

# **NATIONAL FOOD SECURITY MISSION**

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

**(Kharif, 2015)**

**MADHYA PRADESH**



सत्यमेव जयते

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

(Email: [dpd.mp@nic.in](mailto:dpd.mp@nic.in), Web: [dpd.dacnet.nic.in](http://dpd.dacnet.nic.in))

## Contents

S. NO.	PARTICULARS	PAGE NO.
	Preface	
1.	Background	1-2
2.	Area of Operation	2
3.	Monitoring Mechanism	3
4.	NLMT: Composition	4
5.	State Profile	4
6.	Major Crops	
	6.1 Crop Scenario: Plan analysis: (XI-XII Plan)	5
	6.2 Crop Scenario: 2014-15	6
	6.3 Crop Coverage - 2015	7
7.	Financial Progress	
	7.1 Allocation & Expenditure - 2015-16	8
8.	Places of Visit/Activities	8
9.	Observations	9-12
10.	Recommendations/Suggestions	13-16
	Visuals/Photos	
	Annexure-I	

## **ABBREVIATIONS**

1. AICRP-All India Coordinated Research Project
2. CDDs- Crop Development Directorates
3. CHCs-Custom Hiring Centre
4. CIAE-Central Institute of Agricultural Engineering
5. CIPHET- Central Institute of Post-Harvest Engineering and Technology
6. CSBD-Cropping System Based Demonstration
7. CSS- Central Sponsored Schemes
8. DES- Directorate of Economics and Statistics
9. DFSMEC-District Food Security Mission Executive Committee
10. DSR-Direct Seeded Rice
11. FLD-Front Line Demonstration
12. GPS-Global Positioning System
13. HYV-High Yielding Varieties
14. ICAR-Indian Council of Agricultural Research
15. IGKVV- Indira Gandhi Krishi Vishva Vidyalaya
16. IPM-Integrated Pest Management
17. KVK- Krishi Vigyan Kendra
18. MIDH-Mission for Integrated Development of Horticulture
19. MIS- Micro Irrigation System
20. MSP- Minimum Support Price
21. NCIP-National Crop Insurance Programme
22. NDC-National Development Council
23. NGO- Non Governmental Organization
24. NFSM-National Food Security Mission
25. NFSMEC-National Food Security Mission Executive Committee
26. NLMT-National Level Monitoring Team
27. NMAET - National Mission on Agricultural Extension & Technology
28. NMOOP –National Mission on Oilseeds & Oilpalm
29. NMSA- National Mission for Sustainable Agriculture
30. NRM- Natural Resource Management
31. PMKSY-Pradhan Mantri Krishi Sichai Yojna
32. RCT-Resource Conservation Technology
33. RVSKVV- Rajmata Vijayaraje Scindia Krishi Vishwavidyalaya
34. SAUs-State Agriculture University
35. SDA- State Department of Agriculture
36. SFSMEC-State Food Security Mission Executive Committee
37. SRI- System of Rice Intensification
38. TA – Technical Assistant

## PREFACE

Government of India, The Department of Agriculture, Co-operation and Farmers Welfare, Ministry of Agriculture Farmers Welfare has constituted an apex level National Level Monitoring Team (NLMT) for monitoring the implementation/execution of National Food Security Mission (NFSM-Rice, Wheat, Pulses, Coarse Cereals and Commercial Crops) activities in respect of the NFSM states. The NLMT-Madhya Pradesh, comprises of the undersigned as Convener/Team Leader, Principal/Sr. Scientists from ICAR/SAU, State NFSM Nodal officer visited the state from 17-20<sup>th</sup> August, 2015. The Terms of Reference (TOR) of this Central Team include:

i) The Director, Crop Development Directorate (CDD) (the Directorate of Pulses Development, Bhopal for MP & CG) to act as NLMT Convenor /Team leader; ii) undertaking field visits in the state 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 observations 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 Central Monitoring Team was broad based and included the experts from research organizations/SAUs. 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 only be materialized in district Sidhi where all stake holders were involved during the interaction. Meetings The district collectors of Satna and Rewa could not be held due to co-ordination issues between State NFSM HQ and district (DDA/DC). The report has tried to capture the impact of NFSM triennium ending 2014-15 (XII Plan) in comparison to XI five year Plan. The state nodal officer also could not turned-up to represent the team.

I am thankful to the VCs of IGKVV, Raipur; JNKVV, Jabalpur and RVSKVV, Gwalior, for nominating experts/SMSs to represent the NLMT and the district Collector Sidhi and to members for their valuable inputs in summarizing the report outcome. I also acknowledge the technical officers of the Directorate of Pulses Development, Bhopal in bringing out the report publication.

