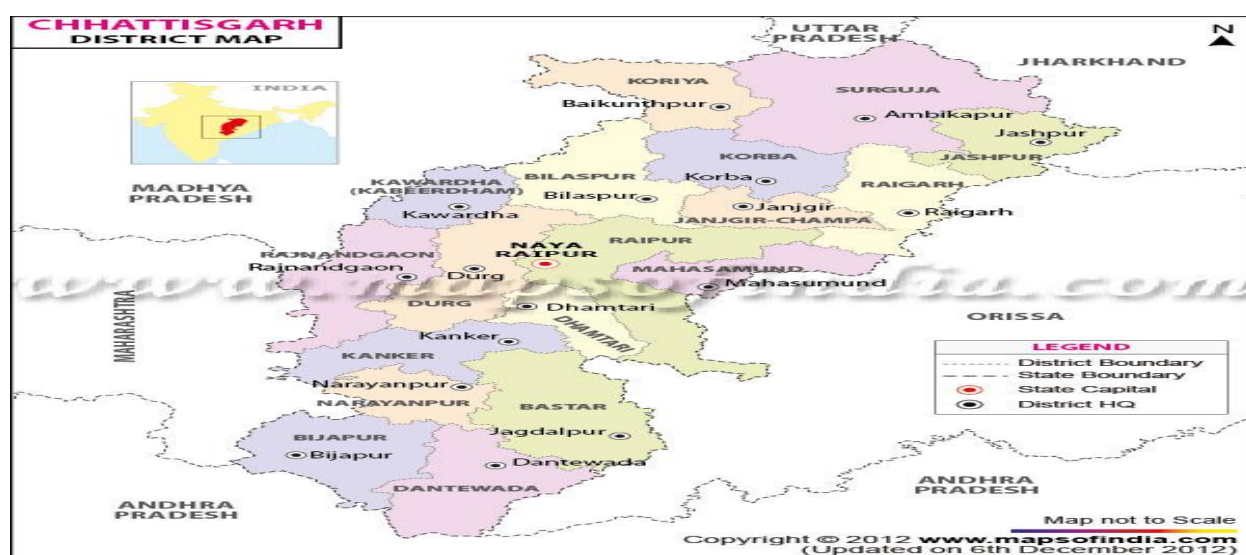


Report of the Joint Inspection Team on their inspection visit to (Bemetara, Bilaspur, Mahasamundrh) Districts of Chhattisgarh during June, 2014 (18th June–22nd June, 2014).



Mission for Integrated Development of Horticulture (MIDH)
Department of Agriculture and Cooperation (DAC),
Krishi Bhawan, New Delhi

Report of the Joint Inspection Team on its visit to Bemetara , Bilaspur, and Mahasamund Districts of Chhattisgarh to review progress of Mission for Integrated Development of Horticulture (MIDH), OFWM, RKVY and Vegetable Initiative Schemes during June, 2014 (18th June–22nd June, 2014).

The Joint Inspection Team (JIT) comprising of the following members visited Chhattisgarh during 18th June–22nd June, 2014 to review the progress under the central and centrally sponsored particularly Mission for Integrated Development of Horticulture (MIDH), Micro Irrigation Scheme and Vegetable Initiative Schemes in the State.

1. Dr. R.C. Upadhyaya, Chief consultant (NHM), DAC, Krishi Bhawan, New Delhi.
2. Mrs. Jyoti Singhal, Under Secretary (MIDH), DAC , Krishi Bhawan, New Delhi
3. Dr. G.Sahu, Asst.Proff. And i/c PFDC, Indira Gandhi Krishi Vishwavidalaya, Raipur.
4. Sri SRS Yadav, Assistant Director (Hort.), Deptt. of Hort., Chhattisgarh as Nodal Officer
5. Sri Paramjeet Singh, Senior Horticulture Officer, Deptt. of Hort., Chhattisgarh

Components of MIDH, RKVY, OFWM, and other programmes:

- Crop specific cluster at district level.
- ☐ Nurseries management and progress including accreditation of nurseries.
- ☐ Vermin compost units under SHM.
- ☐ Flowers and vegetable production under protected conditions.
- ☐ Micro irrigation scheme and use of plastic in mulching, irrigation and precision farming.
- ☐ Placement of technical Staff at Management and also at field Level.
- ☐ Other activities and KVK, s support including Financial Progress: (Rs. in lakhs).
- On Farm Water Management (OFWM).
- National vegetable Initiative (NVI).
- Rastriya Krishi Vikash Yojana (RKVY).

Year-wise details of Outlay, Funds Released and Expenditure under NHM (in Crore)

Year	Sanction			Received Amount			Expenditure	%age of expenditure against sanctioned amount
	GOI Share	State share	Total	GOI Share	State share	Total		
2005-06	50.29	0.00	50.29	23.68	0.00	23.68	3.42	7
2006-07	111.92	0.00	111.92	55.00	0.00	55.00	47.33	42
2007-08	91.03	16.06	107.09	62.52	7.50	70.02	33.57	31

2008-09	107.49	18.97	126.46	30.00	8.83	39.00	84.76	67
2009-10	68.46	12.08	80.54	60.00	10.59	70.59	78.48	97
2010-11	97.75	17.25	115.00	96.57	17.04	113.61	97.94	85
2011-12	93.50	16.50	110.00	85.00	15.00	100.00	98.73	90
2012-13	106.25	18.75	125.0	91.36	9.35	100.71	82.47	66
2013-14	114.75	20.25	135.00	562.0			30.00	
2013 -14			142.00	54.00				

Physical Progress

Salient Progress till 2012-13 is as follow.

- An additional area of 1.73 lakh ha. of identified horticulture crops has been covered.
- 101 nurseries have been established for production of quality planting materials.
- An areas of 4370 ha. has been covered under rejuvenation of old and senile orchards.
- Organic farming has been adopted in an area of 4645 ha for promotion of organic cultivation of horticultural crops.
- IPM practices have been adopted in an area of 70157 ha.
- 3 IPM/INM infrastructure faculties such as Leaf tissue analysis labs, disease forecasting units have been created.
- An area of 11406 ha has been covered under protected cultivation.
- 5948 community water structures have been created.
- Under Post Harvest Management, 1906 units including pack houses, cold storage units, refrigerated vans, primary/mobile processing units, ripening chambers, pre cooling units attach to cold storage and mobile pre cooling units) have been established.
- 100 market infrastructures including 4 whole sale markets, 27 rural markets, 29 market outlets and 40 mobile vending hand carts have been set up.

