly house	Rs.140/Sq. m	50% of cost limited to 4000 sq.m. per beneficiary.
	7. Cost of planting material & cultivation of Orchid & Anthurium under poly house/ shade net house.	Rs. 700/Sqm	50% of cost limited to 4000 sq.m. per beneficiary.
	8. Cost of planting material & cultivation of Carnation & Gerbera under poly house/ shade net house.	Rs. 610/Sqm	50% of cost limited to 4000 sq.m. per beneficiary.
	9. Cost of planting material & cultivation of Rose and lilum under poly house/ shade net house	Rs. 426/Sqm	50% of cost limited to 4000 sq.m. per beneficiary
	10. Plastic Mulching	Rs. 32,000/ha and Rs. 36,800/ha for hilly areas	50% of the total cost limited to 2 ha per beneficiary.
<b>B. 6</b>	<b>Precision Farming development and extension through Precision Farming Development Centers (PFDCs)</b>	Project based	100% of cost to PFDCs
<b>B. 7</b>	<b>Promotion of Integrated Nutrient Management(INM) Integrated Pest Management (IPM)</b>		
	i) Promotion of IPM/INM	Rs. 4000/ha	30% of cost subject to a maximum of Rs 1200/ha limited to 4.00 ha/ beneficiary.
	ii) Disease forecasting unit (PSUs)	Rs. 6.00 lakh/unit	100 % of costs.
	iii) Bio control lab	Rs. 90.00 lakh/unit	100% to Public sector and 50% to private sector.
	iv) Plant Health Clinics	Rs. 25.00 lakhs/unit	100% to Public sector and 50% to private sector.
	v) Leaf /Tissue analysis labs	Rs. 25.00 lakh/unit	100% to Public sector and 50% to private sector.
<b>B. 8</b>	<b>Organic Farming</b>		
	i) Adoption of organic farming.	Rs. 20,000/ha	50% of cost limited to Rs.10000/ha for a maximum area of 4 ha. per beneficiary, spread over a period of 3 years involving an assistance of Rs.4000/- in first year and Rs.3000/- each in second & third year. The programme to be linked with certification.
	ii) Organic Certification	Project based	Rs. 5 lakh for a cluster of 50 ha which will include Rs.1.50 lakh in first year, Rs. 1.50 lakh in second year and Rs. 2.00 lakh in third year.

	iii) Vermi compost Units/organic input production)	Rs.100,000/ unit for permanent structure and Rs. 16,000/unit for HDPE Vermibed.	50% of cost conforming to the size of the unit of 30'x8'x2.5' dimension of permanent structure to be administered on pro-rata basis. For HDPE Vermibed, 50% of cost conforming to the size of 96 cft (12'x4'x2') and IS 15907:2010 to be administered on pro-rata basis.
<b>B. 9</b>	<b>Certification for Good Agricultural Practices (GAP), Including infrastructure</b>	Rs. 10,000/ ha	50% of the cost for maximum of 4ha/beneficiary.
<b>B.10</b>	<b>Centre of Excellence for Horticulture</b>	Rs.1000.00 lakh/ centre	100% of cost to public sector. This can be established through bi-lateral co-operation also.
<b>B.11</b>	<b>Pollination support through beekeeping</b>		
	i) Production of nucleus stock (Public sector)	Rs. 20.00 lakh	100% of the cost.
	ii) Production of bee colonies by bee breeder	Rs. 10.00 lakh	40% of cost for producing min. of 2000 colonies / year
	iii) Honey bee colony	Rs.2000/colony of 8 frames	40% of cost limited to 50 colonies / beneficiary.
	iv) Bee Hives	Rs 2000/ per hive.	40% of cost limited to 50 colonies / beneficiary.
	v) Equipment including honey extractor (4 frame), food grade container (30 kg), net, including complete set of Bee keeping equipment.	Rs. 20,000/set	40% of the cost limited to one set per beneficiary.
<b>B. 12</b>	<b>Horticulture Mechanization</b>		
	i) Tractor (upto 20 PTO HP)	3.00 lakh/unit	25% of cost, subject to a maximum of Rs. 0.75 lakh/unit for general category farmers, and in the case if SC, ST, Small & Marginal famers, women farmers and beneficiaries in NE states, 35% of cost, subject to a maximum of Rs. 1.00 lakh per unit.
	ii) Power Tiller		
	a) Power tiller (below 8 BHP)	1.00 lakh per unit	Subject to a maximum of Rs.0.40 lakh/unit for general category farmers, and in the case if SC, ST, Small & Marginal farmers, women farmers and beneficiaries in NE states, subject of a maximum of Rs. 0.50 lakh/unit.
	b) Power tiller (8 BHP & above)	1.50 lakh per unit	Subject to a maximum of Rs.0.60 lakh/unit for general category farmers, and in the case if SC, ST, Small & Marginal farmers, women farmers and beneficiaries in NE states, subject of a maximum of Rs. 0.75 lakh/unit.
	iii) Tractor/Power tiller (below 20 BHP) driven equipments		
	a) Land Development, tillage and seed bed preparation equipments	0.30 lakh per unit	Subject to a maximum of Rs.0.12 lakh/unit for general category farmers, and in the case if SC, ST, Small & Marginal farmers, women farmers and beneficiaries in NE states, subject of a maximum of Rs. 0.15 lakh/unit.
	b) Sowing, planting reaping and digging equipments	0.30 lakh per unit	Subject to a maximum of Rs.0.12 lakh/unit for general category farmers, and in the case if SC, ST, Small & Marginal farmers, women farmers and beneficiaries in NE states, subject of a maximum of Rs. 0.15 lakh/unit.
	c) Plastic mulch laying machine	0.70 lakh per unit	Subject to a maximum of Rs.0.28 lakh/unit for general category farmers, and in the case if SC, ST, Small & Marginal farmers, women farmers and beneficiaries in NE states, subject of a maximum of Rs. 0.35 lakh/unit.

