

Report of Joint Inspection Team to monitor the implementation of National Horticulture Mission Scheme in Jharkhand State:



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1. HORTICULTURE SCENARIO IN JHARKHAND STATE

The State of Jharkhand is endowed with a conducive condition for cultivation of a variety of horticultural crops. The wide product base, high volume of round the year production, strategic geographical location and high domestic demand automatically project horticulture as the thrust area of development. The horticultural produce including off season vegetables from the states are being preferred in the neighboring states for their quality and time of availability.

Presently, horticultural crops are grown over an area of 3.35 lakh hectares. The main producing regions are Ranchi, Hazaribag, Lohardaga, Gumla, Giridih, East Singhbhum, Dumka, Godda, Deoghar, Jamtara and saraikela. The maximum production of vegetables occurs in the Central and Eastern plateau region.

2. STATUS OF HORTICULTURE DEVELOPMENT BEFORE AND AFTER NHM.

Jharkhand with its diverse agro-climatic condition is highly suited for development of horticulture – based economy with the major crops being Cauliflower, Tomato, Potato, French beans and cole crops.

The National Horticulture Mission (NHM) was taken up in the State during 2005-06.

Status of Horticulture Development before and after NHM.

Crop	2004-05 (Before NHM)	2009-10 (After NHM)	
		Area (ha)	Total Area (ha)
Mango	7663	28841	36504
Litchi	1526	2730	4256
Aonla	NA	5805	5805
Citrus	5516	5670	11186
Papaya	2747	4855	7602
Chilli	11146	4055	15201
Ginger	1243	726	1969
Turmeric	1326	516	1842
Flower	720	673	1393
Cashew nut	NA	2830 500	3330
Vegetable	149231		238890
Protected Cultivation (Rose, Gerbera, Carnation)	NA	12000 0 Sq.m.	120000 Sq.m.

Major fruits grown in the State are Mango, Guava, Banana, Lemon, Litchi, Jackfruit, and papaya. State Horticultural Mission is promoting commercial cultivation of certain fruit crops like Mango, Litchi and Guava with an objective increase the area under cultivation of these crops.

Lemon	Palamu, East Singhbhum, Dhanbad
Litchi	Ranchi, Gumla, Hazaribag,
Jackfruit	West Singhbhum, East Singhbhum, Chatra, Simdega

Major vegetable grown are Potato, Cauliflower, French bean, Onion, Brinjal, Tomato, pea, and Cucurbits. The productivity of vegetable in the State is 14.49 tonnes/ha against national average of 16.00 tonnes/h. Districts like Ranchi, Gumla, Hazaribag, and Lohardaga are known for round the year production of vegetables due to suitable climatic conditions. Major crop cluster are indicated in the table below:

Crops	Production areas (District)
Potato	Ranchi, Hazaribag, Lohardaga, Dumka, Deoghar, Chatra
Onion	Ranchi, Dhanbad, Giridih, Dumka, Sahebganj, Pakur, Simdega, Gumla
Okra	Ranchi, East Singhbhum, Gridih
Brinjal	Ranchi, East Singhbhum, Gridih
Cauliflower	Ranchi, Hazaribag, Lohardaga, Dhanbad, Dumka, East Singhbhum, Khunti
Cabbage	Ranchi, Gridih, Dhanbad
Carrot	East Singhbhum, Ranchi, Dumka, Gumla
French bean	Ranchi, Khunti, Hazaribag, Lohardaga, Chatra
Tomato	Hazaribag, East Singhbhum, Gridih, Ranchi, Khunti

Chilli, Garlic, Ginger and coriander are the major spice crops in the state. Major clusters of production are indicated in the below:

Spices	Production area (Districts)
Chilli	Ranchi, Dhanbad, Gridih, Dumka, Sahebganj, Simdega, Gumla
Ginger	Ranchi, Hazaribag, Pakur, dumka, Lohardaga, Gumla
Garlic	Ranchi, Hazaribag, Godda, Dhanbad Gridih, Dumka, Sahebganj, Pakur, Simdega, Gumla

3. NATIONAL HORTICULTURE MISSION IN JHARKHAND

The Centrally Sponsored Scheme of National Horticulture Mission (NHM) is being implemented in a Mission mode approach to address all the issues related to holistic development of Horticulture in the State since 2005-06. The scheme is being implemented in seventeen identified potential Districts with cluster approach. The focus crops identified under the programme include Aonla, Litchi, Mango, Peach, Citrus, Papaya, Ginger, Turmeric, Chilies, Flower and Medicinal & Aromatic plants.

Major activities being undertaken in the programme are production and distribution of planting material, vegetable seed production, area expansion, rejuvenation of old and senile orchards, creation of community water resources, protected cultivation etc.

Physical Achievements

Under the mission, during 2005-06 to 2009-10, an additional area of 64663 ha of identified horticulture crops has been covered beside establishment of 149 nurseries for production of quality planting materials, 871 ha under vegetable seed production, 1487 ha under mulching, adoption of organic farming in an area of 172 ha for promotion of organic crops besides establishment of 323 number of vermi-compost units, adoption of IPM practices in an area of 517 ha creation of 17 IPM/INM infrastructure facilities such as Leaf tissue labs, disease forecasting units and plant health clinics, 212 community water harvesting structure and distribution of 2337 colonies with hives. Apart from this, 18 functional infrastructures have been given training under various horticulture activities.

During 2010-11, an area of 6400 ha under Fruits (Perennials) and 2825 ha under plantation crops has been covered apart from establishment of 38 community water harvesting structures.

Financial Achievements

During 2005-06 to 2009-06, an amount of Rs. 158.95 crore was released to the State, against which an expenditure of Rs. 136.88 crore has been reported.

The Annual Action Plan of SHM, Jharkhand for 2010-11 has been approved for Rs. 50.00 crore including GOI share of Rs. 42.50 crore. A sum of Rs. 10.18 crore is available with the State Horticulture Mission as unspent balance.

Year-wise details of outlay, Funds Released and Expenditure under NHM in Jharkhand

(Rs in Lakh)

Year	Outlay	Releases	Expenditure	Balance
2005-06	5990.37	3030.00	2.97	3027.03
2006-07	8324.93	4000.00	1948.42	5078.61
2007-08	9018.21	781.00	2351.33	3508.28
2008-09	9872.70	5000.00	5201.46	3306.82
2009-10	4764.27	3084.00	4183.66	2207.16
2010-11	4250.00	-	1188.73	1018.43

4. Field Visit to District West Singhbhum

AREA EXPANSION

Beneficiary No. 1

- 1. Name and address of beneficiary whose field visited** – LAGO KALUNDIA Village
MATAGUTU, P.O. Jhikpani Dist. West
SINGHBHUM
- 2. Total Land available with the beneficiary (ha)** – 1.34
- 3. Crop cluster under which covered** - MATAGUTU
- 4. Name and variety of crop planted** – Mango(Malda, Amrapali)
- 5. Sources of planting material** – Through NGO
- 6. Number of plants planted/rejuvenated** – 134 plants
- 7. Date of planting/rejuvenation** – 8 August 2010
- 8. Number of plants which survived (also indicated percentage survival)** – 134(100)
- 9. Total amount of subsidy assistance due to the beneficiary as (Rs.)** - Nil
- 10.Amount paid and date of payment** –
12/05/10 – 1,148.00
22/05/10 - 919.00
29/05/10 – 1080.00
05/08/10 – 1803.00

