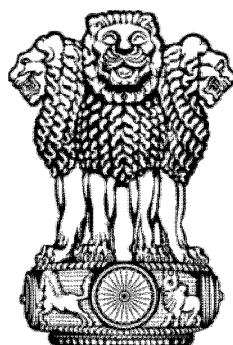


# NATIONAL FOOD SECURITY MISSION

# *REPORT OF THE* **NATIONAL LEVEL MONITORING TEAM (NLMT)**

# CHHATTISGARH



सत्यमेव जयते

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

(KHARIF, 2014)

## Contents

S. NO.	PARTICULARS	PAGE NO.
	Preface	
1.	<b>NFSM: BACKGROUND</b>	1
2.	Area of operation	2
3.	Monitoring Mechanism	2
4.	NLMT: Composition	3
5.	State Profile: CG	3
6.	<b>MAJOR CROPS</b>	
	6.1 Production Scenario: Plan analysis: (X-XI Plan)	4
	6.2 Crop Scenario: 2013-14	6
	6.3 Coverage Kharif ; Target; Rabi; 2014-15	7
7.	Budgetary Status	
	7.1 Fund Utilization - (2013-14)	7
	7.2 Fund Utilization - (2014-15)	8
8.	Places of Visit/Activities	8-9
9.	Prescribed input cafeteria for cluster demonstration	9
10.	Observations	9-14
11.	Wrap-up meeting with ACs/APC	14-15
12.	Recommendations/Suggestions	15-23
	Photos	24-29
	Annex-A	30-35
	Annex-B	36-38
	Annexure I	39-40
	Annexure II	41-45

## PREFACE

The Department of Agriculture and Co-operation, Ministry of Agriculture, Government of India vide order No. CPS 2-29/2014-NFSM dated the 31<sup>st</sup> July, 2014, constituted a National Level Monitoring Team (NLMT) for monitoring the National Food Security Mission (NFSM) activities in respect of the NFSM states, including Chhattisgarh. The Team is comprised of experts in the field of Rice, Pulses and Coarse Cereals. The Terms of Reference (TOR) include i) The Director, Crop Development Directorate (CDD) to act as Convenor 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 and to study the 'Local Initiatives'; 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 Mid-Term Correction for better implementation of the Mission.

The composition of the NLMT for Chhattisgarh was broad based and included the experts from Research organizations/SAUs. The Team interacted with the farmers and Wrap-up Meeting with district Collector, being the Chairman of the District Food Security Mission Executive Committee (DFSMEC). The report has tried to capture the impact of NFSM during 11<sup>th</sup> Plan period in comparison to pre-NFSM five year Plan (10<sup>th</sup> Plan). The observations and recommendations have been categorized under broad heads.

I am thankful to the Members of the NLMT for having spared their valuable time and intensive field visits and their inputs to summarize the report outcome. Sincere thanks are also conveyed to the Mission's Administration in the Deptt. of Agriculture and Cooperation, New Delhi for their sustained guidance and support. Technical Team of the Directorate of Pulses Development, Bhopal in general and Dr.A.L.Waghmare, Sr.Tech.Asstt. in particular deserve appreciation in bringing out the report publication.

Bhopal (M.P.)  
03<sup>rd</sup> December, 2014

A.K.Tiwari  
Convenor/Team Leader

## **ABBREVIATIONS**

1. AICRP-All India Coordinated Research Project
2. AES ó Agro-Eco System
3. APC ó Agriculture Planning Commission
4. ATMA-Agriculture Technology Management Agency
5. BGREI- Bringing Green Revolution to Eastern India
6. BLB-Bacteria Leaf Blight
7. CBSD-Cropping System Based Demonstration
8. CDDs- Crop Development Directorates
9. CIAE-Central Institute of Agriculture Engineering
10. CIPHET-Central Institute of Post-Harvest Engineering and Technology
11. CHCs-Custom Hiring Centre
12. CSBD-Centre for Small Business Development
13. DFSMEC-District Food Security Mission Executive Committee
14. DSR- Direct Seeded Rice
15. FIGs- Farmers Interest Group
16. FPOs-Farmer-Producer Organization
17. GOI- Government of India
18. GPS- Global Positioning System
19. HYV-High Yielding Varieties
20. ICAR-Indian Council of Agriculture
21. IGKV- Indira Gandhi Krishi Vishva Vidyalaya
22. IPM-Integrated Pest Management
23. KVK- Krishi Vigyan Kendra
24. MIDH-Mission for Integrated Development of Horticulture
25. MULLaRP- Mungbean Urdbean Lentil Lathrus Rajmah Pea
26. NRM- Natural Resource Management
27. NAMET - National Mission on Agricultural Extension & Technology
28. NFSM-National Food Security Mission
29. NFSMEC-National Food Security Mission Executive Committee
30. NGOs-Non Government Organization
31. NLMT-National Level Monitoring Team
32. NMOOP ó National Mission on Oilseed & Oilpalm
33. NMSA- National Mission for Sustainable Agriculture
34. PACS-Primary Agriculture Cooperative Society

- 35. PRIs- Panchayati Rajya institutions
- 36. RCT-Resource Conserving Technology
- 37. RAEOs- Rural Agriculture Extension Officer
- 38. SAMETI- State Agriculture Management And Extension Training Institute
- 39. SAUs-State Agriculture University
- 40. SHGs- Self Help Group
- 41. SDA- State Department of Agriculture
- 42. SFSMEC-State Food Security Mission Executive Committee
- 43. SRI-System of Rice Intensification
- 44. SSC- State Seed Corporation
- 45. TA ó Technical Assistant
- 46. TOT-Transfer of Technology

# **REPORT OF NATIONAL LEVEL MONITORING TEAM TO REVIEW THE IMPLEMENTATION OF NATIONAL FOOD SECURITY MISSION (RICE, PULSES AND COARSE CEREALS) IN THE STATE OF CHHATTISGARH DURING KHARIF 2014 .**

## **1. BACKGROUND**

- 1.1 The Centrally Sponsored Scheme of Crop development programme on National Food Security Mission for 03 commodities (viz. Rice, Wheat and Pulses) was launched during the 11<sup>th</sup> five year plan (2007-08 to 2011-12) with the objectives to achieve additional food-grain production consisting of Rice, Wheat & Pulses by 10, 8 and 2 million tonnes respectively by the terminal year of Eleventh Plan. With the critical interventions on demonstrations of improved package of practices, SRI and Hybrid Rice Technology, Seed etc., the envisaged targets of 20 million tonnes of food-grain was achieved.
- 1.2 Along with the other four Missions, viz. NMAET, NMSA, NMOOP & MIDH, the revamped NFSM, cleared by Cabinet Committee on Economic Affairs, has been continued during the 12<sup>th</sup> five year plan 2012-13 to 2016-17 with an allocation of Rs. 12350 Crores. The revamped NFSM, however, became operational from 2014-15. The NFSM during Twelfth Five Year Plan (2012-13 to 2016-17) have five components viz. NFSM- Rice, Wheat, Pulses, Coarse Cereals and Commercial Crops (Sugar, Jute, Cotton) from 2014-15, has targeted an additional production of 25 million tonnes of food grains consisting of Rice-10 million tonnes, Wheat- 8 million tonnes, Pulses- 4 million tonnes & Coarse Cereals-3 million tonnes.
- 1.3 **The basic strategy** of the Mission is to promote and extend improved technology package. The interventions include organisation of Cluster Demonstrations, including 30% of total demonstrations under Cropping System Based Approach focusing *low productivity* and *high potential districts* by SDA with technical backstopping of ICAR/SAUs/ on Rice, Wheat, Pulses; distribution of certified HYV seeds/Hybrid seeds, RCT tools, irrigation machineries/MIS, trainings and undertaking local initiatives to the tune of 5% of total budgetary allocation to improve productivity.

- 1.4 The NFSM strategy further emphasise has to targeting reclamation of problematic soils, water logging areas and mitigation of adverse effect of climate change for high productivity areas, value chain integration (FPOs), and assistance for Custom Hiring Centre (CHCs).

## 2. NFSM: AREA OF OPERATION

S. No.	Commodities	All India		Chhattisgarh (No. of districts)
		No. of States	No. of District	
1.	Pulse	27	607	27
2.	Rice	24	199	19
3.	Coarse cereals (Maize, Small Millet, Pearl Millet)	26	182	09

## 3. MONITORING MECHANISM

S.No.	Level	Formation	Mission structure/ (Composition)	Frequency of Meeting
i.	National	i) General Council (GC)	Union Minister of - Chairman Agriculture  Mission Director - Member Secretary	6 Monthly
		ii) National Food Security Mission Executive Committee (NFSMEC)	Secretary (A & C)- Chairman  Mission Director - Member Secretary	Quarterly
		iii) National Level Monitoring Team (NLMT)	Director CDDs- Convener  Principle Scientist/ SMD NFSM ó Member	Once in a crop season
ii.	State	State Food Security Mission Executive Committee (SFSMEC)	Chief Secretary ó Chairman  State Mission Director - Member Secretary	6 Monthly
iii.	District	District Food Security Mission Executive Committee (DFSMEC)	District Collector/CEO- Chairman Jila Parishad DDA/DAO- Member Secretary	Quarterly

#### 4. NLMT OF CG : COMPOSITION

S.No.	Organization	Names and Designation
i.	Government of India (Department of Agri.& Cooperation) Ministry of Agriculture <b>Directorate of Pulses Development</b> Vindhyachal Bhavan, Bhopal, (M.P.).	Dr. A.K. Tiwari Director (I/c) - (Convenor/Team leader)
ii.	Department of Entomology College of Agriculture, IGKVV, Raipur, (Chhatisgarh).	Dr. Sanjay Sharma Principal Scientist (Entomology) (Principal Investigator, AICRP- Rice)- (Member)
iii.	SG College of Agriculture & Research Station, Jagdalpur IGKVV, Raipur, (Chhatisgarh).	Dr. Adikant Pradhan Scientist (Millets) - (Member)
iv.	RAK College of Agriculture, Sehore RVSKVV, Gwalior, (Madhya Pradesh).	Dr. R.P. Singh Senior Scientist (Agronomy) (Project in-charge AIRCP on MULLaRP (Member)
v.	State Agricultural Management & Extension Training Institute (SAMETI), Govt. of CG., Raipur.	Dr. R.L.Pandey State Consultant (NFSM) (Member)

#### 5. STATE PROFILE: CG

No. of districts	27
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%)
Average rainfall (mm)	1327
Farm families (lakh)	37.36
Small & marginal farmers (%)	80