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	iv) Self-propelled Horticulture Machinery	2.50 lakh per unit	Subject to a maximum of Rs. 1.00 lakh/unit for general category farmers, and in the case if SC, ST, Small & Marginal farmers, women farmers and beneficiaries in NE states, subject of a maximum of Rs. 1.25 lakh/unit.
	v) Plant Protection equipments		
	(a) Manual sprayer: (i) Knapsack/foot operated sprayer.	Rs. 0.012 lakh/unit	Subject to a maximum of Rs.0.005 lakh/unit for general category farmers, and in the case if SC, ST, Small & Marginal farmers, women farmers and beneficiaries in NE states, subject of a maximum of Rs. 0.006 lakh/unit.
	(b) Powered Knapsack sprayer/Power Operated Taiwan sprayer (capacity 8 - 12 lts):	Rs. 0.062 lakh/unit	Subject to a maximum of Rs.0.025 lakh/unit for general category farmers, and in the case if SC, ST, Small & Marginal farmers, women farmers and beneficiaries in NE states, subject of a maximum of Rs. 0.031 lakh/unit
	(c) Powered Knapsack sprayer/Power Operated Taiwan sprayer (capacity above 12- 16 lts):	Rs. 0.076 lakh/unit	Subject to a maximum of Rs.0.03 lakh/unit for general category farmers, and in the case if SC, ST, Small & Marginal farmers, women farmers and beneficiaries in NE states, subject of a maximum of Rs. 0.038 lakh/unit
	(d) Powered Knapsack sprayer/Power Operated Taiwan sprayer (capacity above 16/lts	Rs. 0.20 lakh/unit	Subject to a maximum of Rs.0.08 lakh/unit for general category farmers, and in the case if SC, ST, Small & Marginal farmers, women farmers and beneficiaries in NE states, subject of a maximum of Rs. 0.10 lakh/unit
	(e) Tractor mounted /Operated Sprayer (below 20 BHP ):	Rs. 0.20 lakh/unit	Subject to a maximum of Rs.0.08 lakh/unit for general category farmers, and in the case if SC, ST, Small & Marginal farmers, women farmers and beneficiaries in NE states, subject of a maximum of Rs. 0.10 lakh/unit
	(f) Tractor mounted / Operated Sprayer (above 35 BHP )/Electrostatic Sprayer	Rs. 1.26 lakh/unit	40% of cost, subject to a maximum of Rs. 0.50 lakh/unit for general category farmers, and in the case if SC, ST, Small & Marginal famers, women farmers and beneficiaries in NE states, 50% of cost, subject to a maximum of Rs. 0.63 lakh per unit.
	(g) Eco Friendly Light Trap	Rs. 0.028 lakh/unit	Subject to a maximum of Rs.0.012 lakh/unit for general category farmers, and in the case if SC, ST, Small & Marginal farmers, women farmers and beneficiaries in NE states, subject of a maximum of Rs. 0.014 lakh/unit
	vi) Import of new machines & tools for horticulture for demonstration purpose (Public sector)	Rs. 50.00 lakh per unit	100% of the total cost.
<b>B.13</b>	<b>Technology Dissemination through demonstration/ front line demonstration</b>	Rs. 25.00 lakh	75 % of cost in farmers field and 100% of cost in farms belonging to Public Sector, SAUs etc.
<b>B.14</b>	<b>Human Resource Development (HRD)</b>		
	i) HRD for Supervisors & Entrepreneurs	Rs. 20.00 lakh/unit	100% of the cost in first year. In subsequent years, cost of infrastructure not to be claimed.
	ii) HRD for Gardeners	Rs. 15.00 lakh/unit	100% of the cost.
	iii) Training of farmers		
	a) Within the State	Rs. 1000/day per farmer including transport	100% of the cost.
	b) Outside the State	Project based as per actual.	100% of the cost.
	iv) Exposure visit of farmers		



	a) Outside the State	Project based as per actual.	100% of the cost.
	b) Outside India	Rs. 4.00 lakh / participant	Project Based. 100% of air/rail travel. Course fee cost to be funded under Mission Management.
	v) Training / study tour of technical staff/ field functionaries		
	a) Within the State	Rs.300/day per participant plus TA/DA, as admissible	100% of the cost.
	b) Study tour to progressive States/units (group of minimum 5 participants)	Rs.800/day per participant plus TA/DA, as admissible	100% of the cost.
	c) Outside India	Rs. 6.00 lakh per participant	100% of air/rail travel and course fee cost to be funded under Mission Management.
<b>C.</b>	<b>INTEGRATED POST HARVEST MANAGEMENT</b>		
C. 1	Pack house	Rs. 4.00 lakh/unit with size of 9Mx6M	50% of the capital cost.
C. 2	Integrated pack house with facilities for conveyer belt, sorting, grading units, washing, drying and weighing.	Rs. 50.00 lakh per unit with size of 9Mx18M	Credit linked back-ended subsidy @ 35% of the cost of project in general areas and 50% of cost in case Hilly & Scheduled areas for individual entrepreneurs.
C. 3	Pre-cooling unit	Rs. 25.00 lakh / unit with capacity of 6 MT.	Credit linked back-ended subsidy @ 35% of the cost of project in general areas and 50% of cost in case Hilly & Scheduled areas for individual entrepreneurs.
C. 4	Cold room (staging)	Rs. 15.00 lakh/ unit of 30 MT capacity	Credit linked back-ended subsidy @ 35% of the cost of project in general areas and 50% of cost in case Hilly & Scheduled areas, per beneficiary.
C. 5	Mobile pre- cooling unit	Rs. 25.00 lakh	Credit linked back-ended subsidy @ 35% of the cost of project in general areas and 50% of cost in case Hilly & Scheduled areas, per beneficiary.
C. 6	Cold Storage (Construction, Expansion and Modernisation)		
	i) Cold storage units Type 1 - basic mezzanine structure with large chamber (of >250 MT) type with single temperature zone	Rs. 8,000/MT, (max 5,000 MT capacity)	Credit linked back-ended subsidy @ 35% of the cost of project in general areas and 50% of cost in case Hilly & Scheduled areas, per beneficiary.
	ii) Cold Storage Unit Type 2 – PEB structure for multiple temperature and product use, more than 6 chambers (of < 250 MT) and basic material handling equipment.	Rs. 10,000/MT, (max 5,000 MT capacity)	Credit linked back-ended subsidy @ 35% of the cost of project in general areas and 50% of cost in case Hilly & Scheduled areas, per beneficiary.
	iii) Cold Storage Units Type 2 with add on technology for Controlled Atmosphere	Additional Rs. 10,000/MT for add on components of controlled atmosphere technology. Details are as per <b>Appendix - II</b>	Credit linked back-ended subsidy @ 35% of the cost of project in general areas and 50% of cost in case Hilly & Scheduled areas, per beneficiary.