TOTAL - 4,950.00
- 11.Mode of payment**
- 12.Source of Irrigation Water (Bore will/Tube well/Canal)** - Pond
- 13.Whether drip/Sprinkler system in use** - No
- 14.Other inputs provided** - Yes

15. Whether assistance availed for Organic Farming - No

16. If so, area covered - X

17. Assistance availed - X

18. Available marketing facility for the crop - Yes

19. Other infrastructure available in the vicinity - No

20. General upkeep of the plot : Good

21. Any other relevant observation by the JIT

Beneficiary No. 2

- 1. Name and address of Beneficiary whose field visited:** DoKo Laguri & other 7, Vill.
Hansada Block Jaganathpur District West Singhbhum
- 2. Total land available with the beneficiary (ha):** 16.20
- 3. Crop Cluster under which covered:** Establishment of new gardens (Mango cluster)
- 4. Name and variety of crop planted:** Langara, Maldah, Amarpali (Mango)
- 5. Sources of planting material:** National Seed Cooperation (NSC)
- 6. Number of plants planted/rejuvenated:** 1625
- 7. Date of planting/rejuvenation:** 30 July to 10 August 2010
- 8. Number of plants which survived (also indicate percentage Survival):** 1625 (till
30 September 2010)
- 9. Total amount of subsidy assistance due to the beneficiary as (Rs.):** 50% due till now
- 10. Amount paid and date of payment:** 50% amount-16.87 lakh, Dated 2.9.08
- 11. Mode of payment:** Planting Material, Cash
- 12. Source of Irrigation Water (Bore well/Tube well/Canal):** Water Harvesting Tank, Lift
Irrigation, Jal Kund
- 13. Whether Drip/Sprinkler system in use:** Drip Irrigation will be introduced shortly
- 14. Other inputs provided:** Vegetable Seed Provided for inter cropping
- 15. Whether assistance availed for Organic Farming:** No
- 16. If so, area covered:** No
- 17. Assistance availed:** No

18.Available marketing facility for the crop: Market facility available Locally

19.Other infrastructure available in the vicinity: No

20.General upkeep of the plot: Very good/Good/Average/Poor: Good

21.Any other relevant observation by the JIT.

Beneficiary No. 3

- 1. Name and address of Beneficiary whose field visited:** Balram Babonga & other 8, Vill.
Hansada Block Jaganathpur District West Singhbhum
- 2. Total land available with the beneficiary (ha):** 15.80
- 3. Crop Cluster under which covered:** Establishment of new gardens (Mango cluster)
- 4. Name and variety of crop planted:** Langara, Maldah, Amarpali (Mango)
- 5. Sources of planting material:** National Seed Cooperation (NSC)
- 6. Number of plants planted/rejuvenated:** 1600
- 7. Date of planting/rejuvenation:** 30 July to 10 August 2010
- 8. Number of plants which survived (also indicate percentage Survival):** 1600 (till 30 eptember 2010)
- 9. Total amount of subsidy assistance due to the beneficiary as (Rs.):** 75% due till now
- 10.Amount paid and date of payment:** 25% amount-16.87 lakh, Dated 2.9.08
- 11.Mode of payment:** Planting Material, Cash
- 12.Source of Irrigation Water (Bore well/Tube well/Canal):** Water Harvesting Tank, Lift Irrigation, Jal Kund
- 13.Whether Drip/Sprinkler system in use:** Drip Irrigation will be introduced shortly
- 14.Other inputs provided:** Vegetable Seed Provided for inter cropping
- 15.Whether assistance availed for Organic Farming:** No
- 16.If so, area covered:** No
- 17.Assistance availed:** No
- 18.Available marketing facility for the crop:** Market facility available Locally
- 19.Other infrastructure available in the vicinity:** No
- 20.General upkeep of the plot: Very good/Good/Average/Poor:** Good
- 21.Any other relevant observation by the JIT.**

Beneficiary No. 4

1. **Name and address of beneficiary whose field visited** – LAGO KALUNDIA Village
MATAGUTU, P.O. Jhikpani Dist. West
SINGHBHUM
2. **Total Land available with the beneficiary (ha)** – 1.34
3. **Crop cluster under which covered** - MATAGUTU
4. **Name and variety of crop planted** – Mango(Malda, Amrapali)
5. **Sources of planting material** – Through NGO
6. **Number of plants planted/rejuvenated** – 134 plants
7. **Date of planting/rejuvenation** – 8 August 2010
8. **Number of plants which survived (also indicated percentage survival)** – 134(100)
9. **Total amount of subsidy assistance due to the beneficiary as (Rs.)** - Nil
10. **Amount paid and date of payment** – **12/05/10 – 1,148.00**
22/05/10 - 919.00

29/05/10 - 1080.00
05/08/10 - 1803.00

TOTAL - 4,950.00
11. **Mode of payment**
12. **Source of Irrigation Water (Bore well/Tube well/Canal)** - Pond
13. **Whether drip/Sprinkler system in use** - No
14. **Other inputs provided** - Yes
15. **Whether assistance availed for Organic Farming** - No

16. If so, area covered - X

17. Assistance availed - X

18. Available marketing facility for the crop - Yes

19. Other infrastructure available in the vicinity - No

20. General upkeep of the plot : Very Good/Good/Average/Poor- Good

21. Any other relevant observation by the JIT

Water Resources

Beneficiary No. 1

- | | |
|--|--|
| 1. Name of Project: | N.H.M |
| 2. Year of Implementation: | 2009-10 |
| 3. Project period: | 3 years |
| 4. Name of Implementing Agency: | SINGHBHUM GRAMODYOG VIKAS
SANSTHAN |
| 5. Location of Project: | WEST SINGHBHUM |
| 6. Total project Cost: | 53,256.00 |
| 7. Amount Released by DAC: | 53,256.00 |
| 8. Expenditure incurred: | 53,256.00 up to 31 st August 2010 |
| 9. Current Status of project: | |
| - Capacity: | 50' x 50' x 12' |

- **Command area:** 5 Hac.

- **Whether linked with new plantation or old plantations:** yes

- **Whether Funds disbursed:** 53,256.00

5. Field Visit to District Dumka

Beneficiary No. 1

- 1. Name and address of beneficiary whose field visited:** Bhagwani Samitti, Madhupur, Block Jarmundi Bhagwani Samitti, Ghoghatekcha, Block Jarmundi Bhagwani Samitti, Silenda, Block Jama Bhagwani Samitti, Sarsathari, Block Saraiyahaat
- 2. Total Land available with the beneficiary (ha):** 22 Ha., 32 Ha., 8 Ha., 22 Ha.
- 3. Crop cluster under which covered :** Mango Orchards
- 4. Name and variety of crop planted:** Himsagar, Malda, Bombay Green, Gulabkhas & Malika
- 5. Sources of planting material :** Approved Nursery by NHM
- 6. Number of plants planted/rejuvenated:** 100% (100 plants per Ha.)
- 7. Date of planting/rejuvenation :** 15 July to 30 August of Financial Year
- 8. Number of plants which survived (also indicated percentage survival) :** 80% to 90% as per different Patch wise
- 9. Total amount of subsidy assistance due to the beneficiary as (Rs.):** Rs. 11,250 + 4,500= 15,750 Ha.
- 10.Amount paid and date of payment:**
- 11.Mode of payment:** By Cheque from NHM Ranchi
- 12.Source of Irrigation Water (Bore well/Tube well/Canal):** Pond and well
- 13.Whether drip/Sprinkler system in use:** No
- 14.Other inputs provided:** trying to convergence by NAREGA, NFSM, RKVY and State Horticulture Department

