A. NATIONAL HORTICULTURE MISSION (NHM)

Release and Expenditure: 2012-13

During the current financial year Rs. 1104.40 crore (RE) has been earmarked for NHM. An amount of Rs. 834.68 crore including Rs. 795.47 crore to State Horticulture Missions (SHM) and Rs. 39.21 crore to the NLAs was released till 31st December, 2012.

Performance Review

Out of total release of Rs. 834.68 crore till December, 2012, an amount of Rs. 112.59 crore was released to 4 States, 1 Union Territory and one National Level Agency during the 3rd quarter. Details of releases made and further projections are indicated in Figure 1.

Figure – 1: Quarter wise releases made and projections 2012-13

13 States, 2 Union Territories and 6 National Level Agencies have reported physical and financial progress of the scheme on the website of NHM. Andhra Pradesh and Bihar have yet to post the progress for December 2012 whereas uploading of progress for the month of November and December is awaited from Jharkhand. Odisha has not reported the whole progress for the quarter.

Trends of Expenditure: 2012-13

The major share of expenditure has been under area expansion followed by, protected cultivation and Post-Harvest Management. Details are depicted in Figure- 2.
Financial Performance (2012-13)

By the end of December, 2012, an expenditure of Rs. 609.83 crore has been reported, which includes Rs. 578.17 crore by SHMs and Rs. 31.66 crore by NLAs.

The breakup of physical and financial progress under different components of the scheme is given in Table 1.

Table-1: Details of progress under different components of NHM Scheme (2012-13)

<table>
<thead>
<tr>
<th>Components</th>
<th>Annual Targets 2012-13</th>
<th>Achmt. 2012-13</th>
<th>% Exp. to total Exp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursery</td>
<td>5635</td>
<td>7520.63</td>
<td>60</td>
</tr>
<tr>
<td>Area Expansion</td>
<td>109493</td>
<td>29197.89</td>
<td>92036</td>
</tr>
<tr>
<td>Rejuvenation</td>
<td>61734</td>
<td>7469.25</td>
<td>34841</td>
</tr>
<tr>
<td>Protected Cultivation</td>
<td>19298</td>
<td>27819.42</td>
<td>10887</td>
</tr>
<tr>
<td>Water Resources</td>
<td>3916</td>
<td>10959.11</td>
<td>3033</td>
</tr>
<tr>
<td>Organic farming</td>
<td>70443</td>
<td>5003.33</td>
<td>7200</td>
</tr>
<tr>
<td>Integrated Pest Management</td>
<td>71858</td>
<td>2182.11</td>
<td>47010</td>
</tr>
<tr>
<td>IPM infrastructure</td>
<td>56</td>
<td>1314.1</td>
<td>6</td>
</tr>
<tr>
<td>PHM</td>
<td>29568</td>
<td>30059.75</td>
<td>2181</td>
</tr>
<tr>
<td>Markets</td>
<td>664</td>
<td>3874.55</td>
<td>65</td>
</tr>
<tr>
<td>Beekeeping (Nos. of colonies)</td>
<td>123936</td>
<td>1285.9</td>
<td>27983</td>
</tr>
<tr>
<td>others</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Physical Performance (2012-13)

Post Harvest Management

Table 2: Physical Progress under Post Harvest Management Component

<table>
<thead>
<tr>
<th>States</th>
<th>Pack House</th>
<th>Cold Storage Unit</th>
<th>Refrigerated Vans</th>
<th>Primary/Mobile Process Unit</th>
<th>Ripening Chambers</th>
<th>Low Cost Onion Storage Structures</th>
<th>CA/MA Storage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andhra Pradesh</td>
<td>134</td>
<td>9</td>
<td>9</td>
<td>8</td>
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<tr>
<td>Bihar</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Chhattisgarh</td>
<td>300</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gujarat</td>
<td>130</td>
<td>2</td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Haryana</td>
<td>4</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Jharkhand</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Kerala</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Karnataka</td>
<td>55</td>
<td></td>
<td></td>
<td></td>
<td>57</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Madhya Pradesh</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Maharashtra</td>
<td>205</td>
<td>10</td>
<td>1</td>
<td>54</td>
<td>6</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Odisha</td>
<td>33</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>Punjab</td>
<td>25</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Rajasthan</td>
<td>12</td>
<td>4</td>
<td>6</td>
<td>1</td>
<td>1</td>
<td></td>
<td>975</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>13</td>
<td>1</td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uttar Pradesh</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>West Bengal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>918</strong></td>
<td><strong>64</strong></td>
<td><strong>11</strong></td>
<td><strong>123</strong></td>
<td><strong>20</strong></td>
<td><strong>1017</strong></td>
<td><strong>2</strong></td>
</tr>
</tbody>
</table>

