Districts Visited By Joint Inspection Team to Review of NHM and other Central Scheme of Horticulture Supported for Uttar Pradesh for the year 2010.

- Chitrakoot
- Jhansi
- Banda
- Allahabad
- Kaushambi
- Bareilly
- Sultanpur
- Lucknow
- Varanasi
- Moradabad
- Barabanki
Report of Joint Inspection Team to Review National Horticulture Mission and other Central Scheme of Horticulture Supported for Uttar Pradesh for the year 2010

National Horticulture Mission
Department of Agriculture and Cooperation
JIT Team members to evaluate Horticultural programmes:

The Joint Inspection Team was constituted of Dr R.C Upadhyaya Chief Consultant NHM; Dr. V. K. Singh, Principal Scientist (crop production), CISH (ICAR) Rahmenkhera, Kokoni, Lucknow-227107(U.P). Dr. H. S. Shukla, Head of Horticulture Dept. CSA University of Agri. Tech. Kanpur-208002(U.P).team Coordinator Sri S. P. Joshi, Joint Director (Hort.), Govt. of U.P. Deputy Director/District Horticulture Officer of the respective Divisions/Districts are also member of the JIT team.

Visit Schedule:

<table>
<thead>
<tr>
<th>Dates</th>
<th>Districts visited</th>
</tr>
</thead>
<tbody>
<tr>
<td>21st Oct to 27th Oct 2010</td>
<td>Jhansi, Banda &amp; Chitrakoot</td>
</tr>
<tr>
<td>22nd Nov to 27th Nov 2010</td>
<td>Allahabad, Banaras &amp; Kaushambi</td>
</tr>
<tr>
<td>27th Dec to 31st Dec 2010</td>
<td>Lucknow, Barabanki, Sultanpur, Bareilly &amp; Moradabad</td>
</tr>
</tbody>
</table>

Meeting with state level of NHM officials:

On 22nd Nov., 2010 a meeting was held in the office of the Joint Director Horticulture and Nodal Officer SHM, Govt. of U.P., Lucknow with the deputy Directors and District Horticulture Officers of the visiting districts and discussed the scheme progress of their districts. The team also reviewed the progress of work done including financial details. JIT selected randomly the field visit programme of few selected sites at Allahabad, Kausambi and Banaras and discussed the work done report of Jhansi, Banda and Chitrakoot. The programme of next visit was chalked out to Barabanki, Sultanpur, Lucknow, Bareilly and Moradabad.

Agenda of Meeting:

- Crop specific cluster at district level.
- Nurseries management and progress including accreditation of nurseries.
- Vermi compost units under SHM.
- Flowers and vegetable production under protected conditions.
- Timely release of budget for better and timely utilization
- Micro irrigation scheme and use of plastic in mulching, irrigation and precision farming.
- States is in services shortage of Staff at Management Level and also at field Level.
Main Observations of JIT:

- JIT observed that Nurseries established at private / public sector are not properly managed except from ICAR/SAU’s and needs proper care and maintenance. It was informed that a nursery at private sector takes lot of time to be established under NHM due to delay in Bank loans. Nurseries should be properly leveled with Varieties, date of sowing seeds, date of grafting and method of grafting etc. It is also suggested that all the nurseries should be accredited by NHB /ICAR/SAU’s.

- JIT visited the new area expansion programme in ten districts as test case where plantation is done in cluster of Mango, Anola, Guava and banana. It has been observed that the progress is slow under the area expansion activities of fruit crops for small and marginal farmers. Special emphasis may be given to provide support to the small and marginal farmers in remote areas. JIT team observed that the field functionaries in many cases are not regularly supervising the crop after planting as per package recommended by the ICAR/SAU’s and visit the farmers fields rarely. It is suggested that field functionaries should visit field regularly and advice farmers to adopt package of practices properly.

- JIT team observed that the rejuvenation programme was not properly adopted up as per recommended technologies. Old plantations of Mango, Guava and Aonla needed rejuvenation of decline and senile orchards. Therefore, rejuvenation programme may be initiated in large areas on priority basis which will increase production and productivity of fruit crop. The programme should be strictly monitored and supervised as it needs regular supervision and practical guidance to the farmer’s. Rejuvenation /Replacement of Senile Plantations is urgently needed, since less than 10% of the area having been rejuvenated. The problems faced by the farmers relate to lack of awareness of rejuvenation and its benefits and recommendations of suitable inter-crops, which will allow the farmers to have extra income till the fruit trees starts bearing, lack of training facilities and on-field demonstrations etc. Training manual should be prepared for distribution to the trainees in simple and local language.

- JIT observed that the bio- fertilizer input is given along with fruit seedling without any scientific recommendations to the farmers. It is therefore, suggested that farmers may be supplied inputs only if recommended by ICAR/SAU’s. Recommended package of fruit crops hand out may be given along with proper training to the growers.
• JIT observed in Moradabad that a large area of potato crop has been planted for foundation seed production and adjoining fields were affected by late blight and leaf curl diseases. It is suggested that seed programme should be taken up with the technical guidance of CPRI (ICAR) and the Institute may declare disease free zone for seed production. Seed production programme at Moradabad (Sambhal) may be discontinued.

• Slow pace of progress has been observed for the component of protected cultivation of vegetables and floriculture. It is suggested that cluster of vegetable production and cut flower production under protected conditions may be taken up on priority basis near big cities, so that farmers get better return.

• JIT observed that district horticulture officers and deputy director (hort.) are not aware about the establishment of cold storages in their districts and storages projects are directly submitted to the Directorate and directly paid to the beneficiary’s without any Information’s to DHO’s. It is therefore suggested that District Horticulture Officers may be provided the list of cold storages sanctioned in their district and they may be asked to monitor the working of such units.

• Farmers are not aware of recommended package of practices of horticultural crops. Therefore, Farmers may be provided hand outs of specific technical knowledge and provided regular training or awareness programmes. The farmers may be exposed to the areas where such crops are grown on commercial scale.

• The farmers may be provided training on management of green house, poly house, shade net, plastic tunnel, mulching for high tech. horticulture technology in respect of higher productivity of horticultural Crops. It is therefore, suggested that the farmers may be provided proper training for proper utilization of such infrastructure facilities. Training manual may be prepared to provide training to the growers on this component.

• Front line demonstration may be taken up on Bee production in specific horticultural crops to understand the role of Bee’s as pollinator which helps in increasing the crop yield. The farmers may also be trained in the art of handling bees, transferring the hives and extraction of honey.

• It is suggested that executive committee may visit the project for clear the payments of subsidiary provided from NHM for project based activities within a month which completed all formalities for release of funds. Small and marginal farmers supported for small area expansion programme for short duration crops may be paid timely after verification of the crop in field.
• JIT team suggested that farmers associations may be formed for better organized support of post harvest management and marketing of their produce. Since, good banana clusters are developed at Allahabad, Kausambi and Lucknow it is suggested to provide sufficient ripening chambers near the fruit mandis. Traders and growers interface meeting may be organized regularly for better market link to get better return of their produce.

• It was informed that as annual action plan submitted by most of the DHO’s funds were not accordingly allocated to the districts. It is suggested that allocation of funds and programmes should be as per annual action plan after consulting the districts officers.

• It has been observed that display boards are not displayed at NHM support component locations. It is suggested that display boards are to be placed with the information of crop/component, beneficiaries name date and technical details of components.

• JIT observed that the expenditure till Dec.2011 is Rs.3755.76 lakh out of annual plan allocation of Rs.10000 lakh which is only 37.55%. Therefore, it is suggested that efforts should made to timely utilization the budget allocated to the State from NHM.
Visit to farmer’s field:

DISTRICT JHANSI

Jhansi District located in the Southwest part of Uttar Pradesh lies between 25.3° 25.57’ N and between 78.48° 79.25’ East longitudes and Hq. of Bundelkhand. The geographical area of the District is 5024 square Km with a total population of 17.45 lakh with 40% area under irrigation. Agriculture is the mainstay of Jhansi District and the core section of economy continues to be Agriculture. The crop production experience severe problem in the District due to poor irrigation facilities, rocky topography, and erratic rainfall which results in low and unstable agriculture production. The red and black soil constitutes major soil type in district. The district has been divided into two topographic categories viz. North Eastern plains and South West Hilly Terrains. The average rainfall of the district is 867 mm and is mostly concentrated in the months of July to September. Jhansi district suffers from either drought or flood consistently. There is scope for developing integrated horticultural crops, social forestry, vermin-composting and water harvesting etc. Due to onslaught of drought for the last four years, the production and productivity of all crops has been adversely affected. Consumption of organic and chemical fertilizer and pesticides 24.86 Kg ha.

Major Horticulture Crops.
Drought tolerant fruit crops like Citrus, Aonla, Ber, Guava are of special importance for Jhansi District and with irrigation facility papaya may be grown.

Land utilizations:

a) Geographical Area : 499613 ha  
b) Gross cropped area : 432521 ha  
c) Net Shown Area : 354402 ha  
d) Fallow Land : 17066 ha  
e) Land not suitable for cultivation : 31752 ha  
f) Cropping intensity : 122%

The financial outlay of the district was Rs.755.02 lakh and out of which expenditure was made for Rs.634.88 lakh (up to Oct.2010) i.e. 84.08%.

List of Farmers Field visited:

- Mr. Suresh Yadav: village Lakshmanpura, block Baragaon field of guava planted one hectare and stone fencing provided for the protection
- Mr. Mahadev Kushwaha: village Barethi Block Barua Sagar: Guava (Var.Allahabad Safeda and L-49). 4.00 ha. and plants are healthy and maintained properly.
Mr. Krishan Kant Bhundeley and group of farmers of Dr. Bhimrao Ambedkar Samittee village Futera constructed community water Pond (100x100x3 sq. m. size). Low water availability was found in community pond due to less rain during the year, 2010.

Mr. Krishan Kant, Mr. Chandra Mohan, Smt Chunni Bai and Sri Ramkant: village Gomtabad Block Barua Sagar has 1.0 ha. Guava (Var. Allahabad Safeda and L-49) each and supported by community pond.

Mr. Akram Singh and Birendra Singh from village Manpur Block Babina cultivated Turmeric: 0.5 ha. and Ginger: 0.4 ha. each.