15. Whether assistance availed for Organic Farming: No

16. If so, area covered : NA

17. Assistance availed : NA

18. Available marketing facility for the crop: local Market

19. Other infrastructure available in the vicinity : Trench well pond has been created after plantation By conservance and by NHM

20. General upkeep of the plot : Very Good/Good/Average/Poor- Good

21. Any other relevant observation by the JIT

Beneficiary No. 2

1. Name and address of beneficiary whose field visited : Bhagwani Samitti, Dukhjora, Block Jarmundi Bhagwani Samitti, Chinpur, Block Saraiyahaat Bhagwani Samitti, Jamuniya, Block Saraiyahaat

2. Total Land available with the beneficiary (ha): 14.92 Ha., 28.80 Ha., 17.60 Ha.

3. Crop cluster under which covered : Mango Orchards

4. Name and variety of crop planted: Himsagar, Malda, Bombay Green, Gulabkhas & Malika

5. Sources of planting material : Approved Nursery by NHM

6. Number of plants planted/rejuvenated: 100% (100 plants per Ha.)

7. Date of planting/rejuvenation : 15 July to 30 August of Financial Year

8. Number of plants which survived (also indicated percentage survival) : 80% to 90% as per different patch wise

9. Total amount of subsidy assistance due to the beneficiary as (Rs.): Rs. 11,250 + 4,500= 5,750 ha.

10.Amount paid and date of payment:

11.Mode of payment: By Cheque

12.Source of Irrigation Water (Bore will/Tube well/Canal): Pond and well

13.Whether drip/Sprinkler system in use: No

14.Other inputs provided: No

15.Whether assistance availed for Organic Farming: No

16.If so, area covered :

17.Assistance availed :

18.Available marketing facility for the crop: local Market

19.Other infrastructure available in the vicinity : Trench well pond has been created after plantation
By conservancie and by NHM

20.General upkeep of the plot : Very Good/Good/Average/Poor- Good

21.Any other relevant observation by the JIT

Water Resources

Beneficiary No. 1

1. Name of Project: National Horticulture Mission Mango Plantation

2. Year of Implementation: 2005-06, Ghoghathekcha- 1 Well

2006-07, Sarasathari- 3 Pond

2007-08, Madhupur- 2 Pond

3. Project period: 1 year

4. Name of Implementing Agency: MANAV KALYAN KENDRA, DUMKA JHARKHAND

5. Location of Project: Ghoghathekcha- Block Jarmundi, Dumka

Sarasathari- Block Sarayahat, Dumka

Madhupur- Block Jarmundi, Dumka

6. Total project Cost: 10.75 lakh

7. Amount Released by DAC: 10.75 lakh

8. Expenditure incurred:

9. Current Status of project:

- **Capacity** Pond- 100' X 100' x 12' – 5 Nos.

Well- 30' X 15' – 2 Nos.

- **Command area** 75% of the above mentioned patch

- **Whether linked with new plantation or old plantations**

Linked with the above mentioned financial year

Mango Orchards

- **Whether Funds disbursed**

Yes

Beneficiary No. 2

Water Resources

Name of Project: National Horticulture Mission Mango Plantation

Year of Implementation: 2007-08 & 2008-09

Project period: 1 year

Name of Implementing Agency: District Horticulture Officer, DUMKA JHARKHAND

Location of Project: Dukhjora, Madhupur- Block Jarmundi

Jamunia, Chainpur- Block Sarayahat

Total project Cost: 26.20 lakh

Amount Released by DAC: 26.20 lakh

Expenditure incurred:

Current Status of project:

- **Capacity** Pond- 100' X 100' x 12' – 11 Nos. Pond

Well- 15' X 30' – 4 Nos. Well

- **Command area** 75% of every patch

- **Whether linked with new plantation or old plantations**

Same year

Mango Plantation Feild

- **Whether Funds disbursed**

Yes

NURSERY

Beneficiary No. 1

1. **Name of Project:** National Horticulture Mission (Nursery Establishment) I Ha. each
2. **Year of Implementation:** 2005-06
3. **Project period:** 2006-07 to 2007-08
4. **Name of Implementing Agency:** MANAV KALYAN KENDRA, DUMKA JHARKHAND
5. **Location of Project:** Vill. Birajpur (2 Nos.)- Block Jarmundi, Dumka

Vill. Domnadih(1 Nos.)- Block Jarmundi, Dumka

6. **Total project Cost:** 3 lakh
7. **Amount Released by DAC:** 1.5 lakh
8. **Expenditure incurred:** 100%
9. **Current Status of project:**

- **Name of Nursery and crops for which plants are produced:**

1 Sinha Nursery- Mango, Lemon, Litchi, Guava

2 Bajrang Nursery- Mango, Lemon, Litchi, Guava

3 Mandal Nursery- Mango, Lemon, Litchi, Guava

- **Name of crops for which seeds produced:** Nil

- **Quantity produced:** Nil

- **Quantity sold:** Nil

- **Rate:** NA

- **Amount realizes through sale:** NA

- **Whether NHM logo displayed:** Yes

Beneficiary No. 2

- 1. Name of Project:** National Horticulture Mission, Dumka
 - 2. Year of Implementation:** Nil
 - 3. Project period:** Nil
 - 4. Name of Implementing Agency:** District Horticulture Officer, Dumka
 - 5. Location of Project:** NA
 - 6. Total project Cost:** NA
 - 7. Amount Released by DAC:** Nil
 - 8. Expenditure incurred:**
 - 9. Current Status of project:**
- **Name of Nursery and crops for which plants are produced:**
NA
 - **Name of crops for which seeds produced:** NA

 - **Quantity produced:** NA

 - **Quantity sold:** NA

 - **Rate:** NA

 - **Amount realizes through sale:** NA

 - **Whether NHM logo displayed:** NA

6. Field Visit to District Deoghar

AREA EXPANSION

Beneficiary No. 1

1. **Name and address of beneficiary whose field visited:** Sanjay Kumar Yadav & Other 40, Vill. Ghutia,
District Deoghar
2. **Total Land available with the beneficiary (ha):** 30 Ha.
3. **Crop cluster under which covered :** Extension of Mango Plant Orchards
4. **Name and variety of crop planted:** Langara
5. **Sources of planting material :** NSC (National Seed Cooperation)
6. **Number of plants planted/rejuvenated:** 3000
7. **Date of planting/rejuvenation :** 12 July 2010
8. **Number of plants which survived (also indicated percentage survival) :** 2950 (98%)
9. **Total amount of subsidy assistance due to the beneficiary as (Rs.):**