Agro-climatic zones :

Sl. No.	Agro-climatic Zone	Districts
1.	Chhattisgarh Plains	Raipur, Gariyabandh, Baloda Bazar, Mahasamund, Dhamtari, Durg, Bemetra, Balood, Rajnandgaon, Kabirdham, Bilaspur, Mungeli, Korba, Janjgir and part of Kanker district (Narharpur & Kanker block)

		along with part of Raigarh district
2.	Bastar Plateau	Jagdalpur, Kondagaon, Dantewada, Bijapur, Narayanpur and remaining part of Kanker district.
3.	Northern Hills	Surguja, Surajpur, Balrampur, Koriya and Jashpurnagar and Dharamjaigarh Tehsil of Raigarh district.

Total horticulture area up to 2012-13 : 6.83 lakh ha.(14.60% of its net sown area)

- Proposed total horticulture area (after 5 years 2017-18): 8.05 lakh ha. (approx 17.2% of its net sown area).
- Increase in horticulture area from 2012-13 to 2017-18: 1.21 lakh ha.
- Percentage increase from 2012-13 to 2017-18: 17.75%.
- In fruits Mango is the major crop which occupies 30.62% of the total cropped area of fruits (1.85 lakh ha.).
- In Spices Chili is the major crop which occupies 40.60% of the total cropped area of spices (0.34 lakh ha.).
- In Vegetables: Tomato is the major crop which occupies 12.68% of the total cropped area of vegetables (0.45 lakh ha.).

Physical and Financial Progress under NHM : 2013-14

Sr. No.	Components	Unit	Target		Achievement		
			Phy.	Fin.	Phy.	Fin.	%
1	Plantation Infrastructure & Development	No.	113	580.50	103	261.60	45.06
2	Establishment of New Gardens/Area Expansion+ Mushrooms	Ha.	24841	3303.21	25336	3216.24	97.37
3	Rejuvenation / replanting	Ha.	500	75.00	500	75.00	100.00
4	Promotion of IPM/INM	Ha.	14000	140.00	5774	57.74	41.25
5	Adoption of Organic farming+Vermi compost units	Ha.	3813	329.00	2932	288.00	87.54
6	FLD	Ha.	24	600.00	6	150.00	25.00
7	Post Harvest Management	Ha.	5059	2768.00	4691	1250.00	45.16
8	Markets	Ha.	4	109.00	-	-	-
9	Creation of Water resources	Ha.	1673	1652.00	1683	1652.00	100.00
10	Protected Cultivation	No.	463035	1584.23	463036	1584.24	100.00

11	Horticulture Mechanization	No.	700	917.50	700	917.50	100.00
12	Beekeeping	No.	1650	25.50	-	-	-
13	Human Resource Development	No.	22183	796.92	12822	338.09	42.42
14	Mission Management+ Awareness	-	-	601.81	-	398.36	66.19
	Total			13500.00		10188.78	75.57
15	PFDC					34.22	
	Grand Total					10223.00	

Physical and Financial Progress under VIPUC : 2013-14

Sl. No.	Program	Unit	Target		Target	
			Phy.	Fin.	Phy.	Fin.
1	2	3	4	5	6	7
1	Vegetable Seedling Production - Public Sector	Ha.	2	208.00	1	104.00
2	Vegetable Cultivation					
	i. Open Field	Ha.	2400	300.00	2368	296.00
	ii. Hybrid Vegetable	Ha.	1600	200.00	1600	200.00
3	Protected Cultivation -	Sqm	16000	82.6	-	-
4	Promotion of INM / IPM (50% subsidy)	Ha.	3600	36.00	-	-
5	Organic Farming -					
	a) Adoption of Organic Farming	Ha.	800	30.00	-	-
	b) Organic Certification	Nos	16	24.00	-	-
	c) Vermi compost units/organic input production unit	Nos	100	30	-	-
6	Post Harvest Management -	Nos	101	132.00	-	-
7	Marketing Infrastructure	Nos	220	110.00	-	-
8	HRD	Nos	3160	47.40	-	-
	Grand Total -		27999	1200.00		600.00

Physical and Financial Progress under NMMI : 2013-14

Sl. No.	Program	Unit	Target		Achi.	
			Phy.	Fin.	Phy.	Fin.
1	2	3	4	5	6	7
1	Drip	Ha.	3470	1569.00	1078	1078.80
2	Sprinkler	Ha.	650	61.75	295	44.58
	Grand Total -		4120	1630.75	1373	1123.38

Observations:

1. Overall financial and physical progress of implementation of MIDH activities in Bilashpur district of Chhattisgarh was observed to be slow which needs to be stepped up.
2. Nursery established at Govt. farm, Pendra was found to be in unsatisfactory condition. It may be advised to create a revolving fund out of the revenue generated by nurseries for better maintenance and upkeep of public nurseries. Also efforts may be made to encourage establishment of nurseries in the Private Sector. Adoption of proper package of practices for maintenance of mother and nursery blocks requires highest priority. Rejuvenation of senile mother blocks at Govt. farms also needs concerted attention. Further, action for accreditation of nurseries by National Horticulture Board may be followed up at the earliest.
3. It was informed that second installment for Banana plantation established under MIDH ,in Mahasamund district have not been released to the beneficiaries even after lapse of seven months. DHO may be advised to ensure timely release of funds in this regard.
4. The department needs to ensure timely supply of disease free quality planting material of recommended varieties of fruit crops.
5. . Rejuvenation and replacement of Old and senile orchards of mango at Bilaspur should be taken up on priority. Training of farmers should be carried out for management of rejuvenation activities.
6. Pollination support through bee keeping for higher production and productivity of horticultural crops may be included in districts. Trainings need to be given for bee keeping for promoting pollination and augmenting farm income.
7. There is need for periodic visits to assess progress of centrally sponsored Schemes for horticulture development viz. MIDH, NMMI, VIUC and RKVY. Horticulture department may be advised to constitute a team for effective monitoring.
8. Farmers need regular expose visit to Centre of Excellence for various horticultural crops, within the State and outside State.

9. Chhattisgarh has immense potential for ginger and turmeric crops. Accordingly, farmers may be sensitized on the need to integrate area expansion with packaging and branding of produce above. There is also a need to promote additional turmeric and ginger processing units at Bemetra and Durg districts, which are taking up area expansion.
10. Banana plantations were found affected by rain, hailstorms etc. Farmers may be advised to establish wind breakers consisting of plantations of Jamun, Mulberry and Tamarind species, on their fields.
11. It was observed in Mahasamund district, that grading machines given to the farmers from centrally sponsored schemes for vegetable grading area lying idle. Similarly, vending carts supplied to the vendors are not in use apparently because of faulty design.
12. Low energy cool chambers in Mahasamund district provided to the farmers were not as per designed. The Horticulture department may seek help of experts for specifications in this regard.
13. Support for Oil Palm under area expansion may be discontinued, given that crop is mandated under MIDH.

