REPORT OF JOINT INSPECTION TEAM ON THEIR VISIT TO PUDUCHERRY

DATE OF VISIT: 24-26 NOVEMBER 2010

NATIONAL HORTICULTURE MISSION
MINISTRY OF AGRICULTURE
DEPARTMENT OF AGRICULTURE & COOPERATION
KRISHI BHAVAN, NEW DELHI
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The Joint Inspection Team (JIT) comprising of Dr. Jose C. Samuel, Chief Consultant (NHM) and Shri Venkatesh Hubballi, Director, Directorate of Cashew & Cocoa Development, Kochi visited Puducherry during 24-26 November, 2010 to review the progress under the National Horticulture Mission (NHM), Shri D. Mouronga, Agriculture Officer (Veg.) accompanied the Team during the field visits. Discussions were also held with Shri S. Kalyan Sundram, Additional Director of Agriculture (Hort.), Shri Harish Selvanathan, Joint Director of Agriculture and Shri Gerald Ashok Kumar, Deputy Director of Agriculture.

**About Horticulture in Puducherry**

Puducherry comprise of Pondicherry, Karaikal, Mahe and Yanam Districts. Pondicherry, the capital is situated 162 km South of Chennai on the East coast. Karaikal is situated further 132 km South of Pondicherry. Yanam is located in Eastern Godavari District of Andhra Pradesh, 870 kms from Puducherry, while Mahe is located in Cannanore District of Kerala, about 650 kms away from Puducherry.

The average rainfall vary between 537 mm to 3500 mm in these regions, with Mahe region experiencing the maximum rainfall. Major portion of the rainfall is received during the North East Monsoon period, between the months of October to December.

The total area of Puducherry is 161 Sq. km with a population of 1.71 lakh as per 2001 census. NHM activities have been taken up for the development of horticulture in the Puducherry region, as area under horticultural crops is not very significant in the other regions.

The main fruit crops being grown in Puducherry are Mango, banana, guava and sapota while the major vegetables grown are brinjal, okra, amaranthus and cluster beans. The major horticulture crop in the UT is coconut, which occupies about 1500 ha. The details of area, production and productivity of horticulture crops in Puducherry during 2008-9 as follows:

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Crop</th>
<th>Area (ha.)</th>
<th>Production (tones)</th>
<th>Average Productivity (t/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Fruits</td>
<td>1167</td>
<td>25041.10</td>
<td>21.5</td>
</tr>
<tr>
<td>2.</td>
<td>Vegetables</td>
<td>1411</td>
<td>46619.00</td>
<td>33.0</td>
</tr>
<tr>
<td>3.</td>
<td>Betlevine</td>
<td>29.8</td>
<td>636.00</td>
<td>21.3</td>
</tr>
</tbody>
</table>
Implementation of NHM Scheme in Puducherry

Implementation of NHM Scheme in Puducherry commenced from 2009-10. An outlay of Rs. 133.5 lakh as approved during 2009-10, including GOI share of Rs. 113.47 lakh, against which an amount of Rs. 33.25 lakh was released during November, 2009. During the year, an expenditure of Rs. 32.89 lakh (Rs. 27.99 lakh GOI share) was incurred on area expansion activity, as per the following break up:-