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C. 7	Technology induction and modernisation of cold-chain	Max Rs. 250.00 lakh for modernization of PLC equipment, packaging lines, dock levelers, advanced graders, alternate technologies, stacking systems, modernization of insulation and refrigeration, etc. Details are in <b>Appendix –II</b>	Credit linked back-ended subsidy @ 35% of the cost of project in general areas and 50% of cost in case Hilly & Scheduled areas, per beneficiary.
C. 8	Refrigerated Transport vehicles	Rs. 26.00 lakh for 9 MT (NHM & HMNEH), and prorata basis for lesser capacity, but not below 4 MT.	Credit linked back-ended subsidy @ 35% of the cost of project in general areas and 50% of cost in case of Hilly & Scheduled areas, per beneficiary.
C. 9	Primary / Mobile/ Minimal processing unit	Rs 25.00 lakh/unit	Credit linked back-ended subsidy @ 40% of the capital cost of project in general areas and 55% in case of Hilly & Scheduled areas.
C. 10	Ripening chamber	Rs. 1.00 lakh/MT	Credit linked back-ended subsidy @ 35% of the capital cost of project in general areas and 50% in case of Hilly & Scheduled areas for a maximum of 300 MT per beneficiary.
C. 11	Evaporative / low energy cool chamber (8 MT)	Rs. 5.00 lakh/unit	50% of the total cost.
C. 12	Preservation unit (low cost)	Rs.2.00 lakh/unit for new unit and Rs.1.00lakh/unit for up-gradation	50% of the total cost.
C. 13	Low cost onion storage structure (25 MT)	Rs. 1.75 lakh/per unit	50% of the total cost.
C. 14	Pusa Zero energy cool chamber (100 kg)	Rs. 4000 per unit	50% of the total cost.
C. 15	Integrated Cold Chain supply System	Project Based. Project should comprise of minimum two components listed under C.1 to C.13 above, with maximum cost of Rs. 600.00 lakh.	Credit linked back-ended subsidy @ 35% of the cost of project in general areas and 50% of cost in case Hilly & Scheduled areas, per beneficiary.
<b>D.</b>	<b>ESTABLISHMENT OF MARKETING INFRASTRUCTURE FOR HORTICULTURAL PRODUCE IN GOVT./PRIVATE/ COOPERATIVE SECTOR</b>		
D. 1	Terminal markets	Rs. 150.00 crore/project	25% to 40% (limited to Rs.50.00 crore) as Public-Private Partnership mode through competitive bidding, in accordance with operational guidelines issued separately.
D. 2	Wholesale markets	Rs.100.00 crore/project	Credit linked back-ended subsidy @ 25% of the capital cost of project in general areas and 33.33% in case of Hilly & Scheduled areas, per beneficiary.

D. 3	Rural Markets/Apni mandies/Direct markets	Rs. 25.00 lakh	Credit linked back-ended subsidy @ 40% of the capital cost of project in general areas and 55% in case of Hilly & Scheduled areas, per beneficiary.
D. 4	Retail Markets / outlets (environmentally controlled)	Rs. 15.00 lakh/unit	Credit linked back-ended subsidy @ 35% of the capital cost of project in general areas and 50% in case of Hilly & Scheduled areas, per beneficiary.
D. 5	Static/Mobile Vending cart/ platform with cool chamber.	Rs. 30,000/ unit	50% of total cost.
D. 6	Functional Infrastructure for:		
	i) Collection, sorting/ grading, packing units etc.	Rs.15.00 lakh	Credit linked back-ended subsidy @ 40% of the capital cost of project in general areas and 55 % in case of Hilly & Scheduled areas, per beneficiary.
	ii) Quality control/ analysis lab	Rs. 200.00 lakh	100% of the total cost to public sector and 50% of cost to private sector as credit linked back ended subsidy.
D. 7	Gravity operated rope way in hilly areas	Rs. 15.00 lakh/km	Credit linked back-ended subsidy @ 50% of capital costs in Hilly areas.
<b>E.</b>	<b>FOOD PROCESSING</b>		
E. 1	Food processing units	Rs. 800 lakh/unit	Credit linked back ended capital investment assistance of 50% of cost in the States of J&K, Himachal and Uttarakhand
<b>F.</b>	<b>SPECIAL INTERVENTIONS</b>		
F. 1	Innovative interventions not covered under any GOI schemes	10% of outlay	50% of cost, based on project proposal.
F. 2	Tackling of emergent /unforeseen requirements of SHMs	Rs.20.00 lakh	50% of cost, based on project proposal.
<b>G.</b>	<b>MISSION MANAGEMENT</b>		
G. 1	State & Districts Mission Offices and implementing agencies for administrative expenses, project, preparation, computerization, contingency etc.	5% of total annual expenditure on the basis of appraised needs to State Horticulture Mission (SHM) / implementing Agencies	100% assistance.
G. 2	Institutional Strengthening, hire/purchase of vehicles, hardware/software	Project based	100% assistance.
G. 3	Seminars conferences, workshops, exhibitions, Kisan Mela, horticulture shows, honey festivals etc.		
	a) International level	Rs. 7.50 lakh per event.	100% of cost per event of 4 days, on pro rata basis.
	b) National level	Rs. 5.00 lakh per event.	100% of cost per event of two days.
	c) State level	Rs. 3.00 lakh /event	100% assistance subject to a maximum of Rs.3.00 lakh per event of two days.
	d) District level	Rs. 2.00 lakh /event	100% assistance subject to a maximum of Rs.2.00 lakh per event of two days.
G. 4	Information dissemination through publicity, printed literature etc and local advertisements	Rs. 0.40 lakh/ block	100% of cost.

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G. 5	Development of technology packages in electronic form to be shared through IT network	Rs. 1.00 lakh/ district	100% of Cost
G. 6	Technical Support Group (TSG) at State Level for hiring experts/staff, studies, monitoring & concurrent evaluation/ evaluation, mass media, publicity, video conference etc.	Project based, subject to a ceiling of Rs. 50.00 lakh per annum/state	100% of cost
G. 7	7. Promotion of Farmer Producers Organization/ FPO/FIG Farmer Interest Groups of 15-20 farmers/20 ha, Growers Associations and tie up with Financial Institution and Aggregators.	As per norms issued by SFAC.	As per norms issued by SFAC from time to time.
G. 8	Baseline survey and Strengthening horticultural statistical data base	Rs. 100.00 lakh for large states, Rs. 50.00 lakh for small states and Rs. 25.00 lakh for very small states/ UTs.	100% of cost as one time grant on survey related activities.
<b>I.</b>	<b>National Level</b>		
G. 9	Technical Support Group (TSG) at National Level for hiring experts/staff, studies, Seminar/ Workshops, training, contingencies, monitoring & evaluation, mass media, publicity, video conference etc as per G.3.	Rs. 5.00 crore per annum	100% of cost.
G. 10	2. Technical Collaboration with International agencies like FAO, World Bank, ADB, Bilateral cooperation, International exposure visits/ training of officials etc.	Project based. On actual cost basis.	100% of cost.
* Cost norms means upper limit of cost for calculation of subsidy.			
# Note: The release of back ended subsidy need not be credit linked for the institutions like Public Sector Units, Panchayats, Cooperatives, Registered Societies / Trusts and Public limited Companies, provided they can meet the remaining share of the project cost, out of their own resources. Hilly Areas include those areas covered under Hill Area Development Programme and Western Ghat Development Programme of Planning Commission. Scheduled Areas include those areas notified by Planning Commission and State Governments. TSP Areas include those areas notified by Ministry of Tribal Affairs. NE & Himalayan States refer to States in North East & Himalayan region covered under HMNEH scheme.			