Mr. Ram Das, Smt. Vimala Devi and Mr. Anant Ram cultivated ginger village Talramanna Block Baragaon with total area of about 1.8 ha and advice use treated rhizomes for control of soft rot of ginger.

Mr. Nathu Ram and Mr. Prabhu Dayal village Futera block Berethi Baragaon: guava (Var. L-49 and Allahabad Safeda) 5 ha.

Mr. Safi Mohammad, Mr. Saleem, and Mr. Seva Ram village Bumhori block Bangra cultivated hybrid chilli in 1.20 ha .each and total area 15.5 ha.of Chillies in the village.

Mr. Kali Charan, Mr. Chhotey Lal, Mr. Parshu Ram aki and Sri Devi s/o Sri Ganpat village Bhojla block Jhansi cultivated Marigold in one village and have good cluster of marigold and each farmers has 0.5 ha. Farmers advised that male plant should be removed from the field.

Ma Durga Samaj Seva avam Vikash Samittee village – Prathvipur Nayakhera, block Babina: Community ponds supported drip irrigation for fruit crop of guava (Var. Allahabad Safeda and L-49): 7 ha and aonla (Narendra-6): 3 ha. Ramp of community pond was damaged and needs to be repaired.

Ashtha Samitte of village Sanaorra block Baragaon: Community pond was damaged. The beneficiaries advised to repair the pond and establish their drip irrigation system to irrigate the orchards.

Amrita Summit farmer Sri Pradeep Kumar, Smt Pushpa Devi and Sri Jagdish village Garhwa of Muanipur block: community pond and guava plantation approximately 7.5 ha guava, 3.0 ha aonla and 1.0 ha Lemon plantation and advised them to install drip irrigation system to irrigate orchards.

Mr. Nathu Ram and Prabhu Dayal village Futera and Berethi of Block Baragaon block guava (Var. L-49 and Allahabad Safeda) 3.5 ha field and advice that intercropping in turmeric crop is not good practice.
- Sathi Samaj Vikash Summit village Bhadarwara of Mauranipur block was inspected Community pond with size of 150’X125’.

- Sri Jai Prakash Sharma Bhadarwara of Mauranipur block high density Guava orchard (Var.Allahabad Safeda) 2.0 ha with drip irrigation system. Farmer demanded training.

**Specific Observations:**

- Farmers may form crop based societies proper assistance and organize marketing of their products in the Mandis. Programme for shed net, pro trays and plastic crates may be included in providing infrastructural support to the growers.

- Water harvesting may be given priority for Bundelkhand area and component of individual level water harvesting may be taken up in large scale.

- Custard Apple is a suitable fruit crop which may be included in area expansion programme for Bundelkhand Division since, it hardy crop and water requirement is less. Farmers of the village reported that the fencing is required to save the orchards from free grazing of animals. This component may be supported from RKVY, since this component is not included in NHM.

**BANDA DISTRICT:**

Banda, a district of Uttar Pradesh is located at 24º 53’ and 25º 55' N and 80º 07’ and 81º 34’ E with 4114.2 sq.km area. The district largely consists of irregular uplands with outcrops of rocks intermingling with mostly lowlands, frequently under water during rainy season (Annual rainfall: 902 mm) and temperature ranges from 5.2°C to 44.4°C).

The economy of Banda district is based mainly on agriculture. The soils here are mostly fertile and its dependence on rains has made adopt mostly the traditional farming. There are two main crops: Kharif and Rabi; the one between July and October and the other between November to March. Paddy or wheat is normally taken as mono crop while others crops are mixed sown. Mango, Guava, Aonla and Citrus lime are major fruit crops grown in the district. Other Horticultural crops are vegetables and spices. There is a tendency for mixed cropping depending upon the availability of irrigation. SHM has taken up area expansion programme for fruits (Guava, lemon and Anola), Spices and floricultural crops in the district.

The financial outlay of the district was Rs.96.68 lakh and out of which expenditure was made for Rs.25.60 lakh (up to Sep.2010) i.e. 30.90%.

**List of Farmers Field visited:**

- Mr. Daduram, Village Sinakbara, Banda, Crop: Guava (Var.L-49 and Allahabad Safeda): 2 ha. Mango (Var.Dashehri and Chausa) 0.5 ha. Aonla (Var.Chakia and Banarasi) -1 ha.
• Mr. Rahul Singh, Village Mabai Burz, Banda, Crop GuavaV (Var.L-49 and Allahabad Safeda) 4 ha. (New Plantation).

• Mr. K.D Bajpai, Village Thimwari, Banda Crop Guava (Var.L-49 and Allahabad Safeda) 1 ha.

• Mr. Har Pal Singh, Village Khare Bhadopur, Banda, Water Pond 105’ X 120’ X 12’ (Group of 7 Farmers). Pond is functional and water to be filled in coming season.

• Mr. Md. Mumtaz, Village Kavrai, Banda Crop Guava (Var.L-49 and Allahabad Safeda) 1 ha, Mango (Var. Dashehri and Chausa) 1 ha. (Two years old plantation)

• Mr. Balwant Singh, Village Bhartapri, Banda, Crop Anola (Var. Narendra -6) 1 ha. newly planted crop

• Mrs. Shiv Piyari, Village Bhartapri, Banda Mango Var. Lunra and Dashahri) 1 ha. (New plantation) area fenced.

• Mr. Brij Kishan, Village Bhartapri Banda, Guava (Var.L-49 and Allahabad Safeda) 1 ha. (Newly planted).

Specific Observations:
• Technical support in is not properly provided in the field and field staff are nor visiting the beneficiaries field. Therefore, it is suggested that Field functionaries’ should visit farmer’s field regularly.
• Cluster approached is not adopted for newly plantation of fruit crops.
• Water harvesting may be given priority for Banda district and component of individual level water harvesting may be taken up in large scale.

CHITRAKOOT DISTRICT:

Chitrakoot district is a part of Bundelkhand division of Uttar Pradesh. It lies between 24° 48’ and 25° 12’ north latitudes and between 80° 58’ and 81° 34’ east longitudes. Distance Covered by district from east to west is 62 Km. & north to south is 57.5 Km.ie 345291 Sq. Kilometer. Chitrakoot district has a population of 6, 24,180. Agriculture is the main occupation of the people with Kharif, rabi and jayad being the main crops grown throughout the year. District due to poor irrigation facilities, rocky topography, and erratic rainfall which results in low and unstable agriculture production. The red and black soil constitutes major soil type in district. Its dependence on rains (800-1100mm) has made adopt mostly the traditional farming. National Horticulture Mission develops cluster area expansion programme of Fruits (Guava, Mango, Anola and Lemon), Spices (Chillies, Turmeric) and floriculture (Marigold and tuberose). The financial outlay of the district was Rs.119.69 lakh and out of which expenditure was made for Rs.26.08 lakh (up to Sep.2010) i.e. 32.41%.
List of Farmers Field visited:

- Mr. Nathu Ram, S/o Sahadev, Village Ranipur Bhatt, Block Karvi, Crop Anola (Narendra-6 and Chakia) 0.50 ha.
- Mr. Babu Khan, S/o Amir Khan, Village Chipni Bahar Kheda, Block Karvi, Aonla (Narendra-6 and Chakia): 1.00 ha. and Guava (Var.L-49 and Allahabad Safeda): 1.5 ha. (Newly planted).
- Mr. Phool Chnader, S/o Shobha, Village Chipni Bahar Kheda, Block Karvi, Crop Guava 0.50 ha.
- Mr. Bhaiya Lal, S/o Nathu Prashad, Village Chitra Gokulpur, Block Karvi, Crop Guava 1.00 ha.
- Mr. Anurag Singh, S/o Mahesh Kumar Singh, Village Parsoja, Block Karvi, Crop Guava 1.00 ha.
- Mr. Radhe Shyam, S/o Mann Bhavan Lal, Village Chapara Maffi, Block Karvi, Crop Lemon 1.00 ha.
- Mr. Shiv Prakash Singh, S/o Shiv Ram Singh, Village Sardhwa, Block Pahari, Crop Anola 2.00 ha.
- Mr. Dariyanv Singh, S/o Satya Narayna Singh, Village Archa Berethi, Block Pahari, Vermi Compost 1.00 unit.
- Mr. Hari Charan S/o Suraj Pal, Village Kolsa, Block Ramnagar, Crop Anola 2.0 ha.
- Mr. Raghu Nath, S/o Shiv Ram, Village Goiya Kala, Block Mau, Crop Lemon 1.0 ha.
- Mr. Shiv Kumar S/o Babu Lal, Village Mau Sangrehi, Block mau, Crop Aonla 1.0 ha.

Specific Observations:

- Technical support in is not properly provided in the field and field staff are nor visiting the beneficiaries field. Therefore, it is suggested that Field functionaries’ should visit farmer's field regularly.
- Cluster approached is not adopted for newly plantation of fruit crops. It is also observed that fields are not properly measured and area shown for newly plantation of fruit crops are less than shown in records.
- Water harvesting may be given priority for Banda district and component of individual level water harvesting may be taken up in large scale.

ALLAHABAD DISTRICT:

Allahabad, a district of Uttar Pradesh is located at 24°47´ and 25°47´ North and 80° 07´ and 81° 09´- 82°21´ East with 5246 sq.km area and 49.41 lakh of population. The land of the district falls between the Ganges and Yamuna is sandy alluvial (fertile and is suitable for the cultivation of all crops. The southern and eastern part of the district, are somewhat similar to those of adjoining
Bundelkhand regions - dry and rocky. Allahabad and experiences three seasons: hot dry summer, cool dry winter and warm humid monsoon. The summer season lasts from April to June with the maximum temperatures ranging from 40 °C (104 °F) to 45 °C (113 °F). Monsoon begins in early July and lasts till September. Allahabad is having about 45% irrigated land and famous for its Guava production. District has taken area expansion programme National Horticulture Mission develops cluster area expansion programme of Fruits (Guava, Mango, Anola and Lemon), Spices (Chillies, Turmeric) and floriculture (Marigold and tuberose).

The financial outlay of the district was Rs.458.86 lakh and out of which expenditure made was made Rs.219.09 lakh (up to Sep.2010) i.e. 47.74%.

