



REPORT OF JOINT INSPECTION TEAM WHICH VISITED ANDHRA PRADESH



DATE OF VISIT: 27-30 JUNE 2011



**NATIONAL HORTICULTURE MISSION
MINISTRY OF AGRICULTURE
DEPARTMENT OF AGRICULTURE & COOPERATION
KRISHI BHAVAN, NEW DELHI**

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**REPORT OF THE JOINT INSPECTION TEAM UNDER THE LEADERSHIP OF DR.
JOSE C. SAMUEL, CHIEF CONSULTANT (NHM) WHICH VISITED ANDHRA
PRADESH DURING 27 to 30 June, 2011**

The Joint Inspection Team (JIT) comprising of the following Members visited Andhra Pradesh during 27th to 30th of June, 2011 to review the progress under the National Horticulture Mission (NHM) and Micro Irrigation (MI) in the State:

1. Dr. Jose C. Samuel, Chief Consultant (NHM) - Team Leader
2. Dr. Tamil Selvan, Director, Directorate of Arecanut & Spices Development, Kozhikode
3. Dr. Shiva Shankar Mantha, Professor (Agronomy), PFDC, College of Agriculture, ANGRAU, Rajendernagar, Hyderabad
4. Dr. BVK Bhagawan, Senior Scientist (Hort.), & Head Horticulture Research Station, Kowur, APHU.
5. Shri O. Laxman Rao, Deputy Director, SHM, Andhra Pradesh, Hyderabad

The JIT visited Srikakulam, Guntur and Khammam Districts. A meeting was held with Shri CVSK Sharma, Agriculture Production Commission on 30.06.2011 to appraise him about the observations of the JIT during the field visits and interaction with the farmers.

MAIN OBSERVATIONS

- Major focus in the Districts visited has been on area expansion. In Khammam district, guava has been introduced as an inter crop with oil palm. It needs to be ensured that oil palm does not compete with guava, as oil palm can create shade within 3-4 years.
- For area expansion activities, farmers are making their own arrangement for procuring the planting material either from Departmental nurseries or through Private Nurseries from far off locations, if sufficient planting material is not available in Departmental nurseries. Shortage of planting material for guava was observed in Khammam district in the Model nursery at HRS, Aswaraopeta.

- While the Model nursery at HRS, Aswaraopeta has been well maintained, its production capacity needs to be enhanced to meet the target of 2.0 lakh plants per year. The Model Nursery set up at the Departmental Farm at Srikakulam needs better upkeep. The shade nets need replacement.
- SHM's intervention is needed to ensure availability of good quality planting material within a reasonable distance.
- Area expansion activities need to be taken up on a cluster basis rather than in isolated pockets.
- Under rejuvenation of cashew and mango, mostly canopy management works have been taken along with application of inputs. Some of the senile mango orchards need top working for light penetration. Use of power saw would be needed at such locations.
- Protected cultivation needs to be promoted extensively.
- There is a good scope for establishing community tanks in conjunction with micro irrigation, which needs to be promoted.
- Adequate training need to be imparted to the beneficiaries availing subsidy under micro irrigation system. Post installation maintenance need to be ensured. At places, drippers were leaking and excess irrigation was being provided. Training on Fertigation scheduling and application is also needed.
- A number of primary processing units for cashew have been established at Palasa block of Srikakulam district. Efforts need to be made to introduce latest energy efficient equipments for boiling and heating purpose. One unit has installed automatic peeler, which is functioning well.
- Permanent display boards with NHM logo needs to be displayed wherever NHM assistance has been provided. Presently, only banners have been placed in some of the locations visited.
- More efforts are needed for setting up markets, particularly wholesale/ Terminal market. Turmeric market approved during 2010-11 at Duggairala, Guntur for establishment by AMC, Guntur is yet to take off. SHM needs to expedite its establishment. The facilities provided at Rural Market Narakoduru village need to be improved upon by providing shed, platform and water connection.

- Bio control lab sanctioned during 2009-10 by Department of Horticulture at Old Chillies Yard, Guntur is yet to take off due to non availability of space. SHM need to intervene to expedite the setting up of the lab. Similarly, purchase of equipments for the Bio Control Lab at HRS, Aswaraopeta need to be expedited.
- Monthly Web posting of progress from the District level need to be ensured. The work-flow based MIS need also be operationalised in all the Districts.
- Response to action taken on the observations of JIT which visited Andhra Pradesh during September, 2010 communicated vide DO letter No.33-75/2009-Hort Dated 24.10.2010 is awaited.