# APPENDIX I

## INDICATIVE UNIT COST OF AREA EXPANSION OF SELECTED FRUIT CROPS (Rupees per hectare)

Crop	Plant spacing (m)	No. of Plants/ha	Cost of planting material	Cost of inputs	Total cost without integration	Cost of integration with drip etc.	Total cost with Integration
Almond	4.0 × 4.0	625	37500	40000	77500	33900	111400
	3.0 × 3.0	1111	66660	40000	106660	58400	165060
Aonla	6.0 × 6.0	278	10008	30000	40008	33,900	73908
	4.0 × 5.0	500	18000	32000	50000	33900	83900
	3.0 × 3.0	1110	39960	90000	129960	58400	188360
Apple	6.0 × 6.0	278	16680	30000	46680	33900	80580
	4.0 × 4.0 (RS- MM 111)	625	37500	32000	69500	33900	103400
	3.5 × 3.5 (RS- MM 111)	814	48840	35000	83840	58400	142240
	3.0 × 3.0 (RS- MM 106)	1111	66660	38000	104660	58400	163060
	3.0 × 1.5 (RS- M9)	2222	133320	40000	173320	58400	231720
	2.5 × 2.5 (RS- MM 106)	1600	96000	42000	138000	58400	196400
	1.5 × 1.5 (RS- M9)	4444	266640	45000	311640	85400	397040
Apricot	4.0 × 4.0	625	37500	32000	69500	33900	103400
	3.5 × 3.5	816	48960	35000	83960	58400	142360
Banana (Sucker)	2.0 × 2.0	2500	25000	40000	65000	58400	123400
Banana (TC)	1.8 × 1.8	3086	52462	50000	102462	58400	160862
	1.5 × 1.5	4444	75548	60000	135548	85400	220948
Ber	6.0 × 6.0	278	8340	20000	28340	33900	62240
	5.0 × 5.0	400	12000	23000	35000	33900	68900
	4.0 × 4.0	625	18750	25000	43750	33900	77650
Cherry	4.0 × 4.0	625	18750	32000	50750	33900	84650
<b>Citrus</b>							
(a) Lime & Lemons	3.0 × 3.0	1111	39996	40000	79996	58400	138396
	4.0 × 4.5	555	19980	35000	54980	33900	88880

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<b>(b) Mandarine/ Orange</b>	6.0 × 6.0	278	10008	30000	40008	33900	73908
	5.0 × 5.0	400	14400	31000	45400	33900	79300
	5.4 × 5.4	343	12348	30000	42348	33900	76248
	5.0 × 4.5	444	15984	32000	47984	33900	81884
	4.5 × 4.5	494	17784	35000	52784	33900	86684
	4.0 × 5.0	500	18000	32000	50000	33900	83900
<b>(c) Sweet Orange</b>	6.0 × 6.0	278	10008	30000	40008	33900	73908
<b>Custard apple</b>	2.5 × 2.5	1600	64000	42000	106000	58400	164400
<b>Fig</b>	4.0 × 4.0	625	18750	32000	50750	33900	84650
	2.5 × 2.5	1600	48000	35000	83000	58400	141400
<b>Grapes</b>	4.0 × 4.0	625	9375	98000	107375	75000	182375
	3.0 × 3.0	1110	16650	100000	116650	100000	216650
	3.0 × 2.0	1666	24990	110000	134990	150000	284990
	1.8 x 1.8	2777	41655	115000	156655	200000	356655
<b>Guava</b>	6.0 × 6.0	278	8340	30000	38340	33900	72240
	3.0 × 6.0	555	16650	35000	51650	58400	110050
	3.0 × 3.0	1111	33330	40000	73330	58400	131730
	1.5 x 3.0	2222	66660	45000	111660	58400	170060
	1.0 x 2.0	5000	150000	50000	200000	58400	258400
<b>Kiwi</b>	6.0 × 6.0	278	6950	30000	36950	60000	96950
	4.0 × 6.0	416	10400	100000	110400	70000	180400
	4.0 × 5.0	500	12500	115000	127500	72000	199500
	4.0 × 4.0	625	15625	120000	135625	75000	210625
<b>Litchi</b>	10.0 x 10.0	100	5000	23000	28000	23500	51500
	7.5 x 7.5	178	8900	26450	35350	33900	69250
	6.0 x 6.0	278	13900	30000	43900	33900	77800
	4.5 x 4.5 x 9.0	329	16450	35000	51450	33900	85350
<b>Mango</b>	10.0 x 10.0	100	4500	21000	25500	23500	49000
	5.0 × 5.0	400	18000	23000	41000	33900	74900
	4.0 × 6.0	416	18720	30000	48720	33900	82620
	3.0 × 6.0	555	24975	32000	56975	33900	90875
	3.0 × 4.0	833	37485	35000	72485	33900	106385
	2.5 × 2.5	1600	72000	40000	112000	58400	170400
<b>Papaya</b>	1.8 x 1.8	2777	41655	20000	61655	58400	120055
	1.5 x 1.5	4444	66660	22000	88660	85400	174060
<b>Passion fruit</b>	4.0 × 4.0	625	12500	98000	110500	75000	185500
	3.0 × 3.0	1111	22220	100000	122220	100000	222220
	3.0 × 2.0	1666	33320	11000	44320	150000	194320
<b>Peach</b>	3 x 2.5	1333	46655	45000	91655	58400	150055
	2.5 x 2.5	1600	56000	50000	106000	58400	164400

<b>Pear</b>	5.0 × 5.0	500	15000	23000	38000	33900	71900
	4.0 × 4.0	625	18750	30000	48750	33900	82650
	3.0 × 3.0	1111	33330	40000	73330	58400	131730
<b>Pineapple (Suck)</b>	0.6 × 0.3	45000	135000	23000	158000	100000	258000
<b>Pineapple (TC)</b>	0.6 × 0.3	45000	180000	34500	214500	100000	314500
	0.3 × 0.6 × .9	43000	172000	34500	206500	100000	306500
	.225 × .6 × .9	53000	212000	56000	268000	110000	378000
<b>Plum</b>	3.5 × 3.5	816	32640	35000	67640	33900	101540
	2.5 × 2.5	1600	64000	42000	106000	58400	164400
<b>Pomegranate</b>	5.0 × 5.0	400	16000	32000	48000	33900	81900
	5.0 × 4.0	500	20000	33000	53000	33900	86900
	5.0 × 3.0	667	26680	40000	66680	33900	100580
	5.0 × 2.5	800	32000	48000	80000	33900	139000
	4.5 × 3.0	741	29640	42000	71640	33900	105540
	4.0 × 3.0	666	26640	45000	71640	33900	105540
<b>Sapota</b>	5.0 × 5.0	400	14400	31000	45400	33900	79300
<b>Strawberry</b>	0.9 × 0.45	24691	123455	55000	178455	100000	278455
	0.6 × 0.25	66666	333330	50000	383330	100000	483330
	0.5 × 1.0	2000	10000	100000	110000	100000	210000
<b>Walnut</b>	6.0 × 6.0	278	41700	30000	71700	33900	105600
	5.0 × 5.0	400	60000	31000	91000	33900	124900