**List of Farmers Field visited:**

- Mr. Shiv Lal S/o Dwarka Prashad, Village Kodihar, Block Tevar, District Allahbad, Crop Guava Area 1.00 ha.
- Mr. Mushtaq Ahmed S/o Habibullah, Village Kodihar, Block Manakpur, District Allahbad, Crop Guava Area 0.50 ha.
- Mr. Gyanchandra S/o Babulal, Village Jasra, Block Pachkhara, District Allahbad, Crop Guava Area 0.50 ha.
- Smt. Najnai Begum W/o Ahzaz Hussain, Village Sedabad, Block Sedaha, District Allahbad, Crop Guava Area 1.00 ha.
- Mr. Mohamad Yusuf S/o Habib Ahmed, Village Shirpur, Block Kodihar, District Allahbad, Crop Anola Area 1.00 ha.
- Mr. Lallu S/o Surendra Kumar, Village Malethua, Block Sedabaad, District Allahbad, Crop Anola Area 0.25 ha.
- Mr. Inder Dev Singh S/o Tirth Raj, Village Manakpur, Block Kodihar, District Allahbad, Crop Guava Area 1.50 ha.
- Mr. Seku Lal S/o Kanhai Lal, Village Kundanpur, Block Kodihar, District Allahbad, Crop Lemon Area 0.75 ha.
- Mr. Lal Singh S/o Gyan Singh, Village Sarpar, Block Kodihar, District Allahbad, Crop Banana Area 4.00 ha.
• Mr. Upendra Singh S/o Satya Prakash, Village Sarpar, Block Kodihar, District Allahbad, Crop Banana Area 4.00 ha.

• Mr. Moh. Haroon S/o Sardar Hussain, Village Manakpur, Block Kodihar, District Allahbad, Crop Banana Area 1.50 ha.

• Mr. Moh. Farooq S/o Moharm, Village Manakpur, Block Kodihar, District Allahbad, Crop Banana Area 1.50 ha.

• Mr. Kallu Prashad S/o Mahadev, Village Manakpur, Block Kodihar, District Allahbad, Crop Banana Area 2.00 ha.

• Mr. Shifat Rizvi S/o Riyazan Hussain, Village Asrawalkala, Block Kodihar, District Allahbad, Crop Banana Area 4.00 ha.

• Mr. Alizahir Rizvi S/o Hassan Zahir Rizvi, Village Asrawalkala, Block Kodihar, District Allahbad, Crop Banana Area 4.00 ha.

• Mr. Kamran Abbas S/o Amir Abbas, Village Asrawalkala, Block Kodihar, District Allahbad, Crop Banana Area 4.00 ha.

• Mr. Moh.Wahid S/o Moh. Haroon, Village Jalalpurghosi, Block Kodihar, District Allahbad, Crop Banana Area 2.00 ha.

• Mr. Mahendra Singhi S/o Rammagan Singh, Village Chirlamunjpta, Block Kodihar, District Allahbad, Crop Chillies Area 0.50 ha.

• Mr. Abdullah Raoof S/o SarayHusaina, Village Malethua, Block Sedabaad, District Allahbad, Crop Turmeric Area 0.25 ha.

• Mr. Ram Dutt Shukla S/o Ram Chander, Village Karenhda, Block Kodihar, District Allahbad, Crop Turmeric Area 0.25 ha.

• Mr. RamSabha Singh S/o Motilal Singh, Village Bndhwa, Block Shankargarh, District Allahbad, Crop Turmeric Area 1.00 ha.

• Smt. Aarchna Singh S/o Aditya Singh, Village Lohra, Block Kirgarh, District Allahbad, Crop Guava Area 1.00 ha.

Specific Observations:

• Nurseries established in private sector should be properly managed and leveled properly. Crop and varieties should properly level and plants should be free from disease and pests.

• Large banana cluster has been developed at Allahabad and needs better post harvest management. Therefore, it is suggested to provide sufficient ripening chambers near the fruit.
mandis. Traders and growers interface meeting may be organized regularly for better market link to get better return of their produce.

- Technical support is not properly provided in the field and field staff are not visiting the beneficiaries' field. Therefore, it is suggested that Field functionaries’ should visit farmer’s field regularly.

KAUSHAMBI DISTRICT:

Kaushambi is situated in the west of Allahabad district. The total geographical area of the district is 2012.8 sq. km. The Ganga & the Yamuna are the main rivers of the district. The land of the district falls between the Ganges and Yamuna is sandy alluvial (fertile and is suitable for the cultivation of all crops. Climate is sub tropical i.e. in summer season the weather is too hot and in the winter the weather is very cold.

The District Kaushambi is mainly an agricultural district. The famous Var. Allahabad Safeda of Guava is actually the quality fruits from Kaushambi. The principal sources of irrigation are canals and tube wells. Kausambi is having more than 40% irrigated land. National Horticulture Mission develops cluster area expansion programme of Fruits (Guava, Mango, Anola and Lemon), Spices and floriculture.

The financial outlay of the district was Rs.256.95 lakh and out of which expenditure was made for Rs.81.69 lakh (up to Nov.2010) i.e. 31.70%.

Area, production of fruit crops:

<table>
<thead>
<tr>
<th>Crop</th>
<th>Area (ha)</th>
<th>Production (Q)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guava</td>
<td>1,700</td>
<td>187,000</td>
</tr>
<tr>
<td>Mango</td>
<td>960</td>
<td>67,680</td>
</tr>
<tr>
<td>Aonla</td>
<td>350</td>
<td>21,480</td>
</tr>
<tr>
<td>Lime</td>
<td>20</td>
<td>1,800</td>
</tr>
<tr>
<td>Banana</td>
<td>80</td>
<td>1,60,00</td>
</tr>
<tr>
<td>Rose</td>
<td>25</td>
<td>1000</td>
</tr>
<tr>
<td>Marigold</td>
<td>200</td>
<td>9,200</td>
</tr>
<tr>
<td>Gladiolus</td>
<td>8</td>
<td>496</td>
</tr>
<tr>
<td>Tube rose</td>
<td>10</td>
<td>500</td>
</tr>
</tbody>
</table>
List of Farmers Field visited:

- Mr. Shabbir Hassan, Village Jhimirjha, Block Manjhanpur, District Kaushambi, Crop Guava & Area 1.00 ha.
- Mr. Hassan Raza, Village Jhimirjha, Block Manjhanpur, District Kaushambi, Crop Guava & Area 1.75 ha.
- Mr. Shiv Sagar, Village Kakarhai, Block Naveda District Kaushambi, Crop Guava & Area 2.00 ha.
- Mr. Shiv Pratap, Village Kakarhai, Block Naveda District Kaushambi, Crop Guava & Area 2.00 ha.
- Mr. Wasim Ahemad, Village Baraythi, Block Naveda District Kaushambi, Crop Guava & Area 2.00 ha.
- Mr. Yogendra Singh, Village Chaloli, Block Chayal District Kaushambi, Crop Guava & Area 1.00 ha.
- Mr. Hemraj Singh, Village Chaloli, Block Chayal District Kaushambi, Crop Guava & Area 0.50 ha.
- Mr. Chote Lal, Village Ksenda, Block Chayal District Kaushambi, Crop Guava & Area 1.00 ha.
- Mr. Ramesh Chander, Village Karari, Block Manjhanpur, District Kaushambi, Crop Banana & Area 1.00 ha.
- Mr. Surya Pratap Singh, Village Karari, Block Manjhanpur, District Kaushambi, Crop Banana & Area 0.75 ha.
- Mr. Bachha Lal, Village Moajampur, Block Manjhanpur, District Kaushambi, Crop Banana & Area 2.50 ha.
- Mr. Mohamad Hasim, Village Baraythi, Block Naveda District Kaushambi, Crop Banana & Area 4.00 ha.
- Mr. Mohamad Asif, Village Baraythi, Block Naveda District Kaushambi, Crop Banana & Area 4.00 ha.
- Mr. Mohamad Yasir Irfani, Village Baraythi, Block Naveda District Kaushambi, Crop Banana & Area 1.50 ha.

Specific Observations:

- Large banana cluster has been developed at Kausambi and needs better post harvest management. Therefore, it is suggested to provide sufficient ripening chambers near the fruit
mandis at Allahabad. Traders and growers interface meeting may be organized regularly for better market link to get better return of their produce.

- Field provided supports from NHM are not properly supervised. Field functionaries’ should visit farmer’s field regularly. Technical man power may be strengthened since there is shortage of field staff.
- Vermi compost unit establishment programme should be taken on large scale, since farmers are taking heavy intercropping.

**BANARAS DISTRICT:**

Banaras is located between 82° 56’E - 83° 03’E and 25° 14’N - 25° 23.5’N. Being located in the Indo-Gangetic Plains of North India, the land is very fertile because low level floods in the Ganges continually replenish the soil. Banaras experiences a humid subtropical climate with large variations between summer and winter temperatures. Summers are long, from early April to October, with intervening monsoon seasons and are also extremely hot, even by South Asian standards. The temperature ranges between 32°C – 46 °C (90°F – 115 °F) in the summers. Winters in Banaras sees very large diurnal variations, with warm days and downright cold nights. The average annual rainfall is 1,110 mm (44 in). Fog is common in the winters, while hot dry winds, called loo, blow in the summers. Baranas under National Horticulture Mission produces fruit crops (Mango, Guava, Banana, Anola and Karonda ), vegetables including tomato in protected conditions, area expansion programme of spices and floriculture.

The financial outlay of the district was Rs.119.69 lakh and out of which expenditure was made for Rs.26.08 lakh (up to Sep.2010) i.e. 32.41%.