**Bhopal (M.P.)**  
**6<sup>th</sup> November, 2015**

**(A.K.Tiwari)**  
**Director**

# **NATIONAL LEVEL MONITORING TEAM REPORT TO REVIEW THE IMPLEMENTATION OF NATIONAL FOOD SECURITY MISSION (RICE, PULSES, COARSE CEREALS AND COMMERCIAL CROPS) IN THE DISTRICTS OF REWA, SIDHI AND SATNA OF MADHYA PRADESH FROM 17-20<sup>th</sup> AUGUST, 2015.**

## **1. NFSM: BACKGROUND**

- 1.1 The National Food Security Mission, a Centrally Sponsored Scheme (CSS) on Crop/commodity development programmes for Rice, Wheat and Pulses was launched during the 11<sup>th</sup> five year plan (2007-08 to 2011-12) consequent upon the recommendation of 53<sup>rd</sup> Meeting of National Development Council dated May 29<sup>th</sup>, 2007. The Mission envisaged to achieve additional food-grain production of 20 million tonnes from the base year 2006-07 consisting of Rice, Wheat & Pulses by 10, 8 and 2 million tonnes respectively by the end of Eleventh Plan (2011-12). During 2011-12, the all India foodgrains production was 259.29 million tonnes, a hike of 42 MT additional production from the base year 2006-07. An Additional increase of 11, 19 and 2.89 million tonnes under rice, wheat and pulses respectively was recorded. Increase in per hectare yield of pulses was 0.87 kg (612 kg to 699 kg/ha) while increase in wheat and rice was 4.69 kg (3177 kg/ha) and 2.72 kg/ha (2393 kg).
- 1.2 **During 12<sup>th</sup> Plan**, the NFSM with the other four Missions, viz. NMAET, NMSA, NMOOP & MIDH is continued. The pattern of Central assistance under NFSM has been 100 per cent up-till 2014-15.
- 1.2.1 The Twelfth Plan (2012-13 to 2016-17) was revamped from 2014-15 and has five components viz. i) NFSM- Rice, ii) NFSM-Wheat, iii) NFSM-Pulses, iv) NFSM-Coarse Cereals (millets) and v) NFSM-Commercial Crops (Jute, Cotton, Sugarcane).
- 1.2.2 A target of an additional production of 25 million tonnes of food grains i.e. from 259.29 MT to 284.29 over the base year of XI Plan i.e. 2011-12 comprising Rice- 10 million tonnes, Wheat- 8 million tonnes, Pulses- 4 million tonnes & Coarse Cereals-3 million tonnes, is targeted to be achieved at the end of 12<sup>th</sup> Plan (2016-17).
- 1.2.3 From 2015-16, the revamped NFSM under State Plan Scheme-Krishi Unnati Yojana (State Plan) with interim sharing pattern of 50:50 between Centre and State is under implementation in 28 states. A Central Share of Rs 1300 Crores has been approved during 2015-16. The existing CSS have also been rationalized and 03 schemes viz. (i) Krishi Unnati Yojana (ii) National Crop Insurance Programme (NCIP) and (iii) Pradhan Mantri Krishi Sinchai Yojana (PMKSY) are operational since 2015-16. NFSM-2015-16 is a part of Krishi Unnati Yojana (State Plan).
- 1.3 **The basic strategy of the Mission is to focus on low productivity high potential districts, promote and extend improved technology package, implementation of cropping system centric interventions on technological package, agro-climatic zone wise planning and cluster approach demonstrations**, Further 30% of total demonstrations would be Cropping System Based Demonstration (CSBD) with technical backstopping of ICAR/State Agricultural Universities (SAUs)/ on Rice,

Wheat, Pulses; distribution of certified HYV seeds/Hybrid seeds, Resource Conservation Technology

(RCT) tools, irrigation machineries/MIS, trainings and undertaking local initiatives to the tune of 5% of total budgetary allocation to improve productivity.

1.3.1 Special emphasis has also to be given by targeting reclamation of problematic soils, water logging areas and mitigation of adverse effect of climate change for high productivity areas, value chain integration (FPOs), assistance of Custom Hiring Centre (CHCs). 30% of budgetary allocation has to be earmarked for women beneficiaries.

## 2. Area of operation 2015-16

S.No.	Commodities	All India		Madhya Pradesh (No. of districts)
		No. of States	No. of Districts	
i.	NFSM-Wheat (Area >50000 ha; Yield<state Avg.)	11	126	16
ii.	NFSM-Pulse	28	642	51
iii.	NFSM-Rice (all districts of NE state with 5000 ha area)	25	199	8
iv.	NFSM- Coarse cereals <b>(Maize, Small Millet, Pearl Millet etc.)</b> (districts covering 70% of state area)	26	182	16
v.	<b>NFSM-Commercial Crops</b> (Cotton, Sugarcane Jute)	15 13 09		10 8 -

## 3. Monitoring Mechanism / Mission Structure

Structure	Formation	Composition	Frequency of Meeting
National Level	i) General Council (GC)	Minister of Agriculture - Chairman  Mission Director - Member (NFSM) Secretary	Twice a year
	ii) NFSM- Executive Committee (NFSMEC)	Secretary (A & C)- Chairman Secretary (DARE)&DG (ICAR) Secretary (MoWR) Secretary (Deptt.of Fertilizer) Secretary (MoPR) Secretary (MoTA) Secretary (Deptt. of Social Justice & Empowerment) Secretary (MoW&CD) Adviser (Agriculture), Planning Commission Agriculture Commissioner	Quarterly