During the interaction with the Agriculture Production Commissioner the above issues were highlighted to him, who promised to take necessary steps to rectify the deficiencies.

SRIKAKULAM DISTRICT

NHM activities have been going on in Srikakulam District since 2005-06. The details of area production and productivity of main horticulture crops in the district during 2004-05 and 2009-10 is given in **Table 1**.

Table 1: Area, Production and Productivity of Horticultural Crops in Srikakulam District

Area in ha, Production in MT and Productivity in MT/Ha

Crop	2004-05			2009-10			difference (%)		
	Area	Prod'n	Pvty	Area	Prod'n	Pvty	Area	Prod'n	Pvty
Mango	11475	91800	8.0	12075	101430	8.4	5.2	10.5	5.0
Banana	1000	37000	37.0	2150	79550	37.0	115.0	115.0	0.0
Guava	30	21	0.7	150	105	0.7	400.0	400.0	0.0
Cashew	19902	9951	0.5	22427	11214	0.5	12.7	12.7	0.0
Cocoa				301	226	0.8			
Chilli	1500	3000	2.0	3000	6000	2.0	100.0	100.0	0.0
Turmeric	200	2500	12.5	800	10000	12.5	300.0	300.0	0.0

The major area under horticultural crops in the district is cashew.

There has been significant improvement in the production of crops like banana, guava, chilli and turmeric. But the increase in production has been due to increase in

coverage of area without any improvement in productivity. Cocoa crop is new introduction, in the district with buy back arrangement through Cadbury India Pvt. Ltd.

Investments under NHM in Srikakulam District

Since 2005-06, an expenditure of Rs. 1330.18 lakh has been incurred under NHM in Srikakulam district. The year wise details of expenditure is given in Table- 2.

Table 2. Investments under NHM in Srikakulam District

Year	Amount (Rs. in lakh)	Main activities
2005-06	3.32	HRD, Vermi compost
2006-07	262.90	Area expansion, cashew rejuvenation, HRD Vermi compost.
2007-08	303.39	Area expansion, rejuvenation, IPM/INM, vermi compost, PP equipment, HRD.
2008-09	355.44	Area expansion, rejuvenation, vermi compost, HRD.
2009-10	202.92	Area expansion, rejuvenation, vermi compost, HRD, primary processing.
2010-11	202.21	Area expansion, rejuvenation, vermi compost, horticulture mechanization, primary processing.
Total	1330.18	

The JIT visited various sites to see the progress covering area expansion, rejuvenation, vermi compost unit and model nursery. Shri T. Nagaragh, Assistant Director of Horticulture Dr. M. Ashok Kumar, APD, APMIP and Sh. Soni, Horticulture Officer, Srikakulam accompanied the JIT during the visit.

Rejuvenation of cashew has been taken up in Ramakrishnapuram village of Palara mandal during 2010-11. About 100 ha of old cashew plantation exist in the area, which need rejuvenation measures to enhance the yield. Discussion with one of the beneficiary, Shri Sorra Jayaraju, who has taken up rejuvenation in one ha revealed that mostly

canopy management measures along with supply of inputs and gap filling measures with new plants and gap filling measures with new plants have been taken up in his plot. Under the rejuvenation package One secature and one hand saw has been supplied to

him along with inputs such as vermi compost (700 kg), Urea (250 kg), SSP (110 KG), MoP (30 kg), copper Auxichloride (14 kg), Monocrotophos (14 kg) and carbendizm (2.4

kg). The total expenditure works out to about Rs. 20,000/- per ha against which subsidy assistance @ 50% has been provided. Cash payment to the tune of Rs. 2432/- has been paid through online bank transfer.

Srikakulam being a cashew belt, a number of primary processing unit for cashew have been set up in the District. During 2009-10, 4 cashew processing units were established in Srikakulam District with NHM assistance whereas during 2010-11, assistance was provided to 10 such processing units. Most of these units are located in Palasa Mandal of Srikakulam District.