NHM Contribution-	
337500.00	
	Beneficiary Contribution-
167250.00	
	Total
504750.00	
10. **Amount paid and date of payment:** 12 July 2010 (Not in cash in kind such as planting material & plants)
11. **Mode of payment:** Payment in terms of Labour
12. **Source of Irrigation Water (Bore well/Tube well/Canal):** well
13. **Whether drip/Sprinkler system in use:** No
14. **Other inputs provided:** Inter cropping seed and ploughing
15. **Whether assistance availed for Organic Farming:** No

16.If so, area covered : No

17.Assistance availed : No

18.Available marketing facility for the crop: local Market

19.Other infrastructure available in the vicinity : Trench fencing is under process by MNREGA programme

Deoghar

20.General upkeep of the plot : Very Good/Good/Average/Poor- Good

21.Any other relevant observation by the JIT

Beneficiary No. 2

1. Name and address of beneficiary whose field visited: Jhaksu Mehto & other 16, Vill. Burwakura

District Deoghar Jharkhand

2. Total Land available with the beneficiary (ha): 16 Ha.

3. Crop cluster under which covered : Extension of Mango Plant Orchards

4. Name and variety of crop planted: Langara

5. Sources of planting material : NSC (National Seed Cooperation)

6. Number of plants planted/rejuvenated: 1600

7. Date of planting/rejuvenation : 12 July 2010

8. Number of plants which survived (also indicated percentage survival): 1575 (98%)

9. Total amount of subsidy assistance due to the beneficiary as (Rs.): NHM Contribution-
180000.00 Beneficiary
Contribution- 89200.00
Total 269200.00

10.Amount paid and date of payment: 12 July 2010 (Not in cash in kind such as planting material & plants)

11.Mode of payment: Payment in terms of Labour

12.Source of Irrigation Water (Bore well/Tube well/Canal): well

13.Whether drip/Sprinkler system in use: No

14.Other inputs provided: Inter cropping seed and ploughing

15.Whether assistance availed for Organic Farming: No

16.If so, area covered : No

17.Assistance availed : No

18.Available marketing facility for the crop: local Market

19.Other infrastructure available in the vicinity : Trench fencing is under process by MNREGA programme
Deoghar

20.General upkeep of the plot : Very Good/Good/Average/Poor- Good

21.Any other relevant observation by the JIT

Beneficiary No. 3

1. Name and address of beneficiary whose field visited: Pappu Yadav & other 30, Vill./PO
Jamunia

District Deoghar Jharkhand

2. Total Land available with the beneficiary (ha): 30 Ha.

- 3. Crop cluster under which covered :** Extension of Mango Plant Orchards
- 4. Name and variety of crop planted:** Langara
- 5. Sources of planting material :** NSC (National Seed Cooperation)
- 6. Number of plants planted/rejuvenated:** 3000
- 7. Date of planting/rejuvenation :** 5 August 2010
- 8. Number of plants which survived (also indicated percentage survival):** 2990 (99%)
- 9. Total amount of subsidy assistance due to the beneficiary as (Rs.):** NHM Contribution-
297000.00
Beneficiary Contribution-
99000.00
Total 396000.00
- 10.Amount paid and date of payment:** 10 August 2010 (Not in cash in kind such as planting material & plants)
- 11.Mode of payment:** Payment in terms of Labour
- 12.Source of Irrigation Water (Bore well/Tube well/Canal):** well
- 13.Whether drip/Sprinkler system in use:** No
- 14.Other inputs provided:** Inter cropping seed and ploughing
- 15.Whether assistance availed for Organic Farming:** No
- 16.If so, area covered :** No
- 17.Assistance availed :** No
- 18.Available marketing facility for the crop:** local Market
- 19.Other infrastructure available in the vicinity :** Convergence initiatives for Trench fencing and well in process under MNREGA Scheme

20. General upkeep of the plot : Very Good/Good/Average/Poor- Good

21. Any other relevant observation by the JIT

Beneficiary No. 4

- 1. Name and address of beneficiary whose field visited:** Pramod Pujhar & other 17, Vill./PO Malhara
District Deoghar Jharkhand
- 2. Total Land available with the beneficiary (ha):** 10 Ha.
- 3. Crop cluster under which covered :** Promotion of loose flower cultivation
- 4. Name and variety of crop planted:** Orange
- 5. Sources of planting material :** Plants man Seed Haryana
- 6. Number of plants planted/rejuvenated:**
- 7. Date of planting/rejuvenation :** 12 July 2010
- 8. Number of plants which survived (also indicated percentage survival):** 99%
- 9. Total amount of subsidy assistance due to the beneficiary as (Rs.):**

NHM Contribution-	
120000.00	
	Beneficiary Contribution-
357000.00	
	Total
477000.00	
- 10. Amount paid and date of payment:** 7 September 2010 (Not in cash in kind such as planting material & plants)
- 11. Mode of payment:** Payment in terms of Labour
- 12. Source of Irrigation Water (Bore well/Tube well/Canal):** well

13. Whether drip/Sprinkler system in use: No

14. Other inputs provided: Inter cropping seed and ploughing

15. Whether assistance availed for Organic Farming: No

16. If so, area covered : No

17. Assistance availed : No

18. Available marketing facility for the crop: No

19. Other infrastructure available in the vicinity : 5 well completed under MNREGA Scheme

20. General upkeep of the plot : Very Good/Good/Average/Poor- Good

21. Any other relevant observation by the JIT

Beneficiary No. 5

1. Name and address of beneficiary whose field visited: Palo Mahto & other 4, District Deoghar
Jharkhand

2. Total Land available with the beneficiary (ha): 12 Ha.

3. Crop cluster under which covered : Bael Plantation

4. Name and variety of crop planted: Bael Grafted

5. Sources of planting material : NSC (National Seed Cooperation)

6. Number of plants planted/rejuvenated: 1200

7. Date of planting/rejuvenation : 10 to 15 September 2010

8. Number of plants which survived (also indicated percentage survival): 1000 (80%)

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/Canal): 3 well already Constructed

13.Whether drip/Sprinkler system in use: NA

14.Other inputs provided: NA

15.Whether assistance availed for Organic Farming: NA

16.If so, area covered : NA

17.Assistance availed : NA

18.Available marketing facility for the crop: local Market

19.Other infrastructure available in the vicinity : NA

20.General upkeep of the plot : Very Good/Good/Average/Poor- Good

21.Any other relevant observation by the JIT

Beneficiary No. 6

1. Name and address of beneficiary whose field visited: Hare Ram Singh & other 3, Vill. Gudli
Tand

District Deoghar Jharkhand

2. Total Land available with the beneficiary (ha): 8 Ha.

3. Crop cluster under which covered : Bael Plantation

4. Name and variety of crop planted: Bael Aparna

5. Sources of planting material : From Approved Nursery

- 6. Number of plants planted/rejuvenated:** 800
- 7. Date of planting/rejuvenation :** 20-25 August 2010
- 8. Number of plants which survived (also indicated percentage survival):** 700 (88%)
- 9. Total amount of subsidy assistance due to the beneficiary as (Rs.):** 10,000 Per Ha.
- 10.Amount paid and date of payment:**
- 11.Mode of payment:** By Cheque through KVK Deoghar
- 12.Source of Irrigation Water (Bore will/Tube well/Canal):** NA
- 13.Whether drip/Sprinkler system in use:** NA
- 14.Other inputs provided:** NA
- 15.Whether assistance availed for Organic Farming:** NA
- 16.If so, area covered :** NA
- 17.Assistance availed :** NA
- 18.Available marketing facility for the crop:** local Market
- 19.Other infrastructure available in the vicinity :** Well, Perneal Nala
- 20.General upkeep of the plot : Very Good/Good/Average/Poor- Good**
- 21.Any other relevant observation by the JIT**