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Activity</th>
<th>Target</th>
<th>Achievement</th>
<th>Outlay</th>
<th>Expenditure (GOI share)</th>
<th>No. of Farmers covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Fruits Perennial</td>
<td>30.00</td>
<td>9.82</td>
<td>2.87</td>
<td>0.94</td>
<td>18</td>
</tr>
<tr>
<td>2.</td>
<td>Fruits non perennial</td>
<td>166.0</td>
<td>175.15</td>
<td>10.58</td>
<td>15.63</td>
<td>351</td>
</tr>
<tr>
<td>3.</td>
<td>Flowers (loose)</td>
<td>25.00</td>
<td>49.99</td>
<td>2.55</td>
<td>5.10</td>
<td>119</td>
</tr>
<tr>
<td>4.</td>
<td>Spices</td>
<td>15.00</td>
<td>13.15</td>
<td>1.43</td>
<td>1.26</td>
<td>49</td>
</tr>
<tr>
<td>5.</td>
<td>Plantation crops</td>
<td>50.00</td>
<td>100.00</td>
<td>2.39</td>
<td>4.78</td>
<td>232</td>
</tr>
<tr>
<td>6.</td>
<td>Rejuvenation</td>
<td>25.00</td>
<td>--</td>
<td>3.19</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>7.</td>
<td>Protected cultivation</td>
<td>2.00</td>
<td>8.61</td>
<td>1.63</td>
<td>0.28</td>
<td>--</td>
</tr>
<tr>
<td>8.</td>
<td>Mission Management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>33.25</strong></td>
<td><strong>27.99</strong></td>
<td></td>
</tr>
</tbody>
</table>

During 2010-11, an outlay of Rs. 99.01 lakh was approved including GOI share of Rs. 84.16 lakh. An amount of Rs. 36.34 lakh was released during October, 2010. So far, an area of 303 ha has been covered under area expansion programmes. However, due to want of release of UT share, subsidy assistance is yet to be released to the beneficiaries. In fact, during 2009-10 the UT share was released on 31.3.2010; last day of the financial year.

The JIT inspected the fields at Nettapakkam, Mannadipet and Puducherry communes of the Puducherry District on 25th and 26th of November. The Team also visited one Uzhavar Sandhai (Rural Market) set up by the UT administration at Puducherry.

Visit to Nettapakkam Commune

The JIT visited the plots of three farmers in Nettapakham commune of Puducherry.
The commune is located about 30 kms from Puducherry. About 270 ha is under horticultural crop in the commune, the main crops being banana, mango, guava, sapota, brinjal, okra, tapioca, jasmine and crosandra.

Visit to the plot of Shri Batch Reddiar, Pandasozhnallur village revealed that he has availed NHM assistance for cultivating Grand nine variety of banana in 0.5 ha during the current year 2010-11. The planting was done on 19.8.2010. The TC plants, 2200 Nos, were procured from Jain Irrigation, Odumaleipet, TN @ Rs. 10/- per plant. The total area available with the farmer is 7 acres (2.8 ha). The farmers has availed assistance from the UT administration for taking up Precision Farming under which an amount of Rs. 1.50 lakh/ ha is being provided (Rs. 1.00 lakh / ha for drip irrigation and Rs. 0.50 lakh / ha for inputs like water soluble fertilizer etc., with 100% subsidy. About 0.8 ha has been taken up under brinjal cultivation supported with drip irrigation and fertigation NHM assistance to the tune of Rs. 18,750/- is due to be released to the farmer.

Shri Venktataraman, in the same village, has also taken up banana cultivation with NHM assistance in an area of 0.3 ha. The planting material was procured from Jain Irrigation Odumlaipet. He has also availed assistance under Precision Farming Scheme of the UT Administration. Planting was done on 25.10.2010. The first installment of Rs. 10,125/- is due to be paid to the farmer.

Mrs. Sarikala W/ o Shri V. Vaidyalingam, who is the Chief Minister of Puducherry, has taken up cultivation of Mondan variety of banana in 2 ha. This variety is used mainly for cooking purpose for which there is a good market.

In all these plots display boards have been placed. However, NHM log need also to be placed. A printable version of the NHM logo has been provided to the UT Horticulture Mission (HM) for facilitating display of the NHM logo.
Mr. Batch Reddiar has taken up cultivation of Grand Nine variety of banana in 0.5 ha with NHM assistance during 2010-11 at Pandasozhimalur village, Netapakkam commune.

Planting was done on 19.08.2010. NHM display board has been installed. It was advised to display the NHM logo also.

Mr. Batch Reddiar has availed assistance under the Precision Farming scheme during 2010-11 under which drip with fertigation system has been provided by the UT administration.
Mr. Venkatarajan has taken up cultivation of Grand Nine variety of banana in 0.5 ha with NHM assistance during 2010-11 at Pandasamnallur village, Netrapakkam commune.

