# BRINGING GREEN REVOLUTION IN EASTERN INDIA (BGREI)

# REPORT OF THE NATIONAL LEVEL MONITORING TEAM (NLMT)

## **CHHATTISGARH**



GOVERNMENT OF INDIA MINISTRY OF AGRICULTURE (DAC) DIRECTORATE OF PULSES DEVELOPMENT BHOPAL (M.P.)

(KHARIF, 2014)

## **Contents**

| S. NO. | PARTICULARS   | PAGE NO. |
|--------|---|----------|
|        |   |          |
| 1.     | BGREI: BACKGROUND   | 1        |
| 2.     | Area of operation   | 2        |
| 3.     | Monitoring Mechanism  | 2        |
| 4.     | NLMT: Composition   | 2        |
| 5.     | State Profile: CG   | 3        |
| 6.     | 6.1 Crop Scenario: 2013-14                                    | 3        |
|        | 6.2 Coverage Kharif (2014-15)                                 | 3        |
| 7.     | <u> </u>  |          |
|        | 7.1 Physical and financial progress during 2010-11 to 2012-13 | 3        |
|        | 7.1 Allocation & Expenditure : (2013-14)                      | 3        |
|        | 7.2 Allocation & Expenditure Kharif: (2014)                   | 3        |
| 8.     | Details of field Visit/Activities                             | 4        |
| 9.     | Observations  | 5-6      |
| 10.    | Recommendations/Suggestions                                   | 6-7      |
|        | Photos  | 9-13     |
|        | Annexure I  | 14       |
|        | Annexure II   | 15       |
|        | Annexure III  | 16       |
|        | Annexure IV   | 17-18    |
|        | Annexure V  | 19-22    |

#### **PREFACE**

The Department of Agriculture and Co-operation, Ministry of Agriculture, Government of India vide order No. CPS 6-1/2014-NFSM dated the 8<sup>th</sup> September, 2014, constituted a National Level Monitoring Team (NLMT) for monitoring the programme of Bringing Green Revolution to Eastern India (BGREI) activities in respect of the BGREI states, including Chhattisgarh. The Team is comprised of scientist from CRRI, Cuttack, Nodal officer/Nominated officer from State Department of Agriculture. The Terms of Reference (ToR) include: i) The Director, Crop Development Directorate (CDD), Govt. Of India to act as Convenor & Team Leader of the monitoring Team; ii) The NLMT to visit at least once in each Crop Season; iii) To conduct in-depth inspection of the developmental activities in accordance to Approved Action Plan; iv) The quantitative, qualitative and impact of the delivery mechanism would be studied, to be supplemented through visuals and video films; v) The analysed report will include concrete suggestions/recommendations for necessary corrections for better implementation of the Mission.

The other member from CRRI, Cuttack could not participate owing to his transfer, active involvement of the nodal officer of the CG state and district level functionaries was ensured so as to effectively monitor the implementation of BGREI.

I am thankful to Dr. P.R. Kridutt, Director (Agriculture), Govt. Of CG for having ensured requisite representation of officer from Government and logistic support for intensive field visit. I acknowledge the cooperation of S.R. Verma, Jt. Director and Nodal officer BGREI, CG throughout the field visit and put on record the efforts of Dr A.L. Waghmare, STA and the technical team, including the NFSM TAs of this Directorate, in bringing out the report.

Bhopal (M.P.) 15.12.2014

A.K.Tiwari Convenor

#### **ABBREVIATIONS**

- 1. ATMA-Agriculture Technology Management Agency
- 2. BGREI Bringing Green Revolution in Eastern India
- 3. BMPFAC Block Multi Purpose Farmersø Advisory Centre
- 4. CCE- Crop Cutting Experiment
- 5. CHCs- Custom Hiring Centre
- 6. CRRI- Central Rice Research Institute
- 7. CTCRI- Central Tuber Crop Research Institute
- 8. DLMT- District Level Monitoring Team
- 9. DSR- Direct Seeded Rice
- 10. FIAC- Farmer

  øs Information Advisory Centre
- 11. GSC- General Steering Committee
- 12. KVK- Krishi Vigyan Kendra
- 13. MITs- Minor Irrigation Tanks
- 14. NFSM- National Food Security Mission
- 15. NLMT- National Level Monitoring Team
- 16. RKVY Rashtriya Krishi Vikas Yojana
- 17. SES- Socio Economic Status
- 18. SHG- Self Help Group
- 19. SLMT- State Level Monitoring Team
- 20. ToT- Transfer of Technology

## REPORT OF NATIONAL LEVEL MONITORING TEAM TO REVIEW THE IMPLEMENTATION OF BRINGING GREEN REVOLUTION TO EASTERN INDIA (BGREI) IN THE STATE OF CHHATTISGARH DURING KHARIF 2014.

#### 1. Background

The program of ŏBringing Green Revolution to Eastern India (BGREI)ö- a lateral to Rashtriya Krishi Vikas Yojana (RKVY), intended to address the constraints limiting the productivity of ŏrice based cropping systemsö was initially launched in 2010-11 in eastern India comprising seven (7) States namely; Assam, Bihar, Chhattisgarh, Jharkhand, Odisha, Eastern Uttar Pradesh (Purvanchal) and West Bengal so that agriculture productivity is reasonably enhanced and stabilized in these areas.

Most of the activities taken up under the BGREI program during 2010-11 were short term strategies. Some of the States namely; Chhattisgarh; Jharkhand & West Bengal have added water & soil conservation related medium & long term strategies such as construction of check dams, minor irrigation tanks (MITs), lift irrigation points, re-excavation of old ponds and other water resources development works.