Bilaspur District:

The District is bounded on the north by Korea district (C.G.) & district Aanuppur & Dindori (M.P.) and on the east by Jangir Champa and Korba district and on the west Kabeerdham and on south by Durg and Raipur district (C.G.) Eastern part of Bilaspur district has most hilly area and near about 2456 fit high from sea level and the all hilly area is most potential for underground crop like zinger turmeric garlic onion potato and sweet potato.

Geographical area and land use features (Area in ha.)

Total geographical area	692943 ha.
Total forest land	14565 ha.
Total fallow land	15504 ha.
Total cultivable land	371014 ha.
Kharif	219255 ha.
Rabi	105368 ha.
Total Horticulture area covered	87654 ha.
Horticulture area covered %	23.62%
Area Praposed under Horticulture (from 2010 to 2015)	75302 ha.
Total Praposed area at the end of (2014-2015)	90215 ha.
Percentage area under Horticulture at the end of 2014-15	13.01%
Net area irrigation	115636 ha.

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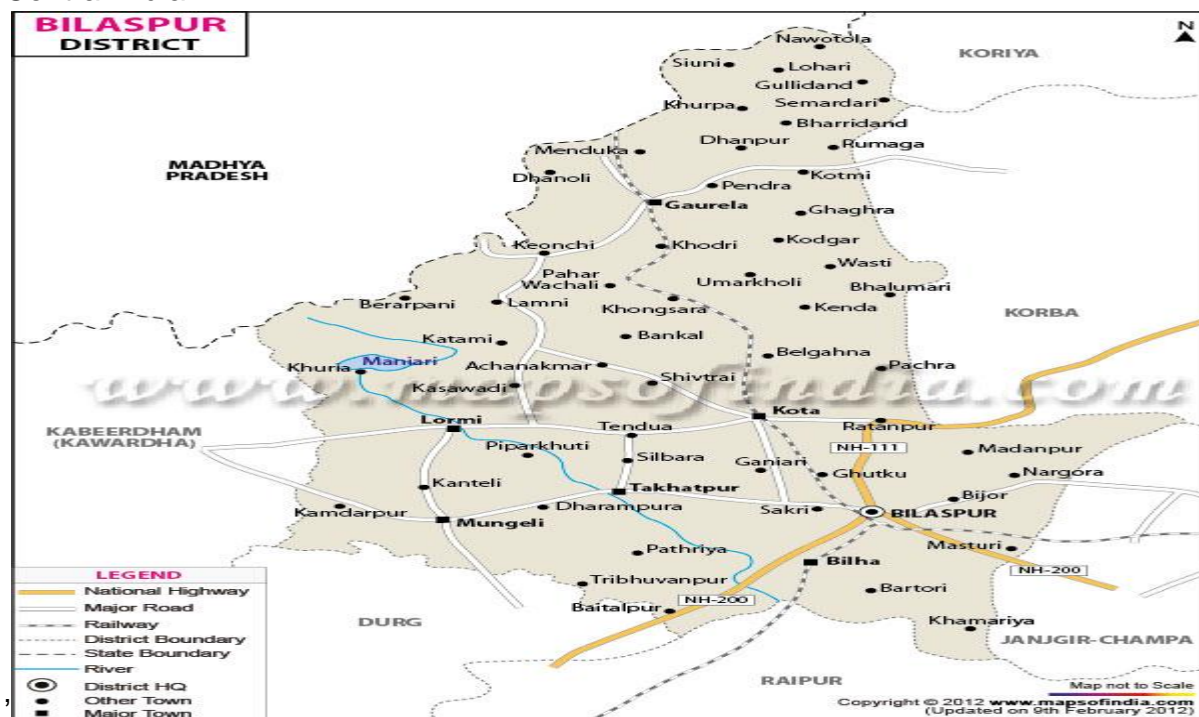
Percentage area under Horticulture at the end of 2014-15	13.01%
Net area irrigation	115636 ha.

Bilaspur is divided into district land areas viz.

I Bilaspur Plains

II Northern hilly zones

In the north of the district are the mighty Satpura Ranges, in the center the plains of River Arpa, Shivrath, Lailagar, Maniyari and its tributaries. The Bilaspur District receives annual rainfall ranging from less than 800 mm to greater than 1000 mm in different areas. The border of Bilaspur district is touched by the District Korba (C.G.) & Anuppur (M.P.) in the North, Bemetara & Raipur in the South, Korba in the East & Mungeli, in the West. Paddy is the main crop of the district Bilaspur and due to abundance of production of Paddy Chhattisgarh was earlier known as Rice Bowl of Central India.



After rainy season unland area of rivers like Arpa & Shivrath serve as potential area for river bed cultivation of horticulture crops. This area is most suitable for growing cucurbit crops because sand and soil particles are free of fungal contamination like fusarium which causes rotting and wilting in seedlings. Apart from cucurbits other crops like Tomato, Brinjal, Radish, Arbi, Bhindi and leafy vegetables are also grown in summer as off-season crops which fetch good market price to farmers.

Total Population of the District Bilaspur is about 26.62 lakh with 15.56 million people residing in rural area constituting more than 0.79 lakh family of scheduled caste and 0.63 lakh are Scheduled Tribe family. Education system in Bilaspur needs greater

attention especially in female education. The literacy rate is 71.49% as compared to the national rate of 65.38%. The literacy rates are still lower in rural areas particularly in tribal blocks like Pendra, Gaurella, Marwahi & some parts of Kota.

Climate and Soil:

The general climate of Bilaspur district is dry sub-humid type where. The average annual rainfall of the region is round 1050 mm and about 90 to 95 percent of this amount is received during southwest monsoon season (June-October). The monsoon sets in around 10th June. Months of July and August are the wettest months. 3 times rainfall occurs in October month due to cyclonic activity in the Bay of Bengal and October rainfall is most crucial for the productivity of rice in the district. Max. temperature during summer season is recorded 37⁰c to 40⁰c and minimum 18⁰c to 22⁰c and in winter season maximum temp. 22⁰c to 24⁰c and minimum 2⁰c to 4⁰c is observed. Topography of the district consists of undulating terrains full of numerous hillocks connected with dense forest and centaury reserve forest in achanakmar area. Main rivers of the district are Arapa, Shivnatha, lilagar which have so many tributaries. The total geographical area of the Bilaspur district is 692943 ha. which is about 5.01% of the total geographical area of State, out of which 5028626 is cultivable land and 373426 ha. is under cultivation of various crops. The area under reserved and open forest is 113865 ha. A variety of fruits (Mango, Litchi, Guava, Jack fruit, Amla, Lobia, Banana, Papaya and Custard apple) Vegetables (Tomato, Colocacia, Potato, Chillies, Okra, Cabbage, Cauliflowers, Brinjal, Cucarbitaeces etc.) and flowers are also grown in the district. At present around 87654 hectares is under Horticulture i.e. around 23.62% of the cultivated area.