Beneficiary No. 7

- 1. Name and address of beneficiary whose field visited:** Hare Ram Singh & other 3, Vill. Gudli Tand
District Deoghar Jharkhand
- 2. Total Land available with the beneficiary (ha):** 17 Ha.
- 3. Crop cluster under which covered :** Mango intercrop with kulthi
- 4. Name and variety of crop planted:** Maldah
- 5. Sources of planting material :** National Seed Cooperation
- 6. Number of plants planted/rejuvenated:** 1700
- 7. Date of planting/rejuvenation :** 16-20 August 2010
- 8. Number of plants which survived (also indicated percentage survival):** Mango 1300 (80%)
- 9. Total amount of subsidy assistance due to the beneficiary as (Rs.):** 11,250.00 Per Ha.
- 10. Amount paid and date of payment:**
- 11. Mode of payment:**
- 12. Source of Irrigation Water (Bore well/Tube well/Canal):** Pond + Well & Lift irrigation
- 13. Whether drip/Sprinkler system in use:** NA
- 14. Other inputs provided:** NA
- 15. Whether assistance availed for Organic Farming:** NA
- 16. If so, area covered :** NA
- 17. Assistance availed :** NA
- 18. Available marketing facility for the crop:** local Market

19. Other infrastructure available in the vicinity : Pond construction at the vicinity

20. General upkeep of the plot : Very Good/Good/Average/Poor- Good

21. Any other relevant observation by the JIT

Beneficiary No. 8

1. Name and address of beneficiary whose field visited: Jiten Yadav & other 3, Vill. Jhilwa
chantdia

District Deoghar Jharkhand

2. Total Land available with the beneficiary (ha): 22 Ha.

3. Crop cluster under which covered : Mango plantation

4. Name and variety of crop planted: Maldah

5. Sources of planting material : National Seed Cooperation

6. Number of plants planted/rejuvenated: 2200

7. Date of planting/rejuvenation : 25-30 August 2010

8. Number of plants which survived (also indicated percentage survival): Mango 2000 (90%)

9. Total amount of subsidy assistance due to the beneficiary as (Rs.): 11,250.00 Per Ha.

10. Amount paid and date of payment:

11. Mode of payment:

12. Source of Irrigation Water (Bore well/Tube well/Canal): 3 Pond already constructed

13. Whether drip/Sprinkler system in use: NA

14. Other inputs provided: NA

15. Whether assistance availed for Organic Farming: NA

16.If so, area covered : NA

17.Assistance availed : NA

18.Available marketing facility for the crop: local Market

19.Other infrastructure available in the vicinity : Pond

20.General upkeep of the plot : Very Good/Good/Average/Poor- Good

21. Any other relevant observation by the JIT

Water Resources

Beneficiary No. 1

1. Name of Project: National Horticulture Mission Pond Construction

2. Year of Implementation: 2010

3. Project period: 2009-10

4. Name of Implementing Agency: RACHNA

5. Location of Project: Village- Gundlitand (100' X 100' X 10')

6. Total project Cost: 2.12 lakh

7. Amount Released by DAC: 2.12 lakh

8. Expenditure incurred:

9. Current Status of project:

- **Capacity:** Pond- 100' X 100' x 12' – 1 Nos.

- **Command area:** 10 Acre

- **Whether linked with new plantation or old plantations**

New Plantation

- **Whether Funds disbursed**

Yes

7. Field Visit to District Jamtara

AREA EXPANSION

Beneficiary no. 1

- 1. Name and address of Beneficiary whose field visited:** G.D. Singh vill. SetialDhara Block Nala
Dist- Jamtara
- 2. Total land available with the beneficiary (ha):** 0.5 (Ha.)
- 3. Crop Cluster under which covered:** II (10-11)
- 4. Name and variety of crop planted:** Malda Bombay Greene Himsagair
- 5. Sources of planting material:** National Seeds Cooperation, New Delhi
- 6. Number of plants planted/rejuvenated:** 50
- 7. Date of planting/rejuvenation:** 28 August 2010
- 8. Number of plants which survived (also indicate percentage Survival):** 46
- 9. Total amount of subsidy assistance due to the beneficiary as (Rs.):** NHM 5,625
Beneficiary 1878
- 10.Amount paid and date of payment:** 4.95 lakh Date 6.8.10
- 11.Mode of payment:** By Cheque
- 12.Source of Irrigation Water (Bore well/Tube well/Canal):** Pond
- 13.Whether Drip/Sprinkler system in use**
- 14.Other inputs provided**
- 15.Whether assistance availed for Organic Farming.**
- 16.If so, area covered.**
- 17.Assistance availed.**
- 18. Available marketing facility for the crop:** Deoghar, Dhanbad, Asansal, Chitranjan, Jamtara
- 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.**

Beneficiary no. 2

1. **Name and address of Beneficiary whose field visited:** Rovin Singh Vil. Pancia Block Nala
District Jamtara
2. **Total land available with the beneficiary (ha):** 1.20 (Ha.)
3. **Crop Cluster under which covered:** II (10-11)
4. **Name and variety of crop planted:** Malda Bombay Grine Himsagair
5. **Sources of planting material:** National Seeds Cooperation, New Delhi
6. **Number of plants planted/rejuvenated:** 108
7. **Date of planting/rejuvenation:** 25 August 2010
8. **Number of plants which survived (also indicate percentage Survival):** 108
9. **Total amount of subsidy assistance due to the beneficiary as (Rs.):** NHM 12,150
Beneficiary 4050
10. **Amount paid and date of payment:** 4.95 lakh Date 6.8.10
11. **Mode of payment:** By Cheque
12. **Source of Irrigation Water (Bore well/Tube well/Canal):** Well
13. **Whether Drip/Sprinkler system in use.**
14. **Other inputs provided**
15. **Whether assistance availed for Organic Farming.**
16. **If so, area covered.**
17. **Assistance availed.**
18. **Available marketing facility for the crop:** Deoghar, Dhanbad, Asansal, Chitranjan, Jamtara
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.**

Beneficiary No. 3

- 1. Name and address of Beneficiary whose field visited:** Amar Gorai, Vill-Kharia
Block Nala, District Jamtara
- 2. Total land available with the beneficiary (ha):** 2 (Ha.)
- 3. Crop Cluster under which covered:** Cluster ... (10-11)
- 4. Name and variety of crop planted:** Mango (Himsagar, Malda, Bombay Green)
- 5. Sources of planting material:** National Seeds Cooperation, New Delhi
- 6. Number of plants planted/rejuvenated:** 200
- 7. Date of planting/rejuvenation:** 22 August 2010
- 8. Number of plants which survived (also indicate percentage Survival):** 200
- 9. Total amount of subsidy assistance due to the beneficiary as (Rs.):** NHM 22,500
Beneficiary 7500
- 10. Amount paid and date of payment:** 4.95 lakh Date 6.08.10
- 11. Mode of payment:** By Cheque
- 12. Source of Irrigation Water (Bore well/Tube well/Canal):** Canal
- 13. Whether Drip/Sprinkler system in use.**
- 14. Other inputs provided**
- 15. Whether assistance availed for Organic Farming.**
- 16. If so, area covered.**
- 17. Assistance availed.**
- 18. Available marketing facility for the crop:** Deoghar, Dhanbad, Asansal, Chitranjan,
Jamtara
- 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.**