Water Harvesting Structures

So far, during the year, 3033 Community Water Harvesting Structures have been created. Andhra Pradesh has reported creation of 1049 units, 907 in Chhattisgarh, 307 in Maharashtra, 221 in Rajasthan, 209 in Karnataka, 172 in Haryana, 43 in Jharkhand, 41 in Punjab, 34 in West Bengal, 13 in Bihar and 7 units in Kerala.
Rejuvenation

Under the component of Rejuvenation of old and senile orchards, a total area of 34841 ha has been covered. Major States are Andhra Pradesh (23,051 ha), Karnataka (4,966 ha), Tamil Nadu (4,100 ha), Chhattisgarh (1,000 ha), Maharashtra (580 ha), Kerala (505 ha), West Bengal (323 ha) and Gujarat (188 ha).

IPM Measures

Under the component of Integrated Pest Management (IPM), a total coverage of 47010 ha has been reported in the States of Karnataka (38445 ha), Haryana (3282 ha), Chhattisgarh (2000 ha), Rajasthan (1065 ha), Kerala (860 ha.), Uttar Pradesh (855 ha), Gujarat (303 ha) and Jharkhand (200 ha).

Markets

Under the component of establishment of marketing infrastructure for horticulture produce, 12 retail markets (7 rural markets in Andhra Pradesh, 4 rural markets Odisha and 1 in West Bengal), 6 outlets (5 in Andhra Pradesh and 1 in Chhattisgarh), 40 vending carts in Chhattisgarh and 7 functional infrastructures for collection, grading etc. (3 in Andhra Pradesh, 2 in Gujarat and one each in Maharashtra and Punjab) have been established.

Addressing Quality Planting Material Needs

So far, during 2012-13, 60 nurseries have been set up and 02 Tissue Culture Units have been rehabilitated. 07 New Tissue Culture Units have been set up for production of quality planting material.

Area Expansion

During the period, an additional area of 87,186 ha. has been brought under various horticultural crops, out of which, an area of 27,963 ha. has been brought under perennial fruits, 17,920 ha. under non – perennial fruits, 7,277 ha. under flowers, 20,206 ha. under spices, 244
ha. under aromatic plants and 13,575 ha under plantation crops. The area covered till December, 2012 in different States is depicted in Figure-3.

**Figure-3: State wise Area Coverage under Horticultural Crops**

![Graph of State wise Area Coverage under Horticultural Crops]

Jharkhand and Chhattisgarh have made healthy advancements in area coverage during 2012-13. Jharkhand has covered 6000 ha under spices and 3000 ha under cashew plantations. Main focus of Chhattisgarh has also been on cashew plantation by covering 6200 ha during 2012-13.