## APPENDIX II

### TECHNOLOGY INDUCTION IN COLD CHAIN, ADD-ON FOR CA AND MODERNIZATION

S. No.	Item	Description	Admissible Cost
i	CA Generator*	Inclusive of sensors, pressure equalising equipment, controls	Rs. 125.00 lakh per unit, maximum 2 generators
ii	Specialised CA Doors*	Add-on specialisation to storage doors for positive pressure chambers.	Rs. 2.50 lac per door, maximum 20 doors
iii	CA Tents#	Low cost enclosure of polyethylene PVC, mylar or other impermeable body for existing or new cold stores	As per original invoice, maximum 5 enclosures
iv	Programmed Logic Controller (PLC) equipment# @	Electronic and electrical logic controls for machinery & equipment for existing or new cold stores.	50% of cost as per original invoice, maximum Rs 10 lakh
v	Dock Leveler system # @	In existing or new storages	Max Rs. 7 lakh per unit, max 5 units
vi	Warehouse Development & Regulatory Authority (WDRA) / Negotiable Warehouse Receipt (NWR) system, equipment# @	Computers and printers & software for use with NWR of WDRA	100% of cost as per original invoice, maximum Rs. 2 lakh
vii	Specialised Packaging#	Automated packaging lines for fruits & vegetables with farm code labelling, with packaging material	100% of cost as per invoice, maximum Rs. 15 lakh per project
viii	High Reach Material Handling Equipment (MHE)*#	Specialised material Handling equipment	Rs. 17 lakh per unit, for max 2 units.
ix	Modernisation of refrigeration @	For upgrading of evaporator system, compressor system	50% of cost as per original invoice, maximum Rs. 100 lakh @ Rs. 2500/MT
x	Modernisation of insulation@	For repair or modernising of cold chamber insulation	50% of cost as per original invoice, maximum Rs.100 lakh @ Rs. 1500/MT
xi	Reefer Container#	Reefer container for use on existing chassis trailers	Max Rs. 6 lakh per 9MT (20 foot container)
xii	Advanced Grader*#@	Computerised, Optical Grading Lines, with packaging material	100% of cost as per original invoice, max Rs. 75 lakh per line
xiii	Stacking system*#@	Racking systemBins, Pallets, for existing or new cold stores.	100% of invoice cost, max Rs 2000/MT
xiv	Retail Shelf / equipment#	Temperature controlled retail cabinets or merchandising equipment	Maximum Rs. 10 lakhs per establishment
xv	Alternate Technology#@	Vapour Absorption, Phase change material, Solar PV panels or Solar Thermal sys	100% of cost as per invoice, maximum Rs. 35 lakhs per project

Components categorization: \* CA Add-ons; # Other Add-ons; and @ Modernisation.

Maximum permissible subsidy shall be subject to original invoices and in no case more than Rs. 750.00 lakh, whichever is lower. For add-on technology, credit linked back ended subsidy shall be provided at 35/50% of the admissible cost. Technology offers inherent value for operators and the admissible cost norms are designed to incentivize induction and not to serve as venture funding.

Any other components as maybe decided by Technical Committee when new technology or items that reduce carbon footprints are introduced. For individual unit components like insulation, graders, CA generator, solar panels, etc - NCCD shall publish guidelines for use by appraising agency.



# ANNEXURE-VI

## COST NORMS AND PATTERN OF ASSISTANCE UNDER MIDH FOR BAMBOO RELATED ACTIVITIES DURING XII PLAN

S. No	Item	Cost Norms*	Pattern of Assistance#
<b>A.</b>	<b>RESEARCH &amp; DEVELOPMENT</b>		
	i) Research & Development on bamboo	Rs. 100.00 lakh	Central Government Institutes under ICAR, CSIR, ICFRE, SAUs, National level Govt. agencies and others location specific will take up need based applied research & development works in the areas of (i) Seed & Planting material including import of planting material (ii) Technology standardization and (iii) Technology acquisition and (iv) imparting training and FLD, on project mode, with 100% assistance.
<b>B.</b>	<b>PLANTATION INFRASTRUCTURE DEVELOPMENT</b>		
<b>B.1</b>	<b>Production of Planting Material</b>		
	i) Hi-tech Nursery (2 ha)	40.00 lakh/ unit	100% of cost to public sector and 40% of cost to private sector, as credit linked back ended subsidy.
	ii) Small Nursery (0.5 ha)	10.00 lakh/ unit	100% of cost to public sector and 50% of cost to private sector, as credit linked back ended subsidy.
	iii) Rehabilitation of TC unit for bamboo	Rs. 21.00 lakh/unit	100% of cost to public sector and 50% of cost to private sector, as credit linked back ended subsidy
<b>B.2</b>	<b>Area expansion under Bamboo</b>		
	i) Forest areas / Public land (Through JFMC / Panchayati Raj Institutions / SHGs, Women group etc.	Rs. 42,000/ha	100% of cost in three installments (50:25:25) in three years
	ii) Non Forest areas	Rs. 30,000/ha, Rs. 42,000/ha with drip irrigation	35% of cost in 3 installments over a period of 3 years, limited to 4 ha per beneficiary.
<b>B.3</b>	<b>Improvement of Existing Stock</b>		
	i) Improvement of Existing Stock in forest/non-forest areas	Rs. 20,000/ha	100% assistance to Public sector and 40% to Private sector, limited to 2 ha per beneficiary for private sector and no area limit for public sector
<b>B. 4</b>	<b>Technology Transfer &amp; HRD</b>		
	i) Training of Farmers/ Artisans	Rs. 1000/day per farmer including transport within State and for outside State, project based as per actual.	100% of cost.
	ii) Training of Field Functionaries	Rs. 300/day per participant plus TA/DA, as admissible.	100% of cost.