November onward the average minimum temperature starts falling below 10⁰ – 12⁰C and in the northern block Pendra, Gourella & Marwahi it is nearly about 2 to 4⁰C respectively. Bilaspur district have ore serve and longer winter period as compared to other parts of State. The atmospheric humidity is very high (90%) during monsoon months and starts decreasing form October onwards and reaches as low as 15-20 percent during peak summer months.

On the basis of general climatic features of the district, plain areas are suitable for Mango, Guava, Lime, and Custard Apple and hilly area is suitable for Mango, Litchi and Jack fruit cultivation.

The soil of Bilaspur varies considerably in to two different agro-climatic zones. The different soils that exist in to agro-climatic zones are as follows:

Bilaspur Plains	Northern hills
Bhata (Leteritic)	Hilly soils
Matasai (Sandy loam)	Tikra
Dorsa (Clay loam)	Bahra
Kanhar (Clay)	

The first two categories of the soils in the Agro climatic zones are very light type soils with very low water retention capacity. As a result water stress or drought conditions occur either during the crop growing season when there is a break of monsoon for more than 5-7 days or immediately after the withdrawal of monsoon. Five block of the district having 70% to 90% alluvial soils which are suitable for lime, guava, for fruit and tomato, brinjal and Okra

Agro-climatic zones-

Agro-climatically, Bilaspur may be divided into 2 agro climate zones with immense potential of horticulture development.

Sl. no.	Agro-climatic zone	Blocks
1	Bilaspur Plain	Bilha, Masturi, Takhatpur, and Maximum portion of Kota
2	Northern Hills	Gaurella, Pendra, Marwahi some portion of and Kota

Irrigation:

In Bilaspur District about 31.00% of net cropped area is under irrigation. The irrigation problem is required to be tackled differently for rapid growth of assured water supply for diversification of existing production systems to high value horticultural and other crops. There is a need to understand as to how the existing irrigation sources can meet this important requirement. Launching of new scheme National Agriculture Development Plan, the harnessing of the surface and sub-surface water resources is possible by strengthening the existing irrigation infrastructure.

Horticulture

In Bilaspur district rice is the main crop grown in about 3.4 lakh ha. Covering 68 percent of the net shown area is under irrigation and rest is under rainfed conditions. 85 to 90 percent area in northern hills is rainfed. The irrigated area available for double cropping is only 1.29 lakhs ha. in Bilaspur plains. The cropping intensity is 153 for the district, out of this a major area in rabi season is under (relay cropping) .Paddy needs to be replaced from upland where it gives only nominal yield. Horticultural crops are the best alternative for crop diversification.

The major horticultural crops can be promoted in different agro-climatic areas of the district are given below.

Sl. no.	Crops	Blocks
Fruits		
1	Mango	Bilha, Masturi, Pendra, Gaurella, Marwahi and kota

2	Guava	Pendra, Gaurella, Marwahi
3	Lime	Bilha, Masturi, Takhatpur, Kota, Pendra, Gaurella, Marwahi
4	Banana & Papaya	Bilha, Masturi, Takhatpur
vegetable		
1	Potato	Takhatpur, Kota, Pendra, Gaurella, Marwahi
2	Tomato	Bilha, Masturi, Takhatpur
3	Brinjal	Bilha, Masturi, Takhatpur
4	Reiver bed cultivation (Water melon, Muskmelon, Bottleguard, Pumpkin, Bitterguard , Cucumber species	Bilha, Masturi, Kota
Spices		
1	Chili	Bilha, Masturi, Takhatpur
2	Coriander	Bilha, Masturi, Takhatpur, Kota
3	Garlic	Bilha, Masturi, Takhatpur, Kota
4	Ginger	Gaurella, Pendra, Marwahi, Kota
Aromatics		Bilha, Masturi, Takhatpur, Kota
1	Lemon grass	Bilha, Masturi, Takhatpur, Kota

Govt. Nursery Pedra and Govt. nursery ,Bilaspur:

Nursery was not properly maintained. There were hardly 2000 mango seedling without any management support and mostly plants were seedling and not properly grafted. Old mother block mango orchard needs proper rejuvenation. Grafted Seedlings of Rs.13000/= only sold annually. Similar situation exist at Bilaspur nursery.



Mango nursery at Govt. farm, Pendra



Damaged poly house at Pendra farm

**Check list for reviewing progress on Area Expansion and Rejuvenation Activities
under National Horticulture Mission (NHM) by Joint Inspection Team**

Sr. No.	Details	Remarks
1	Name & address of Beneficiary whose field visited.	Mrs. Shyam Kashyap S/o Shabhu Kashyap
2	Total land available with the beneficiary (ha).	2.166
3	Crop Cluster under which covered.	Individual Banana
4	Name & variety of crop planted.	G-9
5	Source of planting material.	Aditya Bio Tech Plantation Pvt. Ltd. Raipur
6	Number of planted	4600
7	Date of Planted	06/11/2013
8	Date of plants which survived (also indicate percentage survival).	97%
9	Total amount of subsidy assistance due to the beneficiary as (Rs.)	62376/-

10	Amount paid and date of payment.	03/03/2014
11	Mode of payment.	
12	Source of Irrigation Water (Bore well/ Tube well/ Canel)	Tubewell
13.	Whether Drip/ Sprinkle System in use.	Drip
14.	Other inputs provided.	
15.	Whether assistance available for Organic Farming	
16.	Available marketing facility for the crop.	Bilaspur
17.	Other infrastructure available in the vicinity.	
18.	General upkeep of the plot; Very good/ Good / Average/ Poor.	good
19.	Any other relevant observation by the JIT.	Crop was well managed

Check list for reviewing progress on Area Expansion and Rejuvenation Activities under National Horticulture Mission (NHM) by Joint Inspection Team

Sr. No.	Details	Remarks
1	Name & address of Beneficiary whose field visited.	Mrs. Suresh Sonkar S/o Ramlal Sonkar
2	Total land available with the beneficiary (ha).	1.000
3	Crop Cluster under which covered.	Individual Guava
4	Name & variety of crop planted.	L-49
5	Source of planting material.	New Madhubani nursery Allahabad (U.P.)
6	Number of planted	300
7	Date of Planted	01/07/2013
8	Date of plants which survived	99%

	(also indicate percentage survival).	
9	Total amount of subsidy assistance due to the beneficiary as (Rs.)	
10	Amount paid and date of payment.	
11	Mode of payment.	
12	Source of Irrigation Water (Bore well/ Tube well/ Canel)	Tubewell
13.	Whether Drip/ Sprinkle System in use.	
14.	Other inputs provided.	
15.	Whether assistance available for Organic Farming	
16	If so, area covered	
17.	Assistance available	
18.	Available marketing facility for the crop.	Bilaspur & Takhatpur
19.	Other infrastructure available in the vicinity.	
20.	General upkeep of the plot; Very good/ Good / Average/ Poor.	good
21.	Any other relevant observation by the JIT.	