		Five Experts - Member Mission Director - Member Secretary	
	iii) National Level Monitoring Team (NLMT)	Director CDDs- Co-ordinator  Scientist SAUs/JDA –Member	Once in a crop season
State Level	State Food Security Mission Executive Committee (SFSMEC)	Chief Secretary – Chairman  State Mission Director - Member Secretary	6 Monthly
District Level	District Food Security Mission Executive Committee (DFSMEC)	District Collector/CEO-Chairman Jila Parishad  DDA/DAO- Member Secretary	Quarterly

#### 4. NLMT of MP : Composition

S.No.	Organization	Names and Designation
i.	Government of India Department of Agriculture, Cooperation and Farmers Welfare Ministry of Agriculture and Farmers Welfare Directorate of Pulses Development 6 <sup>th</sup> floor, Vindhyaachal Bhavan, Bhopal.	Dr. A.K. Tiwari Director - Convenor/Team leader
ii.	Department of Genetics & Plant Breeding College of Agriculture IGKV, Raipur	Dr. Sandeep Bhandarkar Scientist (AICRIP-Rice) - Member
iii.	SG College of Agriculture & Research Station, Jagdalpur (IGKV, Raipur)	Dr. Ashwini Thakur Scientist (Agronomy) - Member
iv.	RAK College of Agriculture, (RVSKVV, Gwalior) Sehore (M.P.)	Dr. Ashok Saxena, Senior Scientist (Genetics & Plant Breeding) - Member
v.	Government of Madhya Pradesh Deptt. of Farmers Welfare and Agriculture Development Division-Rewa	Shri S. C. Singadiya Joint Director (NFSM) - Member

#### 5. State Profile: MP

Agro-climatic zones	(Nos.)	11
Net Cultivable area (lakh ha) (2012-13)		154.55
Fallow land(lakh ha) (2012-13)		8.68
Area sown (lakh ha)	(Kharif,2015)	126.37
	(Rabi targets-2015-16)	105.36
Double Cropped Area (lakh ha)		77.78
Cropping Intensity (%)		150
Gross Area under Irrigation (%) (2012-13)		89.70

Rainfed Area(lakh ha) (2012-13)	142.63
No. of Holdings (lakh) (2010-11)	88.73
No. Holdings with SMF (lakh ) (2010-11)	63.40 (71%)
Area with SMF (lakh ha) (2010-11)	53.81 (34%)
Power Consumption (2014-15) (kw/ha)	1.74

## 6. MAJOR CROPS

### 6.1 Production Performance: Eleventh Plan- Twelfth Plan (T.E. 2014-15)

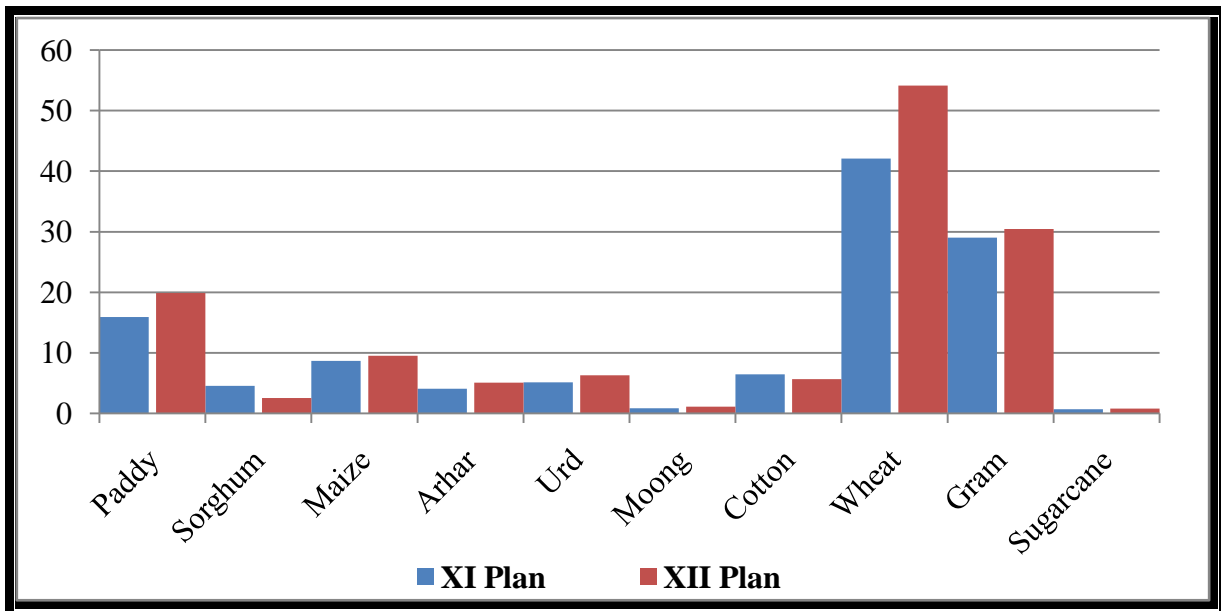
(Lakh ha, Prod. Lakh tonnes, Yield kg/ha)

