

NATIONAL FOOD SECURITY MISSION

REPORT OF THE **NATIONAL LEVEL MONITORING TEAM (NLMT)** **(RABI, 2014-15)**

CHHATTISGARH



सत्यमेव जयते

GOVERNMENT OF INDIA
MINISTRY OF AGRICULTURE
(DEPARTMENT OF AGRICULTURE AND COOPERATION)
DIRECTORATE OF PULSES DEVELOPMENT
BHOPAL (M.P.)

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PREFACE

Government of India, The Department of Agriculture and Co-operation, Ministry of Agriculture, vide letter No. CPS 2-29/2014-NFSM dated the 31st July, 2014, constituted a National Level Monitoring Team (NLMT) for monitoring the implementation/execution of National Food Security Mission (NFSM-Rice, Wheat, Coarse Cereals and Commercial Crops) activities in respect of the NFSM states. The NLMT-Chhattisgarh, under the Chairmanship of Director, DPD, Bhopal comprises of Principal/Sr. Scientists from ICAR/SAU, State NFSM Nodal officer. The Terms of Reference (TOR) of the apex monitoring Team include i) The Director, Crop Development Directorate (CDD) to act as NLMT Convenor /Team leader; ii) to undertake field visit at least once in each Crop Season; iii) to conduct in-depth inspection of the executed activities in consonance to Mission's mandate and approved Action Plan and to study the "Local Initiatives"; iv) to study quantitative, qualitative achievements and impact of the delivery mechanism through supplementation of visuals and video films; v) To prepare analytical report on observation with suggestions/recommendations for further necessary corrections at the level of stake holders for better implementation of the Mission and desired outcome.

The composition of the NLMT for Chhattisgarh was broad based and included the experts from Research organizations/SAUs. The NFSM funded ICARDA-SAU and ICARDA-SDA collaborative projects on Lathyrus crop in district Durg and Bilaspur under implementation since 2011-12 were also considered for monitoring in addition to regular NFSM. Dr. A. Sarker, RC & Food Legume Breeder, South Asia and China Programme and Dr. Puja Shah, Project Manager (NFSM-Pulses) also associated in districts Bilaspur and Durg. The Team interacted with the farmers individually in the field and also by organising Kisan Gosthies. The Wrap-up Meeting with district Collectors, the Chairman of the District Food Security Mission Executive Committee (DFSMEC) could not be materialized due to co-ordination issues between State NFSM HQ and district (DDA/DC). However, the team had a fruitful wrap-up discussion with the Additional Chief Secretary/Agriculture Production Commissioner, Govt. of CG. The report has tried to capture the impact of NFSM during 11th Plan period in comparison to pre-NFSM five year Plan (10th Plan). The observations and recommendations have been categorized under broad heads.

I am thankful to the VCs of IGKV, Raipur and RVSKV, Gwalior, for nominating experts/SMS to represent NLMT and to member for their valuable inputs in summarizing the report outcome. I also acknowledge the Mission Administration, Deptt. of Agriculture and Cooperation, New Delhi for their sustained guidance and support of Technical Team of DPD, Bhopal, especially Dr. A.L.Waghmare, Sr.Tech.Asstt. in bringing out the report publication.

Bhopal (M.P.)
15th May, 2015

A.K.Tiwari
Director/Team Leader (NLMT)

ABBREVIATIONS

1. AICRP-All India Coordinated Research Project
2. AES ó Agro-Eco Situations
3. APC ó Agriculture Production Commissioner
4. ATMA-Agriculture Technology Management Agency
5. BGREI- Bringing Green Revolution in Eastern India
6. CSBD-Cropping System Based Demonstration
7. CDDs- Crops Development Directorates
8. CIAE-Central Institute of Agricultural Engineering
9. CHCs-Custom Hiring Centre
10. CLR- Commissioner of Land Records
11. DAP- Diammonium Phosphate
12. DFSMEC-District Food Security Mission Executive Committee
13. DES- Directorate of Economics and Statistics
14. ETL óEconomic Threshold Level
15. FPOs-Farmer Producer Organization
16. HYV-High Yielding Varieties
17. ICAR-Indian Council of Agricultural Research
18. ICARDA- International Centre for Agricultural Research in Dry Areas
19. IGKV- Indira Gandhi Krishi Vishva Vidyalaya
20. IPM-Integrated Pest Management
21. KVK- Krishi Vigyan Kendra
22. MIDH-Mission for Integrated Development of Horticulture
23. MIS- Micro Irrigation System
24. MULLaRP- Mungbean, Urdbean, Lentil, Lathrus, Rajmash and Pea
25. NRM- Natural Resource Management
26. NMAET - National Mission on Agricultural Extension & Technology
27. NFSM-National Food Security Mission
28. NFSMEC-National Food Security Mission Executive Committee
29. NLMT-National Level Monitoring Team
30. NMOOP óNational Mission on Oilseeds & Oilpalm
31. NMSA- National Mission for Sustainable Agriculture
32. ODAP- -N Oxalyl-L, -diaminopropionic acid
33. PSB- Phosphorous Solubilizing Bacteria
34. RCT-Resource Conservation Technology
35. RKVY- Rashtriya Krishi Vikas Yojna
36. SAUs-State Agricultural University
37. SHGs- Self Help Group

- 38. SDA- State Department of Agriculture
- 39. SFSMEC-State Food Security Mission Executive Committee
- 40. SSC- State Seed Corporation
- 41. TA ó Technical Assistant
- 42. TOT-Transfer of Technology
- 43. YMV- Yellow Mosaic Virus

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 RABI, 2014-15.

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 11th 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 12th 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 (Sugarcane, 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 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 Centres (CHCs).