## 6. MAJOR CROPS

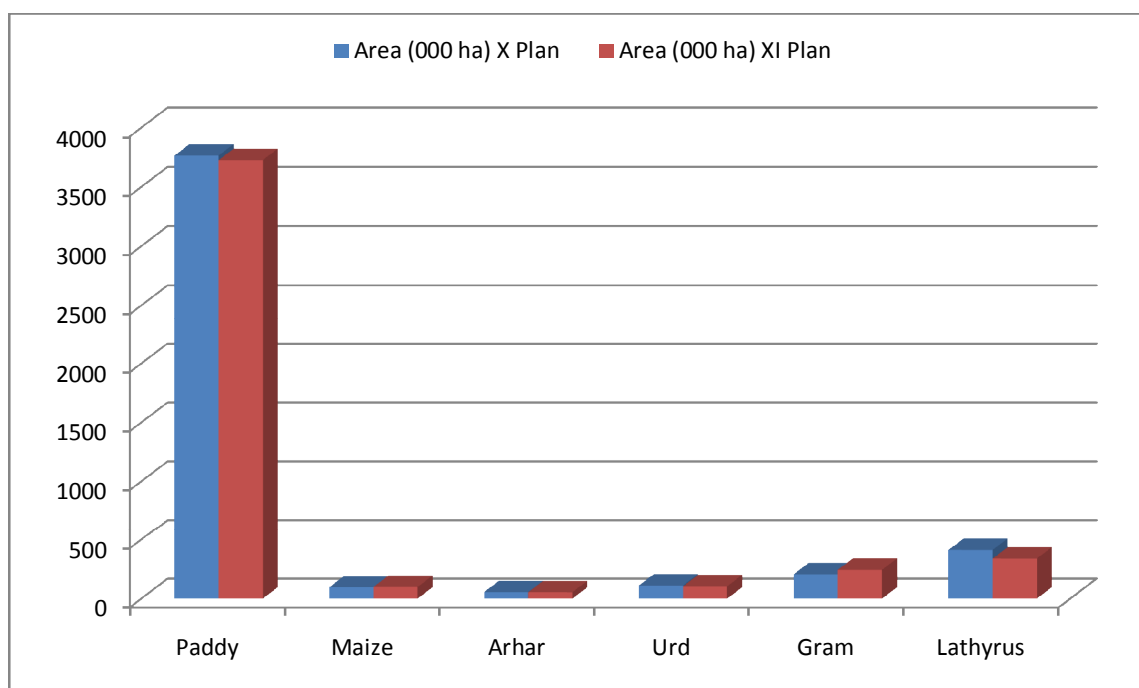
### 6.1 Crop Scenario: Plan analysis (X-XI Plan)

(A=Area Lakh ha, P= Prod. Lakh tonnes, Y= Yield Kg/ha)

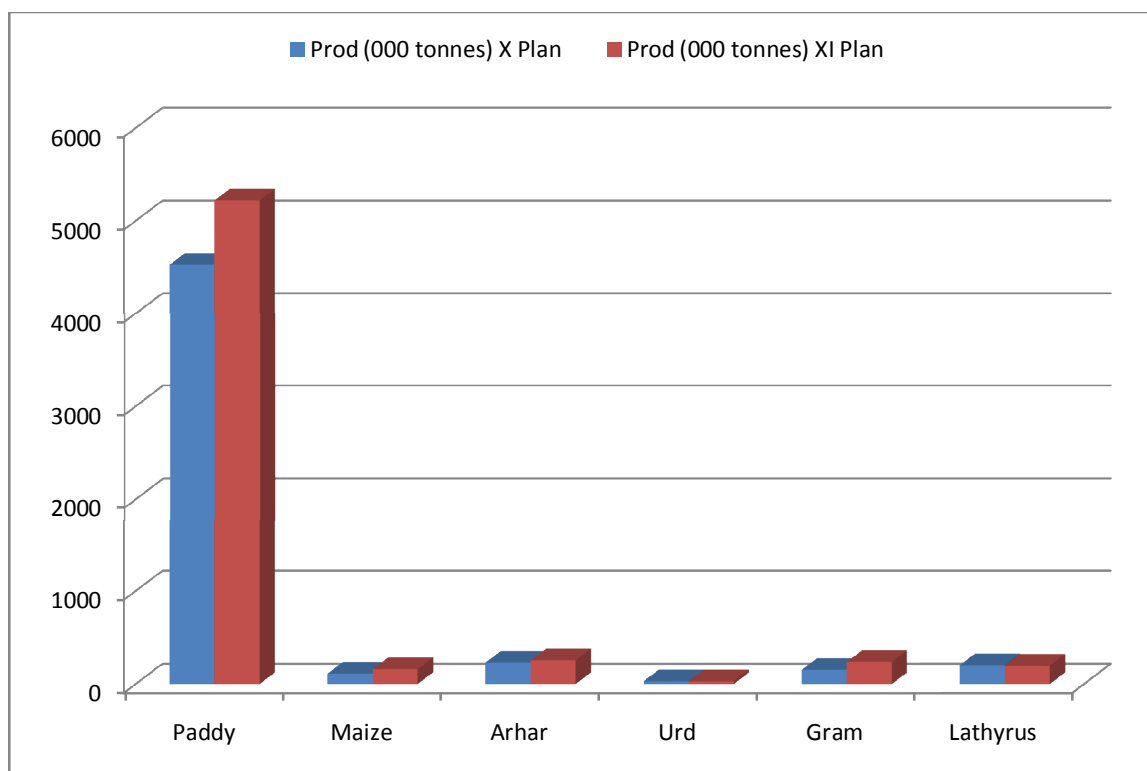
Crop	State	X Plan			XI Plan					Increase/decrease over X plan (%)		
		A	P	Y	A	% cont.	P	% cont.	Y	A	P	Y
Kharif Crops												
Paddy	CG	37.65	45.28	1203	37.27	15.28	52.23	9.91	1402	-1.0	15.4	16.5
	India	218.00	442.50	2030	243.84		527.15		2162	11.8	19.1	6.5
Sorghum	CG	0.07	0.06	813	0.05	0.17	0.06	0.18	1180	-28.3	4.0	45.1
	India	40.61	41.78	1029	30.65		33.38		1089	-24.5	-20.1	5.9
Maize	CG	0.97	1.13	1267	0.99	1.46	1.61	1.08	1618	2.8	31.3	27.7
	India	65.76	114.39	1740	68.36		149.29		2184	3.9	30.5	25.5
Arhar	CG	0.56	0.27	483	0.55	1.46	0.27	1.03	497	-1.1	1.9	3.0
	India	35.07	23.88	681	37.89		26.64		703	8.0	11.6	3.3
Urd	CG	1.12	0.32	285	1.05	4.57	0.31	2.83	292	-6.7	-4.4	2.4
	India	25.06	9.98	398	22.94		10.81		471	-8.4	8.3	18.3
Moong	CG	0.09	0.03	267	0.09	0.35	0.03	0.23	270	-7.7	-6.8	0.95
	India	26.19	8.79	336	26.41		10.49		397	0.8	19.3	18.3
Rabi Crops												
Gram	CG	2.07	1.54	741	2.44	2.97	2.40	3.12	985	17.8	56.5	32.8
	India	68.18	54.71	803	82.18		77.02		937	20.5	40.8	16.8
Lentil	CG	0.17	0.05	312	0.15	1.06	0.05	0.52	322	-8.8	-6.0	3.0
	India	14.44	9.53	660	14.64		9.60		656	1.4	0.7	-0.6
Peas	CG	0.16	0.6	350	0.16	2.22	0.06	0.90	352	-1.9	-1.4	0.6
	India	7.40	6.89	931	7.15		6.21		868	-3.3	-9.9	-6.8
Lathyrus	CG	4.12	2.04	496	3.39	65.6	1.99	58.4	589	-17.8	-2.4	18.7
	India	6.35	3.76	592	5.16		3.42		662	-18.7	-9.2	11.8

The comparative analysis of the two Plan period reveal that the NFSM launched during 11<sup>th</sup> Plan has paid dividends in the productivity of Paddy which was 16.5% higher during the 11<sup>th</sup> Plan (2007-08 to 2011-12) over its previous five year Plan. A quantum jump has been recorded under gram where a productivity level of 985 Kg/ha could be realized over the 10<sup>th</sup> Plan productivity of 741 kg/ha which is more 32%. The state's gram productivity during XI Plan that of all India yield levels.

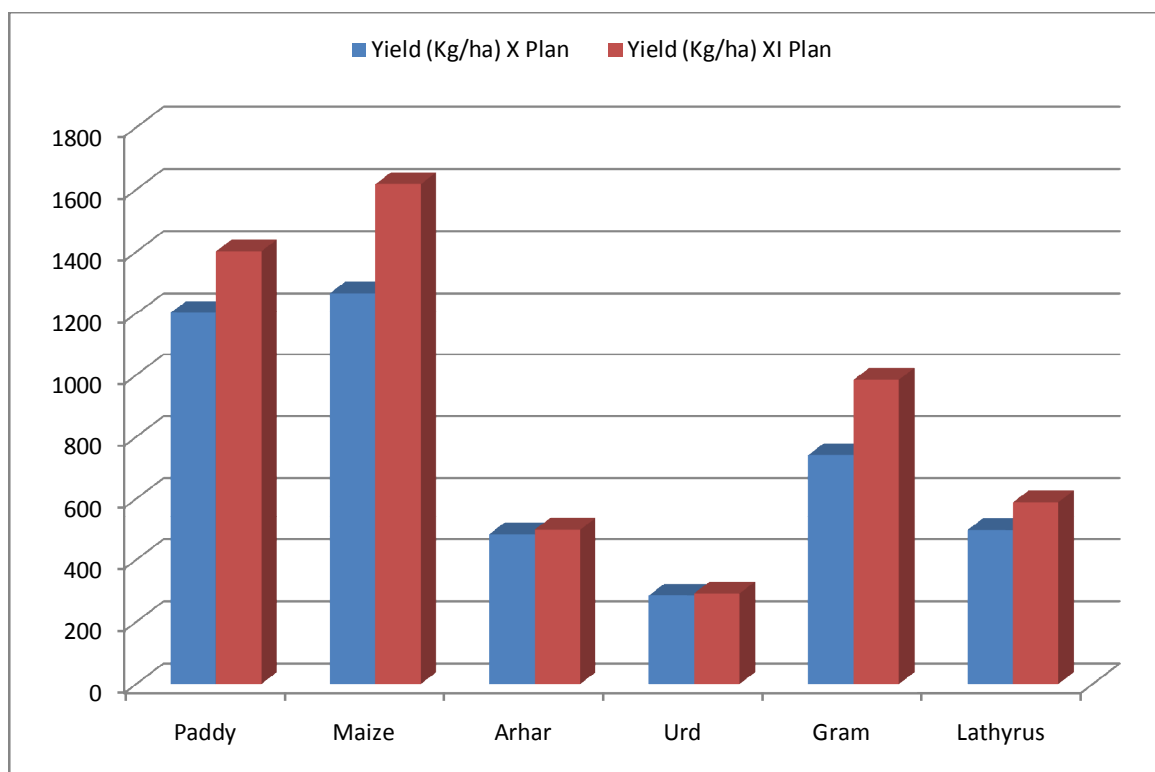
Area under Lathyrus is also getting down to more that 17% during XI Plan built good note on productivity increase to more than 11 per cent. The other cereals and commercial crops were not the part of NFSM during 11<sup>th</sup> Plan.