**List of Farmers Field visited:**

- Mr. Bhanu Pratap Singh S/o Late. Raj Narayan, Village Gosaipur, Block Harhua, Crop Guava, Area 0.60 ha.
- Mr. Ramasjeevan Dixit S/o Jagat Ram, Village Sulemapur, Block Harhua, Crop Guava, Area 0.50 ha.
- Mr. Gulab Singh S/o Kuber Singh, Village Bhetholi, Block Harhua, Crop Guava, Area 1.60 ha.
- Mr. Bacha Lal S/o Ramraj Singh, Village Bhetholi, Block Harhua, Crop Guava, Area 0.50 ha.
- Mr. Jeevan Singh S/o Jai Shankar, Village Bhrthara, Block Kashividhyapeth, Crop Banana, Area 0.25 ha.
- Mr. Tejbahadur S/o Shankar, Village Urcghaon, Block Kashividhyapeth, Crop Banana, Area 0.25 ha.
- Mr. Lalbahadur S/o Ghure, Village Urcghaon, Block Kashividhyapeth, Crop Banana, Area 0.25 ha.
- Mr. Shiv Murat S/o Bhagann, Village Urcghaon, Block Kashividhyapeth, Crop Banana, Area 0.50 ha.
- Mr. Ram Prashad S/o Ram Nath, Village Urcghaon, Block Kashividhyapeth, Crop Banana, Area 0.50 ha.
- Mr. Jiya Ram S/o Moti, Village Urcghaon, Block Kashividhyapeth, Crop Guava, Area 0.50 ha.
- Mr. Lal Mann S/o Ram Ratan, Village Urcghaon, Block Kashividhyapeth, Crop Guava, Area 0.50 ha.
- Mr. Jagarnath Singh S/o Rajan Rayan, Village Mutfabaad, Block Chirrigoan, Crop Banana, Area 1.00 ha.
- Mr. Gajaraj Singh S/o Lal ji, Village Bariyasnpur, Block Chirrigoan, Crop Banana, Area 0.50 ha.
- Mr. Satya Narayan S/o Jagarnath, Village Chandpur, Block Chirrigoan, Crop Banana, Area 1.00 ha.
- Mr. Ishwer Chander S/o Jagarnath, Village Chirrigoan, Block Chirrigoan, Crop Banana, Area 0.50 ha.
- Mr. Rajendra Morya S/o Bihari Lal, Village Gopal Pur, Block Chirrigoan, Crop Guava, No. of Plants 111 & Area 0.40 ha.
- Mr. Amitabh Mishr S/o Dinanath, Village Chandpur, Block Chirrigoan, Crop Guava, No. of Plants 222 & Area 0.80 ha.
- Mr. Allalr S/o Ram Roop, Village Madani, Block Chirrigoan, Crop Guava, No. of Plants 42 & Area 0.50 ha.
- Mr. Sandeep Kumar Morya S/o Ram Laksha Morya, Village Kamoli, Block Chirrigoan, Crop Guava, No. of Plants 42 & Area 0.50 ha.
- Mr. Sanjay Kumar Singh S/o Chander Narayan Singh, Village BariyasanPur, Block Chirrigoan, Crop Guava, No. of Plants 50 & Area 0.60 ha.
- Mr. Ram Bali Singh S/o Devnand Singh, Village Barai, Block Chirrigoan, Crop Guava, No. of Plants 56 & Area 2.00 ha.
National Horticulture Mission programmes at Banaras Hindu University, College of Agriculture:

Physical achievements:

(a) ESTABLISHMENT OF MODEL NURSERY OF Fruit crops:

Production of planting material of fruit crops:

<table>
<thead>
<tr>
<th>Propagating crops</th>
<th>No. of plants to be propagated per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mango</td>
<td>27000</td>
</tr>
<tr>
<td>Guava</td>
<td>10000</td>
</tr>
<tr>
<td>Aonla</td>
<td>10000</td>
</tr>
<tr>
<td>Ber</td>
<td>5000</td>
</tr>
<tr>
<td>Bael</td>
<td>2000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>54000</strong></td>
</tr>
</tbody>
</table>

Procurement Equipment/Machinery/Creation of Infrastructure facilities:

- Poly house sprinkler system for irrigation, ventilation & insect proof, humidity and temperature controller: Order has been places.
- Net house 2000 m² with shading nets, insect proof, 30-75% light diffusion, sprinkler system for irrigation: Order has been places.
- Computer, printer: Order has been places.

ESTABLISHMENT OF SEED PROCESSING INFRASTRUCTUER FACILITIES FOR VEGETABLE CROPS:

The land for the proposed site has been allotted.

- The construction of the aforesaid building will be taken up.
- The quotations for the purchase of various equipments have been called for and are being processed and order would be placed as soon as it is finalized by the Limited Tender Committee of the project.
- The okra (Cv. VRO-6) has been sown for TLS seed production in 0.5 ha.
ESTABLISHMENT OF LEAF / TISSUE ANALYSIS LABORATORY:
2000 samples have been analyzed for various crop plants and horticultural crops viz., mango, Anola and Guava etc., some water samples and Ayurvedic plant preparations have also been analyzed. All these samples were research purposes. In spite of four efforts to motivate the farmers, no interest has been shown by them. Printed leaf-let may be distributed amongst the farmers. The leaf-let includes the details about the methods of collection and further of samples for sending to lab analysis, and the utility of tissue analysis in improving the crop production, including that of horticultural crops.

ESTABLISHMENT OF BIO-CONTROL LABORATORY FOR MASS PRODUCTION OF BIO-AGENTS:

- Training programme on production and use of Trichoderma in horticulture crops was conducted on 5th August, 2009 at village Darekhu of Banaras District. 47 farmers participated in this programme and each farmer was provided with 250 g of *Trichoderma* free cost.

- Training programme on production and use of *Trichoderma* and *Beuveria* in horticulture crops was conducted on 29th November, 2009 at village Bairwan of Banaras District. 42 farmers participated in this programme and each farmer was provided with 250 g of *Trichoderma* 250 g of *Beuveria* free cost. In this village, flowers, vegetables and fruits are grown at large scale.

- On 20th December, 2009, 21 Agriculture Officers of various districts of Eastern Uttar Pradesh visited the laboratory and were explained about the production and use of Bio-agents to manage insect pests and diseases of horticulture crops. They were also provided ready to use 250 g of granular Trichoderma product.

- On 18 & 19th March, 2010 a Kisan Mela was organized at BHU, Banaras. The Bio-control laboratory participated in the exhibition of this Kisan Mela and 236 farmers from Banaras, Ghajipur, Gorakhpur, Azamgarh, Deoria, Chandauli, Sonbhadra and Mirzapur districts collected 250 g each of Trichoderma and Beuveria free cost from our stall for the control of diseases and pests on horticulture and field crops. These farmers were explained about the use if these two bio-control products.

- For registration of *Trichoderma harzianum* (IIHR strain, Bangalore, ICAR) and Bacillus thuringiensis (Directorate of Oilseed Research, Hyderabad, ICAR) with CIB, Faridabad the services of M/s Biotox, New Delhi is being utilized. The funds have been paid as per the terms and conditions. The application for registrations of Bt and Trichoderma have been filed with CIBC, Faridabad on December 24, 2009 and the registration is still awaited. The last installment fund to be paid after the registration has been booked.
Two persons have received training in production of Bt at Directorate of Oilseed, ICAR, Rajendra Nagar, Hyderabad for a week from 08 to 13 March, 2010.

The vehicle has been purchased on DGS & D rate through the university and is being used for project work. As there is sufficient required space in the back of the vehicle so trailer has not been purchased.

Production of Trichoderma and Beuveria is progressive well but we are not able to sell any product pending the registration from Central Insecticide Board, Faridabad. Till then, the products are being provided to farmers free of cost.

**Specific Observations:**

- Technical support in is not properly provided in the field and field staff are not visiting the beneficiaries field. Therefore, it is suggested that Field functionaries’ should visit farmer’s field regularly.
- It is observed that there are units of processing and value addition. It is suggested that NHM programme should support such units, so that they may prepare fruit products in hygienic conditions and prepare better products and get remunerative price.
- Vermi compost unit establishment programme should be taken on large scale, since farmers are taking intercrops.

**LUCKNOW DISTRICT:**

It lies at 26 degree 30 minutes and 27 degree 10 minutes north latitude and 80 degree 30 minutes and 81 degree 13 minutes east longitude. Lucknow covers an area of 2528 sq km. Lucknow District has uniformed tropical climate. The temperature varies from 45 degree Celsius in summer to 5 degree Celsius in winter season. Average rainfall is 1000 mm per annum. The main fruit crops are mango, guava, Banana; vegetables and floricultural crops. Mangoes grown in the district are exported to other countries. The Joint Inspection team visited Kakori, Malihabad, Bakshi Ka Talab, and Gushaiganj blocks of Lucknow district. Team also visited nursery of CISH (ICAR), Rehmankhera. CISH is producing disease free elite seedlings of recommended varieties of Mango, Guava and Aonla. Team visited Malihabad block area expansion programme in cluster of Mango and Aonla. It is observed that there are many old orchards which needs to be rejuvenated. Team visited a cluster of Banana in a area of about 75 ha. at Ahmedpur Kherda. Mr. Habib Khan established a good plantation with tissue culture seedlings of Banana var. Grand Nene.

The financial outlay of the district was Rs.488.60 lakh and out of which expenditure was made for Rs.118.47 lakh (up to Dec.2010) i.e. 24.24%.

**List of Farmers Field visited:**

- Moh. Asif Khan, Village Kakori Block Kakori, Crop Gladioluses -2.00ha (5 Verities) Winter Crop & Mango -2ha (Dasheri)
- Ismail Khan, Village Kakori Block Kakori, Crop Gladioluses - 2.00ha (8 Varieties) & Mango - 1ha (Dasheri)

- Moh. Habib, Village Bakshi Ka Talab Block Bakshi Ka Talab, Crop Banana 2 ha (G-9).

- Hussain, Lucknow, Crop Guava - 2 ha (Allahabadi Safeda).

**Observations:**
- It was observed that there is urgent need of providing post harvest support along with cluster of mango, guava and banana.
- Farmers want more trainings and field visit to the area where such field operations are commercialized. Interface meeting with growers and traders meet may be organized before harvest of fruits for better management and better return to the growers.
- Rejuvenation programme may be initiated in large area where old and declined orchard exists. The recommended technology may be adopted for rejuvenation.
- Vermi compost unit establishment programme should be taken on large scale, since farmers are taking intercrops.