This program was conceptualized adopting focused approach on the medium & long term strategies for asset building activities relating to water conservation and utilization in combination with the short term activities pertaining to Transfer of Technology (ToT) of the major cereals preferably in Non-NFSM districts. The program consisted a bouquet of three broad categories of interventions, viz; (i) Block demonstrations of rice and wheat - short term strategy; (ii) Asset building activities consisting water conservation & utilization - medium term strategies; and (iii) Site specific activities - both short term & medium term strategies for facilitating the petty works such as construction/ renovation of irrigation channels/electric power supply for agriculture purposes. The allocation of funds among these three major interventions was nearly 63% of the total funds for block demonstrations, 17% of the funds for asset building activities and 19% of the funds for site specific activities and about 1% of the funds were earmarked for monitoring activities at national level.

### 2. BGREI: Area of operation

| S.  | Commodities | All India  | Chhattisgarh    |                    |
|-----|-------------|--|-----------------|--------------------|
| No. |             | No. of State's   | No. of District | (No. of districts) |
| 1.  | Rice        | Assam, Bihar, Chhattisgarh,<br>Odisha, Eastern UP, West Bengal<br>(07) | 96              | 08                 |
| 2.  | Wheat       | Bihar, Eastern UP and West<br>Bengal (03)                              | 29              | -                  |

## 3. Monitoring Mechanism

| S.No. | Level    | Formation  | Mission structure/ (Composition)   | Frequency of Meeting                       |
|-------|----------|--|--|--|
| i.    | National | i) Central Steering<br>Committee<br>(CSC)          | Secretary (A & C)- Chairman  | Quarterly                                  |
|       |          | ii) National Level<br>Monitoring<br>Team<br>(NLMT) | Director CDDs- Convenor  Principle Scientist, Cuttack  ó Member  JDA, SDA ó Member | Once in a crop season                      |
| ii.   | State    | State Level<br>Monitoring Team<br>(SLMT)           | Additional Secretary/Joint<br>Secretary ó Chairman                                 | Once in every month (3 <sup>rd</sup> week) |
| iii.  | District | District Level<br>Monitoring Team<br>(DLMT)        | DDA/DAO - Head   |  |

### 4. NLMT: Composition

| S.No. | Organization                          | Names and Designation                   |
|-------|---------------------------------------|---|
| i.    | Government of India                   | Dr. A.K. Tiwari                         |
|       | (Deptt. of Agriculture & Cooperation) | Director (I/c) - (Convenor/Team leader) |
|       | Ministry of Agriculture               |   |
|       | Directorate of Pulses Development     |   |
|       | Vindhyachal Bhavan, Bhopal, (M.P.).   |   |
| ii.   | Division of Crop Production, CRRI,    | Dr. M. Din                              |
|       | Cuttack (Odisha)                      | Principal Scientist ( Agril. Engg.)     |
|       |                                       | - (Member)                              |
| iii.  | Directorate of Agriculture, Govt. of  | Shri S.R.Verma, Joint Director          |
|       | Chhattisgarh                          | - (Member)                              |
|       | Labhandi, Raipur (CG)                 |   |

#### 5. State Profile: CG

| Agro-climatic zones (Nos.)          | 03                                |
|-------------------------------------|-----------------------------------|
| Geographical area (lakh ha)         | 138                               |
| Forest cover (lakh ha)              | 63.36                             |
| Net Cultivable area (lakh ha)       | 47.75                             |
| Cropping Intensity (%)              | 138                               |
| Net Area under Irrigation (lakh ha) | 16.87 (35%)                       |
| Source of irrigation                | Cannels, Tanks, Tube wells, wells |
| Average rainfall (mm)               | 1327                              |
| Farm families (lakh)                | 37.36                             |
| Small & marginal farmers (%)        | 80                                |

#### 6.1.Crop Scenario: (2013-14)

| Sr.No. | Crop  | Area (lakh ha) |       | Production | (Lakh tonnes) | Yield (Kg/ha) |      |
|--------|-------|----------------|-------|------------|---------------|---------------|------|
|        | _     | DES            | CLR   | DES        | CLR           | DES           | CLR  |
| 1.     | Paddy | 38.02          | 36.57 | 67.16      | 74.52         | 1766          | 2021 |

Source-DES, M/A (IV Adv. Est.) / CLR-State

#### 6.2. Crop Coverage Kharif (2014-15)

| Sr. | Crop  | Area (la | Area (lakh ha) |        | Production (Lakh tonnes) |        |        |
|-----|-------|----------|----------------|--------|--------------------------|--------|--------|
| No. |       | Target   | Achi.*         | Target | Achi.*                   | Target | Achi.* |
| 1.  | Paddy | 36.41    | 36.92          | 75.00  | 76.81                    | 2060   | 2080   |

<sup>\*- 1&</sup>lt;sup>st</sup> Estimates, SDA, CG

#### 7. Financial Progress

#### 7.1. Physical and financial progress during 2010-11 to 2012-13 is at Annexure I

#### **7.2.** Allocation & Expenditure : (2013-14)

Rs. in Lakh

|   | S.<br>No. | Name of<br>Crop/ Scheme | Provision | Total<br>release | Expenditure | Unutilised |
|---|-----------|-------------------------|-----------|------------------|-------------|------------|
| Ī | 1         | Paddy                   | 15401.29  | 10225.00         | 9430.63     |            |

Details of physical and financial progress is at Annexure –II.