2. 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/visit
i.	National (Govt. of India)	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- Team Leader / Convener Deptt. of Agri & Coop. Principal / Sr. Scientist (ICAR/SAU) , State Mission Director (NFSM) 6 Member	Once in a crop season
ii.	State (State Govt.)	State Food Security Mission Executive Committee (SFSMEC)	Chief Secretary 6 Chairman State Mission Director - Member Secretary	6 Monthly
iii.	District (District-Admn)	District Food Security Mission Executive Committee (DFSMEC)	District Collector/CEO- Chairman Jila Parishad DDA/DAO- Member Secretary	Quarterly

4. NLMT: COMPOSITION

S.No.	Organization	Names and Designation
i.	Government of India Ministry of Agriculture (Department of Agri.& Cooperation) Directorate of Pulses Development Vindhyachal Bhavan, Bhopal, (M.P.).	Dr. A.K. Tiwari Director - (Team leader/ Convenor)
ii.	Indira Gandhi Krishi Viswa Vidyalaya (IGKVV, Raipur) Department of Entomology College of Agriculture, Raipur, (Chhatisgarh).	Dr. Sanjay Sharma Principal Scientist (Entomology) (Principal Investigator, AICRP- Rice)- (Member)
iii.	Indira Gandhi Krishi Viswa Vidyalaya (IGKVV, Raipur) SG College of Agriculture & Research Station, Jagdalpur (Chhatisgarh).	Dr. Adikant Pradhan Scientist (Millets) - (Member)
iv.	Rajmata Vijaya Raje Scindia Krishi Vishwa Vidyalay (RVSKVV, Gwalior) RAK College of Agriculture, Sehore (Madhya Pradesh).	Dr. R.P. Singh Senior Scientist (Agronomy) (Project in-charge AIRCP on MULLaRP (Member)
v.	Government of Chhattisgarh Directorate of Agriculture, Raipur.	Shri G.K.Nirmam Joint Director Agriculture (Member)

5. STATE PROFILE

Districts	(Nos.)	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

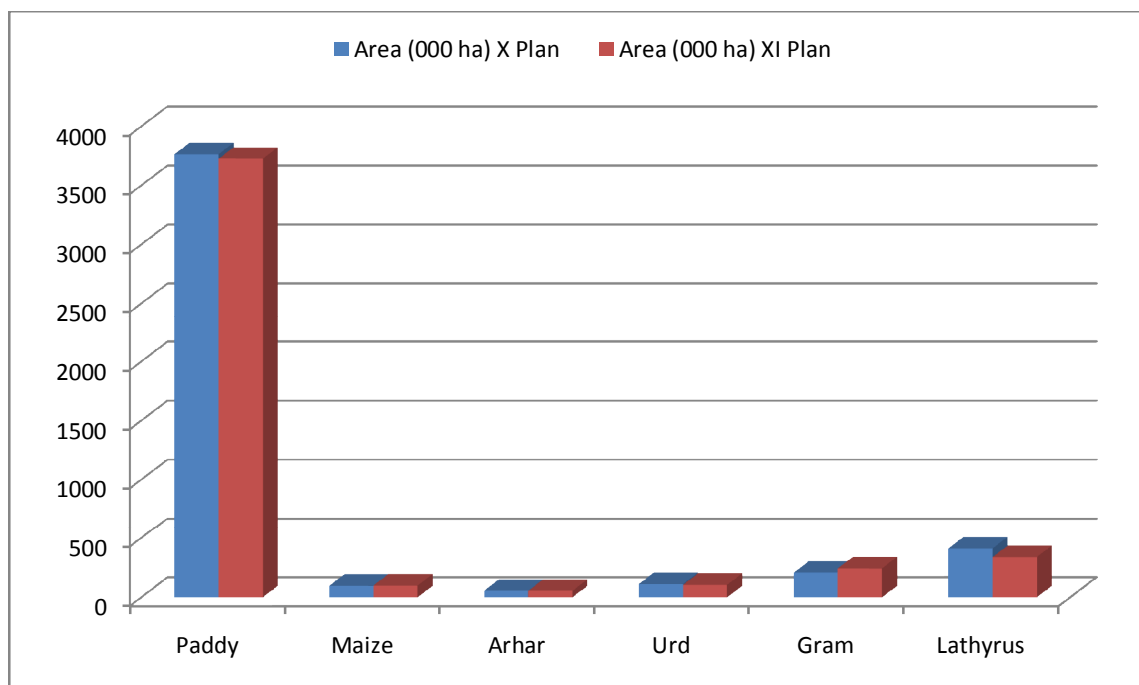
6.1 Crop Growth Analysis: Pre and Post NFSM Plan (X-XI Plan)

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

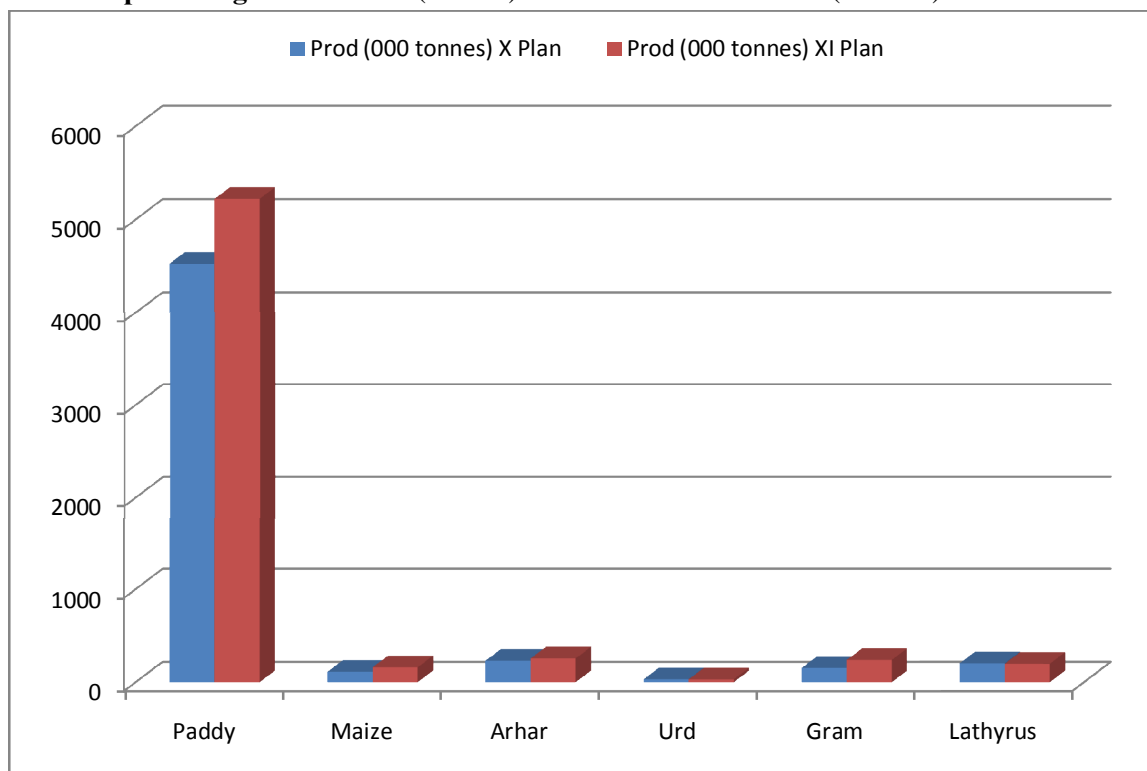
Crop	State	X Plan (2002-03 to 2006-07)			XI Plan (2007-08 to 2011-12)					Increase/decrease over X plan (%)		
		A	P	Y	A	% cont.	P	% cont.	Y	A	P	Y
Kharif Crops												
Paddy	CG	37.65	45.28	1203	37.27	15.28	52.23	9.91	1402	-1.0	15.4	16.5
	India	218.00	442.50	2030	243.84		527.15		2162	11.8	19.1	6.5
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 05 year Plan period i.e. Pre and Post NFSM reveal that the NFSM intervention during 11th Plan has paid dividends in the productivity of Paddy which was 16.5% higher during the 11th 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 10th Plan productivity of 741 kg/ha which is more than 32%. The state's gram productivity during XI Plan is also a bit higher than that of all India yield levels.