Crop	State	XI Plan (207-08 to 2011-12)			XII Plan* (2012-13 to 2016-17)			Increase/decrease over XI plan (%)		
		A	P	Y	A	P	Y	A	P	Y
<b>Kharif Crops</b>										
Paddy	M.P	15.906	16.56	1041	19.89	30.82	1550	25	86	49
	<b>India</b>	<b>243.84</b>	<b>527.15</b>	<b>2162</b>	<b>435.82</b>	<b>1055.59</b>	<b>2422</b>	<b>79</b>	<b>100</b>	<b>12</b>
Sorghum	M.P	4.54	5.89	1297	2.53	4.41	1743	-44	-25	34
	<b>India</b>	<b>30.65</b>	<b>33.38</b>	<b>1089</b>	<b>57.69</b>	<b>52.91</b>	<b>917</b>	<b>88</b>	<b>59</b>	<b>-16</b>
Maize	M.P	8.65	11.32	1309	9.49	16.91	1782	10	49	36
	<b>India</b>	<b>68.36</b>	<b>149.29</b>	<b>2184</b>	<b>89.99</b>	<b>233.97</b>	<b>2600</b>	<b>32</b>	<b>57</b>	<b>19</b>
Arhar	M.P	4.06	2.56	632	5.05	3.98	788	24	55	25
	<b>India</b>	<b>37.89</b>	<b>26.64</b>	<b>703</b>	<b>38.14</b>	<b>29.92</b>	<b>784</b>	<b>1</b>	<b>12</b>	<b>12</b>
Urd	M.P	5.15	1.83	354	6.30	3.44	546	22	88	54
	<b>India</b>	<b>22.94</b>	<b>10.81</b>	<b>471</b>	<b>24.05</b>	<b>12.98</b>	<b>540</b>	<b>5</b>	<b>20</b>	<b>15</b>
Moong	M.P	0.83	0.27	328	1.09	0.50	459	31	85	40
	<b>India</b>	<b>26.41</b>	<b>10.49</b>	<b>397</b>	<b>21.11</b>	<b>8.63</b>	<b>409</b>	<b>-20</b>	<b>-18</b>	<b>3</b>
Cotton	M.P	6.44	13.15	2041	5.65	18.93	3350	-12	44	64
	<b>India</b>	<b>104.73</b>	<b>280.76</b>	<b>2681</b>	<b>123.10</b>	<b>351.50</b>	<b>2855</b>	<b>18</b>	<b>25</b>	<b>6</b>
<b>Rabi Crops</b>										
Wheat	M.P	42.07	80.26	1908	54.13	134.17	2479	29	67	30
	<b>India</b>	<b>283.36</b>	<b>843.62</b>	<b>2946</b>	<b>304.82</b>	<b>927.65</b>	<b>3043</b>	<b>8</b>	<b>10</b>	<b>3</b>
Gram	M.P	29.04	32.90	1133	30.47	33.59	1102	5	2	-3
	<b>India</b>	<b>82.18</b>	<b>77.02</b>	<b>937</b>	<b>88.80</b>	<b>85.10</b>	<b>958</b>	<b>8</b>	<b>10</b>	<b>2</b>
Sugarcane	M.P	0.68	28.07	41023	0.81	36.33	44852	19	29	9
	<b>India</b>	<b>47.14</b>	<b>3257.87</b>	<b>69118</b>	<b>50.08</b>	<b>3499.37</b>	<b>69876</b>	<b>6</b>	<b>7</b>	<b>1</b>

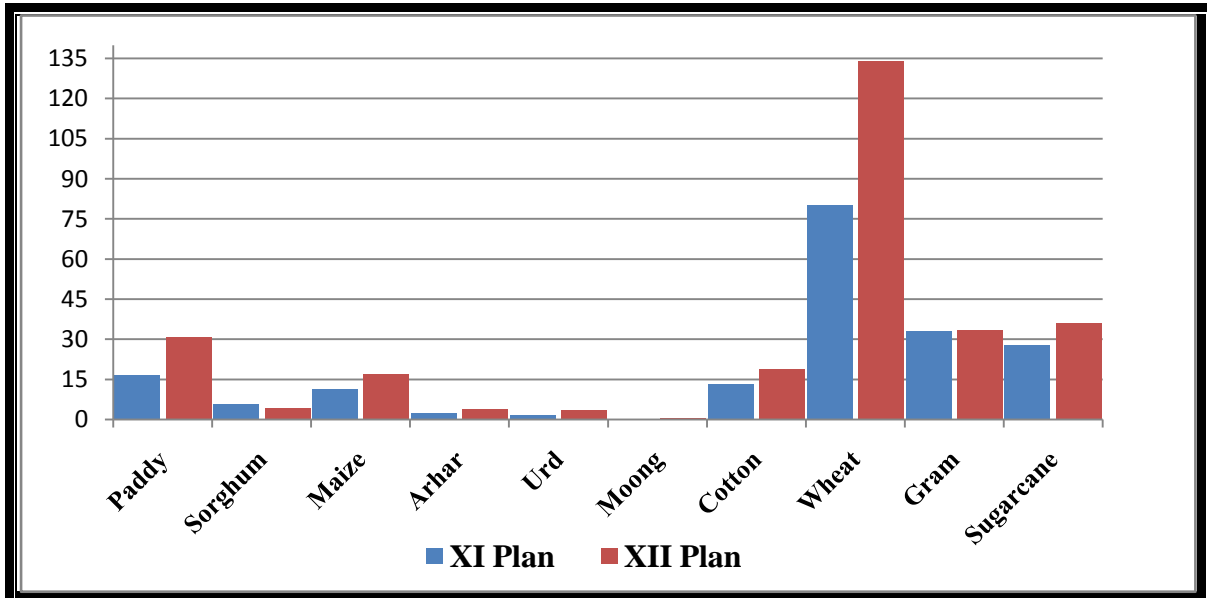
(\*Average of 2012-13 to 2014-15, Triennium ending 14-15)