#### 7.3. Allocation & Expenditure Kharif: (2014)

Rs. in Lakh

| S.<br>No. | Name of Crop/<br>Scheme | Unspent<br>Balance as<br>on 1.04.14 | Allocation | Release | Expenditure (upto Oct., 2014) |
|-----------|-------------------------|-------------------------------------|------------|---------|-------------------------------|
| 1         | Paddy                   |                                     | 15052.23   | 8050.00 | 5363.84                       |

Details of physical and financial progress is at Annexure –III

#### 8. Details of field visit/ Activities

Dr. M. Din, Senior Scientist, CTCRI, Cuttack could not accompany the team due to his transfer from CTCRI. The visit was decided and it proceeded as per schedule. Districts of Balod, Durg and Bemetara of Chhattisgarh state were visited from 15<sup>th</sup> October to 16<sup>th</sup> October, 2014. District level functionaries and KVK scientist from Durg district, also accompanied.

| S.N. | District | Block   | Village/Institute     | Activities/observation                 |
|------|----------|---------|-----------------------|--|
| 1.   | Balod    |         | Bodrasa               | Hybrid SRI, variety DRR H2             |
|      |          | Gurur   | Fagundeeh             | Hybrid Rice-JKRH 401                   |
|      |          | Gurur   | Anandpur              | Paddy Thresher                         |
|      |          |         | Khairdigi             | Chck dam                               |
|      |          |         | Panchyat-Mudgahan     |  |
| 2.   | Durg     |         |                       | 1) KVK, Durg, Farmer  s Information    |
|      |          |         |                       | Advisory Centre (FIAC) ATMA            |
|      |          |         |                       | 2) Block Multi Purpose Farmerøs        |
|      |          |         |                       | Advisory Centre (BMPFAC)               |
|      |          | Durg    | Bilodi                | Power Tiller                           |
|      |          |         | Malud                 | Krishak Club (RKVY-2010)               |
|      |          | Dhamdha | Hirri                 | Demonstration HYV MTU 1010 (35 ha)     |
|      |          | Dhamdha | Chicha (Kisan Gosthi) | Transplanted Paddy Hybrid DRR H2       |
|      |          |         |                       | (91.8 ha)                              |
|      |          |         | Dodaki                | Transplanted Paddy Hybrid DRR H2       |
|      |          |         |                       | (25-30 tillers) 335-340 grains per ear |
|      |          | Dhamdha | Nandvai               | Arhar (LRG 41) + Soybean (JS 335)      |
| 3.   | Bemetara |         | Sawatpur              | • Hybrid Rice (VNR 2245)- 100          |
|      |          |         | Oteband               | hectare demonstration                  |
|      |          |         | Bhimpuri              | • Also CCE plot (5 x 5 m) conducted    |
|      |          |         |                       | by Deptt.                              |
|      |          |         | Singhpur              | Check dam (Total cost Rs. 9.66 lakh)   |
|      |          |         |                       |  |

#### 9. Observations

9.1. The cost norms and interventions on input etc. on the demonstration for promotion of high yielding/hybrid rice, line sowing under different eco-systems, technology demonstration on tissue culture plant of sugarcane are at *Annexure IV&V*. During the period from 2011-12 to 2013-14, the input cafeteria for laying out demonstration was decided by Govt. Of India.

The norms of the demonstrations for different Eco-system are @ Rs. 7500/-per ha however, from the current year 2014, the state has been provided the flexibility to recommend **input cafeteria** (within the prescribed norms) in consultation with the SAU as per the requirement of agro-eco-situations (the details of the norms/interventions and input cafeteria from (2011-12 to 2013-14) and from 2014-15, are enclosed at Annexure IV&V respectively).

- 9.2. The component of marketing support, aims at development of open auction yard (platform for procurement of paddy, is included w.e.f. 2013-14. Owing to little budget, no work was sanctioned during 2013-14. During the current year, the state is yet to finalize the identification of work and its sanction etc.
- 9.3. Crop Coverage during Kharif 2014 and likely production prospects are given under Para No.6.2.
- 9.4. The grass root extension functionaries, as a general trend across the country, are assigned with extra duties of other Department.
- 9.5. No perspective plan was prepared for any of the check dam, Minor Irrigation Tank (MIT) area which is otherwise a pre-requisite for any of the soil and water conservation activity/programme, both as mid term and long term strategies.
- 9.6. The õKrishak Clubö with financial assistance of Rs. 50,000/- each under RKVY during 2010, with 12 members in village-Marud, district Durg is running well with all inputs (pesticides/micronutrients). It is doing good business and earns a profit of Rs. 75-80,000/- per annum. In district Durg a total of 12 such club exists.
- 9.7. Farmers reported that paddy variety MTU 1075 distributed under NFSM, through NSC, has :Kargaøinfestation in village Purai, block Durg.

- 9.8. Interactions with farmers in Kisan Gosthi in Block Dhamdha (Distt.-Durg) has given to understand that this area is major pigeonpea (Var. LRG-41) growing area. A total of 10090 hectares area under sole crop and 600 hectares area under soybean + pigeonpea intercropping is covered. 15-20 % loss of soybean (var. PK 9560) was observed due to õhudhud@cyclone.
- 9.9. In village Sawatpur (distt.- Bemetara) hybrid Rice VNR 2245, was being harvested. A Crop Cutting Experiment (CCE) in 5X5 mts area by the Department under the supervision of RAEO+ADO+HQ/ASO was also going on.
- 9.10. A check-dam with a total cost of Rs. 9.66 lakh constructed in village Singhpur of district Bemetara was seen. The Base line survey on Socio-Economic Status (SES) of the farmers, cropping system and perspective plan for development of agriculture and allied activities was, however, lacking in for the treated area.
- 9.11. Farmers are adopting new agro-techniques (organic farming) for achieving higher yield of paddy but accreditation of organic produce and its marketing has become a bottle neck. Paddy procurement ceiling @10 q/acre/ by govt of Chhattisgarh was observed as a major cause of concern amongst Paddy growers. The Procurement ceiling as against the tentatively higher production levels would involve distress sale of the produce and loss to farmers.