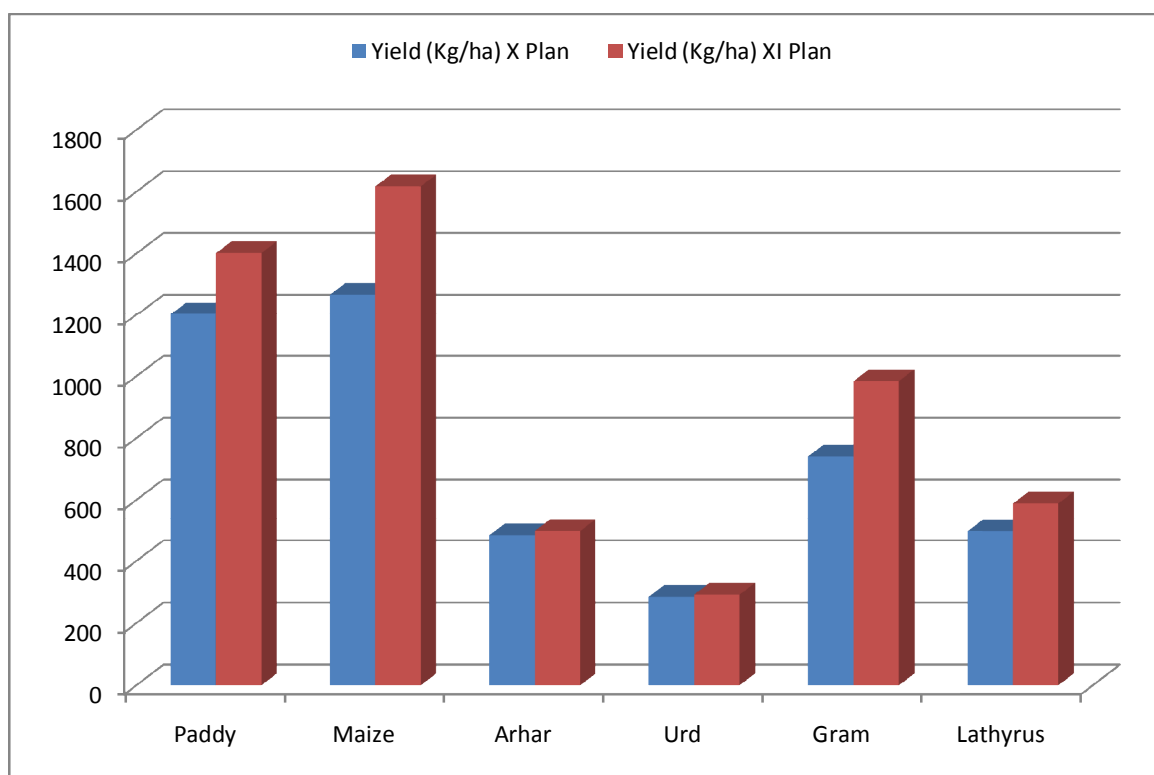
Area under Lathyrus is also getting down to more than 17% during XI Plan and built a good note on productivity increase to more than 11 per cent. The other cereals and commercial crops were not the part of NFSM during 11th Plan.



Crop coverage: Pre-NFSM (X Plan) and Post - NFSM Period (XI Plan)



Production: Pre-NFSM (X Plan) and Post NFSM Period (XI Plan)



Yield: Pre-NFSM (X Plan) and Post NFSM period (XI Plan)

6.2 Crop Performance: (2013-14)

S.No.	Crop	Area (lakh ha)		Production (Lakh tonnes)		Yield (Kg/ha)	
		DES	CLR	DES	CLR	DES	CLR
1.	Paddy	38.02	36.87	67.16	74.52	1766	2020
2.	Sorghum	0.06		0.04		632	
3.	Maize	1.11	2.26	2.29	4.12	3966	1825
4.	Arhar	0.51	1.34	0.32	0.90	613	670
5.	Urd	1.08	1.58	0.32	0.71	297	455
6.	Moong	0.14	0.26	0.04	0.09	266	385
7.	Gram	2.76	3.94	2.13	4.33	771	1100

Source-DES, M/A (Final est.) / CLR-State

6.3 Crop Scenario: 2014-15

S. No.	Crop	Area (lakh ha)		Production (Lakh tonnes)		Yield (Kg/ha)	
		DES	SDA	DES	SDA	DES	SDA
1.	Paddy	38.08	36.92	60.21	76.81	1581	2080
2.	Maize	0.05	2.201	2.30	4.095	1886	1861
3.	Arhar	0.52	1.310	0.35	0.891	665	680
4.	Urd	1.01	1.655	0.31	0.748	310	452
5.	Moong	0.15		0.04		263	
6.	Soybean	1.06	1.471	0.84	1.868	796	1270
7.	Wheat	1.04	1.778	1.36	2.613	1307	1470
8.	Gram	2.62	3.565	2.46	4.060	942	1140
9.	Lathyrus		3.582		2.364		660
10.	Peas		0.481		0.277		575
11.	Rapeseed/Mustard	0.46	1.453	0.22	0.864	487	595
12.	Sugarcane	0.13	0.28	0.34	0.781	2712	2775