Check list for reviewing progress on Area Expansion and Rejuvenation Activities under National Horticulture Mission (NHM) by Joint Inspection Team

Sr. No.	Details	Remarks
1	Name & address of Beneficiary whose field visited.	Mrs. Motilal Agarwal
2	Total land available with the beneficiary (ha).	Oil Palm 0.420
3	Crop Cluster under which covered.	Pack House, Mango & Oil Palm

4	Name & variety of crop planted.	Grafted
5	Source of planting material.	Agro & Departmental Garden
6	Number of planted	60
7	Date of Planted	
8	Date of plants which survived (also indicate percentage survival).	96%
9	Total amount of subsidy assistance due to the beneficiary as (Rs.)	4196/-
10	Amount paid and date of payment.	31/03/2013
11	Mode of payment.	
12	Source of Irrigation Water (Bore well/ Tube well/ Canel)	Tubewell
13.	Whether Drip/ Sprinkle System in use.	Drip
14.	Other inputs provided.	
15.	Whether assistance available for Organic Farming	Oil palm crop not recommended under MIDH and should not be further supported.
16	If so, area covered	
17.	Assistance available	
18.	Available marketing facility for the crop.	Bilaspur & Billha
19.	Other infrastructure available in the vicinity.	
20.	General upkeep of the plot; Very good/ Good / Average/ Poor.	Good
21.	Any other relevant observation by the JIT.	Not recommended

**Check list for reviewing progress on Area Expansion and Rejuvenation Activities
under National Horticulture Mission (NHM) by Joint Inspection Team**

Sr. No.	Details	Remarks
1	Name & address of Beneficiary whose field visited.	Mrs. Deepali Roy
2	Total land available with the beneficiary (ha).	1.000
3	Crop Cluster under which covered.	Pack House & Mango
4	Name & variety of crop planted.	Grafted
5	Source of planting material.	Agro & Departmental Garden
6	Number of planted	
7	Date of Planted	
8	Date of plants which survived (also indicate percentage survival).	90%
9	Total amount of subsidy assistance due to the beneficiary as (Rs.)	
10	Amount paid and date of payment.	
11	Mode of payment.	
12	Source of Irrigation Water (Bore well/ Tube well/ Canel)	Tubewell
13.	Whether Drip/ Sprinkle System in use.	Drip
14.	Other inputs provided.	
15.	Whether assistance available for Organic Farming	
16	If so, area covered	
17.	Assistance available	
18.	Available marketing facility for the crop.	Bilaspur & Billha
19.	Other infrastructure available in the vicinity.	
20.	General upkeep of the plot; Very good/ Good / Average/ Poor.	Good
21.	Any other relevant observation by the JIT.	Pack house not properly made

**Check list for reviewing progress on Area Expansion and Rejuvenation Activities
under National Horticulture Mission (NHM) by Joint Inspection Team**

Sr. No.	Details	Remarks
1	Name & address of Beneficiary whose field visited.	Mrs. Chandrapal Kashyap
2	Total land available with the beneficiary (ha).	2.000
3	Crop Cluster under which covered.	Individual Banana
4	Name & variety of crop planted.	G-9
5	Source of planting material.	Aditya Bio Tech Plantation Pvt. Ltd. Raipur
6	Number of planted	4800
7	Date of Planted	
8	Date of plants which survived (also indicate percentage survival).	90%
9	Total amount of subsidy assistance due to the beneficiary as (Rs.)	
10	Amount paid and date of payment.	
11	Mode of payment.	
12	Source of Irrigation Water (Bore well/ Tube well/ Canel)	Tubewell
13.	Whether Drip/ Sprinkle System in use.	Drip
14.	Other inputs provided.	
15.	Whether assistance available for Organic Farming	
16	If so, area covered	
17.	Assistance available	
18.	Available marketing facility for the crop.	Bilaspur & Billha
19.	Other infrastructure available in the vicinity.	
20.	General upkeep of the plot; Very good/ Good / Average/ Poor.	Good
21.	Any other relevant observation by the JIT.	good

Field visit photographs at Bilaspur district:



Orchid under poly7 house at Govt. Bilaspur



Papaya plantation of MRS Deepali Roy



Mango nursery at Govt. farm,Bilaspur

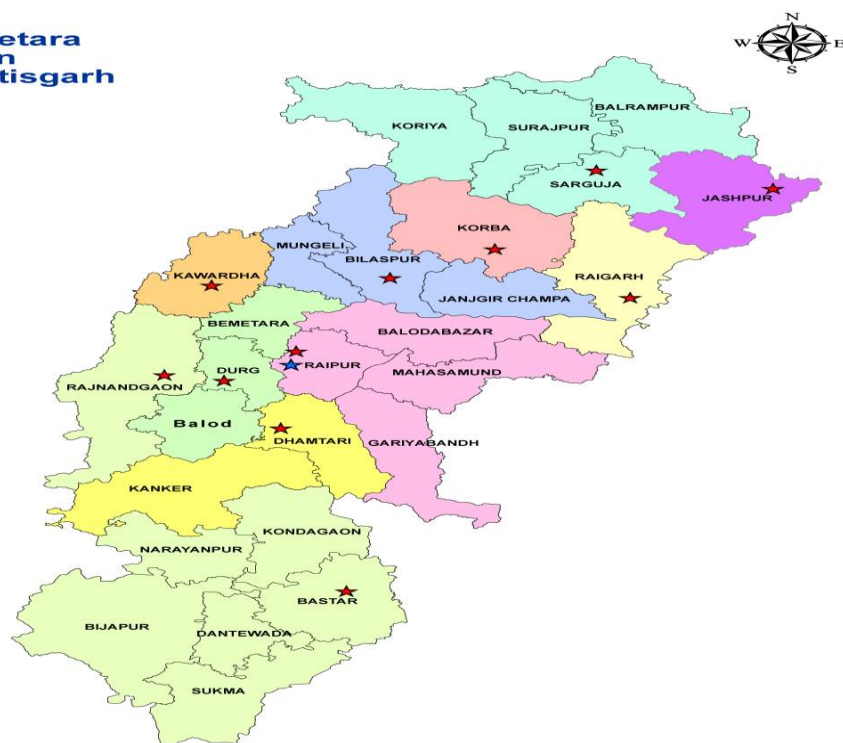


Banana field at farmers field

Bemetara district:

On 01 Jan 2012, Bemetara became a district of Chhattisgarh with District Headquarter at Bemetara. District is situated on the North side of the Durg district. The total area of the district is 2854.81 sq. km. and total population of the district is around 795334. The boundary of the district touches 7 districts i.e. Durg, Raipur, Baloda Bazar, Bilaspur, Mungeli, Kawardha and Rajnandgaon of the Chhattisgarh State.