The comparative analysis of crop performance during the XI Plan period and Triennium ending 2014-15 of the twelfth plan reveal that the NFSM interventions since 11<sup>th</sup> Plan has paid dividends in the production and yield of Paddy which is 86% and 49% higher during Triennium ending 2014-15 over its previous five year Plan. Similarly, the production and productivity of wheat has also increased to 67% and 30% during Triennium ending 2014-15. A quantum jump has been recorded under Arhar where productivity level of 788 kg/ha could be realized over the XI<sup>th</sup> Plan productivity of 632 kg/ha which is approx. 25% increase





**Fig 01: Area under crops during XI and XII plan in MP (Area: Lakh ha)**



**Fig 02: Production of crops during XI and XII plan in MP (Production: Lakh tones)**

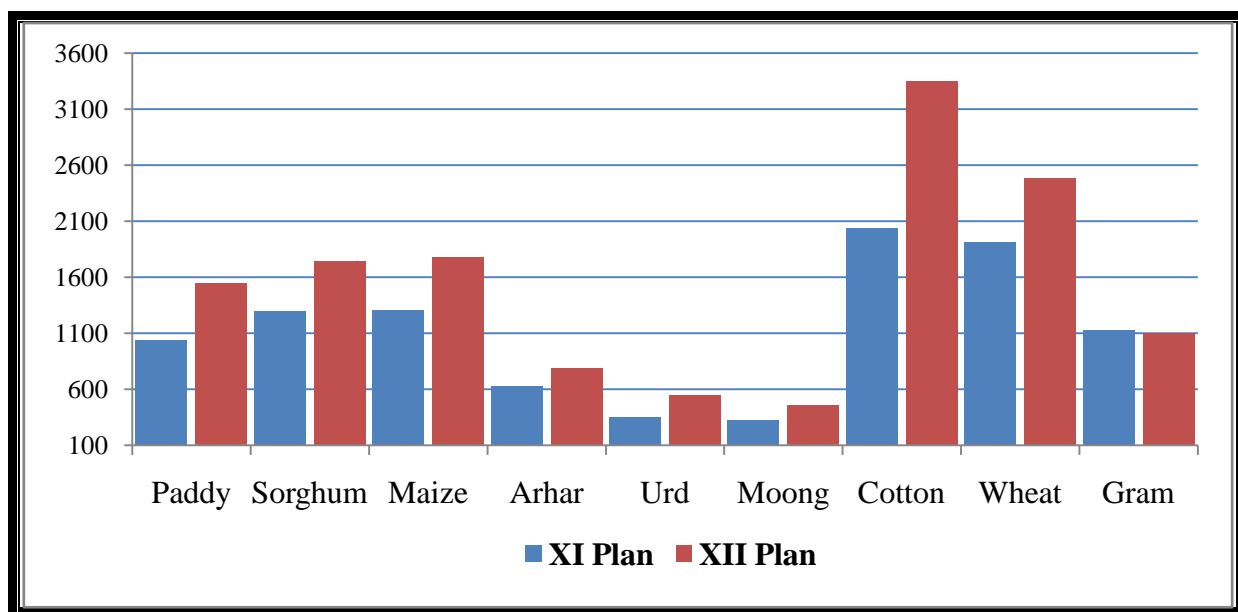


Fig 03: Yield of crops during XI and XII plan in MP (Yield: Kg/ha)

## 6.2. Crop Scenario: (2015-16)

Sr.No.	Crop	Area (lakh ha)		Production (Lakh tonnes)		Yield (Kg/ha)	
		Target	Achi.	Target	Achi.	Target	Achi.
1.	Paddy	21.12	19.63	62.30	52.31	2950	2665
2.	Sorghum	2.20	2.04	4.86	3.84	2210	1880
3.	Maize	11.43	10.98	36.12	26.96	3160	2455
4.	<b>Kharif Cereals</b>	<b>39.03</b>	<b>37.12</b>	<b>110.27</b>	<b>90.81</b>	<b>2825</b>	<b>2446</b>
5.	Arhar	5.86	5.79	6.45	5.96	1100	1030
6.	Urd	8.90	9.27	5.12	4.75	575	512
7.	Moong	1.60	1.84	0.96	0.87	600	475
8.	<b>Kharif Pulses</b>	<b>16.51</b>	<b>17.04</b>	<b>12.59</b>	<b>11.65</b>	<b>763</b>	<b>684</b>
9.	Cotton	6.15	5.47	8.61	5.69	1400	1040