Assistance for drip irrigation system has been availed under the Precision Farming scheme during 2010-11 under which an assistance @ Rs1.5 lakh/ha is being provided by the UT administration.
Plot of Mrs Sashikala, who has taken up cultivation of Mondan variety of banana with NHM assistance at Maducarai village.

Shri Arumuragan who has taken up cultivation of banana with NHM assistance at Kutchipalayam village. Suckers were procured from Vellar @Rs.3/- per plant.

Visit to Mannadipet Commune
Mannadipet commune is situated about 24 km from Puduchery, which is a major horticulture belt of the UT. The total cultivable area of the commune is 1246 ha out of which horticultural crops occupy an area of 503 ha. Banana, guava, sapota, mango, aonla, brinjal, okra, gourds, onion tapioca, jasmine, crorandra, chrysanthemum, marigold and some medicinal plants are the main horticultural crops.

JIT visited the plots of the 10 farmers in the commune.

Shri K. Saravanana, Kalitheerthal Kuppam village has taken up cultivation of turmeric is 0.4 ha during 2010-11. The rhizomes were procured from Erode, TN. The farmer was not present during the visit and it was observed that the plot needed proper weeding.

Shri Vijay Kumar and Shri Suryamurthi have taken up cultivation of Monthan variety of banana during 2009-10 covering an area of 0.5 ha each. They have been paid an assistance of Rs. 5250/- each, based on the cost norms for 2009-10. JIT observed that most of the plantation got damaged due to the cyclone named ‘Jal’ which hit the locally about month ago. The UT has taken up assessment work on the damage for paying compensation to the affected farmers. However, since the plants have fallen after the bunch formations, the second installment of NHM assistance needs to be released to the farmers without further delay.

Incidentally it has been noticed that no provisions have been made in the AAP 2010-11 for meeting the 2nd year maintenance expenditure for the plantations raised during 2009-10. Therefore, necessary provision need to be made in the AAP- 2010-11 in this regard.

Visit to Puducherry Commune

About 24 ha is under horticultural crops in Puducherry commune. Because of its prorunity to the township vegetables are being grown intensively in selected pockets.

A visit was made to the field of Shri B. Surendra Kumar Mohanti who is Managing 15 acres (6 ha) on behalf of the Arbindo Ashram. Banana cultivation has been taken up in 2 ha during 2010-11. Integrated farming system has been adopted in the farm. Mostly organic manure has been used. Pooran, Monthan, Ground nine and Elakhi varieties of banana have been planted. It is an ideal location to severe as a demonstration plot where farmers could be shown different technologies being adopted.
Plot Ms Suryamurthy and her husband (Sh Vishwanathan, who availed assistance under NHM for cultivating Monthan variety of banana during 2009-10. Most of the banana plantation got damaged due to cyclone.
Plot Ms Suryamurthy and her husband (Sh Vishwanathan, who availed assistance under NHM for cultivating Mounthan variety of banana during 2009-10. Most of the banana plantation got damaged due to cyclone.
Visit to KVK, Puducherry