**BARABANKI DISTRICT:**

Barabanki district is situated between 27°19' and 26°30' north latitude, and 80°05' and 81°51’ east longitude and the area of the district was 3895.4 km². The upper part of the district soil is sandy, and in the lower part is clayey and produces all crops. Irrigation in the district is provided by rivers Ghaghra and Gomti for the major part of the year. The changing course of the river Ghagra changes the land area in the district, year to year. The principal crops are rice, wheat, pulse and other food-grains and sugarcane. The district may be topographically divided into three main regions viz. Tarai region, Gomti par region and Har region.

The financial outlay of the district was Rs.201.61 lakh and out of which expenditure was made for Rs.55.55 lakh (up to Dec.2010) i.e. 27.55%.

**List of Farmers Field visited:**
- Mr. Kamla Prashad S/o Kishan, Village Muzafarpur, Block Banki, Crop Banana, No. of Plants 7715 & Area 2.50 ha.

- Mr. Natha Ram S/o Jaganath, Village Majhpurva, Block Banki, Crop Banana, No. of Plants 1234 & Area 0.40 ha.
• Mr. Prakash Narayan S/o Nepal Singh, Village Tilasudapur, Block Fatehpur, Crop Banana, No. of Plants 2228 & Area 1.00 ha.

• Mr. Sermel Singh S/o Norang Singh, Village Chakkodar, Block Fatehpur, Crop Guava, No. of Plants 277 & Area 1.00 ha.

• Mr. Ramhars Verma S/o Vidhya Prashad, Village Gangoli, Block Fatehpur, Crop Guava, No. of Plants 138 & Area 0.50 ha.

Specific Observations:

• Barabanki district is very near to Lucknow and farmers are doing intensive cultivation of traditional floriculture and cut flower production. It is therefore suggested that protected cultivation cluster may be developed through floriculture growers associations. Floriculture seed and plant material programme may be taken up under NHM.

• The farmers may be provided training on management of green house, poly house, shade net and, plastic tunnels.

SULTANPUR DISTRICT:

Sultanpur is located at 26.27° N 82.07° E. Sultanpur had a population of 2000,085. It was observed that there was no progress for activities of nursery, poly house cultivation , INM/IPM, Organic farming and also water community ponds. Absolutely no progress was made for post harvest management and marketing. The financial outlay of the district was Rs.177.80 lakh and out of which expenditure was made for Rs.50.30 lakh (up to Dec.2010) i.e. 28.29%.

List of Farmers Field visited:

• Mr. Shiv Kalan Shukla: Village Abhiankalan Block Bhadhian: Banana (Tissue Culture Var.G-9)- 0.5ha. Crop needs more care and heavily intercropped with potato, which should be avoided.

• Mr. Raghuraj Pratap Singh: C: Banana (Tissue Culture Var.G-9)- 4.0 ha. Banana cultivated scientifically and instructions of departments are followed properly.

• Mr. Talukdar Singh: Village Barui Block Bhadhia: Mango (Var. Dashehri) 0.5ha. Crop and heavily intercropped with wheat crop which should be avoided.

• Mr. Bimlesh Bahadur Singh: Village Terian Block Bhadhia: Mango (Var. Dashehri,Lunra and Chausa) 1.5ha. Crop and intercropped with wheat crop which should be avoided.
• Mr. Chandra Shekharv: Village Chhatoina Kalan Block Kamecha: Guava (Var. L-49 and Allahabad Safada) 1.0 ha. Crop and intercropped with potato crop which should be avoided

• Mrs. Shobabati Devi: Village Pakhrauli Block Bhadhian: Crop Chillies(Var.Hybrid) 0.2ha. area.

• Mrs. Saroj Singh: Village Purina (Hanumangunj) Block Bhadhian: Crop Garlic: 0.2ha. area. Vegetable crop area.

• Mr. Ram Chander Yadav: Village Purena Block Bhadhian: Crop Garlic: 0.2ha. area. Also cultivated turmeric. Crop in good condition.

Specific Observations:

• Farmers want more trainings and field visit to the area where such field operations are commercialized. Interface meeting with growers and traders meet may be organized before harvest of fruits for better management and better return to the growers.

• Rejuvenation programme may be initiated in large area where old and declined orchard exists. The recommended technology may be adopted for rejuvenation.

• Vermi compost unit establishment programme should be taken on large scale, since farmers are taking intercrops.

• It is observed that farmers take heavy intercrops in Banana fields. Therefore, it is suggested that intercrops in Banana fields should be avided.

BAREILLY DISTRICT:

Bareilly is located at 28°10’N, 78°23’E, and lies in northern India. Bareilly lies entirely in the Gangetic plains. District lies on the bank of river Ramganga and the lower Himalayan range is just 100 km from it and it lies in north of it. Bareilly has a semi-arid climate with high variation between summer and winter temperatures. Summers are long, from early April to October. Winter starts in October and peaks in January. Extreme temperatures range from 4°C to 47 °C. The average annual rainfall is approximately 714 mm (28.1 inches), most of which is during the monsoons in July and August

The financial outlay of the district was Rs.194.06 lakh and out of which expenditure was made for Rs.50.31 lakh (up to Sep.2010) i.e. 25.90%.

List of Farmers Field visited:

• Mr. Amod Kumar Sharma, Village Biharipur. Block Bhota: Crop mango-1ha. (Var. Lungra, Dashehri, Chausa) intercrop of wheat and potato.

• Mr. Rampal Sharma: Village Biharipur. Block Bhota: Guava-1.5 ha. (Var.L-49 and Allahabad Safeda) and Mango (Var. Dashehri) Intercrop of Turmeric. Guava orchard was in fruiting stage.
Mr. Haider Abbas: Village Dhakni Block Bhota: Guava-1 ha.(Var.L-49 and Allahabad Safeda)and Intercrop of Potato.

Mr. Ashad Ali: Village Mallapur Block Bhota: Guava-1.5 ha.(Var.L-49 and Allahabad Safeda)and Intercrop of Potato.

Smt. Anguri Devi: Village Mallapur Block Bhota: Mango-0.5 ha. (Var. Lungra and Chausa).

Mr. Rajesh Chandra Mishra: Village Chharpur Block Bhota: Guava-2 ha.(Var.L-49 ,Lalit and Allahabad Safeda)and orchard was in fruiting stage as sole crop .The trees were healthy and he may produce good quality seedlings of guava.

Mr. Harbir Singh: Village Niksuna Block Faridpur: Vermi Compost unit in working condition.

Mufti Md. Cold Storage: Mr Simaran Swarup Singh Block Fatehganj 5000Ton Cap. Multi chamber facilities.

Mr. Devendra Singh: Village Nagarian Kalan Block Faridpur: Mango 0.5ha. Intercrop with Teak and coriander.

Mr. Devendra Singh: Village Nagarian Kalan Block Faridpur: Mango 0.5ha. Intercrop with Teak and coriander.

Mr. Rajesh Chandra: Village and Block Faridpur:Turmeric 1 ha. and crop is at harvesting stage.

**Specific Observations:**
- Vermi compost unit establishment programme should be taken on large scale, since farmers are taking intercrops.
- It is observed that farmers take heavy intercrops in field of newly planted fruit crops. Therefore, it is suggested that heavy intercrops of cereal crops; potato and forest trees should be avoided.
- The farmers may be exposed to the areas where such crops are grown on commercial scale.
- It is therefore, suggested that the farmers may be provided proper training for proper utilization of such infrastructure facilities.

**MORADABAD DISTRICT:**

Moradabad District is situated in western U.P. between 28°-21´ to 28°-16´ Latitude North and 78°- 4´ to 79 Longitude East. Total geographical area of Moradabad District is 3493 sq km. and population of 641,240. Moradabad has an agri. based economy. There are a number of agro-based industries in district.

The financial outlay of the district was Rs.229.90 lakh and out of which expenditure was made for
Rs.49.19 lakh (up to DEC.2010) i.e. 21.39%. The district performance for the year 2010-11 is much below the targets.

**List of Farmers Field visited:**

- Mr. Kanwar Abbas: Village Sirsi Block Kunderki: Potato Seed production (Var. Kufri Bahar) - 1ha. Crop of nearby field suffers late blight.

- Mr. Rakesh Yadav: Village Kirni Moiudinpur Block ambhal: Potato Seed production (Var. Kufri Bahar) - 2 ha. field suffers leaf curl.

- Mr. Rakesh Yadav: Village Kirni Moiudinpur Block ambhal: Cold Storage 5000MT. capacity and multi chamber.

- Mr. Sabbir Ahmed: Village Sarai Tarin Block Sambhal: Potato Seed production (Var. Kufri Bahar) - 1ha. Crop of nearby field suffers late blight.

- Mr. Raghendra Singh: Village Narauli Block Gumthal: Banana (Tissue Culture Var. G-9) - 2ha. Crop in good condition and maintained properly as sole crop.


- Government Horticulture Nursery, Gumthal (Moradabad): Nursery of Mango and Guava: 6.4 ha. farm is having established mother block. Farm needs proper maintenance and leveling of nursery material.


**Specific Observations:**

- JIT observed in Moradabad that a large area of potato crop has been planted for foundation seed production and adjoining fields were affected by late blight and leaf curl diseases. It is suggested that seed programme should be taken up with the technical guidance of CPRI (ICAR) and the Institute may declare disease free zone for seed production. Seed production programme at Moradabad (Sambhal) may be discontinued.

- Nurseries established in Govt. farms sector should be properly managed and properly leveled. Crop and varieties should level and plants should be kept free from disease and pests.
Status of Uttar Pradesh

Introduction:

Uttar Pradesh is situated between 23° 52' and 31° 28'N latitude and 77° 3' - 84° 39'E longitudes, this is the fifth largest state in the country in terms of area, and the first in terms of population. The State is bounded by Nepal on the North, Uttarakhand on the north-east, Himachal Pradesh on the north-west, Haryana on the west, Rajasthan on the south-west, Madhya Pradesh on the south and south-west and Bihar on the east. It spreads over a large area, and the plains of the state are quite distinctly different from the high mountains in the north.