Beneficiary No. 4

- 1. Name and address of Beneficiary whose field visited:** Sushan Sing, Vill.
Setial Dhara Block Nala, District Jamtara
- 2. Total land available with the beneficiary (ha):** 1.5 (Ha.)
- 3. Crop Cluster under which covered:** II (9-10)
- 4. Name and variety of crop planted:** Himsagar, Malda, Bombay Green
- 5. Sources of planting material:** National Seeds Cooperation, New Delhi
- 6. Number of plants planted/rejuvenated:** 150
- 7. Date of planting/rejuvenation:** 27 August 2010
- 8. Number of plants which survived (also indicate percentage Survival):** 150
- 9. Total amount of subsidy assistance due to the beneficiary as (Rs.):** NHM 16,875
Beneficiary 4050
- 10. Amount paid and date of payment:** 3.375 lakh Date 22.09.09
- 11. Mode of payment:** By Cheque
- 12. Source of Irrigation Water (Bore well/Tube well/Canal):** Well (MNREGA)
- 13. Whether Drip/Sprinkler system in use.**
- 14. Other inputs provided**
- 15. Whether assistance availed for Organic Farming.**
- 16. If so, area covered.**
- 17. Assistance availed.**
- 18. Available marketing facility for the crop:** Deoghar, Dhanbad, Asansal, Chitranjan,
Jamtara
- 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.**

8. Field Visit to District Pakur

AREA EXPANSION

Beneficiary No. 1

1. **Name and address of Beneficiary whose field visited:** Panchanw Saha & Bhari Bhano, Vill. Chandamar,
Block Maheshpur, District Pakur
2. **Total land available with the beneficiary (ha):** 40 (Ha.)
3. **Crop Cluster under which covered:** Mango Plantation
4. **Name and variety of crop planted:**
5. **Sources of planting material:** ADIVAN HARZAR GRAMI KH, VIEWS BLOCK MAHESHPUR
6. **Number of plants planted/rejuvenated:**
7. **Date of planting/rejuvenation:** 2009-10
8. **Number of plants which survived (also indicate percentage Survival):** 75%
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/Canal):** Well
13. **Whether Drip/Sprinkler system in use.**
14. **Other inputs provided**
15. **Whether assistance availed for Organic Farming.**
16. **If so, area covered.**
17. **Assistance availed.**
18. **Available marketing facility for the crop:**
19. **Other infrastructure available in the vicinity:** Trench Fencing
20. **General upkeep of the plot:** Very good/Good/Average/Poor Good
21. **Any other relevant observation by the JIT.**

Beneficiary No. 2

1. **Name and address of Beneficiary whose field visited:** Rajan Murwa, Vill. Sigha,
Block Maheshpur, District Pakur
2. **Total land available with the beneficiary (ha):** 25 (Ha.)
3. **Crop Cluster under which covered:** Mango Plantation
4. **Name and variety of crop planted:**
5. **Sources of planting material:** ADIVAN HARZAR GRAMI KH, VIEWS BLOCK MAHESHPUR
6. **Number of plants planted/rejuvenated:**
7. **Date of planting/rejuvenation:** 2009-10
8. **Number of plants which survived (also indicate percentage Survival):** 98%
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/Canal):** Tank
13. **Whether Drip/Sprinkler system in use.**
14. **Other inputs provided**
15. **Whether assistance availed for Organic Farming.**
16. **If so, area covered.**
17. **Assistance availed.**
18. **Available marketing facility for the crop:**
19. **Other infrastructure available in the vicinity:** Trench Fencing
20. **General upkeep of the plot: Very good/Good/Average/Poor- Good**
21. **Any other relevant observation by the JIT.**

Beneficiary No. 3

- 1. Name and address of Beneficiary whose field visited:** 67 Beneficiaries, Vill. Dadpur,
District Pakur
- 2. Total land available with the beneficiary (ha):** 460 (Ha.)
- 3. Crop Cluster under which covered:** Mango Plantation
- 4. Name and variety of crop planted:**
- 5. Sources of planting material:** ADIVAN HARZAR GRAMI KH, VIEWS BLOCK MAHESHPUR
- 6. Number of plants planted/rejuvenated:** 5%
- 7. Date of planting/rejuvenation:** 2009-10
- 8. Number of plants which survived (also indicate percentage Survival):** 95%
- 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/Canal):** Bore Well (12 ps)
- 13. Whether Drip/Sprinkler system in use.**
- 14. Other inputs provided**
- 15. Whether assistance availed for Organic Farming.**
- 16. If so, area covered.**
- 17. Assistance availed.**
- 18. Available marketing facility for the crop:**
- 19. Other infrastructure available in the vicinity:** Trench Fencing
- 20. General upkeep of the plot: Very good/Good/Average/Poor- Good**
- 21. Any other relevant observation by the JIT.**

Beneficiary No. 4

- 1. Name and address of Beneficiary whose field visited:** 200 Beneficiaries, Vill. Pokjheny,
Block Pokunia, District Pakur
- 2. Total land available with the beneficiary (ha):** 200 (Ha.)
- 3. Crop Cluster under which covered:** Cashew Plantation
- 4. Name and variety of crop planted:** Cashew (Vn)
- 5. Sources of planting material:** ADIVAN HARZAR GRAMI KH, VIEWS BLOCK MAHESHPUR
- 6. Number of plants planted/rejuvenated:** 25%
- 7. Date of planting/rejuvenation:** 2010-11
- 8. Number of plants which survived (also indicate percentage Survival):** 75%

- 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/Canal):** Pond
- 13.Whether Drip/Sprinkler system in use.**
- 14.Other inputs provided**
- 15.Whether assistance availed for Organic Farming.**
- 16.If so, area covered.**
- 17.Assistance availed.**
- 18.Available marketing facility for the crop:**
- 19.Other infrastructure available in the vicinity:** Trench Fencing
- 20.General upkeep of the plot: Very good/Good/Average/Poor- Very good**
- 21.Any other relevant observation by the JIT.**

9. Field Visit to District Hazaribagh

Nursery/ Vegetable seed production/ Seed Infrastructure

Beneficiary No. 1

1. **Name of Project:** Mango Plantation
2. **Year of Implementation:** 2005-06
3. **Project period:** 3 Year (50% + 20% + 30%)
4. **Name of Implementing Agency:** Holy cross Social service center Hazaribagh
5. **Location of Project:** Village- Chattermundu Block & -
Hazaribagh
6. **Total project Cost:** 45000
7. **Amount Released by DAC:** 22365 (I & II year)
8. **Expenditure incurred:** 45000
9. **Status of Project**

- **Name of Nursery and crops for which plants are produced:**
Mango.