## ANNEXURE-VI

	iii) International training / visit for exposure of NBM staff/ field functionaries including farmers and entrepreneurs in bamboo sector to upcoming technologies.	Rs. 4.00 lakh/ participant	Project based 100% of air/rail fare course fee cost to be funded under Mission Management for a maximum of 50 participants per year on all India basis.
	iv) Demonstration of Plantation Technology	Rs. 50,000/ha	100% of cost in forest areas and public lands. 50% of cost subject to a maximum of Rs. 25,000/ha. for a maximum area of 1 ha per beneficiary in non-forest areas.
	v) Organizing Workshops/ Seminars/Training	Project Based	100% assistance.
	a) International Level	Rs. 7.50 lakh per event	100% assistance subject to a maximum of Rs.40 lakh.
	b) National Level	Rs. 5.00 lakh per event	100% of cost per event of two days.
	c) State Level	Rs. 3.00 lakh per event	100% of cost per event of two days.
	d) District Level		
<b>B. 5</b>	<b>Pest and disease management of bamboo</b>	Rs. 400/ha	50% of cost subject to a maximum of Rs. 200/- per ha, limited to 2.00 ha per beneficiary
<b>B. 6</b>	<b>Creation of Water resources</b>		
	i) Community tanks/on farm ponds/on farm water reservoirs with use of plastic/RCC lining	Rs. 20.00 lakh in plain areas and Rs. 25.00 lakh/ unit for Hilly areas.	100% of cost to irrigate 10 ha of command area, with either use of minimum 300 micron plastic films or RCC lining, owned & managed by a community/ farmer group. Cost for non-lined ponds/ tanks (only in black cotton soils) will be 30% less. Assistance under NBM will be restricted to the cost of plastic/RCC lining.
	ii) Water harvesting system for individuals- for storage of water in 20mx20mx3m ponds/ wells @ Rs.100/- cum	Rs. 1.50 lakh/unit in plain areas and Rs. 1.80 lakh/unit in hilly areas	50% of cost including plastic/RCC lining. Cost for non-lined ponds/ tanks (only in black cotton soils) will be 30% less. For smaller size of the ponds/dug wells, cost will be admissible on pro rata basis depending upon the command area. Maintenance will be ensured by the beneficiary.
<b>C.</b>	<b>INNOVATIVE INTERVENTIONS IN BAMBOO</b>		
	i). Innovative Interventions	Project Based	100% assistance
<b>D.</b>	<b>INTEGRATED POST HARVEST MANAGEMENT</b>		
	i). Post harvest storage and treatment facilities for bamboo	Rs. 25.00 lakh	40% of cost as credit linked back ended subsidy.
<b>E.</b>	<b>ESTABLISHMENT OF MARKETING INFRASTRUCTURE</b>		
E. 1	(i) Bamboo Wholesale Retail Markets near Villages	Rs. 25.00 lakh per unit	Credit linked back-ended subsidy @ 35% of the capital cost of project in general areas and 50% in case of Hilly & Scheduled areas for individual entrepreneurs.
E. 2	Bamboo Bazaars	Rs. 48.00 lakhs/unit	Credit linked back-ended subsidy @ 35% of the capital cost of project in general areas and 50% in case of Hilly & Scheduled areas, per beneficiary.
E. 3	Retail Outlets (Showrooms) (Nos.)	Rs. 60.00 lakhs/unit.	Credit linked back-ended subsidy @ 35% of the capital cost of project in general areas and 50% in case of Hilly & Scheduled areas, per beneficiary.
E. 4	Retail outlet near village	Rs. 10.00 lakh per unit	Credit linked back-ended subsidy @ 35% of the capital cost of project in general areas and 50% in case of Hilly & Scheduled areas, per beneficiary.

E. 5	Participation in Domestic Trade Fairs / Exhibition etc.	8.00 lakh / event	100% of cost for a maximum of 27 participants in a year on all India basis.
E. 6	Participation in International Trade Fairs / Exhibition etc.	24.00 lakh / event	100% of cost for a maximum of 30 participants in a year on all India basis.
<b>F.</b>	<b>IMPLEMENTATION MONITORING MECHANISM</b>		
<b>F. 1</b>	<b>National Bamboo Cell</b>		
	a) Evaluation and Monitoring	Project Based	100% of cost
	b) Bamboo Technical Support Group	Project Based	Subject to a ceiling of Rs. 50.00 lakh / annum / state.
	c) Colored Brochures and Leaflets	Project Based	100% of cost.
	d) Promotional campaigns through Electronic/ Audio-visual Media/ Newspapers	Project Based	100% cost.
	e) Database Generation & Management (Information, Web Based Database)	Project Based	100% of cost to Central / State level institution/ ICAR / ICFRE etc.
F. 2	Baseline survey	Rs. 100.00 lakh for large states, Rs. 50.00 lakh for small states and Rs. 25.00 lakh for very small states/ UTs.	100% of cost as one time grant on survey related activities.
F. 3	Mission management and administration costs.	Project Based	Up to 5.0% of the project cost.

\* Cost norms means upper limit of cost for calculation of subsidy.

# Note: The release of back ended subsidy need not be credit linked for the institutions like Public Sector Units, Panchayats, Cooperatives, Registered Societies / Trusts and Public limited Companies, provided they can meet the remaining share of the project cost, out of their own resources.