Source-DES, M/A (Final est.) / CLR-State

7. NFSM: FINANCIAL PROGRESS

7.1. Allocation & Expenditure: 2014-15

Rs. In Lakh				
S. No.	Name of Crop/ Scheme	Allocation/ Target	Release	Expenditure (upto February)
1	Paddy	5149.65	2574.83	1763.37
2	Pulses	4252.60	2126.31	975.70
3.	Coarse Cereals	186.00	93.00	32.41
	Total	9588.25	4794.14	2771.48

Details of physical and financial progress is at Annexure –I

8. DETAILS OF FIELD VISIT/ ACTIVITIES

Bilaspur, Durg and Balod districts of Chhattisgarh were visited from 24-26th February, 2015. Dr. Adhikant Pradhan, Scientist (Millets), member could not participate. The other members, including representatives of ICARDA (in District Bilaspur and Durg only) participated in field level monitoring. Team also had Wrap-up meeting with Shri Ajay Singh, Additional Chief Secretary & Agriculture Production Commissioner, Government of Chhattisgarh.

S.N.	District	Block	Village/ Institute	Activities
1.	Bilaspur	Masturi	Hirri	NFSM funded ICARDA + SDA Project Cluster demonstration of Grasspea (Lathyrus)
			Risda	NFSM funded ICARDA + SDA Project Cluster demonstration of Grasspea (Lathyrus)
			Malhar	NFSM Cropping System Based Demonstration (CSBD) Cluster demonstration of Gram var. JAKI 9218
2.	Durg	Patan	Santara	NFSM funded ICARDA + SAU Project Cluster demonstration of Grasspea (Lathyrus)
			Pandar	i) Cluster demonstration of Rabi Pulses Grasspea variety Prateek and Mahateora in sole cropping. ii) Cropping system based Demonstration Chickpea variety Digvijay with IPM package.
			Arasnara	Kisan Gosthi
		Dhamdha	Chincha/ Liteya	Cropping system based Cluster demonstration of Chickpea followed by Kisan Goshti
			Dondke	Interaction with beneficiaries (Rotavator, Leveller)
3.	Balod	Gunderdehi	Dangania	Interaction with beneficiaries (Seed drill and Multicrop Planter)
		Dondilohara	Ghena	Cluster demonstration on Gram
			Bhandera	Interaction with beneficiaries (Seed drill and Multicrop Planter)
			Jhetiya	<ul style="list-style-type: none"> Kisan Gosthi Cluster demonstration on Gram Interaction with beneficiaries (Seed drill and Multicrop Planter) Hybrid Maize minikit demonstration under RKVY.
			Bundeli	Godown

9. List of improved recommended varieties is at **Annex-A**.

10. OBSERVATIONS

10.1. Coverage during Kharif 2014, Rabi 2014-15 and likely production prospects are given at Para No.6.3.

- 10.2. Cyclonic rains during 13-14 October 2014 had delayed harvesting of Kharif Paddy and consequently the late sowings of Rabi crops. Gram crop is mainly taken in the plain districts of Durg, Bemetara, Mungeli, Rajnandgaon, Kawardha and Bilaspur. In Chhattisgarh, gram under Relay cropping (utera) is sown during IInd fortnight of October (Oct, 15-30); timely sown period is 2nd fortnight of October to 1st fortnight of November and late sown gram is planted upto 10th December.

Lentil is grown mainly in Durg, Kabirdham, Rajnandgaon, Bilaspur, Korea, Dhamtari, Kanker and Raipur. IInd fortnight of Oct to 1st fortnight of November is appropriate sowing time.

- 10.3. General crop scenario of all Rabi crops Gram, Wheat, and Lathyrus, Lentil, Pea, Mung, Mustard, Linseed, Sunflower and Safflower are the Rabi Crops of CG is satisfactory. Delayed sowing of (Lentil, Gram, Wheat) during December is likely to give a harvest. Summer paddy of about 1 to 1 ½ month is in good condition. Harvesting and Threshing of Utera Lathyrus, Blackgram, Linseed, Mustard and Lentil have been observed in the field.

- 10.4. The Team visited NFSM funded ICARDA project on 24-25th February, 2015 in the districts Bilaspur and Durg. In Bilaspur, the ICARDA-SDA (DDA) collaborative partner is is under implementation since 2010-11; in district Durg, the ICARDA-SAU collaborative programme is operational since 2010-11.

The demonstrations in Bilaspur is rated as below average owing to non-adherence to the principles of relay cropping, non-adoption of standardised technology for utera, lack of awareness/TOT, date of sowing, organization of field days and mandatory registration of the demonstration plots with the state's seed certification Agency. The State Level Nodal NFSM agencies were also not involved in the execution/monitoring of programme.

- 10.4.1. Traditionally Lathyrus is grown under relay cropping /Utera. However, in the visited site, variety Mahateora was sown between 5-9th December, 2015 as against the recommended time of sowing i.e. between 15th October-15th November. Delayed sowing resulted in poor plant population, the crop was in flowering stage. Severe thrips infestation was observed, no plant protection measures were either applied or recommended by the DDA. Performance of demonstration/crop was highly un- satisfactory, mixture in seed variety was also observed.

10.4.2. Another demonstration on lathyrus in village Risda (Distt-Bilaspur) also had the same observations. The principles of laying out of a technological demonstration plot were not followed.

10.4.3. In district Durg (vill. Santara), the ICARDA-SAU collaborative programme of NFSM on lathyrus was visited by NLMT. Lathyrus variety Prateek was sown during 1st week of November through seed drill @ 60 kg/ha seed rate. The crop expression was good with expected yield of 5-6q. /acre, two and half time higher than that of traditional system of utera (relay cropping).

Demonstration has also been registered with SSC for seed production. The display board for demonstration was installed, whereas, such publicity efforts were missing in Bilaspur.

10.4.4. Another lathyrus demonstration in village Pandar (dist. Durg) was seen. Crop condition is good, all aspects of demonstration have been covered. The intervention of mechanization (use of seed drill, tie-up with SSC) and seed production is appreciable. The success of demonstration is the outcome of perfect planning, coordination between SAU and Development agency and constant supervision.