Crop coverage: Pre-NFSM (X Plan) and during NFSM (XI Plan) in CG



Production: Pre-NFSM (X Plan) and during NFSM (XI Plan) in CG



Yield: Pre-NFSM (X Plan) and during NFSM (XI Plan) in CG

## 6.2 Crop Scenario: (2013-14)

S.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
2.	Sorghum	0.06		0.04		632	
3.	Maize	1.11	2.26	2.29	4.12	2062	1825
4.	Arhar	0.61	1.34	0.31	0.90	613	670
5.	Urd	1.08		0.32		297	
6.	Moong	0.14		0.04		266	
7.	Gram	2.76	3.94	2.13	4.33	771	1100

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

### 6.3 Crop Coverage Kharif -2014 and target for Rabi, 2014-15

S.No.	Crop	Area (lakh ha)		Production (Lakh tonnes)		Yield (Kg/ha)	
		Target	Achi.*	Target	Achi.*	Target	Achi.*
	<b>Kharif</b>						
1.	Paddy	36.41	36.92	75.00	76.81	2060	2080
3.	Maize	2.352	2.201	4.372	4.095	1859	1861
4.	Arhar	1.402	1.310	0.952	0.891	679	680
5.	Urd	1.866	1.655	0.838	0.748	449	452
6.	Moong						
7.	Soybean	1.600	1.471	2.032	1.868	1270	1270
9.	<b>Total Kharif</b>	<b>48.128</b>	<b>47.513</b>	<b>84.908</b>	<b>89.952</b>	<b>1764</b>	<b>1893</b>
	<b>Rabi</b>						
10.	Wheat	1.70	-	2.482	-	1459	-
11.	Gram	4.00	-	4.400	-	1100	-
12.	Lathyrus	3.88	-	2.541	-	655	-
13.	Peas	0.55	-	0.310	-	564	-
14.	Rapeseed/ Mustard	1.50	-	0.885	-	590	-
15.	Sugarcane	0.28	-	0.774	-	2764	-
	<b>Total Rabi</b>	<b>18.76</b>	<b>-</b>	<b>20.70</b>	<b>-</b>	<b>1103</b>	<b>-</b>

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

## 7. FINANCIAL PROGRESS

### 7.1 Allocation & Expenditure : (2013-14)

S.No.	Name of Crop/ Scheme	Unspent Balance as on 1.04.13	Provision	Total release	Available Amount	Rs. In Lakh	
						Expendi- ture	Unutilised
1	Paddy	1359.41	5481.33	4122.41	5481.82	3738.11	1743.71
2	Pulses	470.98	2798.09	2327.11	2798.09	1883.71	914.38
3	A3P (Kharif+Rabi)	352.39	1849.04	1496.65	1849.04	1123.84	725.2
4	Publicity	21.90	0	0	21.90	1.55	20.35
	Interest accrued	0	0	0	711.48	9.88	701.60
	<b>Total</b>	<b>2204.68</b>	<b>10128.46</b>	<b>7946.17</b>	<b>10862.33</b>	<b>6757.09</b>	<b>4105.24</b>

*Details of physical and financial progress is at Annexure –I.*

## 7.2 Allocation & Expenditure Kharif: (2014)

Rs. In Lakh

S. No.	Name of Crop/ Scheme	Unspent Balance as on 1.04.14	Allocation	Release	Expenditure (upto Sept.)
1	Paddy		5149.65	2574.83	653.17
2	Pulses		4252.60	2126.31	429.33
3.	Coarse Cereals		186.00	93.00	2.91
	<b>Total</b>		<b>9588.25</b>	<b>4794.14</b>	<b>1085.41</b>

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

## 8. DETAILS OF FIELD VISIT/ ACTIVITIES

Districts of Kawardha, Raipur and Mahasamund of Chhattisgarh were visited from 12<sup>th</sup> October to 14<sup>th</sup> October, 2014. Team also had Wrap-up meeting with District Collector. Kawardha and with the Additional Chief Secretary & Agriculture Production, Govt. of Chhattisgarh.

S.N.	District	Block	Village/ Institute	Activities
1.	Kawardha		Samnapur	Cluster demonstration on <b>Line Transplanting for Hybrid Rice</b> under midland irrigated conditions.
			Thuhadeh	Cluster demonstration on <b>SRI technology for Rice</b> under midland irrigated conditions.
			Dharampura	Cluster demonstration on <b>Line Transplanting for Rice</b> under irrigated conditions.
2.	Raipur	Dharsima	Deori	Cluster demonstration on <b>Direct Seeded Rice</b> (variety- Sahabhagi- early maturing) under semi irrigated condition Interaction with seed drill beneficiaries under NFSM.
		Dharsima	Silyari	Cluster demonstration on Line transplanting (variety RP Bio 226 (Improved Sambha Mashure) Cropping System Based Demonstration (CSBD).
		Dharsima	Tekari	Cluster demonstration of Pigeon pea (variety LRG-41) on rice bunds.

		Abhanpur	Raveli	Cluster demonstration on SRI technique under irrigated condition with variety Karma Mashuri.
3.	Mahasamund	Mahasamund	Bhoring	<ul style="list-style-type: none"> <li>• Farmer's interaction/meeting</li> <li>• Cluster demonstration on Pigeon pea on rice bunds.</li> </ul>
		Mahasamund	Joba	<ul style="list-style-type: none"> <li>• Farmer's interaction/ meeting</li> <li>• Cluster demonstration on Pigeon pea in rice bunds.</li> </ul>
		Mahasamund	Kona	Interaction with beneficiaries (Rotavator)

9. Prescribed input cafeteria for cluster demonstration is at **Annex-A** and list of improved varieties is at **Annex-B**.

## 10. OBSERVATIONS

10.1. Coverage during kharif 2014 and likely production prospects are given at Para No.6.3.

### 10.2. RICE

10.2.1. Quality seeds of new paddy varieties in required quantities is not being made available to extension personnel for conduction of cluster demonstrations. More over newer varieties do not suit to different agro-eco-situations (AES) of the state and do not yield as much as existing varieties like Swarna, MTU 1010, MTU 1001 and Bamleswari etc which are still in demand.

10.2.2. In rice cultivation, application of **Saathi** herbicide (*Pyrazosulfuron*) with 3 hand weedings triggered high cost in paddy cultivation.

10.2.3. Quality seed production activities were undertaken which can give direct benefit to farmers if adopted in large areas in effective ways. Such state initiative is appreciable.

10.2.4. Transplanting of rice as compared to DSR is common amongst large parts as it doesn't require any special soil conditions such as dry moist situation etc to ensure seed germination.

However, the practice of transplanting is now sharply shifting to DSR covering nearly 40% of total rice cultivation. Hike involved in mechanization, labour cost, time etc are the major factors for this shift. Demonstration on Direct Seeded Rice (DSR) with introduction of *Sahbhagi dhaan* for the first time in several parts, sown through seed-cum fertilizers seed drill observed with good crop stand. Mahamaya, a popular old variety, sown as broad cast, has been considered as Control.

10.2.5. With certain modification, SRI technology is under implementation. At some places **18 days old seedlings with varieties *Ambika*** and test variety ***Karma Masuri*** was found with 10-15 tillers/hill. Transplanting of over aged nursery under water logging conditions was observed in some places.

10.2.6. Varieties Karma Masuri, HMT, MTU-1010, MTU-1064 introduced in Cropping System Based Demonstrations (CSBD), use of seed drill for line sowing & bio-pesticide, bio-fertilizer, pheromone traps etc were also observed as demonstrated.

10.2.7. Rice cluster demonstrations have been organized in scattered way as farmers have no confidence on new varieties.

10.2.8. The Hud-Hud cyclone coincide with NLMT visit dated 12-13<sup>th</sup> October, 2014 caused heavy rains in Kabirdham, Raipur and certain other districts. Lodging in early planted ready to harvest Rice varieties and damage to soybean ready for harvest in 20,000 ha in district Kabirdham was noticed.

10.2.9. ***Rice-gram cropping system under irrigated (Harwa) condition*** is more common practice of the region using gram varieties ***JG-14* & *Vishal***, between these two gram varieties, Vishal is the old one, the team, therefore, recommends to promote JG-14 and other new varieties under NFSM.

### 10.3. PULSES

10.3.1. The team visited *Arhar cluster demonstration* of variety LRG 41 both as sole crop and also on rice bunds. The 10 per cent of total area of rice field is available as bunds which have been targeted under pigeonpea pea cultivation. With wider window of sowing during *kharif* season (7<sup>th</sup> July to 28<sup>th</sup> August), the Arhar as rainfed crop is being popularized by the state. The crop stand was found good at many a places.

10.3.2. In rain fed eco system, medium to late maturing varieties (180-200 days) of pigeonpea do not provide the option to go for rabi season, the yield levels are also low i.e. 6-7 q/ha yield in a whole year. Whereas if early varieties of pigeonpea are available followed Chickpea in rabi season, a total yield of 20 Qtls/ha comprising Kharif & Rabi could be obtained. Economics of total annual harvest in a unit area is the main reason of its area declining in the state. **In Arhar farmers need mid-early varieties maturing in 140-150 days.**

10.3.3. Team also interacted with a farmer Shri Jai Kumar Thakur having versatile (*Arhar, gram, Lathyrus*) *mini dal mill* with milling capacity @ 40 to 50 kg/hr.

10.3.4. 100 ha demonstrations of Arhar grown on rice bunds in 5 villages was visited by the Team. Bunds were assumed as **10% of total cultivated areas of rice** equivalent to 1 hectare coverage of Arhar. **LRG 41**, medium duration varieties (160 to 170 days) was taken for the demonstration.

Farmers prepare the bunds before sowing of Arhar using herbicides *pendimethalin*, rhizobium culture treated seeds were sown through dibbling method @ 2 seeds/hill.

10.3.5. In Raipur, the pigeonpea was demonstrated on rice bunds but plant population was poor in some of the bunds.



10.3.6. On pigeonpea bunds demonstration, narrow bunds with no weed management was observed, which is usually needed considering tremendous scope of growing Arhar on rice bunds.

10.3.7. The Team observed that Pulses are re-introduced in the visited area after 20 years, as these were discontinued owing to free cattle grazing system/ stray animals after paddy harvest have been the main reason behind discontinuous of Pigeonpea cultivation. Joint efforts for protection of Pigeonpea to manage this problem is necessary as wild animal especially monkeys, a major menace in certain district like Mahasamand during late Kharif and Rabi season.

#### 10.4. NRM/SOIL HEALTH

10.4.1. The mandatory Soil health cards were not distributed to all the participating farmers under NFSM cluster demonstration. The status of soil health, thus, was not taken in to consideration while recommending the balance nutrition.

10.4.2. Custom hiring of machineries /equipments is gaining popularity as hiring tractor with implements is easier than maintaining a pair of bullocks throughout year.

10.4.3. The age-old earlier popular **Rice-Lathyrus cropping system** is now diverting to **rice-gram system**. Lathyrus is non-resilient to climate, the rains, therefore, vitiate the standing crop whereas gram is comparatively more reliable to the present climatic scenario subject to management practices to control *Helicoverpa armigera* and recommended dose of fertilizers to harness (15-20 q/ha) yield potential in rice-gram sequence.

#### 10.5. EXTENSION ADMINISTRATION

10.5.1. The field level functionaries directly involved in conducting the demonstrations are not well acquainted with the characteristics of the varieties and the technology to be demonstrated.

- 10.5.2. Team interacted the women farmer **Smt. Satyabhama Chandrakar** in a developed village Kona, a **Rotavator** beneficiary (Rs.35000/- subsidy, (actual cost Rs. 108000/-). Custom Hiring Centres may be started in such villages under local initiatives so as to support marginal farmers, the big farmer do not spare their implements at peak season.
- 10.5.3. 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. Procurement ceiling of 10 q per/acre/ Paddy yield by govt of Chhattisgarh has also become a major cause of concern amongst Paddy growers this year. The farmers are demanding to extend procurement ceiling as per the actual production levels with the individual farmers.
- 10.5.4. **Shri. Vishnu Chandrakar** in village Kona dist. Mahasamund started organic farming three years back, by reducing 25% of recommended fertilizer dose of inorganic fertilizer every year and now has reduced upto 75% of inorganic fertilizers by this year and converted the rice field as organic fields.
- 10.5.5. Chemical or eco-friendly weed management is most important but lack of knowledge poor extension work at this front is accumulating problems to this menace. Common used weedicides are 2, 4-D, Bispyribac-sodium, Fenoxaprop-p-ethyl (whipsuper) in the area.
- 10.6. **CLARITY ON CSBD** - The concept of Cropping System Based demonstration is not amply clear amongst the district/block level functionaries though it was mentioned in the Mission document. The guidelines for organizing at least 30% demonstration under this category. The very basic objectives of targeting *problematic soils like (saline/alkaline/acidic), water logging, mono-cropping and extremely rainfed areas* with poor mechanization/ no mechanization, therefore, seems to be defeated. More attempts to be done on these aspects.