Uttar Pradesh is blessed with rich climatic condition, ideal for growing a large variety of horticultural crops. The sector, which includes fruits, vegetable, floriculture, plantation crops, spices & medicinal and aromatic plants, has gained importance in terms of enhance income per unit area, providing nutritional security, source of raw materials for many food processing industries, earning considerable amount of foreign exchange leading to socio-economic improvement of the people of the State. Uttar Pradesh ranks third in fruit production among all states. UP contribute 18% to the National Basket i.e, 36.74% in Vegetables, 10.48% in Fruits and 44.13%. Major fruit grown are Mango, Guava, Banana, and Litchi. The state is leading in mango production and the prime growing area for mango are Saharanpur, Muzaffarnagar, Bijnour, Meerut, Lucknow, Barabanki, Unnao, Sitapur and Hardoi. The overall productivity of fruits in the state is about 12.30 tones/ha against national average of 11.9 tones/ha. It can be seen from the above table that the area, production & productivity of non perennial fruits registered continuous upward trend in the post NHM period while downward trend in case of perennial fruits.

This state ranks second in vegetable production among all states. Major vegetable are Potato, Peas & Cabbage, it is a leading state in production of Potato & Peas and ranks second in production of sweet Potato and 6th in production of cabbage among all the states. The productivity of vegetables in the state is 18.89 tones/ha against national average of 13.9 tones/ha. The continuous upward trend with respect to area, production & productivity of loose as well as cut flower has been ascertained during post NHM period. The important spices produced in the state are onion (6th among states) Turmeric, Chili, Garlic, Fennel Fenugreek and Coriander. The area under spices crop is 0.78 lakh hectare and productivity is 0.100 MT/ha.

The programme is being implemented in the State of Uttar Pradesh by the State Horticulture Development Society through District Mission Committees involving farmers, Societies, NGOs, Grower Associations, SHGs, State institutions etc. The programme is being implemented in 45 districts with cluster approach. The crops identified under the programme include Mango, Litchi, Guava, Aonla, Bael, Ber, Banana, Betel vine, Spices, Aromatic Plants, Medicinal plants and flowers. Activities undertaken in the project are production and distribution of planting material( model nursery, small nursery, tissue culture units), area expansion (through establishment of new gardens), rejuvenation of existing gardens, production of vegetable seed, seed infrastructure,
protected cultivation, IPM/INM, organic farming, bee keeping, integrated development of Mushroom, development of marketing infrastructure (modern and terminal markets, rural markets, flower markets, functional infrastructure etc), Post Harvest Management( pack houses, multi chamber cold storages, C A storages, refrigerated vans, mobile processing units etc), Human Resource Development and Mission Management.

**Geography and Climate:**

The climatic condition of U.P. varies from temperate to tropical with alluvial and clayey alluvial soils. The soil of terai region is mostly alluvial and clayey alluvial and contains sufficient quantity of carbonic materials with the average annual rainfall of this zone 115mm. Western Plain Region is very fertile region and the soil type is mostly sandy and clayey. The average annual rainfall of this zone is 700-100mm. The soils of Central Western Zone are clayey alluvial, alluvial, sandy alluvial and sandy types. The average annual rainfall of this zone is 600-965 mm. The soil of South-Western Zone is mostly of sandy, sandy alluvial, alluvial and clayey alluvial type. Some are also has saline and sodic soils. The average annual rainfall of this zone is 75mm. Major area of Central Plain Zone is covered by saline and sodic soils. Beside this, alluvial sandy, alluvial clayey and alluvial types are also found. The average annual rainfall is 850-90mm. The soil of Bundelkhand Zone is mostly rocky. The average annual rainfall is 800-100mm. The average annual rainfall in North-Eastern Plain Zone is 1000-120mm. Major soil types of Eastern Plain region are sandy alluvial, clayey and sodic soil. The average annual rainfall is 1000-120mm. Maximum and minimum temperature range is between 40-42°C and 40°C. In Vindhya Region Zone, soils of plain are light black clay and red alluvial. The average annual rainfall of this zone is 110mm. Maximum and minimum temperature ranges between 40-49°C and 30°C.

The climate of Uttar Pradesh can also vary widely, with temperature as high as 47°C in summer, and as low as -1°C in winter.

**Seasons:**

1. **Summer** (March-June): Hot & dry (temperature rise to 45°C, sometimes 47-48°C); low relative humidity (20%); dust laden winds.

2. **Monsoon** (June-September): 85% of average annual rainfall of 990 mm. fall in temperature 40-45°C on rainy days.

3. **Winter** (October-February): Cold (temperature drop to 3-4°C, sometimes below -1°C); clear skies; foggy condition in some tracts.

**Uttar Pradesh is being covered by following nine Agro Climatic Zone:**
<table>
<thead>
<tr>
<th>Zone</th>
<th>Region</th>
<th>Geography &amp; Climate of the Region Districts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone 1</td>
<td>Tarai Region</td>
<td>Some part of the district Saharanpur, Muzaffar nagar, Bijnore, Moradabad, Rampur, Bareilly, Pilibhit, Shahjahanpur, Lakhimpur, Bahaich &amp; Shravasti are under this zone. The soil type of this zone is mostly alluvial and clayey alluvial and contains sufficient quality of carbonic materials. The average annual rainfall of this zone is 1150 mm.</td>
</tr>
<tr>
<td>Zone 2</td>
<td>Western Plain Region</td>
<td>District Bijnore, Moradabad, jyoti-ba-phule nagar, Rampur, Bareilly, Badaun &amp; Pilibhit under this zone. This is very fertile region and the soil type is mostly sandy &amp; clayey the average rainfall of this zone is 700-1000mm</td>
</tr>
<tr>
<td>Zone 3</td>
<td>Central Western Region</td>
<td>District Saharanpur, Muzaffar nagar, Meerut, Baghpat, Ghaziabad, Gautambudh nagar &amp; Buland Shahar are under this zone. The soils of this region are clayey-alluvial, alluvial, sandy alluvial and sandy types. The average annual rainfall of this zone is 600-965 mm.</td>
</tr>
<tr>
<td>Zone 4</td>
<td>South-Western Region</td>
<td>District Agra, Firozabad, Mainpur, Etawah, Aligarh and Mathura are under this zone. The soil is mostly of aravalli, sandy, sandy alluvial, alluvial &amp; clayey and alluvial type. Some are also has saline and sodic soils. The average rainfall of this zone is 700 mm.</td>
</tr>
<tr>
<td>Zone 5</td>
<td>Central Plain Region</td>
<td>District Lucknow, Unnao, Raebareilly, Sitapur, Hardoi, Kanpur Nagar, Kanpur Dehat, Etawah, Kannauj, Farrukhabad, Auraiya, Allahabad, Kaushambi, Fatehpur and Shahjahanpur are under this zone. Saline &amp; sodic soil types cover major area. Beside these, alluvial-sandy, alluvial clayey, alluvium &amp; clayey soil types belong to this region. The average annual rainfall is 850-900 mm.</td>
</tr>
<tr>
<td>Zone 6</td>
<td>Bundelkhand Region</td>
<td>District Jhansi, Lalitpur, Jalaun, Hamirpur, Mahoba, Chitrakoot and Banda falls under this zone. The soil type is mostly rocky. The average annual rainfall is 800-100 mm.</td>
</tr>
<tr>
<td>Zone 7</td>
<td>North Eastern Plain Region</td>
<td>District Gonda, Baharaich, Balrampur, Shravasti, Gorakhpur, Maharajganj, Khusinagar, Siddartha nagar, Basti, Sant Kabir</td>
</tr>
</tbody>
</table>
Nagar and Deoria are under this zone. Major soil types are sand-alluvial, clayey alluvial & diara. The annual average rainfall is 1000-1200 mm.

<table>
<thead>
<tr>
<th>Zone8</th>
<th>Easter Plain Region</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>District Barabanki, Faizabad, Ambedkarnagar, Sultanpur, Pratapgarh, Jaunpur, Azamgarh, Mau, Ballia, Sant Ravidas Nagar, Ghazipur, Banaras and Chaudauli are under this zone. Major soil types are sandy alluvial, clayey &amp; sodic soil. The average rainfall of this region is 1000-1200 mm. maximum and minimum temperature ranges between 40-42(^\circ) C and 4.6(^\circ) C.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Zone 9</th>
<th>Vindhyachal Region</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>District Mirzapur, Sonbhadra and Allahabad are under this zone. The maximum area is undulated and rocky. The soil of plain is light black clay and red alluvial. Average annual rainfall of this zone is 1100 mm. maximum and minimum temperature ranges between 40-49(^\circ) C and 3(^\circ) C.</td>
</tr>
</tbody>
</table>

**Horticulture status in U.P.:**

There has been a substantial increase both in area and production of horticulture crops during the 10\(^{th}\) plan. The area under fruits crops is expected to go up from 11.36 lakh hectare during 2009-10 to 12.25 lakh hectare during 2010-11 and production is also likely to go up from 135-85 lakh MT to 149.43 lakh MT. Similarly, the production of vegetable crops is also expected to go up from 365.20 lakh MT to 401.72 lakh MT during 2010-11. The increase in production of Potato has also been significant as the production during 2009-10 is likely to the tune of 120 lakh MT which is also likely to go up to 151.75 lakh MT during 2010-11. The present share of Uttar Pradesh in total horticulture production of the country is approximately 26%. U.P ranks third in fruits, second in vegetable and first in potato production among all states. Important fruits grown in the state are mango, guava, aonla, papaya, banana, litchis, jack-fruit Ber and citrus. U.P is the first State in the country to declare those areas as fruits belts where connected specific fruit growing areas exits. Major mango, guava and aonla fruits producing areas have been declare as fruit bets by the State.

Under the Mission, during 2005-06 to 2009-10, an additional area of 83039.17 ha of identified horticulture crops has been covered, besides establishment of 95 nurseries for production of quality planting materials, 1600.75 ha. under vegetable seed production, 2626.93 ha. covered under rejuvenation of old and senile orchards, adoption of organic farming in an area of 30240.2 ha for promotion of organic cultivation of horticultural crops, establishment of 3377 numbers of vermi-compost units, adoption of IPM practices in an area of 1653ha., creation of 12 IPM/INM infrastructure facilities such as bio-control labs., leaf tissue analysis labs, bio-control labs., plant health clinics,
creation of 34 community water structures and distribution of 27061 colonies with hives. Under the component of Post Harvest Management, 106 units (62 pack houses, 44 cold storages) have been established. Apart from this, 2 functional infrastructures for collection, grading etc. have been set up. 58032 farmers have been given training under various horticultural activities.