**Market Arrival of Horticultural Produce**

**Fruits**

During October to December, 2012, 44.58 lakh MT of fruits have been traded in about 758 markets in the country. Banana constitutes about 39% (17.35 lakh MT), Apple constitutes about 23% (10.38 lakh MT), Pomegranate 10% (4.51 lakh MT), Orange 9% (3.90 lakh MT), Grapes constitutes about 5% (2.16 lakh MT), Mosambi 4% (1.60 lakh MT), Lime 2% (0.92 lakh MT), Guava 2% (0.71 lakh MT), Sapota constitutes about 1% (0.59 lakh MT), Sweet Lime 1% (0.52 lakh MT) and other fruits 8% (3.62 lakh MT) (Fig-4).
Vegetables

69.35 lakh MT of vegetables has been traded during October to December, 2012 in 1084 markets in the Country. Major arrivals of vegetables are Potato (33%), Onion (30%), Tomato (10%), Cauliflower (5%), Cabbage (3%), Brinjal (3%), Carat (2%), Pumpkin (2%), Radish (2%), Peas (2%), Cucumber (1%) and other vegetables (7%). **Fig- 5**

Figure- 5: Trading of Vegetables in India during October-December 2012

Distribution of vegetables traded in different States during October-December 2012 is given in **Figure- 6**
Flowers

Total market arrival of flowers was 2.16 lakh MT in 74 markets; Marigold (Calcutta) constitutes about 1.60 lakh MT of total arrivals of flowers followed by Chrysanthemum 0.50 lakh MT, Rose (Loose) 0.06 lakh MT and Amaranthus 0.02 lakh MT during October-December, 2012.

Spices

About 19.32 lakh MT of spices has been traded in 1021 markets. Out of this, Methi constitutes 33 %, of total arrival of Spices, followed by Garlic (24 %), Green Chilies (22%), Coriander Seed (8 %), Ginger (3 %), Red Chilies (3%), Betel leaves (2%), Turmeric (1%) and others spices (4%) during October-December, 2012., 2012.

Plantation Crops

Total market arrival of Plantation crops has been reported as 20.26 lakh MT in 151 markets. Out of which Coconut constitutes (99.73%), Cashewnut (0.26%) during October-December, 2012.

Export

Till September, 2011-12, horticulture products worth value of Rs. 3115.92 crore were exported (Table 3).
Table 3: Export Value of Horticultural Products till September, 2011-12

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Products</th>
<th>Value (Rs. in Crore)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Floriculture &amp; Seeds</td>
<td>415.18</td>
</tr>
<tr>
<td>2</td>
<td>Fruits &amp; Vegetables</td>
<td>2700.74</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>3115.92</strong></td>
</tr>
</tbody>
</table>

Meetings

- A meeting on the progress on VIUC with SFAC held on 16th October 2012.
- Eighteenth meeting of Empowered Committee (EMC) of NHM held on 26th October, 2012 to consider project proposals of State Horticulture Missions of Andhra Pradesh, Bihar, Gujarat, Haryana, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal.
- Out of 148 Project Proposals received from above mentioned States, EMC approved 139 Project Proposals with an outlay of Rs. 18254.95 lakh with proposed subsidy of Rs. 5054.92 lakh.

Year of Horticulture – Activities

The year 2012-13 is being celebrated as Year of Horticulture (YOH) for giving added focus to horticulture sector. As a prelude to YOH celebrations, a National Seminar on Horticulture was organized at New Delhi in February 2012. Apart from giving focus on protected cultivation, rejuvenation and canopy management of horticulture crops, trainings, workshops, seminars , conferences and release of publications have been scheduled in different states during the course of the year. Highlights of the activities during the year are as follows:

- **International Conference on Cashew** held on 11-12 October, 2012 at Goa.
- **International Conference on Organic Farming** held on 8-9th November, 2012 at Ranchi, Jharkhand.
- **International symposium on saffron** held on 22-25 October 2012 in Srinagar (J&K).
- Seminar on Green House was organized in April, 2012 at Patna, Bihar.
- Seminar on Production Improvement held in July, 2012 at Bhubaneswar, Odisha.
- International horticulture expo held on 21-25 September 2012, Kannur, Kerala.
- **A Publication on State wise Horticulture status was brought out by DAC.**
- **A Publication on IPM Schedule for Vegetables was brought out by DAC.**

B. **VEGETABLE INITIATIVE FOR URBAN CLUSTERS (VIUC)**

- Outlay for 2012-13, an allocation of Rs. 300.00 crore has been approved and funds to the tune of Rs. 113 crore have been released so far.
During October to December 2012, 9.4 lakh MT of vegetables were traded in the major metro cities, details of which are depicted in Figure 7.