Bemetara in Chhattisgarh



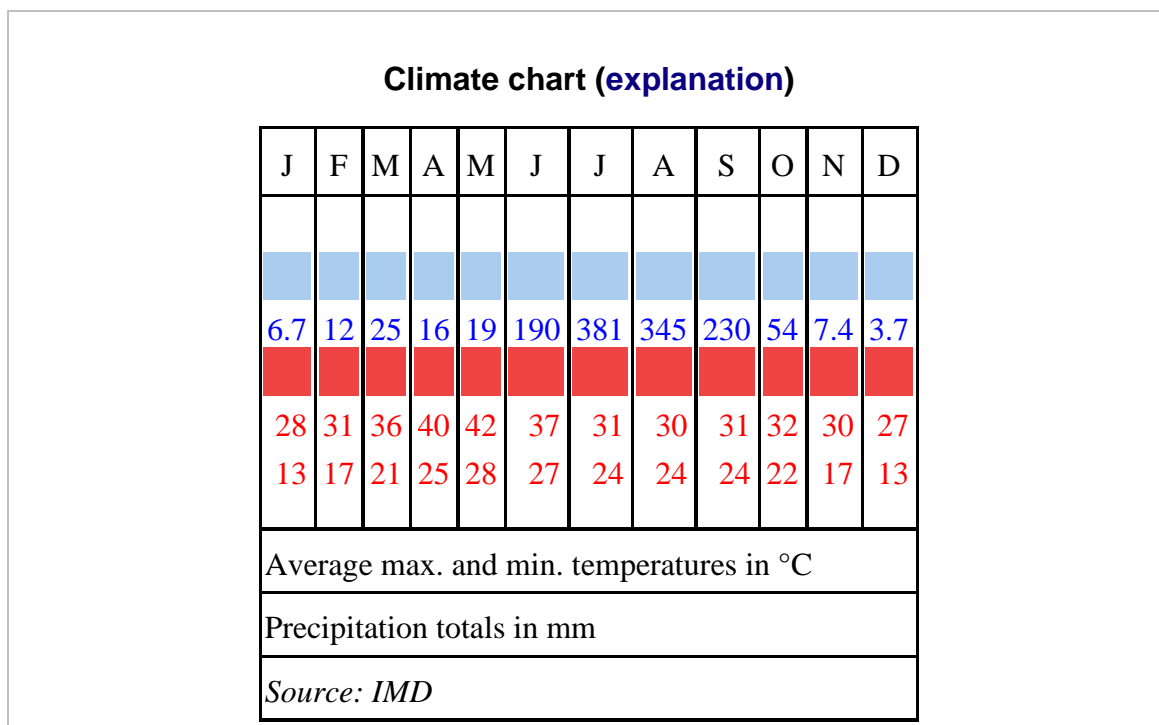
District at a Glance

S.No.	Particular/Block	Bemetara	Nawagarh	Saja	Berla	District Total
1	Area (In Hectare)	72679.85	66106.32	72304	77604	288694.17
2	Population (Census 2001)	148196	179899	134693	136949	599737
3	Nos of Gram Panchayats	87	85	83	79	334
4	Irrigated Area (In Hectare)	17741.08	12136.59	9474	14470.04	53821.71
5	Unirrigated Area (In Hectare)	40542.51	53969.73	53770	48763.96	197046.2
6	Krishi Upaj Mandi	1	1 (Sub Centre)	3 (Sub Centre)	1 (Sub Centre)	1 + 5

Climate :

Owing to the geographical location and physical features, the climate of the district can be classified as tropical. Primarily there are two prominent seasons in the district - the hot summer and moderate winter. In the summer temperature rises upto 47 degree centigrade. The monsoon season starts immediately after summer till late September. The southwest monsoon brings average rainfall during rainy season and there is no draught prone area in the district. The economy of Bemetara is based on agriculture. Almost 80% of the people in Bemetara work on their fields and farms.

Climate data for Bemetara													
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Average high °C (°F)	27 (81)	30 (86)	35 (95)			36 (97)	30 (86)	30 (86)	31 (88)	31 (88)	28 (82)	26 (79)	32 (90)
Average low °C (°F)	13 (55)	15 (59)	20 (68)	24 (75)	27 (81)	26 (79)	23 (73)	23 (73)	22 (72)	21 (70)	16 (61)	14 (57)	20 (68)
Precipitation mm (inches)	10 (0.39)	17 (0.67)	14 (0.55)	13 (0.51)	18 (0.71)				197 (7.76)	50 (1.97)	11 (0.43)	16 (0.63)	1,330 (52.36)



Irrigation:

In the district Shivrath, Kharun, Hanf, Sakri, Hamp, Surahi and Phonk river flows. No major dam is constructed in the Bemetara district. Irrigation facility is provided through micro irrigation projects. Many farmers are dependent on the rains and tubewells for irrigation. Hence much of the lands the district are unirrigated.

**Check list for reviewing progress on Area Expansion and Rejuvenation Activities
under National Horticulture Mission (NHM) by Joint Inspection Team**

Sr. No.	Details	Remarks
1	Name & address of Beneficiary whose field visited.	Vimal chawada village-kodia
2	Total land available with the beneficiary (ha).	10.00 ha
3	Crop Cluster under which covered.	Vegetable crop & plant crop
4	Name & variety of crop planted.	Green house
5	Source of planting material.	By own
6	Number of planted	4000 sqm
7	Date of Planted	2013-14
8	Date of plants which survived (also indicate percentage survival).	
9	Total amount of subsidy assistance due to the beneficiary as (Rs.)	29.30 lakh
10	Amount paid and date of payment.	000117/ 06.02.2014
11	Mode of payment.	Draft
12	Source of Irrigation Water (Bore well/ Tube well/ Canel)	Tube well
13.	Whether Drip/ Sprinkle System in use.	Yes
14.	Available marketing facility for the crop.	Local market
15.	Other infrastructure available in the vicinity.	Guava

**Check list for reviewing progress on Area Expansion and Rejuvenation Activities
under National Horticulture Mission (NHM) by Joint Inspection Team**

Sr. No.	Details	Remarks
1	Name & address of Beneficiary whose field visited.	Shri Rammurti Sharma
2	Total land available with the beneficiary (ha).	4.00 ha
3	Crop Cluster under which covered.	Papaya 4 ha.
4	Name & variety of crop planted.	Redlady (786)
5	Source of planting material.	By own seed
6	Number of planted	10000 sqm
7	Date of Planted	2014-15
8	Date of plants which survived (also indicate percentage survival).	95%

9	Total amount of subsidy assistance due to the beneficiary as (Rs.)	1.20 lakh
12	Source of Irrigation Water (Bore well/ Tube well/ Canel)	Tube well
13.	Whether Drip/ Sprinkle System in use.	Yes