10.7. **NON-PARTICIPATORY APPROACH** - The participation in cluster demonstration by NGO, KVK etc. is negligible or nil the terms recommends the participatory approach in organization of demonstrations. CSBD may also be given to Extension Directorate of SAU to standardize the cropping pattern. Moreover, SAU and KVK are actively involved in preparing district plan.

10.8. It was brought in the notice of the Team that the seeds of early variety seeds (within 10 years of notification) of Paddy, Pulses and Coarse Cereals are not available in sufficient quantities.

10.9. CHCs and assistance for CHCs is not visible at many places, visited by the Team.

## **11. WRAP-UP MEETING WITH ACS/APC**

The Team also had a wrap-up meeting with Shri. Ajay Singh, Additional Chief Secretary and Agriculture Production Commissioner, Govt. of Chhattisgarh. Amongst others, the meeting was participated by Shri P.C. Pandey, Secretary (Agriculture), Shri P.K.Dave, Joint Secretary, Dr. Kranti Director CICR, ICAR, Nagpur, Dr. Urkurkar, Director Research, IGKVV, Raipur (CG), Shri. C.L. Jain, Director (NFSM).

11.1.The other stake holders such as State Seed Corporation, Agro industries etc. may also be entrusted with the job of Input delivery mechanism. The procurement agencies and PACS may ensure input delivery up to the beneficiaries / cluster area.

11.2.To establish and sustain the SRI cultivation and pigeon- pea- bund cultivation in the state, the SAU may be advised to devise the technology package/ modified package of SRI suited to CG. State in view of varied Agro-eco-situations of Chhattisgarh.

11.3.The parallel district level / block level extension functionaries like ATMA, DDA, KVK need to conduct participatory mode of Demonstrations. Reputed NGOs may also be given the participation in TOT activities especially in problematic areas like Bastar region under NFSM.

- 11.4. The Consultants, RAEs, TA & Krishak Mitra should be involved for field visit and laying out of demonstrations. These extension agents need participatory training on method of demonstration, technological aspects etc both for Rabi and Kharif season.
- 11.5. The future need of Resource conservation technologies need Mechanism, CHC, is the need of the hour for CG state.

## **12. RECOMMENDATIONS / SUGGESTIONS**

### **12.1. EXPLORE RICH AREAS**

- 12.1.1. Ensuring seed rolling plan and availability of quality seeds of wilt resistant cultivars of pulses, inclusion of short duration varieties of paddy and Mid to early duration variety of pigeonpea to increase cropping intensity, seed treatment of pulses with *Trichoderma*, mandatory follow-up of IPM in place of sole dependency on pesticides, is strongly recommended.
- 12.1.2. To harness the potential of Coarse Cereals /Millets, there is need of identification of niche areas, bridging yield gaps through availability of quality seeds of promising location specific varieties/hybrids (both grain and fodder); streamlining seed production ;listing the best management practices etc.
- 12.1.3. Harvesting, threshing and pre-processing (de-husking) of small millet being labour intensive, need attention of the CIAE/ CIPHET (ICAR) for development of suitable machines to help and reducing the cost of cultivation, output and value addition to fetch better prices.
- 12.1.4. The System of Rice Cultivation under SRI need suitable agronomic modification for varied Agro-eco-situations (AES) of Chhattisgarh. The contiguous fields with high outer bunds, flooded with water have a system of drainage continuously from one field to other involving whole Rice area. The Technique of SRI need suitable adjustment for Chhattisgarh conditions.

- 12.1.5. Research attempts needed for improved package of practices, width of bunds, spacing, seed rate, IPM etc to sustain the pigeonpea cultivation on rice bunds.
- 12.1.6. A feed back information from Dal mill Association, Bhatapara has given to understand that while breeding new varieties not only the yield but milling traits and processing parameters particularly seed shape should also be taken into consideration. The millers prefer var JG 74 in chickpea, which is puckered and has high dal recovery (75%). Similarly, in Arhar there is demand of round seeded varieties by the processors.
- 12.1.7. Introduction of suitable high yielding varieties, introduction of soil and water conservation techniques, crop rotation, crop diversity, organic farming and mechanized farming should be considered for sustainable agriculture.

## **12.2. STANDARDIZATION OF CROPPING SYSTEM/TECHNIQUES**

- 12.2.1. The SAUs may be advised to *''standardize the cropping systems''* round the year, based on varietal selection, of *rice-fieldpea-wheat-moong/urd cropping* to accommodate the sowing time and management of crop duration based on the available agro-resources.
- 12.2.2. SRI cultivation technique of paddy, with varied AES in all the 03 Agro-climatic Zones of the state, need suitable modifications in consultation with the IGKV, Raipur (CG) SAUs. The input cafeteria prescribed for cluster demonstrations under NFSM should specific and may also differ from one Agro-eco-situation (AES) to other.
- 12.2.3. Popularisation / Introduction of recommended high yielding varieties of paddy and Pulses, soil and water conservation techniques suited to the specific AES, crop rotation, crop diversity, organic farming and inclusion/ introduction of mechanized farming to promote RCT is the urgent need for sustaining the efforts of NFSM & BGREI in the state.

Wild rice eradication, soil amendment, integrated pest management for insect, diseases & weeds are the production constraints lacking in the demonstration, it should be considered.

12.2.4. The tillage and agronomic package also need to be standardized as farmers go for two ploughings, involving higher cost of cultivation. To promote cost-effective and sustainable crop production, promotion of RCT is the need of the hour.

12.2.5. The popular rice variety **Swarna** variety (6-7 tonnes/ha.yield) need to be replaced with recently demonstrated HYV **RPBio 226** (125 days) under NFSM due to its resistant traits to BLB (Bacterial leaf blight) after valid comparison at SAU and KVKs.

Demonstrations taken on red soils with technology of line transplanting and recommended dose of fertilizer were quite satisfactory. Constant persuasion of the extension functionaries would be required to motivate the farmers to opt BLB resistant variety in place of established Swarna variety.

12.2.6. To sustain the bund cultivation of Pigeonpea, the conduct of cluster demonstration need perfect standardization of package of practices with the help of SAUs/KVKs for each district. The suitable varieties of Pigeonpea for each district depending upon the soil type of the fields and rice varieties grown most suited time/sowing window need to be worked out. August sown pigeonpea crop in those fields, so that PP may also mature within 15-20 days just after the harvest of rice.

12.2.7. To control prominent weed such as *Saccharum spontaneum*, *Ageratum conyzoides*, *Pathenium hysterophorus*, *Eclipta alba*, *Blunia oxidentia*, *Ocimum sanctum*, *Commelina bengalensis*, *Cleome viscosa*, pre-& post emergence weedicide should be demonstrated effectively.

### 12.3. GUIDELINES

12.3.1. The Team has a critical observation on the guidelines of conducting the demonstrations which prescribes to organize the cluster demonstration in

comparison to its control. The Team is of the opinion that neither it is being followed nor it seems to be practically possible. It is, therefore, suggested that suitable modification on this may be made in consultation with ICAR at the level of the Head Quarter.

12.3.2. Few new varieties under paddy and pulse have been introduced under NFSM, However, farmers and Extension workers still need more training to adapt these and other best performing cultivars. To ensure next time seed availability of these varieties strategic work plan at SFSMEC and DFSMEC level, such as indenting of breeder seed, mandatory registration of demonstration plots, with SSC and Seed Rolling Plan is essential.

12.3.3. In view of Farmers' intent to go for novel techniques in Agriculture, more aggressive extension transfer and IT enable technology transfer and information system is the demand of the time. GPS data of beneficiaries plot may be given for all the field demonstration programmes in their respective official documents for its authenticity and verification.

12.3.4. 10% limited (cap) allocation under machineries/RCT against total budget allocation should be enhanced to 20%. The state has observed this cap as scarce and defeat very purpose of farm mechanization and RCT. Further, the shelves of RCT equipment/implements and machineries should not be insisted/ imposed upon to the state by GOI.

#### **12.4. CONSERVATION AGRICULTURE: DOCUMENTATION**

12.4.1. Potential increase in area under irrigation by way of intervention of efficient water application tools (Sprinkler, pipes, pump sets, rain gun) need to be compiled in order to evaluate the impact of these interventions. The state has already initiated a massive programme under state plan 'Shakambhari' with 75% subsidy on irrigation infrastructure.

12.4.2. With introduction of Power Tiller, reaper, seed-cum-fertilizer drill and other sowing machineries etc, existing and old age more tillage practices need to be

standardized by the SAU by reducing high frequency of ploughings during rabi and kharif season crops. Reduced tillage and RCT and zero tillage (by zero till plough) in *Direct Seeded Rice- wheat cropping system* would also solve the very purpose of *climate resilient agriculture and reduce cost of cultivation*. However, zero till plough needs modification on existing one, so that it become more useful to the farmers of the Chhattisgarh.

Even farmers prefer more tillage on chickpea and field pea for field preparation, as a part of conventional practice, this also need to be diverted to conservation agriculture.

12.4.3. Economics of cost of cultivation both from the existing and latest technology should be worked out. Cost:Benefit ratio of rotavator, power tiller, paddy transplanter and other such high cost machineries should be regularly brought out by state Directorate of Engineering/IGKV, Raipur. The documentation of best practices, with reduced input costs should be published under NFSM for further replication across the state/country to motivate the farmers.

## **12.5. EXTENSION ADMINISTRATION**

12.5.1. For wider publicity and long lasting impact of demonstrated activities (cluster/implements, variety) display of flexi boards both at village panchayat buildings and demonstration site, is highly recommended.

12.5.2. Flexi-board pertaining details of demonstration be displayed at demonstration site. Literature related to the technologies being transferred in vernacular (Hindi) and be distributed in the extension personnels and farmers too.

12.5.3. Effective weed management strategy using herbicide at critical period of crop-weed competition may leads to reducing cost of production.



- 12.5.4. Selection of site for Cluster Demonstration was not undergone as per situational recommendation of variety, medium duration rice was grown in lowland areas, which need specific attention of the SDA.
- 12.5.5. Simultaneously more demand of machineries during peak season limits the use of tillage machineries and the mechanization owing to less number available with villages. The Team therefore, recommends to increase more CHCs and provide implements to SHGs for better availability to all needy farmers.
- 12.5.6. Lack of mechanization eg. Seed-cum fertilizer drill and versatile/adjustable seed drill for intercropping of Soybean + Pigeonpea etc. need to be propagated.
- 12.5.7. To promote mechanizations, especially as first step in mechanization seed-cum-fertilizer drill and power tiller should be made available to farmers. This may not only reduce the cost of cultivation but would propagate Resources Conservation Technology.
- 12.5.8. Active involvement of Staff (Consultant and TA) appointed under this programme at district level is necessary for effective implementations of NFSM programme. Before conducting the demonstrations RAEO and Sr. Agri. Dev. officers need skill orientation at pre Kharif and Pre-Rabi season.
- 12.5.9. Training and visit component may also be included under this programme, the information of ongoing activities must be displayed in the village Panchayat building and there must be active involvement of public representatives.
- 12.5.10. GPS data of beneficiaries plot may be given for all the field demonstration programmes in their respective official documents for its authenticity and verification and the name of scheme and relevant description should be written over the implements.