Observations

1. A large number of primary processing unit for cashew has come up in the district, particularly in Palasa Block. Most of the units are using conventional methods of boiling and roasting of raw cashewnut. Efforts need to be made to introduce energy efficient and pollution free equipments in the processing units.
2. Area expansion activities need to be taken up in identified clusters. Since cashew is a promising crops, it could be promoted extensively.
3. Since large areas of senile cashew plantation exist in the district, its rejuvenation need to be taken up in a systematic manner in conjunction with top working or replacement in the case of very old plantations.
4. Model nursery set up at the Departmental Farm, Srikakulam needs better up keep and maintenance of its structures.
5. There is scope to promote PHM infrastructure like pack houses, cold storage units.

Glimpses of activities visited in Srikakulam District is available on the following pages.



JIT Members inspecting the equipments provided along with the cashew rejuvenation package in the plot of Shri Sorra Jayaraju. Heavy top working has not been taken up. Pruning of old branches is done with the help of hand saw which is supplemented with agro chemicals. A power tiller is being used to till the soil in the cashew plantation.



Primary processing of cashew. Raw cashew nuts are boiled, dried and then peeled. Presently, most of the raw cashew nuts is being supplied by the local farmers.

SRIKAKULAM... (CONTINUED)

Area expansion under guava, mango and papaya in the plots of Ms Kalidindi Venkata Nagasaritha of Jammu village. Drip irrigation has been adopted, supplied by Netafim. A cluster of about 35 ha has been brought under mango and papaya in the area.



Model Nursery established in 2007-08 at the Departmental Farm in the premises of District Collectorate of Srikakulam. The nursery is mostly producing cashew seedlings. The Nursery needs better upkeep.

SRINKAKULAM... (CONTINUED)



View of vermi compost unit set up by Sh. N. Prakash at Pisini village. The compose produced is being used in his own farm.



Area expansion under cocoa by Shri B.S. N Raju in Sancham village. The planting material has been provided by Cadbury India Ltd., Rajamundry along with buy back arrangement.



JIT members, interacted with Shri Venkatrama Reddy, District Collector and Chairman of District Mission Committee. He was impressed upon the need to ensure an end-to-end approach starting from supply of good quality planting material to setting up of market infrastructure.

GUNTUR DISTRICT

NHM activities were initiated in Guntur District since 2005-06. The details of area production and productivity of main horticulture crops in the district during 2004-05 and 2009-10 is given in **Table 3**.

Table 3: Area, Production and Productivity of Horticultural Crops in Guntur District
Area in ha, Production in MT and Productivity in MT/Ha

Crop	2004-05			2009-10			difference %		
	Area	Prodn	Pvty	Area	Prodn	Pvty	Area	Prodn	Pvty
Mango	883	8830	10.0	1107	11070	10.0	25.4	25.4	0.0
Banana	5899	235960	40.0	6809	272360	40.0	15.4	15.4	0.0
Guava	261	3393	13.0	242	3388	14.0	-7.3	-0.1	7.7
Acid Lime	2214	22140	10.0	2332	34980	15.0	5.3	58.0	50.0
Sweet Orange	1114	11140	10.0	2184	39312	18.0	96.1	252.9	80.0
Papaya	30	1500	50.0	235	18800	80.0	683.3	1153.3	60.0
Cashew	19902	9951	0.5	22427	11214	0.5	12.7	12.7	0.0
Chilli	55534	172155	3.1	66928	376805	5.6	20.5	118.9	81.6
Turmeric	4846	24230	5.0	4704	28224	6.0	-2.9	16.5	20.0

There has been improvement in the production of most of the horticultural crops except mango, banana and cashew in the District.

Investments under NHM in Guntur District

Since 2005-06, an expenditure of Rs. 2114.88 lakh has been incurred for various activities under NHM in Guntur district. The details are given in Table 4.

Table 4: Investment under NHM in Guntur District

Year	Amount (Rs. in lakh)	Main activities
2005-06	150.83	Area expansion
2006-07	484.05	Area expansion
2007-08	584.47	Area expansion, rejuvenation, PP equipment, PHM
2008-09	393.105	Area expansion, rejuvenation, organic farming, PHM, rural market.
2009-10	263.22	Area expansion, rejuvenation, protected cultivation, INM/IPM, PHM
2010-11	239.16	Area expansion, INM/IPM, PHM
Total	2114.88	

The JIT visited different project sites to see the progress of activities covering area expansion, vermi compost unit, ripening chamber and cold storage units, besides micro irrigation projects.