10.5. Cluster demonstration of Chickpea variety JAKI 9218 with IPM package (Bilaspur district) was also visited by the Team. Overall crop expression was good. Seed was sown by broad casting method. Pheromone traps were installed for monitoring purpose. The population of pod borer larvae was seen below ETL. One round spraying of Ekalux was done at the pod initiation stage.

Season long farmers training could not be organized in the wake of engagement of field staff on Election duty. Inputs provided by Block office were reported qualitatively satisfactory.

10.6. NLMT experienced apathy of Bilaspur district administration in monitoring of the NFSM activity (both, the NFSM funded ICARDA+SDA collaborative project and the regular NFSM). Lack of coordination and communication gap between State Level Nodal Agency and district functionaries (including DFSMEC and DDA was noticed) which was also visible in the field in terms of delivery of the programme/technology transfer under NFSM.

- 10.7. Another Cropping system based Cluster demonstration in district Durg (tah.- Patan) on Chickpea variety Digvijay with IPM package was visited with satisfactory crop expression. Pheromone traps, Trichoderma, PSB, Rhizobium cultures and DAP fertilizer were provided. Intensity of Bathua weed was visible in the demonstration plot including nearby fields.

Timely delivery of inputs, all aspects of ideal demonstration etc. have been covered and farmers satisfaction for input quality was noticed.

- 10.8. Grasspea demonstration var. Prateek and Mahateora under Rice fallow was also seen in this area, with come-up irrigation (palewa), the seed drill sown crop during 18-20 November was noticed in good condition.

Community efforts for solving stray cattle problem in the area is appreciable. This will be helpful in increasing the cropping intensity and crop productivity.

10.9. **Kisan Gosthi**

In all the visited districts Kisan Gosthis were also organised to have a feed back of farmers both under NFSM and Non NFSM beneficiary categories.

- 10.9.1. In Block-Masturi (Distt Bilaspur), interactions in the Kisan Gosthi have revealed that the earlier Rice - Wheat - Urd bean cropping system in Masturi block of Bilaspur and other adjoining districts of the state is reducing drastically due to stray cattle problems and non-availability of seed of suitable urdbean variety, thereby, increasing rice fallow areas every year. Appropriate utera techniques of cultivation of urd, lathyrus, linseed; availability of good varieties/seeds and some policy to control stray cattle were major demand of farmers.

- 10.9.2. In **Arasnara (district Durg)**, about 50 farmers participated in the discussion, progressive farmers explained their views and problems in the sector. ZDA, DDA, PI ESRDA and NLMT members interacted with farmer. The farmers requested for effective marketing and ensuring availability of quality certified seeds of Paddy, Moong and Urdbean etc.

The gosthi was followed by visit of Maize demonstration site in village Arasnara Block-Dhamda (district Durg), **Village Chinch/Liteya** Kisan Gosthi was

organised. Issue of procurement of paddy, quality organic manures/bio-fertilizers availability etc. were discussed. The farmers raised the issue of non-availability of quality seeds of promising varieties, as one of the major concern.

- 10.9.3. District-Balod, Block-Lohara, Village-Jhetiya, the Gosthi was followed by field visit of Maize cultivation demonstrations. The beneficiaries farmers belonging to nearby villages had brought their farm implements at Gosthi site. About 50 farmers had participated. The officers from State, NLMT shared their experience with the farmers. Cultivation of hybrid Maize was visited along with the farmers.

Kisan Gosthi was interactive, the crop condition of Maize was good. However, stem borer damage was observed to have crossed the ETL. Damage of field rat was also observed. Plant protection measures were suggested.

Relay cropping of Grasspea, Urdbean, Linseed was seen in district Balod.

- 10.10. Cropping system based Cluster demonstration of Chickpea variety JG 11 in Bore and **Barha village in district Durg** were visited. The beneficiaries farmer of this cluster had harvested 80 q/ha DRR H2 paddy and good harvest of ICPL 87119 Pigeonpea during Kharif season. Traditional variety of Chickpea is replaced with the improved variety. The crop was sown through seed drill after treating with cultures and pheromone traps were used.

- 10.11. Summer moong area is decreasing in the state mainly due to problem of YMV disease and farmers demand for mosaic resistant varieties, need attention of the State Deptt. Problem of Wilt disease in gram, prevalence of Bathua weed and Monkies etc. are the major issues in certain parts of state including Durg

- 10.12. Some of the Crops were at the harvesting stage. Farmers, in certain area, were expecting 5-7 q/acre yield of chickpea. Farmers are also opting innovative practices such as participating in the hybrid rice seed production programme of VNR seeds, a private seed entrepreneur.

- 10.13. In many districts of CG, intercropping is popular. Pigeonpea + Tomato and Pigeonpea + Soybean intercropping is in practice. Innovation like vegetable cooperatives in Durg to facilitate marketing CHCs etc. such innovative ideas could be replicated for other commodities also.

10.14. Cluster demonstration of Chickpea variety JG-63 with IPM package (District-Balod) was observed with line sowing through seed drill, seed treatment with culture, application of DAP and pheromone trap used for monitoring of pest. One round spraying of Quinalphos was done at the pod formation stage. The Variety used is too old and highly infected with Collar Rot.

Of the Two mandatory season long trainings, only one training programme could be organized another cannot due to election duties. Crop condition is good this demonstration was advised to be registered for the seed production programme.

10.15. Farm mechanization

10.15.1. Farm mechanization is picking-up in the state. Rotavator, Plough, Leveller etc. provided during 2012 under financial assistance of NFSM/RKVY, are also going for custom hiring at the level of beneficiaries. Line sowing is picking up with the use of seed drills. However, these are single box seed drills which need to be replaced with double box where fertilizer and seed could be placed separately.

10.15.2. In district Balod (Block- Gunderdehi), the NLMT visited one of the machinery beneficiaries. The Team noticed that the Seed drill, Thresher and Rotavator beneficiary is not a real farmer and lives away in Delhi.

10.15.3. Mechanized threshing and winnowing operation of Lathyrus, Urd, Linseed and Mustard etc were observed in Balod and other parts of the state. Practice of Hiring services of power operated thresher is replacing traditional system. The custom hiring charges for thresher are running @ Rs. 700/- per hour (without labour) to @ Rs.1000/- per hour (with labour).