# ANNEXURE-VII

## COST NORMS AND PATTERN OF ASSISTANCE UNDER MIDH FOR NATIONAL HORTICULTURE BOARD RELATED ACTIVITIES DURING XII PLAN

S.No.	Item	Cost Norms*	Pattern of Assistance#
<b>A.</b>	<b>DEVELOPMENT OF COMMERCIAL HORTICULTURE##</b>		
A. 1	Commercial Horticulture Development in open field conditions, including components viz planting material, plantation, irrigation, fertigation, precision farming, GAP etc.	Rs. 75.00 lakh /per project (Rs 125.00 lakh for date palm, olive and saffron) for projects covering area over 2 ha.	Credit linked back ended subsidy @ 40% of project cost limited to Rs.30.00 lakh per project in general area and @ 50% of project cost limited to Rs. 37.50 lakh for NE and Hilly and scheduled areas.
A. 2	Commercial Horticulture Development in protected cover.	Rs 112.00 lakh per project covering area above 2500 Sq.mt.	Credit linked back-ended subsidy @ 50% of cost limited to Rs.56.00 lakh per project.
A. 3	Integrated Post Harvest Management Projects e.g. Pack House, Ripening Chamber, Refer Van, Retail Outlets, Pre-cooling units, Primary processing, etc.	Rs. 145.00 lakh per project. The add-on components of pre-cooling, pack house, grading, packing, cold room can be taken up as individual components.	Credit linked back ended subsidy @ 35% of cost limited to Rs.50.75 lakh per project in general areas and @ 50% of project cost limited to Rs. 72.50 lakh per project in NE, Hilly and scheduled Areas, ensuring backward and forward linkage. For standalone projects, NHM norms will be adopted.
<b>B.</b>	<b>CAPITAL INVESTMENT SUBSIDY SCHEME FOR CONSTRUCTION/ EXPANSION/ MODERNIZATION OF COLD STORAGE AND STORAGES FOR HORTICULTURE PRODUCTS</b>		
B. 1	Cold storage units Type 1 - basic mezzanine structure with large chamber (of >250 MT) type with single temperature zone	NHB to take up projects with Capacity above 5000MT upto 10000MT as per following rates. · Rs. 7600/ MT for capacity between 5001 to 6500 MT. · Rs. 7200/MT for capacity between 6501 to 8000 MT. · Rs. 6800/MT for capacity between 8001 to 10000 MT.	Credit linked back-ended subsidy @ 35% of the cost of project (50% in NE, Hilly Areas and scheduled areas) <b>for capacity above 5000 MT.</b>
B. 2	Cold Storage Unit Type 2 – PEB structure for multiple temperature and product use, more than 6 chambers (of < 250 MT) and basic material handling equipment.	NHB to take up projects with Capacity above 5000 MT upto 10000 MT as per following rates. · Rs. 9500/ MT for capacity between 5001 to 6500 MT. · Rs. 9000/MT for capacity between 6501 to 8000 MT. · Rs. 8500/MT for capacity between 8001 to 10000 MT.	Credit linked back-ended subsidy @ 35% of the cost of project (50% in NE, Hilly Areas and scheduled areas) <b>for capacity above 5000 MT.</b>

B. 3	Cold Storage Units Type 2 with add on technology for Controlled Atmosphere	NHB to take up projects with Capacity above 5000MT upto 10000MT as per following rates. Additional Rs. 10,000/MT for add on components of Controlled Atmosphere technology. <b>(Appendix II)</b>	Credit linked back-ended subsidy @ 35% of the cost of project (50% in NE, Hilly Areas and scheduled areas) <b>for capacity above 5000 MT.</b>
B. 4	Technology induction and modernisation of cold-chain	Max Rs.500.00 lakh. (Details in <b>Appendix II</b> )	Credit linked back-ended subsidy @ 35% of the cost of project (50% in NE, Hilly Areas and scheduled areas) <b>for capacity above 5000 MT.</b>
B. 5	Refrigerated Transport vehicles	Rs. 30.00 lakh for 15 MT, and prorata basis for capacities between 9 to 15 MT.	Credit linked back-ended subsidy @ 35% of cost (50% in NE, Hilly Areas and scheduled areas)
<b>C. TECHNOLOGY DEVELOPMENT AND TRANSFER FOR PROMOTION OF HORTICULTURE</b>			
C. 1.	Setting up of block / mother plant and root stock nursery (Area above 4 ha)	Rs. 100.00 Lakh / ha including virus indexing, tissue culture lab etc	Project based – 100% and only through govt. agency The component includes mother block of scion and root stock, infrastructure for production of disease free planting material, creation of poly house, green house, net house, screen house, mist chamber, hot beds sterilization of media, working shed, tissue culture lab, referred lab, virus indexing facility, quality control lab, weather station, water supply, irrigation facility, fertigation unit, electric supply with generator, ETP, farm equipment/farm mechanization, tools, portrays, root trainer, container, computer system for data management and analysis etc.
C. 2	Acquisition of technologies including import of planting material from other countries for evaluation and mass multiplication in order to increase production & productivity of horticulture crops	Rs. 50.00 lakh/project	Project based – 100% and only through govt. agency
C. 3	Import/procurement of machines and Tools for horticulture for demonstration purpose (Public sector)	Rs. 50.00 lakh/ machine	100% of total cost and only through govt. agency
C. 4	Development & Transfer of Technology	Rs. 25.00 lakh/ project	100% of total cost and only through govt. agency
C. 5	Long Distance Transport Solution	Project Based	Rs. 2000.00 lakh
C. 6	Product Promotion and Market Development Services- Horti-fairs	Rs. 25.00 lakh	100% of cost by Central Nodal Agency
C. 7	Exposure visit of farmers (Outside State)	Project based as per actual	100% of the cost.
C. 8	Visit Abroad for Government Officers	Rs. 6.00 lakh per participant	100% of air / rail travel and course fee
C. 9	Organisation/Participation in Seminar/ symposia/ workshop for development of horticulture	Rs 10.00 lakh for international event/ Rs 5.00 lakh for national event/ Rs 3.00 lakh for state level event and Rs 0.50 lakh/- for District level event	50% of cost, on actual basis for Pvt. Agencies and 100% for NHB's own events.

## ANNEXURE-VII

C.10	Accreditation and Rating of Fruit Plant Nurseries	Rs. 1.00 lakh / nursery	By Central Nodal Agency
<b>D.</b>	<b>MARKET INFORMATION SCHEME</b>		
D. 1	Market Information Services and Horticulture Statistics	Project based, as per of actual cost	By Central Nodal Agency
<b>E.</b>	<b>HORTICULTURE PROMOTION SERVICES / EXPERT SERVICES &amp; STRENGTHENING CAPABILITY OF NHB</b>	Project based, as per of actual cost	By Central Nodal Agency

\* Cost norms are indicative and refer to upper limit of cost for calculation of subsidy.

# Note: The release of back ended subsidy need not be credit linked for the institutions like Public Sector Units, Panchayats, Cooperatives, Registered Societies / Trusts and Public limited Companies, provided they can meet the remaining share of the project cost, out of their own resources. Hilly Areas include those areas covered under Hill Area Development Programme and Western Ghat Development Programme of Planning Commission. Scheduled Areas include those areas notified by Planning Commission and State Governments. NE & Himalayan States refer to States in North East & Himalayan region covered under HMNEH scheme.

## For projects on Development of Commercial Horticulture, subsidy need not be credit linked in North Eastern States and for the institutions like Public Sector Units, Panchayats, Cooperatives, Registered Societies / Trusts and Public limited Companies, provided they can meet the remaining share of the project cost, out of their own resources. Projects will have to be appraised by an appraising Agency.