- 12.5.11. The NFSM programme should be replicated in KVK & NGO for comparison. Involvement of Village Panchayat will be useful in deciding the cluster demonstration site.
- 12.5.12. Beneficiaries of agricultural implements should be motivated for custom hiring of their implements for generating extra income and resource poor farmers may also avail the facility of mechanization.
- 12.5.13. Protection of the crops from monkeys on charge sharing basis by farmers to pay the bow man etc, should be worked out. Alternatively the department should think of some local initiative to contain this menace for establishing profitable cropping system.
- 12.5.14. Missing links like synergistic extension efforts lack of skill in extension functionaries/Consultants/TAs on organization of cluster demonstration, documentation and organization of season wise trainings for farmers etc. are the issue needing attention of the State deptt. of Agriculture.
- 12.5.15. The organic growers in the state must be facilitated in terms of the accreditation, marketing and strengthening of the organic manures, vermin-compost preparation and skill up-gradation etc.
- 12.5.16. Single box seed drills should be replaced by double box seed drill (Seed-cum-fertilizer drill). *Mixing of seed and fertilizer together in one box is common practice and not recommended as it may damage to seeds due to hygroscopic nature of fertilizers.*
- 12.5.17. Field functionaries have given to understand that cluster size of demonstration should be restricted to 20 ha. Also the concept of **control** plot is in practical as farmers do not allow their land for any poor harvest Value chain integration component should be implemented.

- 12.5.18. The participatory mode of programme implementation underlines active involvement of scientists of KVK. A sizable number of cluster demonstrations should be allocated to them.
- 12.5.19. The NFSM Scheme must be reviewed by the Chairman of DFSMEC i.e. District Collector. Vacant post of Consultant, Kisan Mitra should be filled up.
- 12.5.20. Similarly, to control major diseases such as Blast, Neck blast, BLB, Brown spot, False smut, Wilt, Root rot etc. effectively, demonstration on cultural, mechanical, bio-intensive & chemical methods need to be conducted.
- 12.5.21. Under **local initiatives** Godown, Reaper & Power tiller have been distributed, processing, value addition, control of wild animal menace etc should also be thought of under this component.
- 12.5.22. The Monitoring mechanism in the state involves inspection of cluster demonstration as - (%) DDA-5%, SDO-25%, SADO-50%, ADO-100%, RAO-100%.
- 12.5.23. Economics of SRI cultivation in Chhattisgarh such as cost of cultivation, manpower used, total production and economic return etc. should be studied in the end of demonstration to ensure sustainability of the system, as also to conclude its suitability for Chhattisgarh.
- 12.5.24. It is revealed that existing qualification prescribed for consultant at district level is the major constraint in the positioning of district consultant. It necessitates relaxation in existing prescribed qualification of M.Sc. Agriculture with experience to be relaxed to M.Sc. (Agri.)/B.Sc. Agri. Appointment of 01 Kisan Mitra in each Panchayat, irrespective of Panchayat consisting of mandatory two villages, should be the criteria in multivillage Panchayats.
- 12.5.25. Active involvement of Staff appointed under this programme (Consultant and TA) is necessary for effective implementations of NFSM programme. Proper programme planning is required by involving Agriculture University in deciding the



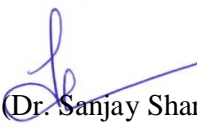


technologies to be demonstrated by considering socioeconomic status, availability of natural resources and marketing of produce. Training and visit component (crop based/season based training) need impetus, may also be included under this programme, the information of ongoing activities must also be displayed in the village Panchayat building.

## 12.6. LOCAL INITIATIVES

12.6.1. **Chakbandi** (Consolidation of land) through **Jila Panchayat** or local **Panchayati Rajya institutions** (PRIs) should be involved as local initiative to initiate Custom Hiring Centre on normalized rate for farmers. For max. Utilization of govt. Schemes Land consolidation has now become an urgent of the today. It must be done at district level.

12.6.2. Community threshing yards, to support small & marginal farmers in villages having no common land may be an innovative component. Such threshing yards could be managed by the SHG, FIGs at village level.

12.6.3. Under **local initiative** to promote value addition/processing by giving mini dal mills to SHG/FIG may be taken up to increase livelihood through enhanced processing activities with custom hiring component and uplift the socio-economic status of tribal farmers in the state of Chhattisgarh.

				
(Dr. A.K. Tiwari)	(Dr. R.L. Pandey)	(Dr. Sanjay Sharma)	(Dr. R.P. Singh)	(Dr. A. Pradhan)
Convenor	Member	Member	Member	Member



**Pigeonpea Cluster demonstration on Rice bunds**





**Paddy crop damage due to cyclone Hudhud 12-13<sup>th</sup> October, 2014**



**Rice cluster demonstration**





Paddy cluster demonstration



Display Board on paddy cluster demonstration





**Mechanization: Interaction with Seed-cum-fertilizer drill beneficiary**



**Team observing growth related aspects under cluster demonstration**





**Pigeonpea Cluster demonstration on Rice bunds**





**Paddy cluster demonstration**

# ANNEXURES

## CAFETERIA OF INTERVENTIONS FOR CLUSTER DEMONSTRATIONS FOR 2014-15

## A. Arhar (Improved varieties)

S.N	Activity/Particular	Unit Cost	Cost Norms (Rs./ha)
1	Land Preparation	Rs. 1000/ha	1000
2	Line Sowing	Rs. 500/ha	500
3	Seed @ 20kg/ha) including seed treatment	Rs. 91.47/kg	1830
4	Fertilizer (N:P:K) (20:50:20)**	Urea-Rs. 284.30/bag or Rs. 5.686/kg SSP-Rs.348.06 /bag or Rs. 6.9612/kg MOP- Rs. 840.00/bag or Rs. 16.80/kg	To be purchased by farmers
5	Integrated Nutrient Management including ZnSO <sub>4</sub> , Sulphur, Borax, Sodium Molybdate, considering soil test value	-	1420
6	Weedicide/Weed Management	Rs. 1000/ha	1000
7	Integrated Pest Management including bio-pesticides, pesticides, pheromone traps etc.	Rs. 850/ha	850
8	Rhizobium + PSB culture	Rs. 100/ha	100
9	Demonstration Board, Training materials, Farmers Training, Field day, POL, vehicle hiring and other contingency, Visit of Scientists/state officials	Rs. 800/ha	800
	<b>Total</b>		<b>7500</b>

## B. Intercropping of Arhar with Soybean (2 rows Arhar and 6 rows Soybean)

S. No.	Activity/Particular	Unit Cost	Cost Norms (Rs./ha)
1	Land Preparation	Rs. 1000/ha	1000
2	Line Sowing	Rs. 500/ha	500
3	Seed (Arhar @ 5 kg/ha) including seed treatment	Rs. 91.47/kg	1830
4	Fertilizer (N:P:K) (20:50:20)**	Urea-Rs. 284.30/bag or Rs. 5.686/kg SSP-Rs.348.06 /bag or Rs. 6.9612/kg MOP- Rs. 840.00/bag or Rs. 16.80/kg	To be purchased by farmers
5	Integrated Nutrient Management including ZnSO <sub>4</sub> , Sulphur, Borax, Sodium Molybdate, considering soil test value	-	1467
6	Weedicide/Weed Management	Rs. 1000/ha	1000
7	Integrated Pest Management including bio-pesticides, pesticides, pheromone traps etc.	Rs. 850/ha	850
8	Rhizobium + PSB culture	Rs. 25/ha	25
9	Demonstration Board, Training materials, Farmers Training, Field day, POL, vehicle hiring and other contingency, Visit of Scientists/state officials	Rs. 800/ha	800
	<b>Total</b>		<b>6100</b>

**C. Intercropping of Arhar with Urd (2 rows Arhar and 4 rows Urd)**

S.No.	Activity/Particular	Unit Cost	Cost Norms (Rs./ha)
1	Land Preparation	Rs. 1000/ha	1000
2	Line Sowing	Rs. 500/ha	500
3	Seed (Arhar @ 7 kg/ha) (Urd @ 13 kg/ha) including seed treatment	Rs. 91.47/kg (Arhar) Rs. 94.20/kg (Urd)	1865
4	Fertilizer (N:P:K) (20:50:20)**	Urea-Rs. 284.30/bag or Rs. 5.686/kg SSP-Rs.348.06 /bag or Rs. 6.9612/kg MOP- Rs. 840.00/bag or Rs. 16.80/kg	To be purchased by farmers
5	Integrated Nutrient Management including ZnSO <sub>4</sub> , Sulphur, Borax, Sodium Molybdate, considering soil test value	-	1385
6	Weedicide/Weed Management	Rs. 1000/ha	1000
7	Integrated Pest Management including bio-pesticides, pesticides, pheromone traps etc.	Rs. 850/ha	850
8	Rhizobium + PSB culture	Rs. 100/ha	100
9	Demonstration Board, Training materials, Farmers Training, Field day, POL, vehicle hiring and other contingency, Visit of Scientists/state officials	Rs. 800/ha	800
	<b>Total</b>		<b>7500</b>

**C. Intercropping of Arhar with Rice (Upland Unbunded Rice fields) (1 rows Arhar and 4 rows Rice)**

S. No.	Activity/Particular	Unit Cost	Cost Norms (Rs./ha)
1	Land Preparation	Rs. 1000/ha	1000
2	Line Sowing	Rs. 500/ha	500
3	Seed (Arhar @ 4 kg/ha) (Urd @ 48 kg/ha) including seed treatment	Rs. 91.47/kg (Arhar) Rs. 20/kg (Urd)	1325
4	Fertilizer (N:P:K) (20:50:20)**	Urea-Rs. 284.30/bag or Rs. 5.686/kg SSP-Rs.348.06 /bag or Rs. 6.9612/kg MOP- Rs. 840.00/bag or Rs. 16.80/kg	To be purchased by farmers
5	Integrated Nutrient Management including ZnSO <sub>4</sub> , Sulphur, Borax, Sodium Molybdate, considering soil test value	-	2000
6	Weedicide/Weed Management	Rs. 1000/ha	1000
7	Integrated Pest Management including biopesticides, pesticides, pheromone traps etc.	Rs. 850/ha	850
8	Rhizobium + PSB culture	Rs.25/ha	25
9	Demonstration Board, Training materials, Farmers Training, Field day, POL, vehicle hiring and other contingency, Visit of Scientists/state officials	Rs. 800/ha	800
	<b>Total</b>		<b>7500</b>