The major vegetables grown in the state are peas, chilies, okra, tomato, brinjal, cauliflower, cabbage, spinach, melon, radish, carrot, turnip and cucurbits. The state has about 30.00 lakh hectare under various horticulture crops. Uttar Pradesh is the second largest producer of vegetables in the country after West Bengal. Significant increase in area under vegetables has been recorded on small and marginal farms. As regards productivity, the productivity of fruits was 11.5 MT/Ha during 2008-09 which is likely to increase to 12.18 MT/Ha during 2009-10. Productivity of vegetables increased to 18.09 MT/Ha from 17.28 MT/Ha during 2008-09.

**Present Status of Horticulture in U.P**

<table>
<thead>
<tr>
<th>S. No</th>
<th>Item</th>
<th>Ach. of Xth Five Yr. Plan</th>
<th>during XI Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fruits</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Area (Lac ha.)</td>
<td>9.14</td>
<td>13.21</td>
</tr>
<tr>
<td></td>
<td>Production(Lac MT)</td>
<td>103.00</td>
<td>164.37</td>
</tr>
<tr>
<td></td>
<td>Productivity (MT/ha)</td>
<td>11.27</td>
<td>12.44</td>
</tr>
<tr>
<td>2</td>
<td>Vegetable</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Area (Lac ha.)</td>
<td>16.67</td>
<td>24.8</td>
</tr>
<tr>
<td></td>
<td>Production(Lac MT)</td>
<td>276.90</td>
<td>441.9</td>
</tr>
<tr>
<td></td>
<td>Productivity (MT/ha)</td>
<td>16.61</td>
<td>17.81</td>
</tr>
<tr>
<td>3</td>
<td>Potato</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Area (Lac ha.)</td>
<td>4.71</td>
<td>6.81</td>
</tr>
<tr>
<td></td>
<td>Production(Lac MT)</td>
<td>104.60</td>
<td>166.93</td>
</tr>
<tr>
<td></td>
<td>Productivity (MT/ha)</td>
<td>22.20</td>
<td>24.51</td>
</tr>
<tr>
<td>4</td>
<td>Growth Rate</td>
<td>6.57</td>
<td>10.87</td>
</tr>
</tbody>
</table>
Strategic Planning:

Plantation infrastructure and development:

Since 2005-06 about 12 model nurseries, 85 small nurseries and 6 new tissue culture unit are established to ensure the availability of quality planting material particularly of tissue-culture banana. U.P has only one Govt. TC lab at Lucknow which produces 1.70 lakh TC banana plants.

Vegetable Seed Production is planned in few districts having good potential for seed multiplication, particularly potato, pea and okra. Vegetable seed production targets are 8606 ha. in coming three years on public and private sector. U.P is number one producer of potato and pea in the country. This will help in higher seed replacement rate and production.

Year wise Fruits, Vegetables including potato: Area Production & Productivity:

<table>
<thead>
<tr>
<th>Year</th>
<th>Fruit</th>
<th>Vegetable</th>
<th>Potato</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006-07</td>
<td>8.24</td>
<td>88.87</td>
<td>10.79</td>
</tr>
<tr>
<td>2007.08</td>
<td>8.40</td>
<td>91.06</td>
<td>10.84</td>
</tr>
<tr>
<td>2008-09</td>
<td>9.53</td>
<td>109.60</td>
<td>11.50</td>
</tr>
<tr>
<td>(estmd.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase</td>
<td>1.67</td>
<td>24.14</td>
<td>0.55</td>
</tr>
<tr>
<td>2009-10</td>
<td>10.75</td>
<td>131.0</td>
<td>12.19</td>
</tr>
<tr>
<td>(Pro.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011-12</td>
<td>13.21</td>
<td>164.37</td>
<td>12.44</td>
</tr>
</tbody>
</table>
Area Expansion:

There is an increasing trend in area of all horticultural crops in Uttar Pradesh. The area expansion is more significant in fruits like Mango, Anola and guava and registered a substantive area increase of 16648 ha. Lucknow district area under floricultural crops increased tremendously to the level of 800%. These figures indicate the positive impact. In the new plantation for perennial fruits, the main fruits are Mango, Guava, and Aonla. Mango accounts for the largest proportion of 40.67% of the total area followed by Guava (23.88%), Aonla (23.29%). Recently Banana clusters are developed in substantive areas of Lucknow, Allahabad, Kausambi and Pratapgarh districts. About 60% more expenditure has been incurred on the area expansion programme in the state.

- Area expansion with high density planting of mango and guava is being taken up in fruits belt and other major producing areas of 200 Ha. in the state. Tissue culture banana is proposed in new clusters with a target of 6295 Ha.

- Flower cultivation in 10090 Ha. is proposed with close linkage of erection of green house and cost planning material of high value flowers for poly houses.

- The horticulture development has been given focused attention during Xth Plan period in the State and has resulted in spectacular change in the horticulture crops.

Infrastructural Development:

- 81 Multi-community multi-chamber cold storages with technical specification as prescribe by Govt. of India are proposed in major 20 potato and vegetable growing districts which will help in motivating other already established cold storages to upgrade their technology.

- Since inception of NHM programme 199 pack-house, 24 pre-cooling units, 30 mobile pre-cooling units, 22 refer van/containers, 130 primary/mobile/minimal processing unit, 7 ripening chamber, 144 low energy cool chamber, 329 prevention units and 204 low cost onion structure are proposed to be established in major crop producing areas.

- Considering the inefficiency of rural markets, 74 new rural markets and 196 retail markets are proposed. 938 mobile/static vending are proposed to reduce the post harvest losses. 75 functional infrastructures for collection, sorting, grading and packing are proposed.

Resource Management:

- In order to facilitated the latest technology to the beneficiaries fields, human resource development programme is planned in a way that the get the technology to their door steps,
through training within district, state and outside the state and through exposure visit 58384 beneficiaries will be trained through these programme.

- Horticulture mechanization is planned in such a way that the 21 fruit belt of mango, guava and aonla are benefited by power operated machine and import of new machine for demonstration purposes. Rs. 4.00 crore is proposed for these activities.

**Source of Planting material and varieties:**

The quality planting material for area expansion programme is being arranged / procured primarily from Govt. nurseries of the department and in case of deficit; it is being arranged from Central Institute of Sub-tropical Horticulture Institute, Rehman khera, Lucknow, State Farm Cooperation, Govt. of India, State Agriculture Universities, CIMAP and other public sector organizations and institutions. At time quality planting material is also procured from the private sector nurseries as per norms/standard fixed by Govt. of India. The quality planting material is being verified by the constituted committee by the District Magistrate in which the officers of the DHM, Department of Agriculture, Forest and district Economical and Statistical officer are the members. This committee examines the quality of procured planting material on random basis.

**Model Nurseries:**

Production and distribution of good quality seeds and planting material is an important component of the Mission. To meet the requirement of planting material for bringing additional areas under improved varieties of horticultural crops assistance was provided for setting up new nurseries under the Public as well as Private sector. About 15 model nurseries have been established by public sector cater the 30% requirement of planting material of fruit crops for the state and 11 model l nurseries are proposed at private sector, but they are yet to establish for one reason or other.

**Small Nurseries:**

The assistance will be to the extent of 100% of the cost for the Public sector and 50% of the cost subject to a ceiling of Rs.1.5lakhs for the nurseries in the private sector. Small nurseries would cost Rs.3.0lakh per unit. It would be the responsibility of the nurseries to ensure quality of the planting material through self accreditation. Nurseries will also be regulated under the legislation in force relating to seeds and planting material. The nurseries could be multi-crop or crop specific depending upon the requirements of planting material in the locality/project area. State has proposed 33 small nurseries at public sector, and 114 small nurseries at private sector. Committee has seen established model/small nurseries at public sector, whereas no nurseries observed at private sector. The requirement of planting material meets from private nurseries producing planting material at their orchard sites other than public sector nurseries.

Large number of TC units already exist, some of which need strengthening/rehabilitation, No new Tissue Culture (TC) units are proposed to be set up under the Mission assistance. The existing units
would be provided support for rehabilitation/ strengthening subject to a maximum ceiling of Rs.8.0 lakhs for the TC Units in the Public sector and 50% of the cost with a ceiling of Rs.4.0 lakhs for the TC units in the Private sector.

The varieties recommended by Technical Support Group (TSG) of State Horticulture Mission, U.P. is listed below. These varieties are recommended to be planted /cultivated in the different agro-climatic zones of the state:

**Crops and Varieties recommended:**

<table>
<thead>
<tr>
<th>Crop/Item</th>
<th>Varieties/Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Grafted Saplings of different Fruits Plants</strong></td>
<td></td>
</tr>
<tr>
<td>Mango</td>
<td>Dashehri, Chausa, Amrapali, Mallika, Totapai, Gaurjeet, Bombay Green, Dasehari-51, Ramkela</td>
</tr>
<tr>
<td>Guava</td>
<td>L-49, Allahabad-safeda, Lalit, sangam, Apple colour (surkha), Arka Mridula</td>
</tr>
<tr>
<td>Aonla</td>
<td>NA-6, NA-7, NA-10, Kanchan, Laxmi-52</td>
</tr>
<tr>
<td>Litchi</td>
<td>Rose-scented, Shahi</td>
</tr>
<tr>
<td>Bael</td>
<td>NB-5, NB-6 &amp; other suitable selections</td>
</tr>
<tr>
<td><strong>Floriculture</strong></td>
<td></td>
</tr>
<tr>
<td>Gladiolus</td>
<td>White Prosperity, Friendship Pink, Big Lime, Supreme, American Beauty, Novalux, Yellow Supreme, Rose Supreme, Jitter, Jister Gold, Jackson Willy Gold etc</td>
</tr>
<tr>
<td>Marigold</td>
<td>Pusa Narangi, Pusa Basanti &amp; Other Hybrids</td>
</tr>
<tr>
<td>Tuberose</td>
<td>Vaibhav, Shringar, Suvasini, Swarnrekha, Rajaterakha, Prajjwal.</td>
</tr>
<tr>
<td><strong>Spices</strong></td>
<td></td>
</tr>
<tr>
<td>Turmeric</td>
<td>Rajendra-Sonia, Azad haldi-1 N.H.D.-18, Vallabh-Priya, Roma, Sudarshan &amp; other</td>
</tr>
</tbody>
</table>
## Important Varieties

<table>
<thead>
<tr>
<th>Item</th>
<th>Varieties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chillies (Hybrid)</td>
<td>Kashi Anmol, Kashi Vishwanath, Indira, Ujala (PS/NU) 010A, Pari hot, NS-1101, NS211, Mahajwala, Divyajyoti, 86235, Siddhi, Jawahar Dhoom, Ulka, Daiya, Bss 414</td>
</tr>
<tr>
<td>Ginger</td>
<td>IISR Rejatha, Subhprabha, Baruasagar (selection)</td>
</tr>
<tr>
<td>Garlic</td>
<td>G-1, G-50, G-282</td>
</tr>
</tbody>
</table>

## Rejuvenation of Old and Senile Orchards:

Uttar Pradesh is a major mango, guava and aonla producing state. The area under mango is 2.76 lakh ha. in the state out of which the area in fruit belt districts is approximately half of it. Rejuvenation /replacement of senile plantation with canopy management are necessary for increasing productivity. During past years, due to unawareness and unacceptability of this technique at farmer’s level, the target could not be achieved. The old and senile/unproductive orchards are being rejuvenated under NHM since 2005-06 and an area of 3945 ha. have been rejuvenated since then. The Technologies adopted are as suggests/recommended by CISH, Rehmankhera, Lucknow.