#### 10. Recommendations/Suggestions

- 10.1. The developed check dam/MIT should also have a base ó line/ bench mark survey on SES and existing cropping pattern/agricultural system, suggestive crop production plan so as to evaluate the impact of such interventions. It should have monitorable targeted outcomes under BGREI.
- 10.2. The state, based on the assets created in soil and water conservation under BGREI and NFSM, should conduct an evaluation on potential increase in irrigation and cropping intensity.
- 10.3. The efforts done on establishment of Krishak Club under RKVY-2010, need to be evaluated in terms of efficacy and proposed extended roles in ToT and organic farming etc. These or such other Clubs/SHGs may be upgraded or extended under BGREI also. These may also function as CHCs.

- 10.4. To include the component of ownership and participatory approach, farmers should be strengthened by formation of SHG. Component of Agro-forestry, seed production, vegetable production, poultry and AHD activities should be planned to promote organic production.
- 10.5. The viability period of check dam /MIT should also be worked out in these projects which is otherwise lacking. It is felt that soil and water conservation functionaries need skill development and capacity building in the changed scenario of depleting national resources.
- 10.6. To ensure better quality of construction and civil work, a provision of mortar quality check and inspection by third party should be incorporated by the department.
- 10.7. The paddy growers of the area, under DSR, are inclined to opt line sowing, hence a good number of seed-cum-fertilizer drills and other machinery support through CHCs may be planned.
- 10.8. The constraints of getting 100 hectare cluster demonstration, prescribed under BGREI, need to be relaxed in terms of **maximum limit of 2 hectares per beneficiary**.
- 10.9. The state has suggested to permit promising old/existing paddy varieties under BGREI demonstration.
- 10.10. On the pattern of flexibility to state to decide input cafeteria in consultation with SAU (cluster demonstration), the shelves of agricultural implements and machineries should also be left at the wisdom of the state to be decided as per the location specific needs of the district/blocks in the state.
- 10.11.Implementation of BGREI and NFSM (Paddy) with almost same objectives and interventions in the state, necessitates a convergence of these two schemes for effective programme implementation, monitoring and better synergistic approach and outcome. Running two similar schemes in the same district need a policy revisit at DAC level.
- 10.12. A perspective plan, constitution of water user committee and number of diesel/electric pump-sets etc. needed should be a mandatory document before selection of site of check dam/Minor Irrigation Tank (MIT). These components should also be the part of construction estimate so as to increase the cropping intensity or other allied activities to enhance the livelihood of the people and sustain the development efforts.
- 10.13. The assets created under BGREI and implements machineries distributed should be properly popularised by erecting cement/GI sheet board at the site of infrastructure and

by putting permanent sticker/marker on machinery indicating name of scheme, subsidy and year of execution etc.

- 10.14.Pendamethalin has been found as ineffective weedicide (pre-emergence) at several places. Farmers of the area has revealed superiority of Novino Gold weedicide.
- 10.15. The soil conservation functionaries should be advised to mandatory preparation of documents of the base line survey on the agronomic or other allied activities, socio-economic status of the beneficiaries of check dam/MIT area and the proposed cropping system or dove-tailing of the on-going programmes on Agriculture, Animal Husbandry, Dairying, Horticulture, Fisheries etc. in consulatation with the agricultural extension functionaries.
- 10.16. To develop a strong interface between the Development and Research (CDDs and ICAR/IRRI), there is need that the FLDs allocated by the Commodity specific organizations of ICAR should be endorsed to the CDDs to facilitate the monitoring of FLDs. Usually there is lukewarm response from the SAUS/KVKs/ICAR Institutes etc. to facilitate a quick visit at the field level. There is a general feeling that the onus of programme and its monitoring rests with the ICAR, not with the Development Department.

10.17. The labour constraints also warrants for paddy transplanter at CHCs level.

(Dr. A.K.Tiwari)

Convenor

(Shri S.R. Verma)

Member

Mun 15-12-2014



Mechanization: Interaction with power tiller beneficiary



Interactions with the Farmers of Krushak Club developed under RKVY



Field inspection: Paddy



Pigeonpea+Soybean inter-cropping



Farmers Advisory Centre at ATMA, Durg



Asset Building: Check dam at district Bemetra



Inspection of the Crop Cutting Experiment Plot by the Department (5x5 meter plot size)