10.16. Under Local Initiative component of NFSM (Rice and Pulses) - Construction of 50 Metric tonnes of godown on 50% subsidy or maximum up to Rs. 1.50 lakh financial assistance (storage structure) in district Balod, Block-Lohara, Village Bundale was under construction. The NLMT visited the site. Size of godown is 9.40 mt x 4.60 meter. Quality of construction was upto the mark.

10.17. Visit of the University Labs and field trials- Field trials conducted on oilseed and pulses under AICRP, Seed production programme taken at IGKVV Farm were also visited. A quick visit of Central Instrumentation Centre, IGKVV has given to understand the research strength of IGKVV Raipur for generation and evaluation of agricultural technologies for agriculture development in the state.

11. RECOMMENDATIONS / SUGGESTIONS

- 11.1. Technologies for yield enhancement under relay cropping (utera) of Lathyrus have been generated by the SAU. These include, timely sowings, seed rates, seed treatment and Supplementary sowings of moist seed at the blank portion (lowlying non-germinated site) of field followed by Spraying of 2% DAP before flowering and need based application of insecticide for thrips control. However, none of these aspects were demonstrated either in Bilaspur or found practicing by the farmers.

Similarly, the IGKVV, Raipur and IIPR should develop cultivation package for utera, urd, linseed, mung, lathyrus, pea and mustard, safflower etc.

- 11.2. The real need of the state like CG, with maximum rice fallow potential, is perfect standardization of utera/relay crop technology for different district including their blocks on Agro-Eco-Situation (AES) basis. The crops like Linseed, Mustard, Lathyrus, Urd and Safflower have been a relay practice traditionally and are being taken by farmers. The Team has noticed that there is an urgent need of Research/extension efforts on this count. Availability of Certified seeds of these crops of recommended varieties and identification of niche area is strongly recommended. The programme may be taken under Local Initiative component also.

The NFSM-ICARDA project in addition to propagation and standardization of utera cultivation should have targeted manual mechanical harvester and the value addition aspects. Similarly Epical bud nipping for higher increase of bio-mass, resultantly higher yields, value of Bhaji as a source of extra income (@ Rs. 80/kg) and scientific methods of cooking and safe consumption of lathyrus etc need to be popularised. Formation of Lathyrus Bhaji cluster or Lathyrus FIGs may also be a good initiative for Chhattisgarh state.

- 11.3. There is need for a policy on stray cattle ban and standardise techniques of utera under rice fallow. Farm animals prefer for straw of Deshi Teora. Low ODAP varieties of Lathyrus and newly released Pea variety Indira Matar 4 may be popularised.
- 11.4. Over all pulses development programme in Bilaspur District is not implemented seriously. Newly developed production technology of Chickpea with promising varieties needs to be demonstrated among the farmers. Other varieties like JG 11, RVG 202 and RVG 203 which are high yielder, resistance to multiple diseases should be demonstrated in these areas. There is a lot of scope of chickpea cultivation.

- 11.5. Sustain Community efforts for restricting stray cattle's grazing such as in district Durg, Block-Patan, village Pandar, coupled with certain policy initiatives may be taken up to increase the rice fallow/utera cultivation thereby increasing the cropping intensity as also discouraging/diversion of summer rice area.
- 11.6. Farmers should be motivated for adoption of the zero tillage, Precision farming and MIS for water use efficiency.
- 11.7. It is observed that the Farmers are facing a lot of problem in harvesting of crops particularly grasspea, urdbean etc., therefore, it is highly essential to develop a small manually operated harvester for harvesting of crops. This may be a part of NFSM-IGKV-ICARDA & ICAR project.
- 11.8. There is a lot of scope of increasing area under double cropping with pulses in Rice based cropping system of Chhattisgarh. Rice fallow can be converted into Rice followed by chickpea, lentil, Grasspea, wheat, linseed and pea, if suitable production technology/variety is given to the farmers.
- 11.9. Rice followed by mungbean/urdbean in utera followed by wheat/chickpea can be promoted under irrigated conditions.
- 11.10. NFSM programme on Chickpea cluster demonstrations were conducted with small seeded old variety (Digvijay). It needs to be conducted with improved variety which is high yielding, multiple disease resistant and tolerant to drought viz, JG 11, JG 16, RVG 202, RVG 203 etc.
- 11.11. Small and marginal farmers should be targeted more under NFSM activities along with rich and large farmers. Zero till seed drill should essentially be made available to the farmers. This will be highly helpful in establishment of rabi crops in the state like CG successfully.
- 11.12. Rabi pigeon pea variety Asha (ICPL 87119) needs to be popularized. Replacement of old variety of grasspea with Prateek and Mahateora can only help to increase the production.
- 11.13. Popularization of new variety of **Chickpea** (JG11, JAKI 9218, JG 16, RVG 202, RUG 203); **Lentil** (JL3, DPL 62 (Sheri), IPL 316, 814, RVL 31); **Pea** (India Matar-4); **Mungbean** (Patri, TARM 2, Pusa Vishal, Pragya Mung); **Urd** (Pant U 31); **Linseed** (Indira Alsi-32 (RLC-81), Kartika (RLC 16), Deepika (RLC 78); **Safflower** (PBBNS 12 (135-140 days, 29% oil content), Nari 6 and PBNS 40 (non thorny variety tolerant to *Alternaria* and *Cercospora*), Phule Kusum (JLSF 414) not only

need to be popularised but seeds production programme of these varieties should also be organised. Low ODAP lathyrus varieties and Newly evolved Pea variety Indira Matar 4, also need popularisation.

- 11.14. Poor farmers are still growing their own old traditional varieties of Grasspea, Lentil, Mungbean/Urdbean needs to be replaced with new varieties. Dissemination of pulse production technology in state is very poor and requires more attention for maximization of yield of pulses in rice based cropping system.
- 11.15. Weeds is one of the serious problem observed in chickpea, grasspea and other rabi pulses because of Utera system of cultivation and lying of fallow fields after rice where no cultural operation is practiced. This can be minimized by adopting cultural/agronomical methods of weed control.
- 11.16. Due care in selection of the beneficiary and extending financial assistance under the implements etc. should be taken so as to ensure that only the real farmer gets the benefits of the programme and technology.
- 11.17. Chickpea cultivation with traditional practices is an old practice, interventions of good technologies coupled with trainings will only boost-up the productivity of this crop. It is therefore, advised that serious efforts are needed to provide full recommended package in conduction of the demonstration.