Source-DES, M/A (1<sup>st</sup> Adv. Est.) Target -SDA

## 7. Budgetary Status

### 7.1. Fund Utilization (2014-15)

(Rs. In Lakh)

S. No.	Name of Crop/ Scheme	Revalidation	Allocation	Total release	Available Amount	Expenditure	Unspent Balance as on 31.03.2015
1	Paddy	263.64	1926.18	1181.00	1444.64	608.19	836.45
2	Wheat	1162.46	6924.45	4030.73	5193.19	3009.36	2183.83
3	Pulses	4119.71	17824.36	9248.56	13368.27	8861.46	4706.81
4	Additional Pulses		5790.00	5790.00	5790.00	3990.07	1799.93
5	Coarse Cereals		1536.00	1152.00	1152.00	549.71	602.29
6	Cotton		70.03	52.52	52.52	5.57	46.95
7	Sugarcane		20.80	15.60	15.60	11.04	4.56
	<b>Total</b>	<b>5545.81</b>	<b>34091.82</b>	<b>21470.41</b>	<b>27016.22</b>	<b>16835.40</b>	<b>10180.82</b>

## 7.2. Fund Utilization (2015-16)

(As on Sept 01, 2015)

(Rs. In Lakh)

S. No.	Name of Crop/ Scheme	Unspent Balance as on 1.9.2015	Allocation	Release	Expenditure
1	Paddy	187.08	1916.99	479.25	292.17
2	Wheat	822.11	4813.00	1203.25	381.14
3	Pulses	3309.35	22376.40	5594.10	2284.75
4.	Coarse Cereals	246.10	1369.00	342.25	96.15
	<b>Total</b>	<b>4564.64</b>	<b>30475.399</b>	<b>7618.85</b>	<b>3054.21</b>

## 8. Places of Visit/Activities

Rewa, Sidhi and Satna districts of Madhya Pradesh were visited during 17-20<sup>th</sup> August, 2015. The nodal officer, NFSM HQ nominated in the team could not participate during the visit. Shri Sateesh Dwivedi, TA, Directorate of Pulses Development, Bhopal was associated with the visit.

S.N.	District	Block	Village/Institute	Activities
1.	Rewa	Rewa	KVK-Rewa	FLD of Moong Crop-Variety PDM-139
			Simariya	i) Custom haring canter/RKVY ii) Ridge Furrow Techniques on Soybean (JS-9305)
		Sirmour	Bida	Urd Demonstration (Azad-3
			Delhi	Demo on Paddy (Kaveri-995) by SRI/NFSM method
2.	Sidhi	Rampur Naikin	Bhisrha	Paddy (Hybrid)-By SRI method Tur (ICPL-87119), sown on -25.07.15, method of planting SPI (Dharwad)Transplanting Paddy (LG-9402)
			Raiduarya	Paddy Composite nursery /NFSM
			3.	Satna
Matha	i) Moong var. Samrat-3 method Ridge Furrow ii) Custom hiring canter /RKVY			
		Majhgawa	KVK	Tur var.-TJT-401, method transplanting Farmers Meeting

## 9. Observations

1. Programme Coordinator of KVK- Rewa informed that they were not aware of the 80 ha paddy demonstrations under NFSM-paddy allotted by State Department of Agriculture.
2. In Rewa district Moong crop had heavy infestation of Yellow Vein Mosaic, Jassids, hairy caterpillar,. The seed was broadcasted, none of the recommended package, nor technical advisory was followed to recommend IPM measures etc.

3. For improving the yield by adoption of modern practices and also to minimize the cost towards various agricultural operations, Rewa District implement the “Yantra Doot” scheme in selected villages. A total of eight Custom Hiring Centers under RKVY scheme are operational in the district.
4. To know the availability of soil nutrients, the soil testing laboratory exists in the district but most of them are underutilized. In Rewa only 15 samples are only being analyzed per day at the district level.
5. The organisation of targeted cluster demonstrations, both CSBD and sole crop suffered or conducted much delayed in the visited district. The procedural delay in allotment of both physical and financial allocation by the State NFSM HQ to the districts has been the major cause. Such situations is in all the districts of the State. The kharif targets were issued on 17<sup>th</sup> July by the state HQ whereas the sowing season starts in the month of 1<sup>st</sup> fortnight of June or the onset of monsoon, whichever is earlier.
6. Lack of campaigning on NFSM, absence of demonstration display boards, banners, etc. systematic documentation on cluster demonstration, Input use, Crop based technological skill training etc have been a major observation in Rewa district. The apathy of DFSMEC, may be attributed to this fact. The team could not avail the opportunity to have a wrap-up meeting with the District Collector/DFSMEC.
7. Transplanted rice and DSR have been badly affected by delay and deficit rains (>50%) during Kharif season in the visited districts. To reclaim such situations, adaptation strategies viz. supplemental irrigation facilities with MIS at critical stage, short duration cultivars and timely sowing of rice is highly recommended for harvesting good yield.
8. In Sidhi district, Cluster demonstrations with limited input management, conducted on paddy, maize, mungbean, and pigeonpea were visited by team, The demonstrations were found excellent. The district Collector and the Chairman DFSMEC also had an interactive wrap-up meeting with the team and stake holders.
9. Wrap-up meeting with Chairman, DFSMEC-NFSM and District Collector Sidhi has been very faithful. Various issues on scheme implementation, prevalent and recommended high yielding pulses/other crop varieties and strategy to enhance SRR etc are discussed with stake holders.