**Hybrid Rice Cluster Demonstration** 



Visiting the harvested plot of cluster demonstration



Check dam site visit 12





Check dam

13

## ANNEXURES

Annexure I PHYSICA L AND FINANCIAL PROGRESS (BGREI) FROM 2010-11 to 2012-13

| Year                   |   |       | Physical                           |                                       | Financial (Rs. in lakh) |                    |  |
|------------------------|---|-------|------------------------------------|---------------------------------------|-------------------------|--------------------|--|
|                        | Component   | Unit  | Sanction<br>by SLSC                | Achi.                                 | Sanction by<br>SLSC     | Expenditure        |  |
| 2010-11<br>(Components | Integrated Nutrition Management/Balance fertilizer kits for Rice (0.4 ha)   | На.   | 27055                              | 27055                                 | 262.50                  | 262.50             |  |
| were not specified)    | Agricultural Technology Support<br>to the farmers (recently allotted<br>with permanent lease of forest<br>arable land (0.4 ha))   | На.   | 79900                              | 79900                                 | 1000.00                 | 1000.00            |  |
|                        | Incentives to the farmers to<br>promote line sowing of Paddy<br>crop (Hire charges of Tractors<br>with Seed-cum-fertilizer drill) | Nos.  | 1774                               | 1774                                  | 12.99                   | 12.99              |  |
|                        | Distri. of seed minikits of pulse & oilseeds as the minor crop in intercropping / mixed cropping/ bund farming                    | Nos.  | 136640                             | 136640                                | 208.30                  | 208.30             |  |
|                        | Construction of runoff<br>management structures<br>(Checkdam)   | Nos.  | 224                                | 224                                   | 2000.00                 | 2000.00            |  |
|                        | Construction of Minor Irrigation<br>Tanks   | Nos.  | 100                                | 100                                   | 2000.00                 | 2000.00            |  |
|                        | Dem. of Technolgy with special emphasis on Tissue culture plant of Sugarcane-0.5 ha.  | Nos.  | 3091                               | 3091                                  | 227.43                  | 227.43             |  |
|                        | Promotion of High yielding /<br>hybrid demonstration of rice  | На.   | 15119                              | 15119                                 | 250.98                  | 250.98             |  |
|                        | Subsidy to farmer for Well and<br>Pumps as per Shakambhari<br>Yojna norms   | Nos.  | 107 New<br>well<br>& 5109<br>Pumps | 107<br>New<br>well<br>& 5109<br>Pumps | 730.61                  | 730.61             |  |
|                        | Administrative and Contingency Expenses on Monitoring etc.  |       |                                    |                                       | 22.19                   | 22.19              |  |
|                        |   |       | , ,                                | 2010-11)                              | 6715.0                  | 6715.0             |  |
| 2011-12                | Block Demonstratio (Paddy)  | Ha.   | 44000                              | 44000                                 | 2706.57                 | 2706.57            |  |
|                        | Asset Building  | Nos.  | 18405                              | 18405                                 | 652.62                  | 652.62             |  |
|                        | Site Specific Needs   | Nos.  | 186                                | 186                                   | 2161.91                 | 2161.91            |  |
| 2012 12                | Plack Demonstratio (Paddy)  | Πa    |                                    | 2011-12)                              | <b>5521.1</b> 6598.80   | 5521.1             |  |
| 2012-13                | Block Demonstratio (Paddy)  | Ha.   | 138724                             | 145297                                |                         | 6580.80            |  |
|                        | Asset Building Site Specific Needs  | Nos.  | 86275<br>380                       | 86275<br>380                          | 4819.50<br>1731.70      | 4819.50<br>1731.70 |  |
|                        | Site Specific Needs   | INOS. | 1                                  |                                       |                         |                    |  |
|                        |   |       | 1 otal (                           | 2012-13)                              | 13150.0                 | 13132.0            |  |

Physical and Financial Progress during 2013-14

|        | and Financial Progress   |          |             |           |               |
|--------|--------------------------|----------|-------------|-----------|---------------|
| Sr.No. | Components               | Physical |             | Financial |               |
|        |                          |          |             |           | (Rs. In lakh) |
|        |                          | Target   | Achievement | Target    | Achievement   |
|        | Rice Block               |          |             |           |               |
| Α.     | Demonstration            |          |             |           |               |
| 1      | (a) Rainfed Upland       | 20400    | 20,000      | 1614.05   | 1270.00       |
| 1      | Rice                     | 20400    | 20688       | 1614.05   | 1270.88       |
|        | (b) Shallow Low land     | 20400    | 21205       | 2405.25   | 1077.75       |
|        | Rice                     | 30400    | 31205       | 2405.25   | 1877.75       |
|        | (c) Irrigated -          | 20204    | 27269       | 2600.29   | 2209.56       |
|        | Traditional Variety      | 39394    | 37268       | 2699.28   | 2208.56       |
|        | (d) Irrigated - Hybrid   | 20900    | 20379       | 1633.75   | 1363.5        |
|        | Total (A)                | 111094   | 109540      | 8352.33   | 6720.69       |
| B.     | Assets Building          |          |             |           |               |
| 2      | Dug Wells/Borewell       | 3000     | 0           | 900       | 0             |
| 3      | Paddy Transplanters      | 0        | 31          | 60        | 11.6          |
|        | (Asst.@ Rs. 40,000 /-    |          |             |           |               |
|        | unit )                   |          |             |           |               |
| 4      | Distri. of Agri.Impl. As | 0        | 5004        | 700       | 561.46        |
| 4      | per MMA Norms            | U        | 5084        | /00       | 561.46        |
|        | Total (B)                |          |             | 1660      | 573.06        |
| C      | State Specific           |          |             |           |               |
| 5      | Construction of Check    | 273      | 236         | 2507.42   | 1867.83       |
| 3      | dams                     | 213      | 230         | 2507.43   | 1807.83       |
| 6      | Construction of MIT      | 35       | 20          | 837.53    | 269.06        |
|        | Total (C)                |          |             | 3344.96   | 2136.89       |
| D      | Marketing Support        |          |             | 2044      | 0             |
|        | Grand Total              |          |             | 15401.2   | 0.420.62      |
|        | (A+B+C+D)                |          |             | 15401.3   | 9430.63       |