### E. Cultivation of Arhar on Rice Bunds

S. No.	Activity/Particular	Maximum rate of assistance (Rs.) for one hectare paddy bunds	Maximum rate of assistance per hectare bund area(10 ha paddy fields (Rs.))
1	Cleaning and preparation of bunds and seed sowing	1000/ha	1500
2	Seed (@ 2 kg/ha-Rs. 91.47/kg) including seed treatment	182.94	1829.4
3	Fertilizer (N:P:K) (20:50:20)**	Urea-Rs. 284.30/bag or Rs. 5.686/kg SSP-Rs.348.06 /bag or Rs. 6.9612/kg MOP- Rs. 840.00/bag or Rs. 16.80/kg	To be purchased by farmers
4	Integrated Nutrient Management including bio-fertilizer	117.06	1170.6
5	Rhizobium + PSB culture	10	100
6	Weed Management/Weedicide	80	800
7	Integrated Pest Management including bio-pesticides, pesticides, pheromone traps etc.	130	1300
8	Demonstration Board, Training materials, Farmers Training, Field day, POL, vehicle hiring and other contingency, Visit of Scientists/state officials	80	800
	<b>Total</b>		<b>7500</b>

### F. Demonstration on Ridge Furrow v/s Farmers Practices

S.No.	Activity/Particular	Unit Cost	Cost Norms (Rs./ha)
1	Land Preparation	Rs. 1000/ha	1000
2	Line Sowing	Rs. 500/ha	500
3	Seed (Arhar @ 4 kg/ha) including seed treatment	Rs. 91.47/kg (Arhar)	1830
4	Fertilizer (N:P:K) (20:50:20)**	Urea-Rs. 284.30/bag or Rs. 5.686/kg SSP-Rs.348.06 /bag or Rs. 6.9612/kg MOP- Rs. 840.00/bag or Rs. 16.80/kg	To be purchase by farmers themselves
5	Integrated Nutrient Management including ZnSO4,Sulphur, Borax, Sodium Molybdate, considering soil test value	-	1420
6	Weedicide/Weed Management	Rs. 1000/ha	1000
7	Integrated Pest Management including bio-pesticides, pesticides, pheromone traps etc.	Rs. 850/ha	850
8	Rhizobium + PSB culture	Rs.100/ha	100
9	Demonstration Board, Training materials, Farmers Training, Field day, POL, vehicle hiring and other contingency, Visit of Scientists/State officials	Rs. 800/ha	800
	<b>Total</b>		<b>7500</b>

**G. Urd (Upland Rainfed Condition)/ Improved Varieties v/s Local Varieties.**

S.No.	Activity/Particular	Unit Cost	Cost Norms (Rs./ha)
1.	Land Preparation	Rs. 1000/ha	1000
2.	Line sowing	Rs. 500/ha	500
3.	Seed (@ 20kg/ha) including seed treatment	Rs. 94.20/kg	1984
4.	Fertilizer (N : P : K) (20 : 50 : 20)	Urea ó Rs. 284.30/bag or Rs. 5.686/kg SSP ó Rs. 348.06/bag or Rs. 6.9612/kg MOP ó Rs. 840.00/bag or Rs. 16.80/kg	To be purchase by farmers themselves
5.	Integrated Nutrient Management including ZnSo4, Sulphur, Borex, Sodium Molybdate, considering soil test value.	-	1266
6.	Weedicide/ Weed Management	Rs. 1000/ha	1000
7.	Integrated Pest Management including bio-pesticides, pesticides, pheromone traps etc.	Rs. 850/ha	850
8.	Rhizobium + PSB culture	Rs. 100/ha	100
9.	Demonstration Board, Training materials, Farmers Training, Field day, POL, vehicle hiring and other contingency, Visit of Scientists/state officials.	Rs. 800/ha	800
	<b>Total</b>		<b>7500</b>

**H. Pea (Rainfed - Semi – irrigated Condition) / Improved Varieties v/s Local Varieties.**

S. No.	Activity/Particular	Unit Cost	Cost Norms (Rs./ha)
1.	Land Preparation	Rs. 1000/ha	1000
2.	Line sowing	Rs. 500/ha	500
3.	Seed (@100kg/ha) including seed treatment	Rs. 42/kg	4200
4.	Fertilizer (N : P : K) (20 : 40 : 20)	Urea ó Rs. 284.30/bag or Rs. 5.686/kg SSP ó Rs. 348.06/bag or Rs. 6.9612/kg MOP ó Rs. 840.00/bag or Rs. 16.80/kg	To be purchase by farmers themselves
5.	Integrated Nutrient Management including ZnSo4, Sulphur, Borex, Sodium Molybdate, considering soil test value.	-	940
6.	Weedicide/ Weed Management	-	To be purchase by farmers themselves
7.	Integrated Pest Management including bio-pesticides, pesticides, pheromone traps etc.	-	To be purchase by farmers themselves
8.	Rhizobium (3 Pkt) + PSB culture (2 Pkt)	Rhizobium ó Rs. 10/150 g Pkt PSB ó Rs. 12/250 g Pkt	60
9.	Demonstration Board, Training materials, Farmers Training, Field day, POL, vehicle hiring and other contingency, Visit of Scientists/state officials.	Rs. 800/ha	800
	<b>Total</b>		<b>7500</b>

**I. Chickpea/Gram (Rainfed - Semi – irrigated Condition) /Improved Varieties v/s Local Varieties.**

S. N.	Activity/Particular	Unit Cost	Cost Norms (Rs./ha)
1.	Land Preparation	Rs. 1000/ha	1000
2.	Line sowing	Rs. 500/ha	500
3.	Seed (@ 75 kg/ha) including seed treatment	Rs. 42/kg	3150
4.	Fertilizer (N : P : K) (20 : 40 : 20)**	Urea ó Rs. 284.30/bag or Rs. 5.686/kg SSP ó Rs. 348.06/bag or Rs. 6.9612/kg MOP ó Rs. 840.00/bag or Rs. 16.80/kg	To be purchase by farmers
5.	Integrated Nutrient Management including ZnSo4, Sulphur, Borex, Sodium Molybdate, considering soil test value.	-	1140
6.	Weedicide/ Weed Management	-	To be borne by farmers
7.	Integrated Pest Management including bio-pesticides, pesticides, pheromone traps etc.	Rs.850/ha	850
8.	Rhizobium (3 Pkt) + PSB culture (2 Pkt)	Rhizobium ó Rs. 10/150 g Pkt PSB ó Rs. 12/250 g Pkt	60
9.	Demonstration Board, Training materials, Farmers Training, Field day, POL, vehicle hiring and other contingency, Visit of Scientists/state officials.	Rs. 800/ha	800
<b>Total</b>			<b>7500</b>

**J. Rice – Pea (Rainfed - Semi – irrigated Condition)/ Demonstration on Cropping System.**

S. No.	Activity/Particular	Unit Cost	Cost Norms (Rs./ha)	
			Kharif (Rice)	Rabi (Rice)
1.	Land Preparation	Rs. 1000/ha	1000	0
2.	Sowing	Rs. 500/ha	500	500
3.	Seed(Rice-@60kg/ha)- Line Sowing (Pea-@100kg/ha)-Line sowing including seed treatment	Rs. 20/kg for Rice and Rs. 42/kg for Pea	1200	4200
4.	Fertilizer (N : P : K) ( Rice - 60 : 40 : 20)** ( Pea ó 20 : 40 : 20)**	Urea ó Rs. 284.30/bag or Rs. 5.686/kg SSP ó Rs. 348.06/bag or Rs. 6.9612/kg MOP ó Rs. 840.00/bag or Rs. 16.80/kg	To be purchase by farmers	
5.	Integrated Nutrient Management including use of bio-fertilizers during kharif	ZnSo4 @ 2 kg/ha ó Rs.850 Lime @ qtl/ha ó Rs.1000	1850	0
6.	Weed Management / Weedicide	-	700	500
7.	Integrated Pest Management including biopesticides, pesticides, pheromone traps etc.	-	600	590
8.	Rhizobium + PSB culture	-	0	60
9.	Demonstration Board, Training materials, Farmers Training, Field day, POL, vehicle hiring and other contingency, Visit of Scientists/state officials.	Rs. 800/ha	800	
<b>Total</b>			<b>6650</b>	<b>5850</b>



**K. Rice – Chikpea/Gram (Rainfed - Semi – irrigated Condition) /Demonstration on Cropping System.**

S. No.	Activity/Particular	Unit Cost	Cost Norms (Rs./ha)	
			Kharif (Rice)	Rabi (Rice)
1.	Land Preparation	Rs. 1000/ha	1000	0
2.	Sowing	Rs. 500/ha	500	500
3.	Seed(Rice-@60kg/ha)- Line Sowing (Gram-@75kg/ha)-Line sowing including seed treatment	Rs. 20/kg for Rice and Rs. 42/kg for Pea	1200	3150
4.	Fertilizer (N : P : K) ( Rice - 60 : 40 : 20)** ( Pea ó 20 : 40 : 20)**	Urea ó Rs. 284.30/bag or Rs. 5.686/kg SSP ó Rs. 348.06/bag or Rs. 6.9612/kg MOP ó Rs. 840.00/bag or Rs. 16.80/kg	To be borne by farmers	
5.	Integrated Nutrient Management including use of bio-fertilizers during kharif	ZnSo4 @ 2 kg/ha ó Rs.850 Lime @ qtl/ha ó Rs.1000 #	1850	0
6.	Weed Management / Weedicide	-	100	750
7.	Integrated Pest Management including biopesticides, pesticides, pheromone traps etc.	-	800	890
8.	Rhizobium + PSB culture	-	0	60
9.	Demonstration Board, Training materials, Farmers Training, Field day, POL, vehicle hiring and other contingency, Visit of Scientists/state officials.	Rs. 800/ha	800	0
	<b>Total</b>		<b>6650</b>	<b>5850</b>



**LIST OF IMPROVED VARIETIES (< 10 YEAR AGE) RECOMMENDED FOR  
CHHATTISGARH**

**A. Pigeonpea (Arhar)**

S. No.	Variety	Years of Release	Developed by	Special Features	Notification No. & Date
1	BDN 708	2004	A.R.S. Badnapur (Maharashtra)	Moderate resistant to Wilt and Sterility Mosaic Disease	S.O.122 (E) 6.2 2007
2	GTH-1 (Hybrid)	2004	SDAU, Gujarat	Resistant to Wilt, Sterility Mosaic Disease and Pod Borer	S.O.1703 (E)05.10 2007
3	JKM 189	2006	RARS, Khargone (M.P.)	Drought tolerant, Resistant and Moderate resistant to Wilt, S.M.D. and Phytophthora Blight	No. 17-10/S.D.IV 06.08.2007
4	Vipul	2006	MPKV, Rahuri (Maharashtra)	Resistant to Wilt, Tolerant to S.M.D. and less damage by Pod Borer	-
5	TJT 501	2008	RARS, Khargon (M.P.)	Tolerant to Pod Borer and Pod Fly	S.O.2187 (E) 2.7 2009
6	Rajeev Lochan	2011	IGKV, Raipur	Resistant to Wilt and SMD	S.O. 632 (E) 25.03.2011
7	Phule T 0012	2012	MPKV, Rahuri (Maharashtra)	Moderate resistant to Fusarium Wilt, SMD and tolerant to Pod Borer and Pod Fly	-
8	VLA-1 (ICPL 88039)	2007	ICISAT	135-140 days duration	S.O. 1703 (E) 2007
9	Pusa 991	2005	IARI	Tolerant to Wilt, Phytophthora Blight and SMD	-

**B. Urd**

S. No.	Variety	Years of Release	Developed by	Special Features	Average grain yield (qtls/ha)
1	PU - 31	2005	GBPUA&T, Pantnagar	Resistant to MYMV	10
2	PU-40	2005	GBPUA&T, Pantnagar	Resistant to MYMV	10
3	NUL 7	2009	Nirmal Seeds	Resistant to MYMV & Powdery Mildew	11