## ANNEXURE-VIII

### COST NORMS AND PATTERN OF ASSISTANCE UNDER MIDH FOR COCONUT DEVELOPMENT BOARD RELATED ACTIVITIES DURING XII PLAN

S.No.	Item	Cost Norms*	Pattern of Assistance
<b>A.</b>	<b>NORMAL SCHEMES</b>		
A. 1.	Production & Distribution of Quality Planting material		
	a) Demonstration cum- Seed Production Farm (DSP)		
	i) Setting up new DSP Farms.	Rs. 25.00 lakh / farm	100% of cost
	ii) Maintenance of seven old DSP Farms with nurseries.	Rs. 27.00 lakh / farm	100% of cost
	b) Establishment of Regional Coconut Nurseries.	Rs. 32.00 per seedling	50% of cost
	c) Distribution of hybrids/dwarf seedlings in Govt. / Private Sector.	Rs. 36.00 per seedling	25% of cost, for a maximum of 25,000 seedlings/ acre.
	d) Establishment of Nucleus Coconut Seed garden	Rs. 6.00 lakh/ha	25% of cost for a maximum of four ha.
	e) Establishment of Small Coconut Nursery	Rs. 2.00 lakh /unit of 0.4 ha.	100% of cost for Public sector and for Private sector
A. 2	Expansion of Area under coconut		
	a) Normal area	-	
	i). Tall varieties	Rs. 26,000/ha	25% of cost for a maximum of 4 ha per beneficiary, in two equal installments.
	ii). Hybrid	Rs. 27,000/ha	
	iii). Dwarf	Rs. 30,000/ha	
	b) Hilly and Scheduled areas#		
	i). Tall varieties	Rs. 55,000 / ha	25% of cost for a maximum of 4 ha per beneficiary, in two equal installments.
	ii). Hybrid	Rs. 55,000 / ha	
	iii). Dwarf	Rs. 60,000 / ha	
A. 3.	Integrated farming for productivity improvement		
	a) Laying out of Demonstration plots.	Rs. 35,000/ha	100% of cost in Public sector on cluster basis.
	b) Organic Manure Units	Rs. 60,000/unit	100% of cost in Public sector on cluster basis.
A. 4	Technology Demonstration / Quality Testing lab.	Rs. 25.00 lakh per project	100% to public sector
A. 5.	Marketing, Market Intelligence Services, statistics and Strengthening of Export Promotion Council (EPC)	Rs. 50.00 lakh per project	100% to public sector
A. 6.	Information & Information Technology	Rs. 50.00 lakh per project	100% of cost to public sector
A. 7.	Technical Service & Project Management	Project based	100% of cost to public sector

## ANNEXURE-VIII

<b>B.</b>	<b>TECHNOLOGY MISSION ON COCONUT</b>		
<b>B.1</b>	<b>Development and adoption of technologies for management of insect pests and disease affected gardens</b>		
	a) Development of technologies	a) Rs. 50.00 lakhs for ICAR(CPCRI)/ State Agricultural Universities/ State Deptt. of Horticulture/ Agriculture/ and cooperative sector b) Rs. 25 lakhs for NGO's and other organizations	a) 100% of the cost of project b) 50% of the cost
	b) Demonstration of technologies	a) Rs.25 lakh/ projects to ICAR (CPCRI)/ State Agricultural Universities/ State Deptt. of Horticulture/ Agriculture/ other related public sector units/ Registered cooperative societies b) Limited to Rs 10.00 lakh for individuals / group of farmers/ NGO's, private companies	a) 100% of the cost of project b) 50% of the cost
	c) Adoption of technologies	a) 25% of the cost of technology adoption b) 25% of the cost in case of group of farmers/NGO's /other organizations	25% of the cost
<b>B.2</b>	<b>Development and adoption of technologies for processing and product diversification</b>		
	a) Development of technologies.	a) Rs.75 lakhs for all the Govt. institutions and cooperative societies. b) Rs.35 lakhs for NGO's, Individual entrepreneurs and other research organizations	a) 100% of the project cost b) 75% of the project cost
	b) Acquisition, training, demonstration of technologies	a) Rs.25 lakh/ projects to ICAR (CPCRI)/ State Agricultural Universities/ State Deptt. of Horticulture/ Agriculture/ other related public sector units/ Registered cooperative societies b) Limited to Rs 10.00 lakh for individuals / group of farmers/ NGO's, private companies	a) 100% of the cost to all the Govt. institutions and cooperative societies b) 50% of the cost for the NGO's, Individual entrepreneurs and other organizations



	c) Adoption of technologies	a) 25% of the cost of technology adoption b) 25% of the cost in case of group of farmers/NGO's /other organizations	a) Back-ended credit capital subsidy limited to 25% of the cost. b) For SC/ST women farmers, 33.3% of the project cost. c) In case of high value agriculture in the Union Territories of Andaman and Nicobar Islands and Lakshadweep 50% of the project cost.
<b>B.3</b>	<b>Market research and promotion</b>		
	a) Market research	a) Rs. 25 lakhs for Govt. agencies and cooperative societies b) Rs. 12.50 lakh for individuals, NGO's and other organizations	a) 100% of the cost of project b) 50% of the cost
	b) Market Promotion	a) Rs. 25 lakhs for Govt. agencies and cooperative societies b) Rs. 6.00 lakhs to federation of CPS (FPO's). c) Rs. 15 lakhs for NGO's and private institutes.	a) 100% of the cost of project b) 50% of the cost
<b>B.4</b>	<b>Technical support external evaluation and emergent requirement</b>	Need basis	As per TMOc norms
<b>C.</b>	<b>REPLANTING &amp; REJUVENATION OF OLD COCONUT GARDEN</b>		
	a) Cutting & removing old / senile palms	Rs. 32,000/ ha	@ Rs. 1000 / palm limited to 32 palms / ha
	b) Assistance for replanting	Rs. 80/- per seedling	50% of cost subject to maximum of Rs. 4000 / ha.
	c) Improvement of existing coconut gardens through integrated management practices.	Rs. 70,000/ha	25% of cost in two equal installments.
<b>D.</b>	<b>COCONUT PALM INSURANCE SCHEME</b>	Rs. 4.69 per palm for trees in age group 4-15 years and Rs. 6.35 / palm in the age group of 16-60 years, including service tax @ 10.30%.	75% of cost of premium of which 50 % of insurance premium by CDB and 25% by State Government.
<b>E.</b>	<b>KERA SURAKSHA INSURANCE SCHEME</b>	Project based	75% of cost of premium
<b>F.</b>	<b>ESTABLISHMENT OF IN-HOUSE RESEARCH &amp; DEVELOPMENT CENTRE</b>	Project based	100% of cost, to CDB

\* Cost norms means upper limit of cost for calculation of subsidy. .05

# Hilly Areas include those areas covered under Hill Area Development Programme and Western Ghat Development Programme of Planning Commission. Scheduled Areas include those areas notified by Planning Commission and State Governments.







## MISSION FOR INTEGRATED DEVELOPMENT OF HORTICULTURE

OPERATIONAL GUIDELINES  
April, 2014



### **Horticulture Division**

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