- **Name of crops for which seeds produced:** -

- **Quantity produced:** 4 - 5 quintal

- **Quantity sold:** 3 - 4 quintal

- **Rate:** 10 to 20 kg

- **Amount realizes through sale:** 5000

- **Whether NHM logo displayed:** Yes

Beneficiary No. 2

1. **Name of Project:** Small Nursery (1 ha.)
2. **Year of Implementation:** 2005-06
3. **Project period:** 2 year
4. **Name of Implementing Agency:** Holy cross Social service center
Hazaribagh
5. **Location of Project:** Village-Tongi Block dadi - Hazaribagh
6. **Total project Cost:** 300000
7. **Amount Released by DAC:** 150000 (NHM)

8. Expenditure incurred: 300000

9. Status of Project

- **Name of Nursery and crops for which plants are produced:**
Tongi Bio-tech Nursery & Mango & Guava plant
- **Name of crops for which seeds produced:** -
- **Quantity produced:** 20000 no. of mango plants
- **Quantity sold:** 15000
- **Rate:** 25 to 30 Rs per plant.
- **Amount realizes through sale:** 40000 Rs
- **Whether NHM logo displayed:** Yes

Beneficiary No. 3

- 1. Name of Project:** Poly house
- 2. Year of Implementation:** 2009-10
- 3. Project period:** 1 Year
- 4. Name of Implementing Agency:** Holy cross Social service center Hazaribagh
- 5. Location of Project:** Village-Tongi Block dadi – Hazaribagh
- 6. Total project Cost:** 650000
- 7. Amount Released by DAC:** 325000
- 8. Expenditure incurred:** 650000
- 9. Status of Project**

- **Name of Nursery and crops for which plants are produced:**
Rose Flower & Vegetable.
- **Name of crops for which seeds produced:** -
- **Quantity produced:** 2000 plant Rose Flowers.
- **Quantity sold:** -
- **Rate:** -
- **Amount realizes through sale:** -

- **Whether NHM logo displayed:** Yes

Beneficiary No. 4

1. Name of Project:	Poly house
2. Year of Implementation:	2009-10
3. Project period:	1 Year
4. Name of Implementing Agency:	Holy cross Social service center Hazaribagh
5. Location of Project:	Village-Tongi Block dadi – Hazaribagh
6. Total project Cost:	650000
7. Amount Released by DAC:	325000
8. Expenditure incurred:	650000
9. Status of Project	

- **Name of Nursery and crops for which plants are produced:**
Rose Flower & Vegetable.
- **Name of crops for which seeds produced:** -
- **Quantity produced:** 2000 plant Rose Flowers.
- **Quantity sold:** -
- **Rate:** -
- **Amount realizes through sale:** -
- **Whether NHM logo displayed:** Yes

10. Field Visit to District Ramgarh

AREA EXPANSION

Beneficiary No. 1

- 1. Name and address of beneficiary whose field visited** – Rajesh Giri Village, chattermada Dist. & Block Ramgarh
- 2. Total Land available with the beneficiary (ha)** – 1.50 ha
- 3. Crop cluster under which covered** – Mango plantation
- 4. Name and variety of crop planted** – Amrapali, Malika, Langara & Bombaygram
- 5. Sources of planting material** – **CONFUSION**
- 6. Number of plants planted/rejuvenated** – 142 No. of Mango plant
- 7. Date of planting/rejuvenation** – July 2006-07
- 8. Number of plants which survived (also indicated percentage survival)** – 142 no. of plants
100%
- 9. Total amount of subsidy assistance due to the beneficiary as (Rs.)** – 1st year - 15975
11nd year - 63901
TOTAL - 22365
- 10. Amount paid and date of payment** – 2006-07 & 2007-08
- 11. Mode of payment** - confusion
- 12. Source of Irrigation Water (Bore will/Tube well/Canal)** - 10` x 30` size Irrigation Well
- 13. Whether drip/Sprinkler system in use** - Nil

14. Other inputs provided -

15. Whether assistance availed for Organic Farming -

16. If so, area covered -

17. Assistance availed -

18. Available marketing facility for the crop -

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

11. ACTIVITIES AT BIRSA AGRICULTURAL UNIVERSITY UNDER NHM

During the year 2005-06, the University has taken up the following activities under the Jharkhand State Horticulture Mission.

Physical achievements

Establishment of model nursery

Site of nursery and crops

Place	Area of nursery	Crops
KVK Chatra	1 Hectare	Aonla, Beal, Guava, Citrus, Mango
KVK Chianki	1 Hectare	Aonla, Beal, Guava, Citrus, Mango
ZRS Chianki	1 Hectare	Aonla, Beal, Guava, Citrus, Mango
KVK Lohardaga	1 Hectare	Litchi, Mango, Guava, Citrus, Custard apple
ZRS Dumka	1 Hectare	Mango, Guava, Litchi
KVK W. Singhbhum	1 Hectare	Litchi, Mango, Sapota, lime, Custard apple
ZRS Darisai	1 Hectare	Mango, Aonla, Guava, Custard apple, Beal, Lime
Gauria Karma, Hazaribhag	1 Hectare	Mango, Litchi, Guava, Aonla, Beal, Ver, Lime, Citrus, Spota, Custard apple
BAU, H.Q.	4 Hectare	Aonla, Mango, Citrus, Guava, Custard apple, Spota, Litchi

YEAR 2007-08

Establishment of model nurseries

Site of Nursery and crops

Place	Area of nursery	Crops
KVK Simdega	2 Hectare	Custard apple, Citrus
KVK Jamtara	1 Hectare	Mango, Guava, Citrus
KVK Pakur	1 Hectare	Mango, Sapota, Guava
ZRS Center Chattarpur	2 Hectare	Citrus, Aonla
KVK Balumath	1 Hectare	Citrus, Aonla
KVK W. Singhbhum	4 Hectare	Aonla, Mango, Guava, Lime , Sapota, Beal, Custard apple, Ber
ZRS Chianki	4 Hectare	Citrus
ZRS Chianki	4 Hectare	Revival of old mango and citrus orchard

In addition to above the University has established the following mother plant nursery from its own resources.

Sites of Nursery and Crops

Place	Area of nursery	Crops
KVK Dhanbad	1 Hectare	Mango, Guava, Ber, Citrus
KVK Garhwa	1 Hectare	Mango, Guava, Ber
KVK Sahebganj	1 Hectare	Mango, Citrus
KVK Giridih	1 Hectare	Mango, Aonal, Guava, Citrus
KVK Bokaro	1 Hectare	Mango, Guava

The following facilities for mother plant nursery have been provided

Centre	Renovation/new construction ponds	Fencing	Tube wells
Pakur	✓	✓	✓
Dumka	✓	✓	✓
Chatra	✓	✓	✓

Lohardaga	✓	✓	✓
Chainki	✓	✓	✓
West Singhbhum	✓	✓	✓
KVK Jamtara	✓	✓	✓
KVK latehar	✓	✓	✓
KVK Simdega	✓	✓	✓

Hi-tech horticulture facilities have been provided to the following centres.

- BAU Head Quarter - 3 hi-tech polyhouse (Big size)
- KVK E. singhbhum - 3 hi-tech polyhouse (Small size)
- KVK W. Singhbhum - 3 hi-tech polyhouse (Small size)
- KVK Jamtara - 3 hi-tech polyhouse (Small size)
- KVK Chainki - 3 hi-tech polyhouse (Small size)

Initiation has been made to derive substantial number of plants from each and every centres to fulfill the need of the state.