#### **Annexure III**

Physical and Financial Progress during 2014-15

| Sr. | Components  | Ph     | ysical      | Financial (Rs. In lakh) |                 |
|-----|---|--------|-------------|-------------------------|-----------------|
| No. | -   | Target | Achievement | Target                  | Achievement     |
|     | <b>Block Demonstration</b>  |        |             |                         |                 |
|     | (a) Rainfed Upland Rice   | 15000  | 9433        | 1125.00                 | 287.74          |
|     | Unit Cost: Rs. 7500 per ha.   | 13000  | 9433        | 1123.00                 | 287.74          |
|     | (b) Shallow Low land Rice   | 28300  | 15989       | 2122.50                 | 619.67          |
| 1.  | Unit Cost: Rs. 7500 per ha.   | 20300  | 13707       | 2122.30                 | 017.07          |
| 1.  | (c) Irrigated - Traditional Variety   | 41500  | 25484       | 3112.50                 | 692.98          |
|     | Unit Cost: Rs. 7500 per ha.   | 11200  | 25.0.       | 3112.30                 | 0,2.,0          |
|     | (d) Irrigated - Hybrid  | 22533  | 42779       | 1689.98                 | 2279.05         |
|     | Unit Cost: Rs. 7500 per ha.   |        |             | 00.40.00                |                 |
|     | TOTAL (Demonstration)   | 107333 | 93685       | 8049.98                 | 3879.44         |
| 2.  | Shallow Tub Well @Rs. 20000 per unit (अधिकतम देय अनुदान रु. 20000 / – प्रति ईकाई, | 2500   | 1050        | 500.00                  | 102.40          |
| ۷.  | (अधिकतम दय अनुदान रु. 20000/ — प्रांत इकाइ,<br>खनन रु. 5000/ — + पम्प रु. 15000)  | 2300   | 1050        | 500.00                  | 192.40          |
| 3.  | Borewell @Rs. 30000 per unit  | 2000   | 20          | 600.00                  | 0.00            |
| 4   | Agriculture Implements  | 2000   | 20          | 000.00                  | 0.00            |
| •   | Zero till seed drills 50% cost limited  | 40     |             |                         | 0.00            |
| a   | (अधिकतम रू. 15000)  | 40     | 9           | 6.00                    | 0.00            |
| b   | Seed Drills 50% cost limited (अधिकतम रू.  | 50     | 0           | 7.50                    | 0.00            |
| υ   | 15000)  | 30     | U           | 7.30                    | 0.00            |
| c   | Power Weeders 50% cost limited  | 10     | 0           | 1.50                    | 0.00            |
|     | (अधिकतम रू. 15000)  | 10     | U           | 1.50                    | 0.00            |
| d   | Paddy Thresher 50% cost limited   | 0      | 0           | 0.00                    | 0.00            |
|     | (अधिकतम रू. 15000)  |        |             |                         |                 |
| 0   | Self propelled paddy transplanter 50% cost limited                                | 30     | 8           | 22.50                   | 5.00            |
| e   | COST HIMTED<br>(अधिकतम रू. 75000)   | 30     | 0           | 22.30                   | 3.00            |
|     | Conoweeder 50% cost limited   |        |             |                         |                 |
| f   | (अधिकतम रू. 600)  | 1000   | 995         | 6.00                    | 6.00            |
|     | Manual Sprayers 50% cost limited  | 1000   | 0           | 6.00                    |                 |
| g   | (अधिकतम रू. 600)  | 1000   | 0           | 6.00                    |                 |
| h   | Drum Seeders 50% cost limited   | 50     | 15          | 0.75                    |                 |
| 11  | (अधिकतम रू. 1500)   | 30     | 13          | 0.73                    |                 |
| i   | Power Knapsack Spryer 50% cost  | 800    | 234         | 24.00                   | 7.00            |
|     | limited (अधिकतम रू. 3000)   | 000    | 254         | 24.00                   | 7.00            |
| i   | Multi-crop Thresher 50% cost limited  | 195    | 25          | 78.00                   | 4.00            |
| J   | (अधिकतम रू. 40000)  |        |             |                         |                 |
|     | Total Implements  | 3175   | 1286        | 152.25                  | 22.00           |
| 5   | Construction of Check dams in Govt.   | 389    | 153         | 3890.00                 | 1270.00         |
|     | Land @ Rs. 10 Lakh  | 207    | 155         | 3070.00                 | 1270.00         |
| 6   | Construction of MIT in Govt. Land @   | 10     |             | 250.00                  | 0.00            |
|     | Rs. 25 Lakh   |        |             | == 3.00                 | 2.00            |
|     | Marketing Support (Construction of  | 10     |             | 1610.00                 | 0.00            |
|     | Pakka Chabutra for Stacking of paddy  | 10     |             | 1610.00                 | 0.00            |
|     | purchased by PACS)  |        |             | 15052 22                | <b>52</b> (2.04 |
|     | Grand Total   |        |             | 15052.23                | 5363.84         |

Input Cafeteria, Intervention & Cost Norms (2010-11 to 2013-14): Demonstration under Different rice production system:

| Cost per Hectare (Rs.) |   |                |                                |                                 |                              |             |                |  |  |
|------------------------|---|----------------|--------------------------------|---------------------------------|------------------------------|-------------|----------------|--|--|
| S. No.                 | Activity  | Rainfed        |                                | infed Low Land                  | l rice                       | Irriagate   | ed Rice        |  |  |
|                        |   | Upland<br>Rice | Shallow<br>Lowland<br>(0-15cm) | Medium<br>Deep Water<br>(25-50) | Deep<br>Water (50-<br>100cm) | Traditional | Hybrid<br>Rice | Remarks  |  |
| 1.                     | Deep Ploughing<br>and Land<br>Preparation                           | 1500           | 1500                           | 1500                            | 1500                         | 1500        | 1500           | Extra Cost if any will be met by the Farmer  |  |
| 2.                     | Seed*   | 2000           | 2000                           | 2000                            | 2000                         | 1000        | 2000           | <ul> <li>Seed cost Rs 25/Kg.</li> <li>80Kg /ha for Rainfed Upland Rice and Shallow low land rice direct seeding</li> <li>100Kg/ha for direct seeding and 40Kg/ha for transplanted rice under medium deep water and deep water rice (average is 70Kg/ha)</li> <li>40Kg/ha for irrigated rice and</li> <li>15Kg /ha for hybrid rice and cot of hybrid rice is Rs. 150/Kg.</li> </ul> |  |
|                        | Direct Seeding<br>(Line sowing by<br>drum seeder)/<br>Transplanting | 1500           | 1500                           | 1500                            | 1500                         | 1500        | 1500           | <ul> <li>Only labour cost</li> <li>Direct line sowing in rainfed upland and shallow low land</li> <li>** 50% area is direct seeding and 50% transplanted ómedium deep and deep water rice</li> <li>100% transplanting for irrigated rice</li> </ul>  |  |
| 3.                     | Seed treatment  | 120            | 120                            | 105                             | 105                          | 60          | 25             | Bavistin @ 2.5g/Kg seed ,rate of Bavistin Rs 600/Kg  |  |