However, during 2010-11 to 2012-13, an area of 24645 hectares will be rejuvenated by the way of light, medium and hard pruning and other recommended management practices. Similarly, Aonol and guava orchards are also to be rejuvenated on priority basis in old orchards of major districts.

## Vegetable Seed Production:

The State Horticulture Mission will ensure the timely availability of the good quality seeds and planting material to the farmers at nominal price. The production of true to the type quality seeds of recommended varieties of vegetables will be assisted under this component.--The assistance for vegetable seed production will be Rs.50, 000/- per ha for the Public sector and 50% of the cost subject to a ceiling of Rs.25, 000/- per ha to the Private Sector limited to 5ha per beneficiary as credit linked back ended subsidy. About 761 ha. cropped area was sown for quality seed production of high yielding varieties suitable for various agro climatic conditions and breeders seeds were provided by ICAR institutes/SAU,s. To facilitate proper handling, storage and packaging of seeds, assistance would be provided for creating infrastructure like drying platforms, storage bins, and packaging units etc. 100% assistance will be provided to the public sector and the assistance to the private sector will be credit linked back ended subsidy limited to 25% of cost.
**Creation of Water Sources:**

Under the Mission assistance would be provided for creating water sources through construction of community tanks, farm ponds/reservoirs with plastic lining. The assistance will be limited to Rs.10.0 lakh per unit for an area of 1 ha to be taken up on community basis. Maintenance of the water source will be the responsibility of the community. About 650 ha. Cropped area was brought under water source by creating community water ponds.

**Protected Cultivation:**

As per report submitted 15.3% targets are achieved in respect of hi-tech green house. However, in the category of poly structures or shade nets about 50% physical progress has been indicated. Although in case of greenhouse 33.60% of the allotted funds have been spent, but the physical achievement as reported by the UPSHM are much below the targets. About 80% of the physical target of mulching has been achieved, which can be said to be a good beginning. During the visits in the districts, not even a single complete poly hose or shade net was seen by the team. In case of Plastic tunnel, physical achievements seem to be a 30% as reported.

**Pollination Support through Bee-Keeping:**

More than half of the physical target (60%) i.e.1016 colonies out 1597 target of distribution of colonies with hives has been achieved. As far as technology dissemination through demonstration is concerned, no work has been initiated.

Figures in brackets indicate percentage

**Post Harvest Management:**

As reported by the UPSHM, not much progress has been made. In the case of pack house, physical targets have been unsatisfactory. Large no. of pack house are indicated in targets, but most of them are shown as proposed only. However, the JIT team did not see any pack house unit in the districts visited. A good progress is made for infrastructure development of cold storage in the state. i.e.42 out of 5 proposed is functional. It is suggested that at least 25% of proposed budget may be utilized for post harvest management. Therefore, UPSHM should take Post Harvest Management as a priority area for the holistic development of this sector.

**Financial Progress:**

During 2005-06 to 2009-2010 an amount of Rs. 226.3 crore was released to the State. The State has reported an expenditure of Rs. 222.27 crore up to 2008-09. A sum of Rs. 4.12 crore as unspent balance is available with the State Horticulture Mission. The Annual Action Plan of SHM, Uttar Pradesh for 20010-11 has been approved for Rs. 100.00 crore. JIT observed that the expenditure till Dec.2011 is Rs.3755.76 lakh out of annual plan allocation of Rs.10000 lakh which is only 37.55%.
The physical achievements since 2005-06 to 2009-10 have so far been as under:

<table>
<thead>
<tr>
<th>SI No.s</th>
<th>Components</th>
<th>Unit</th>
<th>Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Area expansion- Perennial Fruits</td>
<td>Ha.</td>
<td>35495</td>
</tr>
<tr>
<td>2</td>
<td>Area expansion- Non- Perennial Fruits</td>
<td>Ha.</td>
<td>13463</td>
</tr>
<tr>
<td>3</td>
<td>Area expansion- Flower</td>
<td>Ha.</td>
<td>14780</td>
</tr>
<tr>
<td>4</td>
<td>Area expansion- Spices, Medicinal &amp; Aromatic Plants</td>
<td>Ha.</td>
<td>54710</td>
</tr>
<tr>
<td>5</td>
<td>Rejuvenation of old orchards</td>
<td>Ha.</td>
<td>3944</td>
</tr>
<tr>
<td>6</td>
<td>Vegetable Seed Production</td>
<td>Ha.</td>
<td>7090</td>
</tr>
<tr>
<td>7</td>
<td>Creation of Community Tanks/Ponds</td>
<td>No.</td>
<td>46</td>
</tr>
<tr>
<td>8</td>
<td>Mulching</td>
<td>Ha.</td>
<td>6033</td>
</tr>
<tr>
<td>9</td>
<td>Promotion of IPM</td>
<td>Ha.</td>
<td>21825</td>
</tr>
<tr>
<td>10</td>
<td>Promotion of Organic Farming</td>
<td>Ha.</td>
<td>29427</td>
</tr>
<tr>
<td>No.</td>
<td>Programmes</td>
<td>No.</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>------------------------------------------------------</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Establishment Of Vermi-Compost Unit</td>
<td>3707</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Training of Farmers</td>
<td>75428</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Distribution of Bee-colonies with hives</td>
<td>37584</td>
<td></td>
</tr>
</tbody>
</table>

**Infrastructure created under NHM**

<table>
<thead>
<tr>
<th>Programmes</th>
<th>Achievements (Unit in No.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estab. Of Nurseries (A) Model Nursery</td>
<td>2</td>
</tr>
<tr>
<td>(b) Small Nursery</td>
<td>8</td>
</tr>
<tr>
<td>Rehabilitation of Tissue Culture Lab</td>
<td>0</td>
</tr>
<tr>
<td>Seed Infrastructure</td>
<td>0</td>
</tr>
<tr>
<td>Community Tanks</td>
<td>0</td>
</tr>
<tr>
<td>Bio Control Lab</td>
<td>0</td>
</tr>
<tr>
<td>PHM (a) Pack House</td>
<td>13</td>
</tr>
<tr>
<td>(b) Cold Storage units</td>
<td>0</td>
</tr>
<tr>
<td>(c) Mobile Processing units</td>
<td>0</td>
</tr>
<tr>
<td>(d) Whole Sale/Rural Market</td>
<td>0</td>
</tr>
<tr>
<td>(e) Functional Infrastructure</td>
<td>0</td>
</tr>
<tr>
<td>(f) Mentha Distillation unit</td>
<td>0</td>
</tr>
<tr>
<td>(g) Refer van</td>
<td>0</td>
</tr>
<tr>
<td>(h) Onion Storage</td>
<td>0</td>
</tr>
<tr>
<td>(i) Primary Processing Unit</td>
<td>0</td>
</tr>
</tbody>
</table>
JHANSI, BANDA & CHITRAKOOT

Govt. Nursery, Gomtabad (Barua Sagar):

Newly planted guava in farmer field at Nayakhera:

Guava established orchard as sole crop:

Guava, Mango and Lemon orchards in Badgaon:
Newly established guava orchard: Guava orchard in fruiting (4yrs old):

Lemon nursery in Jhansi: Ginger cultivation in farmers field:
Anola crop in farmers field at Barethi:

Marigold production in Village Bhojla farmers field:

Community pond at Garwha village Mauranipur

Vermi Compost unit at village Bamhori
Guava orchard with drip irrigation at Garwaha: Community pond at village Bhojla:
ALLAHABAD, KAUSAMBI and BANARAS

Anola plantation in fruiting at Banaras (Var. N-6): Anola plantation in fruiting at Allahabad (Var. Chakia):

Fruit nursery at private sector in Kauta (Jasra):

Community pond and drip irrigation for Banana at Asrabe Kalan (Kaurihar):
L.B.R. Singh village Maida Makanpur Guava block: Guava orchard in fruiting at Gaura(Sambegarh):

Plant health clinic and nursery at BHU: Guava orchard at Charai Gaon B.Mustafabad:
Trainees at Agri. Institute, Nani (Allahabad): Guava orchard in fruiting at Charai Gaon:

Banana orchard at Uancha Gaon (Banaras): Established banana orchard at Ashare Kalan:
Banana seven month old crop at Makanpur:  Banana orchard inter cropped with chilies:

Banana orchard in Barethi (Nabada):  Marigold production at Kanthipur (Banaras):
LUCKNOW, BARABANKI, SULTANPUR, BAREILLY and

Banana crop at Gosain ganj (Lucknow);

Vermi Compost unit at Bakshi Ka Talab:

Banana after harvest at majehpurba village;

Matured bunch of banana in farmers field:
Low cost Poly tunnel for nursery plants  

Mango grafted seedling in Nursery

Gladiolus production at Kakori village:

Gerbera production in protected condition:
Gladiolus in farmer’s field at Md. Ismail field

Gladiolus cultivation in farmers field at Barabanki