Check list for reviewing progress on Area Expansion and Rejuvenation Activities under National Horticulture Mission (NHM) by Joint Inspection Team

Sr. No.	Details	Remarks
1	Name & address of Beneficiary whose field visited.	Shri Jay veer singh Nevnara
2	Total land available with the beneficiary (ha).	6.00 ha
3	Crop Cluster under which covered.	Banana 3.40 ha.
4	Name & variety of crop planted.	G-9 (Tissue culture)
5	Source of planting material.	By own jain irrigation watervillage
6	Number of plans planed	8500
7	Date of Planting	2013-14
8	Number of plants which survived (Also indicate percentage survival)	95%
9	Total subsidy assistance due to the beneficiary as (Rs.)	1.43 lakh
12	Amount paid & date of payment	2013-14
13.	Mode of payment	By Cheque
14	Source of irrigation water	Tube well
15	Whether Drip, Sprinkler, system in use	Yes

Check list for reviewing progress on Area Expansion and Rejuvenation Activities under National Horticulture Mission (NHM) by Joint Inspection Team

Sr. No.	Details	Remarks
1	Name & address of Beneficiary whose field visited.	Shri Padam Singh Godgari
2	Total land available with the beneficiary (ha).	4 ha.
3	Crop Cluster under which covered.	Banana 4 ha
4	Name & variety of crop planted.	G-9(Tissue culture)

5	Source of planting material.	By own irrigation
6	Number of planting material.	10000
7	Number of plants planted/ rejuvenated.	2013-14
8	Date of plants which survived (also indicate percentage survival).	95%
9	Total amount of subsidy assistance due to the beneficiary as (Rs.)	Banana- Rs. 1.22 lakh Drip- Rs. 1.95 lakh
10	Amount paid and date of payment.	2013-14
11	Mode of payment.	By cheque
12	Source of Irrigation Water (Bore well/ Tube well/ Canel)	Tube well
13.	Whether Drip/ Sprinkle System in use.	Yes

Check list for reviewing progress on Area Expansion and Rejuvenation Activities under National Horticulture Mission (NHM) by Joint Inspection Team

Sr. No.	Details	Remarks
1	Name & address of Beneficiary whose field visited.	Shri Krishan Kumar and other
2	Total land available with the beneficiary (ha).	4 ha.
3	Activity covered	-----1 ha.
4	Name & variety of crop planted.	-----
9	Total amount of subsidy assistance due to the beneficiary as (Rs.)	Rs. 15.00 lakh
10	Mode of payment.	By cheque
11	Source of Irrigation Water (Bore well/ Tube well/ Canel)	Tube well
12.	Whether Drip/ Sprinkle System in use.	

Check list for reviewing progress on Area Expansion and Rejuvenation Activities under National Horticulture Mission (NHM) by Joint Inspection Team

Sr. No.	Details	Remarks
1	Name & address of Beneficiary whose field visited.\	Shri Narayan Singh & Parvesh Singh village ghatiya Kala
2	Total land available with the beneficiary (ha).	8 ha
3	Crop Cluster under which covered.	Banana-4ha, Papaya 4 ha.

4	Name & variety of crop planted.	G-9 (Tissue culture)
5	Source of planting material.	By own jain irrigation
6	Number of planting material.	Kela 10000, papaya 10000
7	Date of planting material	Banana 2013-14, Papaya 2014-15
8	Number of plants which survived (Also indicate percentage survival)	95%
9	Total amount of subsidy assistance due to the beneficiary as (Rs.)	Banana Rs. 1.22 lakh Papaya Rs. 1.20 lakh
11	Mode of payment.	By cheque
12	Source of Irrigation Water (Bore well/ Tube well/ Canel)	Tube well
13.	Whether Drip/ Sprinkle System in use.	Yes

Check list for reviewing progress on Area Expansion and Rejuvenation Activities under National Horticulture Mission (NHM) by Joint Inspection Team

Sr. No.	Details	Remarks
1	Name & address of Beneficiary whose field visited.	Shri Rajesh Chawada & Parveen Chawada village – Kareli
2	Total land available with the beneficiary (ha).	8 ha
3	Crop Cluster under which covered.	Guava- 4 ha, Pomegranate-4 ha
4	Name & variety of crop planted.	
5	Source of planting material.	By own
6	Number of planting material.	Guava 3333, Pomegranate 3333
7	Date of planting	Guava & Pomegranate 2012-13
8	Date of plants which survived (also indicate percentage survival).	95%
9	Total amount of subsidy assistance due to the beneficiary as (Rs.)	1 st installment 4 ha. Rs 51684 2 nd installment 4 ha Rs. 25112 Pomegranate
10	Amount paid and date of payment.	
11	Mode of payment.	By cheque
12	Source of Irrigation Water (Bore well/ Tube well/ Canel)	Tube well
13.	Whether Drip/ Sprinkle System in use.	Yes

Field Photographs from Bemetara distirct:



Plantation of Tomato with drip in field



Field plantation of Banana Var.G9



Date palm in fruiting with good yield performance



Guava var.BNR propagated through budding



Poly house for guava propagation of nurseries



Commercial turmeric production



Turmeric processing by the growers

Mahasamund District :

Mahasamund District covers an area of 3902.39 km² in the central eastern part of the Chhattisgarh. The district lies between 20°47' to 21°31'30" latitude and 82°00' and 83°15'45" longitude, surrounded by Raigarh District and Raipur District of Chhattisgarh and Nuapara District and Bargarh District of Orissa. According to the 2011 census Mahasamund district has a population of 10, 32,275. The district has a tribal population of 28.9%. The tribes living in the district are Bhujia, Binjwar, Dhanwar, Halba, Kamar, Kanwar, Kharai, Munda, Pardhi, Bahalia, Saur, Saharia, Sonar, Sanwara and Kharwar



Soils :

The area has been covered by Alfisols. This Alfisols is further divided into Red & Sandy and Red & Loamy on the basis of major constituents as follows:

Alfisols:

i) Red & sandy soil

ii) Red & Loamy soil.

iii) Red & Sandy soil: This soil is exposed in the major part of south- eastern side of watershed. It covers an area of about 24.55 sq.km. It mainly consists of sand kankar & pieces of rock fragments (sandstone) and clay.

iv) Red & Loamy soil: This soil is exposed in the major part of north & western side of watershed.

The rainfall of the area is dominated by the South West Monsoon, which starts in the middle of June each year and ceases by the end of September or beginning of October. The maximum rainfall of the area recorded in the past is 1210 mm and minimum ever recorded rainfall is 900 mm and is given in Table 4. About 90% of the annual rainfall takes place during the South West Monsoon i.e. between June to September. Only 8% of the annual rainfall takes place during the Winter Season from October to February and only 2% of the annual rainfall takes place during summer Season. Hence 10% of the rainfall takes place from October to May.

b) TEMPERATURE

The records of the IMD observatory data indicate that May is the hottest month during which temperatures rises up to 48° C, December is the coolest month during which the temperature decreases to 13.5° C. The daily mean, maximum and minimum temperatures during the summer (May) are 42.5° C and 28.8° C respectively while during winter (December) it is 27.2 to 13.5° C. The average daily annual normal temperature for the area is about 26° C.