Annexure-IV

| 4.Micro | o Nutrient   |         |      |      |      |      |      |   |
|---------|--|---------|------|------|------|------|------|---|
| 4. A    | Zinc   | 875     | 875  | 875  | 875  | 875  | 875  | • 25 Kg/ha cost of Rs. 35/Kg  |
| 4. B    | Boron  | 275     | 275  | 275  | 275  | 275  | 275  | • 5 Kg/ha Cost of Rs.55/Kg  |
| 5.      | Weed<br>Management   | 640     | 640  | 640  | 0    | 640  | 640  | <ul> <li>Pretlachlor 1.6 Lt/ha, cost Rs. 400/Lt</li> <li>For SRI-Conoweeder, manual</li> </ul>  |
| 6.      | Plant protection   | 700     | 700  | 700  | 700  | 700  | 700  |   |
| 7.      | Staff cost/Hand l  | holding |      |      |      |      |      | One staff foe 1000 hectare and he will be paid Rs. 1000 per month as honorarium and Rs.1000 per month mobility for a period of six months. It comes out to be Rs 12 per ha. For one staff for one paddy season. |
| 7. A    | Honorarium   | 6       | 6    | 6    | 6    | 6    | 6    |   |
| 7 B.    | Mobility   | 6       | 6    | 6    | 6    | 6    | 6    |   |
| 8.      | Progressive<br>Farmers   |         |      |      |      |      |      | Progressive Farmer Cost: One progressive farmer for every 100 ha  |
| 8 A.    | Honorarium   | 60      | 60   | 60   | 60   | 60   | 60   | will be paid Rs. 1000 as honorarium and Rs. 1000 per month for mobility for a period of six months. It comes out to be Rs 120 per ha.   |
| 8. B    | Mobility   | 60      | 60   | 60   | 60   | 60   | 60   | For one farmer for one paddy season.  |
| 9.      | Provision of<br>Drum Seeder  | 70      | 70   | 70   | 70   | 70   | 70   | Each Progressive farmer will be provided two drum seeder whose cost is Rs. 3500 for one   |
| 10.     | Travel Cost for<br>KVK<br>Scientist/State<br>Officials/GOI<br>Officers | 100     | 100  | 100  | 100  | 100  | 100  | For meeting the POL/TA/DA of KVK Scientists.  |
| -       | Total  | 7912    | 7912 | 7897 | 7257 | 6852 | 7817 |   |

#### <u>Input Cafeteria / Intervention & Cost Norms (2014 – 15) Cluster Demonstration on rice</u>

Eco-system : (A) Upland Rainfed.

Method of Sowing : Direct seeded / line sowing.

Area Proposed for Demostration : 15,000 ha.

Varieties to be used : 1. Variety released within 10 yrs. : Samleshwari,

Chandrahasini, Indira Barani dhan-1, etc.

2. Variety released more than 10 yrs. :- MTU 1010,

IR 36, 64, etc.

Activity wise cost norms

| S.No. | Activity / Particular                | Direct Seeded / Line Sowing |                       |  |  |
|-------|--------------------------------------|-----------------------------|-----------------------|--|--|
|       |                                      | Variety released            | Variety released with |  |  |
|       |                                      | with 10 yrs.                | more than 10 yrs.     |  |  |
| 1     | Seed                                 | 1200                        | -                     |  |  |
| 2     | Land Preparation                     | 1000                        | 1000                  |  |  |
| 3     | Sowing                               | 600                         | 1000                  |  |  |
|       | (Direct Seeded / Line sowing)        |                             |                       |  |  |
| 4     | Zinc sulphate 25 kg/ha. or other     | 1800                        | 1800                  |  |  |
|       | micro nutrient as per                |                             |                       |  |  |
|       | recommendation by SAU/KVK            |                             |                       |  |  |
|       | green manure seed / bio-fertilizer   |                             |                       |  |  |
| 5     | Weedicide                            | 1200                        | 1200                  |  |  |
|       | (1 pre and 1 post emergence)         |                             |                       |  |  |
| 6     | Ambika Paddy Weeder / Kono           | -                           | 800                   |  |  |
|       | Weeder                               |                             |                       |  |  |
| 7     | IPM ( PP chemicals/Bio Pesticides)   | 900                         | 900                   |  |  |
| 8     | Demonstration Board, Training        | 800                         | 800                   |  |  |
|       | Materials, farmers training, field   |                             |                       |  |  |
|       | day, POL, Vehicle hiring / Visit of  |                             |                       |  |  |
|       | Scientist / State Officers and other |                             |                       |  |  |
|       | contingencies.                       |                             |                       |  |  |
|       | Total                                | 7500                        | 7500                  |  |  |

Eco-system : (B) Shallow water Rice

Method of Sowing : Direct seeded / line sowing.

Area Proposed for Demostration : 28,300 ha.

Varieties to be used : 1. Variety released within 10 yrs.: Karma Masuri,

ND 2359, Samaleshwari, IGKVR 2.