The JIT visited KVK Puduchery on 26.11.2010. Dr. A. Ramamurthy, Principal explained that the Perunthalaivar Kamaray Krishi Vigyan Kendra (KVK) was established during the year 1974 at Pondichery and is the first KVK in the country. The KVK has 145 acres (58 ha) of land of which 62.5 acres (25 ha) are wet lands for rice farming and 50.5 acres (20.2 ha) under rainfed farming, 5 acres (2 ha) for horticulture and 27 acres (10.8 ha) is under roads and buildings. Mango, guava, banana sapota, lime pomegranate, jack and bread fruits are the main fruit crops while cashew and coconut are the main plantation crops being grown in the KVK. The KVK has been instrumental in releasing seven paddy varieties in the region. One Tissue Culture Lab was established during 1995-96 with the technical guidance from Baba Atomic Research Centre, Mumbai. The TC lab is producing about 15,000-20,000 plantlets of banana, orchids, rose and crossandra. One bio control lab was established during 1997 with technical guidance form National Bureau of Agriculturally Important Insects, ICAR, Bangalore. The lab has released *Trichogramma japonicum* in 1999 as a first bio control agent. The KVK is also producing Tricho cards- *Trichogramma japonicum* & *Trichogramma chilonis*; Nucleo Polyhedro Virus- Spodoptera litura; Antagonistic Fungal and Bacterial Biopesticides- *Trichoderma viride*, *Trichoderma harzianum* and Pseudomonas fluorescens are being produced and supplied with Government subsidy. Production of Mycoinsecticide- Beauveria bassina; Enzootic Bacterial Biopesticide- *Bacillus thuringiensis* and Nucleo Polyhedro Virus- *Helicoverpa armigera* are in pipeline. The KVK has also established Fruit & Vegetables Preservation Demonstration unit, Zero Energy cool chamber, Mushroom Demonstration units Spawn Unit and a milky mushroom unit.

One hi-tech nursery has been established in an area of 1020 sq. m for producing vegetable seedlings. Planting material for flowers and fruits are also being produced and distributed to the farmers from another nursery. However, the quantum of planting material being produced is much less compared to the local demand. There is a requirement of 30,000 TC banana in the UT. Besides, about 15,000 graft of fruit crops like mango, guava, sapota, pomegranate mosambi and acid lime are required annually. In the absence of adequate number of planting material, the farmers have to procure the same from Tamil Nadu without any guarantee in quality. Therefore, there is an urgent need to set up TC and nursery facilities. The KVKs best equipped for the purpose.
Dr A. Rammurthy, Principal, KVK, Puducherry explaining about mushroom production unit.

Lady trainees at the KVK

Mother block for guava at KVK.
Visit to Rural Market / Uzhavar Sandhai

Four Uzhavar Sandhais are functioning under the control of Director of Agriculture and the Secretary, Pondicherry Market Committee in Puducherry region at the following places:

1. Old Bus Stand, Thattachavady, Puducherry (Since Feb. 2000)
2. Lawspet (Since Feb. 2002)
3. Arumbarthapuram (Since Feb. 2006)
4. Ariyankuppam (Since Feb. 2009)

Everyday the Uzhavar Sandhai opens early in the morning at the 0500 hrs and closes by 1200 hrs. Three vehicles attached these four Uzhavar Sandhais collect the farmers produce from the different villages in Puducherry region on a daily basis. The farmers are also brought to the Uzhavar Sandhais along with the produce. Thus, the farmers get the benefits of coming in the Uzhavar Sandhais free of cost.

The JIT visited the Uzhavar Sandhais located at Thattachavady. There are 113 stalls in the Uzhavar Sandhais which cater to horticultural produce, mainly

The Horticulture wings of the Agriculture Department have issued identity cards to 130 farmers. Only the farmers having the ID card are allowed to sell their produce in the Sandhak. About 15 tonnes of fruits, vegetables, flowers are being sold from the Sandhai.

Everyday, the stalls are allowed to the farmers on first come and first served basis. After verifying the identity of the farmers the staff of Uzhavar sandhai issue stall slip’s to the farmers. The farmers are issued weighing balances by depositing the slips. Thereafter they occupy the allotted stalls and sell the produce.

Everyday the rates for the produce are fixed by the Uzhavar Sandhai in charge. For this purpose, the staffs of the Uzhavar Sandhai collect prevailing daily wholesale price and retail price in the Puducherry vegetable market. Based on the collected data, the Uzhavar Sandhai fixes the rates by giving 20% increase in wholesale rate and 15%, decrease in the retail price. The average of the above prices is taken as the rates of the Uzhavar Sandhai. The rates so fixed are announced to the farmer which is displayed in the stalls.
The JIT observed that the market place lacked hygienic conditions. The drainage system was poor and the roofs were leaking. Since the market is located in the heart of the town it caters to the needs of the local population. Hence, immediate steps need to be taken for renovating the market.