Check list for reviewing progress on Area Expansion and Rejuvenation Activities under National Horticulture Mission (NHM) by Joint Inspection Team

Sr. No.	Details	Remarks
1	Name & address of Beneficiary whose field visited.	Shri parishikshit Daga- Khuteri
2	Total land available with the beneficiary	7.14

	(ha).	
3	Crop Cluster under which covered.	Vegetable & Banana Crop
4	Activity taken	Drip system
5	Source of planting material.	Departmental
7	Year of Establishment	2012-13
9	Total amount of subsidy assistance due to the beneficiary as (Rs.)	Rs. 248199.00
10	Amount paid and date of payment.	
11	Mode of payment.	Seed
12	Source of Irrigation Water (Bore well/ Tube well/ Canel)	Tube well
13.	Whether Drip/ Sprinkle System in use.	Yes
14.	Available marketing facility for the crop.	Local market

Check list for reviewing progress on Area Expansion and Rejuvenation Activities under National Horticulture Mission (NHM) by Joint Inspection Team

Sr. No.	Details	Remarks
1	Name & address of Beneficiary whose field visited.	Shri Narender Chauhan
2	Total land available with the beneficiary (ha).	2.20 ha
3	Crop Cluster under which covered.	Vegetable & Banana, Guava
4	Name & variety of crop planted.	Drip system
5	Source of planting material.	Departmental
6	Number of planting material.	
7	Number of plants planted/ rejuvenated.	2012-13
8	Date of plants which survived	

	(also indicate percentage survival).	
9	Total amount of subsidy assistance due to the beneficiary as (Rs.)	59600.00
10	Amount paid and date of payment.	
11	Mode of payment.	Seed
12	Source of Irrigation Water (Bore well/ Tube well/ Canel)	Tube well
13.	Whether Drip/ Sprinkle System in use.	Yes
14.	Available marketing facility for the crop.	Local market
15.	Other infrastructure available in the vicinity.	Guava, Ber bending

Check list for reviewing progress on Area Expansion and Rejuvenation Activities under National Horticulture Mission (NHM) by Joint Inspection Team

Sr. No.	Details	Remarks
1	Name & address of Beneficiary whose field visited.	Hitesh Taank – Kamroth
2	Total land available with the beneficiary (ha).	8.84 ha
3	Crop Cluster under which covered.	Vegetable crop
4	Name & variety of crop planted.	Drip system
5	Source of planting material.	Departmental
6	Number of planting material.	
7	Year of establishment	2012-13/ 2013-14
8	Date of plants which survived (also indicate percentage survival).	
9	Total amount of subsidy assistance due to the beneficiary as (Rs.)	246204.00
10	Amount paid and date of payment.	
11	Mode of payment.	Seed
12	Source of Irrigation Water (Bore well/ Tube well/ Canel)	Tube well
13.	Whether Drip/ Sprinkle System in use.	Yes
14.	Available marketing facility for the crop.	Local market

**Check list for reviewing progress on Area Expansion and Rejuvenation Activities
under National Horticulture Mission (NHM) by Joint Inspection Team**

Sr. No.	Details	Remarks
1	Name & address of Beneficiary whose field visited.	Khorbahara Diwan- navagaaou
2	Total land available with the beneficiary (ha).	3.58 ha
3	Crop Cluster under which covered.	Vegetable crop & Drip
4	Name & variety of crop planted.	Fruit & vegetable
5	Source of planting material.	Departmental
6	Number of planting material.	
7	Number of plants planted/ rejuvenated.	2012-13/2013-14
8	Date of plants which survived (also indicate percentage survival).	
9	Total amount of subsidy assistance due to the beneficiary as (Rs.)	914547.00
10	Amount paid and date of payment.	003311/30.03.2013
11	Mode of payment.	Bank Draft
12	Source of Irrigation Water (Bore well/ Tube well/ Canel)	Tube well
13.	Whether Drip/ Sprinkle System in use.	Yes
14.	Available marketing facility for the crop.	Local market

**Check list for reviewing progress on Area Expansion and Rejuvenation Activities
under National Horticulture Mission (NHM) by Joint Inspection Team**

Sr. No.	Details	Remarks
1	Name & address of Beneficiary whose field visited.	Komal Dhurv- Mongra
2	Total land available with the beneficiary (ha).	2.50 h
3	Crop Cluster under which covered.	Vegetable crop
4	Name & variety of crop planted.	Fruit & vegetable
5	Source of planting material.	
6	Number of planting material.	
7	Number of plants planted/ rejuvenated.	2013-14
8	Date of plants which survived	

	(also indicate percentage survival).	
9	Total amount of subsidy assistance due to the beneficiary as (Rs.)	200000.00
10	Amount paid and date of payment.	039534/22.04.2014
11	Mode of payment.	Bank Draft
12	Source of Irrigation Water (Bore well/ Tube well/ Canel)	Tube well
13.	Whether Drip/ Sprinkle System in use.	Yes
14.	Available marketing facility for the crop.	Local market

**Check list for reviewing progress on Area Expansion and Rejuvenation Activities
under National Horticulture Mission (NHM) by Joint Inspection Team**

Sr. No.	Details	Remarks
1	Name & address of Beneficiary whose field visited.	Urmila/ Sanjay Chandrakar- Mahamund
2	Total land available with the beneficiary (ha).	3.40 ha
3	Crop Cluster under which covered.	Banana & Drip
4	Name & variety of crop planted.	Drip system
5	Source of planting material.	
6	Number of planting material.	
7	Number of plants planted/ rejuvenated.	2012-13
8	Date of plants which survived (also indicate percentage survival).	
9	Total amount of subsidy assistance due to the beneficiary as (Rs.)	39862.00
10	Amount paid and date of payment.	
11	Mode of payment.	Seed
12	Source of Irrigation Water (Bore well/ Tube well/ Canel)	Tube well
13.	Whether Drip/ Sprinkle System in use.	Yes
14.	Available marketing facility for the crop.	Local market

Field visit photographs of Mahasamund district:



Banana cultivation in cluster in Sanjai Chandraker of Mahasamund and Sri Chandra Pal of Sendhri village



Papaya cultivation in farmers field in mahasamund distirct. Cucumber cultivation in farmers field



Cucumber cultivation in farmers field in open conditions Guava orchard of Naresh Chauhan of Tusda village



Vending carts supplied under NVI programme to the farmers of Mahasamund district



Installation of low cost zero cool chambers



Installation of low cost zero cool chambers