Figure 7: Vegetables traded in VIUC Cities

C. NATIONAL MISSION ON MICRO IRRIGATION (NMMI)

Release and Expenditure: 2012-13

During the current financial year viz. 2012-13, RE of ` 1217.29 crore has been earmarked for NMMI. The Annual Action Plan for all the 27 States and NCPAH were approved on 11th April, 2012. An amount of ` 981.25 crore was released till 31st December, 2012 in 15 States.
An area of about 3.93 lakh ha has been covered under micro irrigation till December, 2012 (Fig: 9)

**Fig 9: Area Covered under NMMI during 2012-13**

D. NATIONAL CENTRE FOR COLD CHAIN DEVELOPMENT (NCCD)

NCCD has been constituted by Department of Agriculture and Cooperation as an autonomous body which has been registered as a Society under the Societies Registration Act 1860.

The aims and objectives of the Society are:

i. To recommend standards and protocols for cold chain infrastructure/building including post harvest management so as to harmonize with international standards and best practices and suggest mechanism for bench marking and certification of infrastructure/building, process and services provided by cold chain industry.
ii. To suggest indicative guidelines for preparation of project reports for potential investors/entrepreneurs.

iii. To assess and develop appropriate IT-based management information system for the cold chain infrastructure.

iv. To undertake and coordinate Research and Development (R&D) work required for development of cold chain industry in consultation with stakeholders.

v. To undertake and coordinate the task of Human Resource Development (HRD) and capacity building. It may also conduct in-house training, short-term/long courses relevant for cold chain development.

vi. To launch publicity campaign to educate the stakeholders including awareness building about the benefits of integrated cold chain.

vii. To recommend appropriate policy framework relating to development of cold chain.

viii. To facilitate and foster the development of multi-modal transportation facilities for perishable agricultural, horticultural and allied commodities and establishment of National Green Grid Perishable Commodities.

**Progress made by NCCD**

- 2\(^{nd}\) meeting of Executive Committee of NCCD held on 16.07.2012 under the chairmanship of Secretary (DAC).
- An interactive conclave was organized with a huge industry participation to work out a road map on 17.07.2012.
- Steps have been initiated for having collaboration with Cemafroid (French Cold Chain regulatory agency).
- Membership of International Institution of Refrigeration (IIR), Paris has been obtained. Director, NCCD is Indian delegate in IIR.
- Process is underway to secure World Bank support for HR Development.
- Communication with HRD Ministry has been initiated to develop a B. Tech course on Refrigeration Technology in IITs.
- NCCD has been housed in Nirman Bhavan and Chief Advisor and supporting staff have been employed.
- IIT, Delhi has been requested to provide specialized vocational training to technical manpower (technicians) engaged in cold chain sector.
- Technical Committees constituted to provide recommendations on the following:
  a) Technical Specification, Standards, test laboratory and product certification Committee, b) Training, HRD and R&D Committee, c) Application of Non-conventional
Energy Sources in Cold Chain Infrastructure and d) Supply Chain & Logistics for Post Harvest Marketing.

E. NATIONAL MISSION ON SAFFRON (NMS)

National Saffron Mission is being continued during 2012-13 in Jammu & Kashmir State with the main objective to increase production, productivity of saffron and for improving the product quality. An outlay of Rs.50.00 crore has been earmarked for the Scheme during 2012-13, out of which funds to the tune of Rs. 25.00 crore has been released. During the year, the following achievements have been made so far:

- About 360 ha of saffron area rejuvenated/replanted.
- About 29 ha developed for producing planting material.
- Three tube wells established and irrigation system strengthened in 56 ha.
- Saffron mechanization activities taken up.
- Three hundred farmers trained and 200 demonstrations organized.
- More than 400 vermi compost units established.
- An expenditure of Rs.10.19 crore has been incurred.
- RKVY Division has been requested for continuation of the scheme during the XIIth plan period to complete the targets.