Ms. Vijayalakshmi, PD, APMIP, Shri Madhusudan Reddy ADH-I, Ms Padmavati ADH-II, Shri Binny, APD, APMIP, Shri Chandra Babu, HO accompanied the JIT during the visit in Guntur district.

Observations

1. Rural market set up with SHM assistance at Narakoduru need to be provided with raised platform, shed and water tap. Moreover, the market should facilitate better remuneration to the local farmers rather than allowing the local traders to control the prices.
2. Arrangements need to be made for producing planting material for fruit crops like sweet orange and lime as the farmers are getting the material from other districts.
3. Proper training need to be imported to the beneficiaries availing subsidy for drip irrigation. Post installation maintenance need also to be ensured. Training on fertigation scheduling is also needed.
4. Setting up of ripening chambers in Guntur has brought about significant transformation in banana consumption in the metro, with more and more consumers preferring quality banana ripened in RCs. This concept need to be promoted.
5. Fairly large number of cold storages exists in the district, which is catering to storage of chillies, a major crop of the district. Some of the cold storage owner mentioned that they are finding it difficult to run the cold storage at the existing level of storage price, which is fixed by the District Administration.
6. There is scope to promote protected cultivation, which need to be to be promoted.
7. Turmeric wholesale market approved during 2010-11 is yet to take off.
8. Bio control lab sanctioned during 2009-10 at old chillies yard is yet to take off due to non availability of space. SHM need to intervene to expedite its establishment.

Glimpses of activities visited in Guntur District is placed on the following pages.

GLIMPSES OF ACTIVITIES VISITED BY JIT IN GUNTUR DISTRICT



View of rural market set up at an expenditure of Rs. 4.80 lakh (NHM assistance of Rs. 1.20 lakh) during 2008-09 at Narakoduru village, Chebrolu Mandal. The market lacks basic facilities like platform, shed and water supply.



Area expansion of sweet orange taken up by Shri Kotha Sybramanayam at Vadlamudi village.



Vermi compost units established by Ms Yarlagadda Bala Thripura Sundari and vermiculture bed at Sargamj Agariamudi village, Tenali Mandal. FYM is being purchased to produce the vermiculture compost.

GUNTUR... (CONTINUED)

Drip irrigation being used along with area expansion activities in Changishkhanpet village, Edlapadu Mandal. The system has been supplied by Netafim. There is good awareness about micro irrigation but the farmers lack training on scheduling and post installation maintenance.



View of PSR Cold Storage set up by Shri P. Uma Shankar Rao during 2007-08 at Vadlamudi village, Chebrolu Mandal with a capacity of 5103 MT. Mostly spices like chilies and turmeric is being stored in the cold storage.



Ripening chamber for banana set up by Royal Agri Solutions and SN Bio Fuels at Guntur. These ripening chambers have brought about significant improvement in the availability of good quality banana in the city.

KHAMMAM DISTRICT

NHM activities have been going on in Khammam District since 2005-06. The details of area production and productivity of main horticulture crops in the district during 2004-05 and 2009-10 is given in **Table 5**.

Table 5: Area, Production and Productivity of Horticultural Crops in Khammam District

Area in ha, Production in MT and Productivity in MT/Ha

Crop	2004-05			2009-10			difference %		
	Area	Prodn	Pvty	Area	Prodn	Pvty	Area	Prodn	Pvty
Mango	34507	248450	7.2	41321	330449	8.0	19.7	33.0	11.1
Banana	49	588	12.0	3774	86802	23.0	7602.0	14662.2	91.7
Guava	376	4136	11.0	588	7056	12.0	56.4	70.6	9.1
Acid Lime	225	2700	12.0	892	12488	14.0	296.4	362.5	16.7
Papaya	38	2736	72.0	343	26411	77.0	802.6	865.3	6.9
Cashew	6521	26084	4.0	11523	11523	1.0	76.7	-55.8	-75.0
Cocoa	320	320	1.0	879	1318	1.5	174.7	311.9	49.9
Chilli	18276	32897	1.8	16351	32702	2.0	-10.5	-0.6	11.1
Turmeric	124	248	2.0	64	256	4.0	-48.4	3.2	100.0

There has been substantial increase in the production and productivity of banana in the District. However there has been reduction in the productivity of cashew.