The DFSMEC is therefore necessarily need to be sensitized in districts like Bilaspur. Apathy of district Administration towards Centrally Sponsored Schemes on agriculture sector may defeat the sole purpose of DFSMEC, and thus the whole scheme.

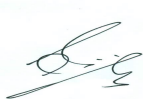
- 11.18. A mis-conception is spreading among the farmer that the Bathua weed is spreading with the use of certified seed of gram. The fact of the matter is that sufficient moisture and frequent irrigation under Rice based cropping system give rise to the germination/survival of bathua (*Chenopodium album*).

The extension functionaries need effective orientation/training on weed occurrence phenomenon and its control methodology. Similarly to control thrips infection Curacron (Propenophos) @ 1.5-2 litre/hectare was being used by the farmers but it was not giving effective result. IGKVV recommended insecticide 2% DAP solution + Emidachlor (Confidor) a highly systemic insecticide to control all sucking pest should also be demonstrated.

- 11.19. Small farmers are fully convinced with the advantages of farm mechanization, they are, however, not coming forward due to financial constraints to match farmers share in such type of programmes.
- 11.20. Safe and scientific storage structure/godowns at domestic levels needs to be promoted as the old age traditional storage structures have been destroyed by farmers due to rodent problem. The state local initiatives may also target distribution of Metal bins of different capacities ranging between 2-10 quintals.
- 11.21. Interactions with University scientists have revealed that lot of state specific deliverable technologies are available eg. Zero tillage wheat cultivation, Rabi Pigeonpea, Indira Field Pea, Early safflower line, Moong varieties. These technologies are needed to be propagated and transferred to farmers field.
- 11.22. It is suggested that the DAC funded Development projects/programmes of collaborative nature with National and International Research organizations should also incorporate the requirements/state specific needs for its sustainability and desired outcome. For eg. the NFSM funded ICARDA project on Grasspea in district Bilaspur and Durg should have considered the Utera techniques developed by ICARDA or IGKVV, Raipur with low cost of cultivation, income generating and targeting the increase in cropping intensity. Here, the views of the State government or specific Crop Development Directorate may provide good input.
- 11.23. The details on the allocation of FLDs for all crops such as number of demonstrations, crops, budgetary allocation and organizing agency etc. should be known to the State Nodal Officer for better coordination with Research organizations in getting the benefits of the demonstrated technologies. Presently, the State Department of Agriculture, including DDAs are not aware of such programmes.



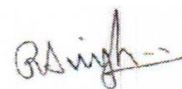
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Member



Chickpea: Cluster Demonstration in Bilaspur



Grasspea Cluster demonstration: ICARDA-SDA Collaborative project –Bilaspur 18



Kisan Gosthi: Bilaspur



Interactions with farmers: District Durg



Kisan Gosthi: District Durg



Kisan Gosthi: District Durg



Grasspea Cluster demonstration: ICARDA-SAU Collaborative project –Durg



Post harvest operations: Lathyrus/Urd (Utera) threshing in district Balod



Traditional Bullock cart: Farmer in district Balod to carry paddy straw



Chickpea: Cluster demonstration in district Balod



Hybrid Maize minikit demonstration in district Balod



Kisan Gosthi: District Balod



Mechanization: Multicrop thresher beneficiary in district Balod



Local Initiative: Godown construction site with individual beneficiary (50 MT capacity)

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, Gujrat	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 (Vikas)	2005	IIPR, Kanpur	Resistant to Powdery Mildew, Mid. Duration 102 days	23	-
2	IFPD 1-10 (Prakash)	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 2014-15 (upto January, 2015)

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.	Demonstration on improved package:	ha	2880.00	144.00	2380.00	31.19	21.66
2.	Distribution of certified seeds:						
	(a) HYVs Seeds	Qtl	0.00	0.00	0.00	0.00	0.00
	(b) Hybrid Seeds	Qtl	840.00	42.00	66.88	1.22	2.90
	Sub Total 2(a) and 2(b)		840.00	42.00		2.91	2.02
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
	Sub Total 3(a) and 3(b)		0.00	0.00	0.00	0.00	0.00
4.	Local initiatives (Activity to be specified by the district)		0.00	0.00	0.00	0.00	0.00
5.	Other Initiatives						
	(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
	Sub-Total 5 (a) to 5 (e)		0.00	0.00	0.00	0.00	0.00
	Total Financial (1 to 5)			186.00		32.41	17.42