As per the Annual Action Plan (AAP) for 2010-11, a provision of Rs. 16.00 lakh has been earmarked two rural markets/ Apni mandis. It was improved upon the Additional Director of Agriculture to submit project proposals to the Ministry of Agriculture for sanctioning these projects.

The JIT also visited the APMC market, which is presently catering to food grains. They propose to establish one cold storage and ripening chamber in the market, for which provisions have been kept in the AAP-2010-11. Shri Krishna Raj, Marketing Superintendent mentioned that the construction work has commenced and the equipments for the ripening chamber (10 MT) have been procured. Project proposal in this regard is being formulated and will be submitted to the Ministry shortly.

**Web enabled Progress Monitoring System:**

Despite many requests the UT HM has not been uploading the monthly progress report on the NHM web site. Therefore, during the visit of the JIT a live demonstration was organized for the officials and staff of the UT HM wherein the physical and financial progress for the year 2009-10 and for two months in 2010-11 were uploaded on the NHM web site. It was observed that during 2010-11, while physical progress has been achieved, corresponding financial progress was not available due to non release of subsidy amount to the farmers, pending release of the UT share. The Additional Director and Agricultural Officer were impressed upon to post the physical and financial progress simultaneously. Thus, the progress report for the months of September and October, 2010 is yet to be uploaded. The UT HM need to ensure its uploading on a regular basis by the 5th of each month.
View of Uzhavar Sandhai at Puducherry where horticultural produce is being sold directly by the farmers. The market premises needs better upkeep and infrastructure.
Observations & Recommendations

1. Mostly area expansion programmes were taken up during 2009-10 and 2010-11. However, no provision has been kept in the AAP 2010-11 for taking up 2\textsuperscript{nd} year maintenance work of 2009-10. Therefore, necessary provision need to be made for 2\textsuperscript{nd} year maintenance in the AAP 2010-11, and the amount due to the farmers need to be released without further delay.

2. There is shortage of planting material for fruit crops including Tissue Culture plantlets for banana. The availability needs to be augmented by setting up new nurseries and Tissue culture units. A system needs to be introduced to ensure the quality of the planting material. The main source of planting material is the KVKs, which need to be involved for setting up nurseries besides strengthening the TC unit. Adequate provisions need to be made in the AAP in this regard.

3. There is very good scope for taking up protected cultivation of high value vegetables and flowers. During 2009-10, no progress was achieved on this front. A provision of Rs. 23.37 lakh has been made during 2010-11 for bringing 0.5 ha under naturally ventilated green house structures. There is scope to enhance this provision.

4. The UT proposes to set up one cold storage and a ripening chamber at the APMC market premises. Project proposal in this regard, duly indicating the break up of cost, source of funding, period of implementation along with the layout map need to be submitted to the Ministry of Agriculture for according approval.

5. The Uzhavar Sandhais set up by the UT administration in facilitating the farmers to sell their produce without the involvement of middleman, which is a welcome step. However, the condition of the market need to be improved by providing proper drainage, repair of leaking roofs and facility for display of the produce. Provision of Rs. 16.00 lakh earmarked during 2010-11 for two rural markets need to be availed. For this, project proposal need to be furnished to the Ministry of Agriculture for according approval.

6. The farmers need to be educated about the modern technologies through training and study tours. Necessary provision needs to be made in the AAP for this purpose. The scope for organizing Gardeners training through the KVK need to be explored.

7. The UT HM staff have been trained about the posting of physical and financial progress on the web enabled progress monitoring system of NHM web site. The physical &
financial progress for the months of Sept. & October need to be uploaded after booking the expenditure. UT need to ensure posting of data by the 5th day of each month.

8. The release of UT share of funds need to be expedited. Timely release of funds to the beneficiaries on the investments made is necessary to build their confidence. The very purpose of constituting the Puduchery Horticulture Development Society as a Registered Society is to ensure timely flow of funds on a mission mode. UT Administration needs to ensure the implementation of the National Horticulture Mission programmes in letter and spirit.