Investments under NHM in Khammam District

Since 2005-06, an expenditure of Rs.1004.49 lakh was incurred in Khammam district, as per the break up given in Table 6.

Table 6: Investment MAE and Rejuvenation taken of under NHM in Khammam District

Year	Amount (Rs. in lakh)	Main activities
2005-06	159.73	Area expansion & rejuvenation.
2006-07	178.30	Area expansion & rejuvenation.
2007-08	82.16	Area expansion & rejuvenation.
2008-09	183.66	Area expansion & rejuvenation.
2009-10	106.13	Area expansion & rejuvenation.
2010-11	295.01	Area expansion & rejuvenation.
Total	1004.49	

JIT visited various activities taken up under NHM to review the progress, covers area expansion, model nursery and Bio control lab.

Shri B.S Subbarayadu, ADH-I, Shri Srinivasa Rao, ADH II, Shri B.V. Ramana, HO and Shri J. Mariyanna, HO accompanied the JIT during the visit in Khammam district.

Observations

1. Arrangements need to be made for the supply of quality planting material, as the farmers are getting the planting material for fruits crops like mango, guava from other districts. The production capacity of the model nursery at Horticulture Research Farm, Aswaraopet need to be enhanced as presently it is producing less than one lakh plants against the capacity of 2 lakh plants for annum.
2. Area expansion of guava has been taken up as an inter crop of oil palm at Bathulapalli. Since oil palm will create shade and compete with the nutrient requirement, proper management need to be ensured in the area.
3. Large scale rejuvenation of mango along with top working will be necessary to rejuvenate the senile mango orchards in the district. This would call for use of power saws, which need to be provided.
4. There is good scope for promoting micro irrigation in conjunction with water resource development, which need to be promoted.
5. Setting up of Bio control lab at Hort. Research Farm, Aswaraopt need to be expedited.

Glimpses of activities visited in Khammam District is available on the following pages.

GLIMPSES OF ACTIVITIES VISITED BY JIT IN KHAMMAM DISTRICT



Area expansion under mango in the plot of Vakaya Capati Drowpathi.



Mango rejuvenation taken up in the orchard of Shri Vemu Pottaiah at Kalluru. Rejuvenation has been taken up through input management in the orchard.



Area expansion of guava as an inter crop with oil palm taken up by Ms Mekala Savithri at Bathulapalli village.



A guava cluster at Bethupalli village.



View of Model Nursery at Horticultural Research Farm (HRF), Aswaraopet



Building for Bio Control Lab at HRF.

Status of project on vegetable Initiatives in Urban Cluster- Hyderabad

The status of implementation of NVI project for Hyderabad was reviewed with the Executive Director, SHM on 30.6.2011. The following information was provided.

1. Project implementation area is identified as Medak, Mahboobnagar and Ranga Reddy districts which are the feeders of vegetables for the Hyderabad.
2. The Action Plan has been prepared as per the guidelines prescribed by Government of India with an out lay of Rs. 17.00 crore and the project has been approved by the State Sanction Committee in the meeting held on 16.5.2011.

Salient Features of Action Plan under are as follows:

- Area expansion of Vegetables with Hybrid Vegetable Seed in an extent of 1400 Ha.
 - Promotion of 150 Farmers Associations @ 50 in each district.
 - Establishment of 75 Collection Centers in major vegetable producing mandals.
 - Assistance for Pandals in Gourd clusters (105 Acres), Trellies System of cultivation in Tomato clusters (70 Acres).
 - Organic Farming and Certification in an extent of 150 Ha.
 - Creation of Post Harvest Infrastructures, Pack Houses (75), Zero Energy Cool Chambers (75), Onion Storage Structure (2).
 - Vegetable seedling Production at Commercial Nursery, Hyderabad in an area 1 acre to cater to the needs of city dwellers, to take up Kitchen Gardening, Terrace Gardening and Pot Culture of vegetables.
 - Off season cultivation under Shadenets.
3. The Component wise District wise targets have been communicated to the district officers for implementation of project.
 4. Representative of Management Support Group of SFAC visited the state and discussed with the Assistant Directors about the objectives of the scheme on 23.06.2011.