**C. Field Pea**

S. No.	Variety	Years of Release	Developed by	Special Features	Average grain yield (qtls/ha)	Notification No. & Date
1	IFPD 99-13	2005	IIPR, Kanpur	Resistant to Powdery Mildew, Mid. Duration 102 days	23	-
2	IFPD 1-10	2006	IIPR, Kanpur	Resistant to Powdery Mildew and Rust, Mid. Duration 110 days	22	
3	Paras	2006	IGKV, Raipur	Resistant to Powdery Mildew and Rust, Mid. Duration 103 days	15-20 (Irrigated) 10-15 (rainfed)	S.O. 599 (E) 25.04.2006

**D. Lentil**

S. No.	Variety	Years of Release	Developed by	Special Features	Average grain yield (qtls/ha)	Notification No. & Date
1	IPL -316	2013	-	-	-	S.O. 312 (E) 01.02.2013

**E. Chickpea (Gram)**

S. No.	Variety	Years of Release	Developed by	Special Features	Average grain yield (qtls/ha)	Notification No. & Date
1	JG- 63	2004	JNKVV, Jabalpur	-	-	-
2	JG-1	2006	JNKVV, Jabalpur	-	15	-
3	JGK-2	2006	JNKVV, Jabalpur	Kabuli, Bold Seed	-	-
4	Pusa Subhra	2006	IARI, New Delhi	-	18	S.O. 1572 (E)
5	JG -14	2009	JNKVV, Jabalpur	Mid. Bold, Wilt Resistant, Tolerant to heat	18	S.O. 449 (E)
6	JG-6	2009	JNKVV, Jabalpur	-	20	S.O. 449 (E)
7	ICPK 2002-29	2009	IIPR, Kanpur	-	21	S.O. 2187 (E)
8	ICPK 2004-29	2010	IIPR, Kanpur	-	20	S.O. 2137(E)
9	Phule G 0517	2010	MPKV, Rahuri (Maharashtra)	-	18	S.O. 2137(E)
10	JSC 55	2012	RAK, COA, Sehore (M.P.)	-	20	-
11	JSC 56	2012	RAK, COA, Sehore (M.P.)	-	19	-

## F. Rice

S. No.	Variety	Duration days	Yield (t/hac)	Suitability	Average grain yield (qtls/ha)	Notification No. & Date
1	Samleshwari	105-112	3 - 3.5	Direct seeded in rainfed upland and rainfed bunded matasi,dorsa & kanhar planting with 20-25 days seedling	Tolerant to Brown spot & Neck blast, Resistant to Gall Midge biotype 1 & 4	S.O. 1178 (E) 20.07.2007
2	Jaldubi	135-140	4 - 4.5	Direct seeded in rainfed shallow & semi-deep water ecosystem of Surguja division	Resistant to blast and Gall midge biotype 1	S.O. 1178 (E) 20.07.2007
3	Chandahasini	120 - 125	4 ó 4.5	Irrigated condition, rainfed bunded, dorsa and kanhar soils	Tolerant to Blast, Brown Spot & Sheath rot. Resistant to Gall Midge biotype 1	S.O. 1178 (E) 20.07.2007
4	Sampada	135	4.5ó5.0	Rainfed low land, Irrigated	Tolerant to Gall Midge	S.O. 2458 (E) 16.10.2008
5	Karma Masuri	125-130	4.5-5.0	Irrigated and Rainfed bunded, medium to heavy textured soils of Chhattisgarh	Tolerant to BPH, WBPH, Resistant to Gall midge biotype 1,4 & 5	S.O. 2458 (E) 16.10.2008
6	IGKV R-1244 (Maheshwari)	130-135	5.0-5.5	Irrigated and Rainfed-heavy dorsa and kanhar soils	Resistant to Brown Spot, Blast, Sheath rot, BPH and stem borer	S.O. 456 (E)16.3 2012
7	IGKV R-1 (Improved Mahamaya)	120-125	5.0-5.7	Irrigated and Rainfed-heavy soils	Moderately resistant to blast, brown spot and Gall midge, Tolerant to Neck Blast	S.O. 283 (E) 7.2 2011
8	IGKV R-2	130-135	5.0-5.5	Irrigated condition	Tolerant to sheath rot, sheath blight and BLB. Resistant to Gall midge	S.O. 283 (E) 7.2 2011
9	Indira Barani Dhan-1	111-115	4.0-4.5	Rainfed shallow lowlands, rainfed in dorsa and kanhar soils	Tolerant to Neck Blast, BLB, Gall midge and stem borer	S.O. 456 (E) 16.3 2012
10	PKV-HMT	130-135	4.0	Irrigated condition	Follow IPM	S.O. 2458 (E) 16.10.2008

## Physical and Financial Progress during 2013-14

## 1. NFSM-Pulses

Rs. In lakh

S. N.	Intervention	Unit	Target		Achievement		% Achivement	
			Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
1.	Distribution of certified seeds:							
	(a)For Varieties less than 10 years	Qtl.	8500	187.00	9134.04	188.61	107.46	100.86
	(b) For Varieties more than 10 years	Qtl.	47667	572.00	26980.18	290.25	56.60	50.74
2.	Demonstration on improved technologies							
	Cluster demonstration (of 100 ha each) on intercropping/improved varieties/farm implements like Ridge Furrows makers-seed drills.	Hac.	14500	725.00	14600	597.39	100.69	82.40
	(b) Front line demonstration by ICAR/SAUs in a cluster of 10 ha each	Qtl.	0.00	0.00	0.00	0.00	0.00	0.00
3.	Integrated Nutrient Management (INM)							
	(a)Micro-nutrients	Hac.	14000	70	17842.2	62.86	127.44	89.80
	(b) Lime/Gypsum/80% WG Sulphur	Hac.	3800	28.50	1659	7.78	43.66	27.30
	(c) Distribution of Rhizobium culture/Phosphate Solubilising Bacteria/mycorhiza	Hac.	162600	162.60	107069.5	75.61	65.85	46.50
4.	Integrated Pest Management (IPM)							
	(a) IPM Package	Hac.	15000	112.50	14832	105.17	98.88	93.48
	(b) Distribution of NPV	Hac.	1500	3.75	839	1.48	55.93	39.47
	(c) Distribution of PP Chemicals	Hac.	18000	90.00	16528	68.37	91.82	75.97
	(d) Weedicide	Hac.	1000	5.00	529	1.69	52.90	33.80
5.	Resources Conservation technologies/tools							
	(a)Knapsack Sprayer	Nos.	2500	75.00	9257	76.87	370.28	102.49
	(b) Zero till seed drills	Nos.	0.00	0.00	0.00	0.00	0.00	0.00
	(c) Multi crop planters	Nos.	0.00	0.00	0.00	0.00	0.00	0.00
	(d) Seed drills	Nos.	900	135.00	850	109.65	94.44	81.22
	(e) Zero till multi crop planter	Nos.	0.00	0.00	0.00	0.00	0.00	0.00
	(f) Ridge furrow planters	Nos.	0.00	0.00	0.00	0.00	0.00	0.00
	(g) Rotavator	Nos.	615	184.50	380	109.80	61.79	59.51
	(h) Laser land levelers	Nos.	0.00	0.00	0.00	0.00	0.00	0.00
6.	Efficient Water application tools:							
	(a)Distribution of sprinkler set	Nos.	1000	75	708.58	40.73	70.86	54.31
	(b) Incentive for mobile sprinkler sets	Nos.	450	67.50	0.00	0.00	0.00	0.00
	(c) Incentive for pump sets	Nos.	500	50.00	108	7.83	21.60	15.66
	(d)Pipe for carrying water from sources to the field	Nos.	250	37.50	37.00	4.52	14.80	12.05
7.	Cropping system based trainings (four sessions i.e. one before kharif, one each during kharif and rabi crops and one after rabi harvest.)	Nos.	180	25.20	154	26.77	85.56	106.23
8.	Miscellaneous expenses:							
	(a)Project Management team and other miscellaneous expenses at district level	No. Of district	8	35.76	8.00	11.71	100.00	32.75
	(b) Project Management team and other miscellaneous expenses at state level	No. Of district	1	6.28	1.00	5.32	100.00	84.71
	(c) Miscellaneous expenses to state for other districts (districts of ISOPOM)	No. Of district	10	10.00	14	11.95	140.00	119.50
9.	Local initiatives (Pasture land development)		7	140	0.00	0.00	0.00	0.00
10.	19+ Million Tonnes Pulse Production Programme (seed requirement @10 Kg/ha)							
	(a)Demonstration of Intercropping		5800	34.80	4602.5	24.09	79.35	69.22
	(b) Bund Cultivation of Pigeonpea		12100	72.60	17689	55.26	146.19	76.12
	Total Financial (1 to 9)			2740.29		1856.94		67.76

## 2. NFSM-Rice

S. N..	Intervention	Unit	Target		Achievement		% Achievement	
			Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
1.	Cluster demonstration by SDA with the technical backstopping of ICAR/SAUs/IRRI of 100 ha.							
	(a)Direct seeded Rice/Line Transplanting/SRI (Target 1.5% of area of district)	ha	22226	1666.95	25979	1008.57	116.89	60.50
	(b) Cluster demo. on hybrid rice (one cluster of 100 ha) target 0.5% of area of district	ha	6200	465.00	7170	314.67	115.65	67.67
	(c) Cluster demo. on Swarna sub-1/Sahbhagi dhan of 100 ha each.	ha	0.00	0.00	0.00	0.00	0.00	0.00
	(d) Frontline demo. by ICAR/SAUs/on hybrid s varieties (Cluster to minimum 10 ha each).	ha	0.00	0.00	0.00	0.00	0.00	0.00
2.	Seed distribution:							
	(a)Hybrid Rice seed	Qtls.	1250	25.00	742.09	7.70	59.37	30.80
	(b) HYVs seeds	Qtls.	345000	1725.00	271772.0	1314.64	78.77	76.21
3.	Plant and Soil protection management:							
	(a)Micronutrient	ha	21000	105.00	25780.86	72.69	122.77	69.23
	(b )Liming in acidic soils	ha	5210	26.06	2598.1	12.22	49.87	46.89
	(c) Plant protn. chemicals & bio-agents	ha	116350	581.25	68867.43	341.55	59.19	58.76
4.	Resource conservation techniques/tools							
	(a)Conoweeders	Nos.	5000	150	33783	84.78	675.66	56.52
	(b)Knap sack sprayers	Nos.	6000	180	25527	169.77	425.45	94.32
	(c) Zero till seed drills	Nos.	0.00	0.00	0.00	0.00	0.00	0.00
	(d) Multi crop planters	Nos.	0.00	0.00	0.00	0.00	0.00	0.00
	(e) Seed drills	Nos.	640	96	504	75.60	78.75	78.75
	(f) Power weeders	Nos.	60	9	25	3.59	41.67	39.89
	(g) Zero till multi crop planter	Nos.	0.00	0.00	0.00	0.00	0.00	0.00
	(h) Ridge furrow planters	Nos.	0.00	0.00	0.00	0.00	0.00	0.00
	(i) Rotavator	Nos.	590	177	585	175.50	99.15	99.15
	(j) Laser land levelers	Nos.	0.00	0.00	0.00	0.00	0.00	0.00
5.	Incentive for pump sets	Nos.	424	42.40	284	28.48	66.98	67.17
6.	Cropping system based trainings (four sessions i.e. one before kharif, one each during kharif and rabi crops and one after rabi harvest.)	Nos.	200	28	188	32.09	94	114.61
7.	Miscellaneous expenses:							
	(a)Project Management team and other miscellaneous expenses at district level	No. of districts	10	63.60	10	38.01	100	59.76
	(b) Project Management team & other miscellaneous expenses at state level	No. Of states	1	13.87	1	5.59	100	40.30
8.	Local initiatives (focus should be water harvesting structures for promotion of SRI and providing irrigations.		159	127.20	76	52.65	47.80	41.39
	Total Financial (1 to 8)			5481.33		3738.1		68.19