Around 20-25 thousand persons from various Governmental/ nongovernmental organizations, progressive farmers, SHG's, entrepreneurs and rural youth and other farmers of the state visit the protected unit every year. In addition at every normal rate seedling/saplings of fruits plant like papaya and vegetable seedling e.g. capsicum, chillies, tomato, brinjal etc are being provided to the farmers along with the package of practices in order to popularize the protected horticulture as well as high yielding varieties of vegetable.

Establishment of Leaf Tissue Analysis Lab.

Location: Department of Soil science & Agriculture Chemistry

The basis behind leaf analysis is that optimum ranges exist for the level of each nutrient in the leaf and maximum quality/yield occurs when nutrients are maintained within these ranges. If the level of a nutrient falls outside of its optimum range, corrective measures should be taken. Leaf analysis is done to determine the nutrient

status of a plant or orchard and to provide a fertilizer recommendation for that plant of orchard. Unnecessary fertilizer costs are prevented because the correct amount of fertilizer is applied. Deficiencies and malnutrition that can affect crop production can also be detected in time. A standard analysis includes N, P, K, Mg, Zn, Cu, Mn, Fe and B. In addition to the above some of the enzymatic activities can also be informative.

Instruments and equipments installed in leaf analysis laboratory.

S.NO	Instrument/equipment
1	Forced air hot air oven for drying of the plant samples
2	Cyclostek mill for grinding of the plant samples
3	Fume hood with good exhaust for digestion
4	Refrigerator
5	pH meter, conductivity meter & Flame photometer
6	Chlorophyll meter
7	UV-VIS Spectrophotometer
8	Automatic Absorption Spectrophotometer
9	Accessories and hybrid generator for AAS
10	Block digester
11	Hot plate
12	Horizontal shaker
13	Laptop
14	Distillation glass
15	Electric work
16	Get shaker
17	Stationary and miscellaneous

Establishment of plant Health Clinic

Location: Department of Plant Pathology

Plant Health Clinic will have three components:

1. Monitoring of plant disease
2. Monitoring of insect pests
3. Monitoring of deficiency diseases/symptoms

S.NO	Instrument/equipment
1	B.O.D Incubator

2	Laptop
3	Precision Electric balance
4	Laminar flow
5	Autoclave (horizontal & vertical)
6	Bacteriological Incubator
7	Stereo-binocular microscope
8	Generator
9	PC, Printer and accessories
10	Handy cam
11	Refrigerator
12	Digital camera
13	Compound microscope
14	Mini microscope
15	Distillation unit
16	Pressure cooker gas cylinder, Mixie and other misc. items
17	Working table for equipments and furniture for all the units of plant clinic
18	Repair work (civil & electrical)
19	Glassware's, Chemicals and Stationeries
20	Servo stabilizer

**Vegetable Seed Production Programme
Rabi 2010-11 & summer 2011) under NHM**

KVK Jamtara & G.K. Farm

S.N o.	Name of vegetable	Variety	Area (acre)	Remark
1	Pea	Arkel	4	Rabi 10-11
2	Okra	Arka Anamika	5	Summer 10- 11
3	Watermelon	Arka Manik	2	
4	Bottle gourd	Arka Bahaar	2	

5	Cucumber	Swarna Sheetal	2	
6	Bitter gourd	Arka Harit	2	
	Total		17	

Birsa Agriculture University Head Quarter

S.No.	Name of vegetable	Variety	Area(acre)	Remarks
1	Pea	Arkel	4	
2	Frenchbean	Arka Komal	2	
3	Watermelon	Arka Manik	1	
4	Bottle gourd	Arka Bahaar	1	
5	Cucumber	Swarna Sheetal	1	
6	Bitter gourd	Arka Harit	1	
7	Pumpkin	Arka Surya Mukhi	1	
	Total		11	

Gauria Karma Farm, Hazaribagh

S.No.	Name of vegetable	Variety	Area(acre)	Remarks
1	Okra	Arka Anamika	10	
2	Bottle gourd	Arka Bahaar	3	
3	Cucumber	Swarna Sheetal	2	
4	Bitter gourd	Arka Harit	2	
5	Pumpkin	Arka Surya Mukhi	3	
6	Palak	Pusa Jyoti/All green	2	
	Toatl		22	

ZRS Chianki and KVKs

S.No.	Name of vegetable	Variety	Area(acre)	Remarks
1	Pea	Arkel	6	
2	Okra	Arka Anamika	2	
3	Cucuribts		2	
	Total		10	

Total 60 acre

Vegetable Seed Production Programme in KVK's and Chattarpur during Rabi & Summer 2010-11 under NHM

S.N o.	Name of KVK	Name of Vegetable	Variety	Area (ha)	Remarks
1	ZRS Darisai	Cowpea	Arka Garima(BS)	1.0	In MPM as intercrop for seed only
2	KVK Jagannathpur	Okra	Arka Anamika(BS)	0.5	''
3	KVK Darisai	Bottle gourd	Arka Bahar (BS)	1.0	''
		Cucumber	Swarna Sheetal (BS)	2.0	''
4	Jamtara (KVK)	Okara	Arka Anamika	0.5	''
5	Chattarpur	Bottle gourd	Arka Bahar	0.5	

Note: Seeding of hybrid vegetable will be taken at H.Q.

12. Observations/ Recommendations:

- 1.** Computer layout plan on the paper indicating all details of the orchards like no. of plants, variety, date of planting, date of replacement in case of mortality indicating the name of the variety. The entire exercise should be done prior to the planting and get it approved from the DHO of the respective districts. The revenue records of the plot like Khasra no. should also be recorded.
- 2.** In many cases the sign board of NHM was not available. For the sake of uniformity a sample of the write-up for the sign board along with NHM logo should be provided to different NGO.s and cemented board need to displayed accordingly.
- 3.** Meager irrigation facilities are available in the State. In view of mega NHM programme implemented in the State there is a need to have one well for every 5 ha. area under Horticulture.
- 4.** Efforts have been made by the implementing agency to erect the area with bamboo; net fence etc. to protect the horticulture area and social fencing too has been tried in Dumka District. For the protection of horticulture area, this type of fencing should be done in other districts also.
- 5.** Planting material supplied to the implementing agency was without tag. It is recommended that planting material should be supplied with proper tag indicating the name of the variety etc.
- 6.** It was observed that spacing of mother plant nursery was just like the orchard (10m x 10m). It should be 5m x 5m or even less than that.
- 7.** The infrastructure like shade net and poly house in Mother Plant Nursery should be installed after three years of age of the mother plant as it was observed that in majority of cases such type of structure either remain useless in the initial stage or ruined during 3 years.
- 8.** In case of mortality in the orchards, it is recommended to give attention and thrust on in-situ grafting of the same varieties of the row.
- 9.** Weed is a severe problem in the State of Jharkhand and has adverse effect on the crop the possibility of providing motorized weed cutter should be explored.
- 10.** Suitability of the land selected (for area expansion) for horticulture crops need to be ascertained before releasing funds for planting.
- 11.** Possibilities should be explored to get quality planting material of medicinal plant like Aswagandha, Valmegh and other from BAU Ranchi.
- 12.** In Jharkhand the plantation work is mostly through different NGO's and farmers participation is not much in most of the cases. Accordingly after three years of plantation the State Department should organize orchard management training regularly.