2. NFSM-Rice

S. No.	Interventions	Unit	Target		Achievement		% Achi. (Fin.)
			Physical	Financial	Physical	Financial	
1	2	4	5	6	7	8	9
1.	Cluster demonstration by state department of agriculture with the technical backstopping of ICAR/SAUs/IRRI(one cluster of 100 ha).						
	(a) Direct seeded Rice/Line Transplanting/ SRI (Target 1.5 %of area of district)	ha	26174.00	1963.05	25125.00	915.52	46.64
	(b)Cluster demonstrations on hybrid rice (one cluster of 100 ha) target 0.5% of area of district.	ha	5000.00	375.00	5000.00	244.09	65.09
	(c)Cluster demonstrations on Swarna sub-1/ Sahbhagi dhan of 100 ha each.	ha	0.00	0.00	0.00	0.00	0.00
	(d)Cropping System based demonstration	ha	8016.00	1002.00	7016.00	254.53	25.40
	Sub Total 1 (a) to 1 (d)		39190.00	3340.05	37141.00	1414.14	42.34
2.	NEED BASED INPUTS						
	Seed distribution:						
	(a) Hybrid rice seed	Qtls	4754.40	237.72	1327.06	50.20	21.12
	(b) HYVs seeds	Qtls	26228.00	262.28	18374.00	30.16	11.50
	Sub Total 2 (a) to 2 (b)		30982.40	500.00	19701.06	80.36	16.07
3.	Plant and soil protection management:						
	(a)Micronutrients and Biofertilizers	ha	20000.00	100.00	8662.00	37.43	37.43
	(b) Liming in acidic soils	ha	4000.00	40.00	400.50	6.14	15.35
	(c) Plant protection chemicals and bio-agents	ha	40000.00	200.00	11165.00	38.98	19.49
	(d) Weedicides	ha	15000.00	75.00	3673.00	13.23	17.64
	Sub Total 3 (a) to 3 (c)			415.00		95.78	23.08
4.	Resource conservation techniques/ tools						
	(a) Conoweeders	Nos.	4000.00	24.00	1590.00	3.48	14.50
	(b) Manual Sprayer	Nos.	4000.00	24.00	2940.00	12.33	51.38
	(c) Power Knap sack sprayers	Nos.	500.00	15.00	287.00	5.10	34.00
	(d) Multi crop planters	Nos.	25.00	3.75	0.00	0.00	0.00
	(e) Seed drills	Nos.	300.00	45.00	150.00	17.70	39.33
	(f) Power weeders	Nos.	80.00	12.00	0.00	0.15	1.25
	(g) Zero till multi crop planters	Nos.	75.00	11.25	0.00	0.00	0.00
	(h) Drum seeder	Nos.	300.00	4.50	0.00	0.00	0.00
	(i) Rotavators	Nos.	300.00	105.00	231.00	50.65	48.24
	(j) Laser land levelers	Nos.	0.00	0.00	0.00	0.00	0.00
	Sub Total 4 (a) to 4 (j)			244.50		89.41	36.57
5.	(a) Incentive for pump sets	Nos.	800.00	80.00	191.00	10.82	13.53
	(b) Pipe for carrying water from source to the field	Mtr.	1200000.00	300.00	10550.00	2.70	0.90
	Sub Total 5 (a) and (b)			380.00		13.52	14.43
6.	Paddy thresher/multi-crop thresher	Nos.	70.00	28.00	51.00	21.00	75.00
7.	Self propelled Paddy transplanter	Nos.	20.00	15.00	9.00	0.75	5.00
8.	Cropping system based trainings (four sessions i.e. one before kharif, one each during kharif and rabi crops and one after rabi harvest.)	Nos.	150.00	21.00	110.00	11.94	56.86
	Total of Need Based Inputs (2 to 8)			1603.50		312.76	19.50
9.	Miscellaneous expenses:						
	(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

	Sub Total (9a to 9b)		0.00	0.00	0.00	0.00	0.00
10.	Local initiatives						
	(a) Construction of Godowns	Nos.	100.00	150.00	26.00	10.50	7.00
	(b) Distribution of Reaper	Nos.	51.00	25.50	36.00	13.97	54.78
	(c) Distribution of Power Tiller	Nos.	51.00	30.60	25.00	12.00	39.22
	Sub-Total 10 (a) to (c)			206.10		36.47	17.69
11.	Other Initiatives						
	(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
	Sub Total 11 (a) to 11(c)		0.00	0.00	0.00	0.00	0.00
	Total Financial (1 to 11)			5149.65		1763.37	34.24

3. NFSM-Pulses

Sl. No.	Interventions	Unit	Target		Achievement		% Achi. (Fin.)
			Physical	Financial	Physical	Financial	
1	Demonstration on improved technologies:						
	(a) Cluster Demonstrations (of 100 ha each)	ha	19285.00	1446.38	18685.00	469.81	32.48
	(b) Cropping system based demonstrations	ha	5152.00	634.00	3852.00	172.75	27.25
	Sub-Total 1 (a) and 1 (b)		24237.00	2065.38	22537.00	642.56	30.89
	NEED BASED INPUTS						
2	Distribution of certified seeds:						
	HYVs Seeds	Qtl	23800.00	595.00	9904.96	47.84	8.04
3	Integrated Nutrient Management (INM)						
	(a) Micro-nutrients	ha	18000.00	90.00	4275.00	18.45	20.50
	(b) Gypsum/ 80% WG Sulphur	ha	10000.00	75.00	696.00	5.22	6.96
	(c) Lime	ha	2500.00	25.00	235.00	0.00	0.00
	(d) Bio-fertilizers	ha	80000.00	80.00	37389.45	25.45	31.81
	Sub Total INM 3 (a) to 3 (d)			270.00		49.12	18.19
4	Integrated Pest Management (IPM)						
	(a) Distribution of PP chemicals	ha	30000.00	150.00	7962.00	21.93	14.62
	(b) Weedicides	ha	8000.00	40.00	1866.00	4.12	10.30
	Sub Total 4 (a) and 4 (b)			190.00		26.05	13.71
5	Resource conservation technologies /tools						
	(a) Manual Sprayer	Nos.	8000.00	48.00	7954.00	43.31	90.23
	(b) Power Knap sack sprayers	Nos.	500.00	15.00	388.00	3.45	23.00
	(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	202.00	53.40	71.20
	(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	82.00	24.05	45.81
	(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	49.00	10.80	18.00
	Sub total of Machinery 5(a) to 5 (l)			262.98		135.01	51.34
6	Efficient water application tools:						
	(a) sprinkler sets	ha	2995.00	299.50	397.87	21.74	7.26
	(b) pump sets	Nos.	350.00	35.00	137.00	2.19	6.26
	(c) Pipe for carrying water from source to the field	Mtr.	475000.00	118.75	22800.00	0.00	0.00
	(d) Mobile Rainguns	Nos.	0.00	0.00	0.00	0.00	0.00
	Sub Total 6 (a) to 6 (d)			453.25		23.93	8.28
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.	100.00	14.00	66.00	7.16	51.14
	Sub Total of Need Based Inputs (2 to 7)			1785.23		289.11	16.19
8	Miscellaneous expenses:						
	(a) Project management team and other miscellaneous expenses at district level	No. of District	17.00	204.99	11.00	17.09	8.34
	(b) Project management team and other miscellaneous expenses at state level	-	1.00	17.00	1.00	5.94	34.94
	Sub-Total 8(a) to (b)			221.99		23.03	10.37

9	Local initiatives						
	(a) Construction of Godowns	Nos.	100.00	150.00	6.00	6.00	4.00
	(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	16.00	15.00	50.00
	Sub-Total 9(a) to (c)			180.00		21.00	11.67
10	Other Initiatives						
	(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
	Sub-Total 10 (a) to 10 (e)		0.00	0.00	0.00	0.00	0.00
	Total Financial (1 to 10)			4267.59		975.70	22.86