10. Demonstration of Pigeon pea (Variety-TJT-501) by transplanting method in good establishment condition. The effect of nipping was also observed as the crop was healthy and with good bio-mass.
11. In village Sirmaour- block Rewa ( farmer Lalmani Shukla) the cluster demonstration on blackgram (variety- Azad urd 1) was visited. Delayed sowing has resulted poor plant population, heavy infestation of Yellow Vain Mosaic (white fly vector) and weeds. In fact such demonstration may not be treated as organised one. It did not follow any scientific recommendations.
12. Observed very poor paddy demonstration conducted by SRI method due to faulty practices/practices not applied as per the norms made for the same.
13. Krishi Vigyan Kendras (KVK) are the major source of the farmers of the district of all the Technology transfer and for the new techniques of agriculture practices. In this way the KVK, Satna has conducted demonstration in a very scientific mode and covered all crops viz vegetables, fruit crops, nurseries, **pigeonpea + soybean using raised bed system for soybean crop** with latest technologies.
14. MTU 1010 is midland farming variety but it was put under lowland situations under NFSM demonstration in Satna and Rewa. The state, based on the experience should shift it to proper farming situations as per crops requirement.
15. Hybrid rice 6444 is taken in large area, expecting 30 q/acre yields. Here the farmers are concerned on restricted procurement policy per unit area need to revisit as hybrid growers may be discouraged by limitation in purchasing system.
16. WGL 32100 rice variety with seed as-input provided under poor soil depth, up land situation for the DSR demonstration, is not suitable such situation. In-fact, as per the land situation proper crop planning and selection of short duration improved paddy or other crop cultivar with complete package should have been planned. Hybrid cultivars should be demonstrated under advanced and resource rich eco-situation following the basic principles of soil/moisture conservation in light soils, rainfed and plateau zone.
17. The Direct Seeded Rice (DSR) is observed with severe problems of common weed wild rice (*Sadwa*) mixture, which matures prior to ripening/ harvesting of main rice resultantly its seeds shatters in the field and germinates in next the next kharif.

18. Transplanting of rice manually is becoming very expensive, equipments like paddy transplanter etc. need to be popularised.
19. Interaction with large number of chickpea growers have revealed sufferings due to non-remunerative prices during 2013-14 and 2014-15 @ Rs. 2300-2400 per quintal (against Rs. 3100/Qtls MSP), in addition to crop loss in the preceding season due to excessive rains, insect/pest etc.
20. Farmers are switching over to second crop after Wheat. Moongbean during spring/summer, with critical irrigation, is the preferred option. Appropriate variety /quality seeds and proper IPM techniques with availability and advocacy of quality pesticide stall remains a big issue to be addressed under NFSM.
21. Urdbean is cultivated without following recommended package of practices with very old variety T 9. New varieties like *KU 96-3*, *Pant U 30*, *RBU 38* and *PDU 1* with recommended technology package should be the part of NFSM demonstration.
22. Traditionally the Paddy–Pea, Paddy-Chickpea, Paddy-Lentil cropping system is shifting to Paddy-Wheat cropping system, is gaining popularity due to continuous occurrence of frost during last 3-4 years.
23. The concept of Cropping System Based Demonstration (CSBD) is not amply clear amongst the district/block level functionaries especially in Satna districts. The district has, therefore, not proposed the targets for such demonstration. The guidelines of organizing at least 30% demonstration under this category is with the very basic objectives of targeting *problematic soils (saline/alkaline/acidic)*, *water logging*, *mono-cropping and extremely rainfed areas* with poor mechanization/ no mechanization, therefore, seems to be defeated.

The participation in cluster demonstration by NGO, KVK etc. are negligible or nil the Team recommends the participatory approach in organization of demonstrations. CSBD may also be given to Extension Directorate of SAU to standardize the cropping pattern.

24. Team observed unavailability of early variety seeds, also the varieties within 10 years of notification in Paddy, Pulse and Coarse Cereals under NFSM.