**Note: 1. The financial Exp. also included the adjustment of advances of previous years and payment of liabilities of previous years.**

## 3. Accelerated Pulses Production Programme (A3P)

Crop	Target		Achievement		Achievement %	
	Phy. (No./hac.)	Fin. (Rs. In lakh)	Phy.	Fin.	Phy.	Fin.
<b>A) Kharif</b>						
Black gram	5200	249.60	4600	135.26	88.46	54.19
Pigeonpea	8000	432.00	6875	219.28	85.94	50.76
<b>Total Kharif</b>	<b>13200</b>	<b>681.60</b>	<b>11475</b>	<b>354.54</b>	<b>174.4</b>	<b>104.95</b>
<b>B) Rabi</b>						
Gram	19990	1119.44	19190	723.59	96.00	64.64
<b>Total Rabi</b>	<b>19990</b>	<b>1119.44</b>	<b>19190</b>	<b>723.59</b>	<b>96.00</b>	<b>64.64</b>
<b>Grand Total (A+B)</b>	<b>33190</b>	<b>1801.04</b>	<b>30665</b>	<b>1078.13</b>	<b>270.4</b>	<b>169.59</b>

**Physical and Financial Progress during 2014-15 (upto Sept., 2014)****1. NFSM-Coarse Cereals****Rs. In lakh**

S. N o.	Interventions	Unit	Targets proposed by the state		Target achieved by state		% Achievement (Financial)
			Physical	Financial	Physical	Financial	
1	2	4	5	6	7	8	9
1.	<b>Demonstration on improved package:</b>	ha	2880.00	144.00	2080.00	2.91	2.02
2.	<b>Distribution of certified seeds:</b>						
	(a) HYVs Seeds	Qtl	0.00	0.00	0.00	0.00	0.00
	(b) Hybrid Seeds	Qtl	840.00	42.00	15.60	0.00	0.00
	<b>Sub Total 2(a) and 2(b)</b>		<b>3720.00</b>	<b>186.00</b>	<b>2095.60</b>	<b>2.91</b>	<b>2.02</b>
3.	(a) Project management team at district level		0.00	0.00	0.00	0.00	0.00
	(b) Project management team at state level		0.00	0.00	0.00	0.00	0.00
	<b>Sub Total 3(a) and 3(b)</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
4.	<b>Local initiatives</b> (Activity to be specified by the district)		0.00	0.00	0.00	0.00	0.00
5.	<b>Other Initiatives</b>						
	(a) Demonstration by NGOs		0.00	0.00	0.00	0.00	0.00
	(b) Assistance for custom hiring		0.00	0.00	0.00	0.00	0.00
	(c) Marketing support		0.00	0.00	0.00	0.00	0.00
	(d) Specialized projects		0.00	0.00	0.00	0.00	0.00
	(e) Value chain integration		0.00	0.00	0.00	0.00	0.00
	<b>Sub-Total 5 (a) to 5 (e)</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	<b>Total Financial (1 to 5)</b>		<b>3720.00</b>	<b>186.00</b>	<b>2095.60</b>	<b>2.91</b>	<b>1.56</b>



## 2. NFSM-Rice

[illegible]

	(a) Project management team and other miscellaneous expenses at district level		0.00	0.00	0.00	0.00	0.00
	(b) Project management team and other miscellaneous expenses at state level	No.	0.00	0.00	0.00	0.00	0.00
	<b>Sub Total (9a to 9b)</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>10.</b>	<b>Local initiatives</b>						
	(a) Construction of Godowns	Nos.	100.00	150.00	1.00	0.00	0.00
	(b) Distribution of Reaper	Nos.	51.00	25.50	1.00	0.00	0.00
	(c) Distribution of Power Tiller	Nos.	51.00	30.60	3.00	1.20	3.92
	<b>Sub-Total 10 (a) to (c)</b>		<b>202.00</b>	<b>206.10</b>	<b>5.00</b>	<b>1.20</b>	<b>3.92</b>
<b>11.</b>	<b>Other Initiatives</b>						
	(a) Demonstration by NGOs	ha	0.00	0.00	0.00	0.00	0.00
	(b) Assistance for custom hiring (For Land preparation and Line sowing)	ha	0.00	0.00	0.00	0.00	0.00
	(c) Specialized projects		0.00	0.00	0.00	0.00	0.00
	<b>Sub Total 11 (a) to 11(c)</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	<b>Total Financial (1 to 11)</b>		<b>1359994.40</b>	<b>5149.65</b>	<b>57796.59</b>	<b>653.17</b>	<b>12.68</b>

### 3. NFSM-Pulses

Sl. No.	Interventions	Unit	Target		Achievement		% Achi. (Fin.)
			Physical	Financial	Physical	Financial	
<b>1</b>	<b>Demonstration on improved technologies:</b>						
	(a) Cluster Demonstrations (of 100 ha each)	ha	19285.00	1446.38	12725.00	193.87	13.40
	(b) Cropping system based demonstrations	ha	4952.00	619.00	3652.00	64.10	10.36
	<b>Sub-Total 1 (a) and 1 (b)</b>		<b>24237.00</b>	<b>2065.38</b>	<b>16377.00</b>	<b>257.97</b>	<b>12.49</b>
	<b>NEED BASED INPUTS</b>						
<b>2</b>	<b>Distribution of certified seeds:</b>						
	HYVs Seeds	Qtl	<b>23800.00</b>	<b>595.00</b>	<b>3040.62</b>	<b>40.86</b>	<b>6.87</b>
<b>3</b>	<b>Integrated Nutrient Management (INM)</b>						
	(a) Micro-nutrients	ha	18000.00	90.00	1690.00	5.22	5.80
	(b) Gypsum/ 80% WG Sulphur	ha	10000.00	75.00	0.00	4.18	5.57
	(c) Lime	ha	2500.00	25.00	235.00	0.00	0.00
	(d) Bio-fertilizers	ha	80000.00	80.00	21180.00	9.03	11.29
	<b>Sub Total INM 3 (a) to 3 (d)</b>		<b>110500.00</b>	<b>270.00</b>	<b>23105.00</b>	<b>18.43</b>	<b>6.83</b>
<b>4</b>	<b>Integrated Pest Management (IPM)</b>						
	(a) Distribution of PP chemicals	ha	30000.00	150.00	1860.00	26.39	17.59
	(b) Weedicides	ha	8000.00	40.00	1185.00	2.72	6.80
	<b>Sub Total 4 (a) and 4 (b)</b>		<b>38000.00</b>	<b>190.00</b>	<b>3045.00</b>	<b>29.11</b>	<b>15.32</b>
<b>5</b>	<b>Resource conservation technologies /tools</b>						
	(a) Manual Sprayer	Nos.	8000.00	48.00	4505.00	3.90	8.13
	(b) Power Knap sack sprayers	Nos.	500.00	15.00	99.00	0.13	0.87
	(c) Zero till seed drills	Nos.	5.00	0.75	0.00	0.00	0.00
	(d) Multi crop planters	Nos.	0.00	0.00	0.00	0.00	0.00
	(e) Seed drills	Nos.	500.00	75.00	73.00	33.75	45.00
	(f) Zero till multi crop planters	Nos.	0.00	0.00	0.00	0.00	0.00
	(g) Ridge furrow planters	Nos.	15.00	2.25	0.00	0.00	0.00
	(h) Chiseller	Nos.	6.00	0.48	0.00	0.00	0.00
	(i) Rotavators	Nos.	150.00	52.50	42.00	19.50	37.14
	(j) Laser land levelers	Nos.	6.00	9.00	0.00	0.00	0.00
	(k) Tractor mounted sprayer	Nos.	0.00	0.00	0.00	0.00	0.00
	(l) Multi crop thresher	Nos.	150.00	60.00	0.00	0.00	0.00
	<b>Sub total of Machinery 5(a) to 5 (l)</b>		<b>9332.00</b>	<b>262.98</b>	<b>4719.00</b>	<b>57.28</b>	<b>21.78</b>
<b>6</b>	<b>Efficient water application tools:</b>						
	(a) sprinkler sets	ha	2995.00	299.50	56.67	12.64	4.22
	(b) pump sets	Nos.	350.00	35.00	67.00	0.10	0.29
	(c) Pipe for carrying water from source to the field	Mtr.	475000.00	118.75	0.00	0.00	0.00
	(d) Mobile Rainguns	Nos.	0.00	0.00	0.00	0.00	0.00
	<b>Sub Total 6 (a) to 6 (d)</b>		<b>478345.00</b>	<b>453.25</b>	<b>123.67</b>	<b>12.74</b>	<b>2.81</b>
<b>7</b>	<b>Cropping system based trainings (four sessions i.e. one before kharif, one each during kharif and rabi crops and one after rabi harvest.)</b>	Nos.	<b>100.00</b>	<b>14.00</b>	<b>54.00</b>	<b>2.59</b>	<b>18.50</b>
	<b>Sub Total of Need Based Inputs (2 to 7)</b>		<b>660077.00</b>	<b>1785.23</b>	<b>34087.29</b>	<b>161.01</b>	<b>9.02</b>
<b>8</b>	<b>Miscellaneous expenses:</b>						
	(a) Project management team and other miscellaneous expenses at district level	No. of District	17.00	204.99	9.00	7.42	3.62
	(b) Project management team and	-	1.00	17.00	1.00	2.33	13.71

	other miscellaneous expenses at state level						
	<b>Sub-Total 8(a) to ( b)</b>		<b>18.00</b>	<b>221.99</b>	<b>10.00</b>	<b>9.75</b>	<b>4.39</b>
<b>9</b>	<b>Local initiatives</b>						
	(a) Construction of Godowns	Nos.	100.00	150.00	0.00	0.00	0.00
	(b) Distribution of Reaper	Nos.	0.00	0.00	0.00	0.00	0.00
	( c) Distribution of Power Tiller	Nos.	50.00	30.00	1.00	0.60	2.00
	<b>Sub-Total 9(a) to ( c)</b>		<b>150.00</b>	<b>180.00</b>	<b>1.00</b>	<b>0.60</b>	<b>0.33</b>
<b>10</b>	<b>Other Initiatives</b>						
	(a) Demonstration by NGOs	ha	0.00	0.00	0.00	0.00	0.00
	(b) Assistance for custom hiring (For Land preparation and Line sowing)	ha	0.00	0.00	0.00	0.00	0.00
	( c) Marketing support		0.00	0.00	0.00	0.00	0.00
	(d) Specialized projects		0.00	0.00	0.00	0.00	0.00
	(e) Value chain integration		0.00	0.00	0.00	0.00	0.00
	<b>Sub-Total 10 (a) to 10 (e)</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	<b>Total Financial (1 to 10)</b>		<b>684482.00</b>	<b>4252.60</b>	<b>50475.29</b>	<b>429.33</b>	<b>10.10</b>