2. Variety released more than 10 yrs.:- MTU 1010,

MTU 1001, Swarna.

Activity wise cost norms

| S.No. | Activity / Particular                | Direct Seeded / Line Sowing |                       |  |  |
|-------|--------------------------------------|-----------------------------|-----------------------|--|--|
|       |                                      | Variety released            | Variety released with |  |  |
|       |                                      | with 10 yrs.                | more than 10 yrs.     |  |  |
| 1     | Seed                                 | 1200                        | -                     |  |  |
| 2     | Land Preparation                     | 1000                        | 1000                  |  |  |
| 3     | Sowing                               | 500                         | 900                   |  |  |
|       | (Direct Seeded / Line sowing)        |                             |                       |  |  |
| 4     | Weedicide                            | 1200                        | 1200                  |  |  |
|       | (1 pre and 1 post emergence)         |                             |                       |  |  |
| 5     | Zinc sulphate 25 kg/ha. or other     | 1850                        | 1850                  |  |  |
|       | micro nutrient as per                |                             |                       |  |  |
|       | recommendation by SAU/KVK            |                             |                       |  |  |
|       | green manure seed / bio-fertilizer   |                             |                       |  |  |
| 6     | Ambika Paddy Weeder / Kono           | -                           | 800                   |  |  |
|       | Weeder                               |                             |                       |  |  |
| 7     | IPM ( PP chemicals/Bio Pesticides)   | 950                         | 950                   |  |  |
| 8     | Demonstration Board, Training        | 800                         | 800                   |  |  |
|       | Materials, farmers training, field   |                             |                       |  |  |
|       | day, POL, Vehicle hiring / Visit of  |                             |                       |  |  |
|       | Scientist / State Officers and other |                             |                       |  |  |
|       | contingencies.                       |                             |                       |  |  |
|       | Total                                | 7500                        | 7500                  |  |  |

Eco-system : (C) High yielding variety-Irrigated

Method of Sowing : Transplanting/SRI.

Area Proposed for Demostration : 41,500 ha.

Varieties to be used : 1. Variety released within 10 yrs. : Karma Masuri,

PKV-HMT, Chandrahasini, IGKVR 1, 2, 3 etc.

2. Variety released more than 10 yrs. :- MTU 7029 (Swarna), MTU 1001, BPT 5204, MTU 1010 etc.

Activity wise cost norms :

| S.No. | Activity / Particular              | Normal Plant | ting SRI @ 15 kg/ha |          |              |
|-------|------------------------------------|--------------|---------------------|----------|--------------|
|       |                                    | @40kg/ha     |                     |          |              |
|       |                                    | Variety      | Variety             | Variety  | Variety      |
|       |                                    | released     | released            | released | released     |
|       |                                    | with 10 yrs. | with more           | with 10  | with more    |
|       |                                    |              | than 10 yrs.        | yrs.     | than 10 yrs. |
| 1     | Seed                               | 1200         | -                   | 300      | -            |
| 2     | Land Preparation                   | 1500         | 1500                | 1500     | 1250         |
| 3     | Sowing                             | 100          | 1000                | 1500     | 1250         |
|       | (Direct Seeded / Line sowing)      |              |                     |          |              |
|       | Ambika Paddy Weeder / Kono         | -            | 800                 | -        | 800          |
|       | Weeder                             |              |                     |          |              |
| 4     | Zinc sulphate 25 kg/ha. or other   | 1850         | 1850                | 1850     | 1850         |
|       | micro nutrient as per              |              |                     |          |              |
|       | recommendation by SAU/KVK          |              |                     |          |              |
|       | green manure seed / bio-           |              |                     |          |              |
|       | fertilizer                         |              |                     |          |              |
| 5     | Weedicide                          | 600          | 600                 | 600      | 600          |
|       | (1 application)                    |              |                     |          |              |
| 6     | IPM ( PP chemicals/Bio             | 950          | 950                 | 950      | 950          |
|       | Pesticides)                        |              |                     |          |              |
| 7     | Demonstration Board, Training      | 800          | 800                 | 800      | 800          |
|       | Materials, farmers training, field |              |                     |          |              |
|       | day, POL, Vehicle hiring / Visit   |              |                     |          |              |
|       | of Scientist / State Officers and  |              |                     |          |              |
|       | other contingencies.               |              |                     |          |              |
| 8     | Total                              | 7500         | 7500                | 7500     | 7500         |

Eco-system : (D) Hybrid Rice

Method of Sowing : Transplanting / SRI

Area Proposed for Demostration : 22,533 ha.

Varieties to be used : Only notified Rice Hybrids suitable for

Chhattisgarh state.

Activity wise cost norms :

| S.No. | Activity / Particular                | Transplanting / SRI |
|-------|--------------------------------------|---------------------|
| 1     | Land Preparation                     | 500                 |
| 2     | Seed                                 | 3750                |
| 3     | Sowing                               | 500                 |
|       | (Transplanting / SRI)                |                     |
| 4     | Weedicide                            | 1200                |
|       | (1 pre and 1 post emergence)         |                     |
| 5     | Zinc sulphate 25 kg/ha. or other     | 650                 |
|       | micro nutrient as per                |                     |
|       | recommendation by SAU/KVK            |                     |
|       | green manure seed / bio-fertilizer   |                     |
| 6     | Weedicide                            | 600                 |
|       | (1 Application)                      |                     |
| 7     | IPM ( PP chemicals/Bio Pesticides)   | 700                 |
| 8     | Demonstration Board, Training        | 800                 |
|       | Materials, farmers training, field   |                     |
|       | day, POL, Vehicle hiring / Visit of  |                     |
|       | Scientist / State Officers and other |                     |
|       | contingencies.                       |                     |
|       | Total                                | 7500                |