25. Chemical or eco-friendly weed management is most important but lack of knowledge, poor extension work in district like Rewa and Satna at this front is accumulating problems to this menace. Commonly used weedicides are 2, 4-D, Bispyribac-sodium, Fenoxaprop-p-ethyl (whipsuper) in the area.
26. Wilt, a major constraint of pulses. The local farmers have informed about the Non-availability of micro nutrients in the local market, sub-standard pesticides inputs etc.
27. Active involvement of district PMT is necessary for effective implementations of NFSM programme. Proper programme planning is required by involving SAUs in deciding the technologies to be demonstrated by considering socio-economic 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.

## 10. Suggestions

1. There is need to introduce inter-crop with transplanted pigeon pea increase food production (cereals and pulses) including double cropping. It also provides the risk bearing capacity against the crop loss due to natural weather at one side and enhances the soil productivity on the other.
2. The infestation of weeds in the soybean crop can be controlled by applying the quantity of 2-2.5 litre Glyphosate per ha controlling all types of weeds. Seed treatment by sodium molybdate @2g kg<sup>-1</sup> seed may also helpful for the same purpose.
3. The loss to soybean in the state has encountered due to deficient/scanty rains, poor drainage/water logging at the time of flowering/pod formation in low lying area and heavy infestation of whitefly, yellow mosaic. Technology with variable inputs can overcome the yield barriers. Promotion of ridge and furrow method of soybean cultivation, pigeon pea-soybean inter-cropping etc need to be propagated vigorously.
4. Farmer's perception of use of more fertilizer to get the bumper crop yield ,need to be changed by advocating /demonstrating balanced fertilizer on the basis of soil testing report and demonstrating use of the green manure crop i.e. Dhaincha (*Sesbania aculata* and *rostrata*) for sustained the soil life.

5. Need of popularization of *Dharwad* technique of arhar cultivation as introduced in intercrops with the other crops. Such technique is proving very useful for low land /marginal farmers to get more yields in the small piece of land.
6. Scarcity of land, labours and capital with the pressure of more demand of food for ever increasing population can only be rectified by use of low cost farm implements and labour saving implements. Hence the team recommend to increase *Yantra Doot* villages so that poor farmers can execute various agricultural operations economically.
7. Organic farming may be one of the best alternatives for tribal district like Sidhi, Mandla and Dindori where fertilizer consumption is observed to be very low.
8. *Cereal-pulse cropping system* in alternate year, to gain soil fertility and sustainable production system, is highly recommended. The state and DFSMEC is advised to critically monitor the NRM issues and suggest cropping systems suited to the eco-system of the region on sustainable basis.
9. The SAU may be advised to standardize the cropping system 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.
10. 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 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.
11. The NFSM-Pulses interventions may be pursued in the command areas to explore the potential of urd and mung. Similarly, the area and productivity potential of chickpea and lentil may be harnessed with suitable varieties and production.
12. Use of wilt resistant cultivars of pulses, inclusion of short duration variety of paddy 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.
13. There is wide scope of cultivation of Mungbean in Kharif and summer season. Improved varieties of mungbean viz. PDM 11, Pusa 9531, HUM 1 and TJM 3 need to be popularised.
14. On Coarse Cereals /Millets, there is need of identification of niche areas, bridging yield gaps through availability of quality seeds of promising location specific



varieties both grain and fodder varieties/hybrids; streamlining seed production; listing the best management practices etc.;

15. Development of varieties/hybrids with better re-generative capacity under drought condition, breeding of millet varieties with high Omegas-3 amino acids may be taken up by the ICAR/SAU.
16. Special focus on minor millets with wide publicity to capitalize the virtues of millets as C 4 plants, nutritional superiority, amenability for climate change etc.
17. 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.
18. Introduction of suitable high yielding varieties, introduction of soil and water conservation techniques, crop rotation, crop diversity, organic farming and introduction of mechanized farming is the urgent need for sustainable agriculture. Wild rice eradication, soil amendment, integrated pest management for insect, diseases & weeds are the production constraints lacking in the demonstration, it should be considered.
19. Farmers are showing interest in adopting novel techniques in Agriculture. Mode of input availability and present system of govt. subsidy should be simplified, quality assurance of inputs and their availability should be provided in the form of demonstration kit. GPS data of beneficiaries plot may be given for all the field demonstration programmes in their respective official documents for its authenticity and verification.
20. Potential increase in area under irrigation by way of intervention of efficient water application tools (Sprinkler, pipes, pumpsets, raingun) need to be compiled in order to evaluate the impact of these interventions. The subsidy benefits under the interventions of efficient water application tools, including 3 HP electric pumps is still not given to farmers and need to be extended to all categories of farmers on pro-rata basis.
21. 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.*

22. Shelves of *local initiatives*, specialized project, market support & value chain integration etc. which are nil. These are the activities which may emerge from DFSMEC and should be a part of the Annual Action Plan.
23. 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.
24. Hybrid maize was seen in upland which was dense and overlapped. Standard practices of agronomical measures such as line sowing, earthing-up at 30 DAS with balance fertilizer doses etc need to be recommended by SAUs to realise the potential cob size and cob yield.
25. Herbicides (weedicides) are well known among farmers but with limited knowledge, the Team therefore recommends to organize a good number of demonstrations on available herbicides use (other than regular) as continuous use of same herbicides create tolerance in weeds and hence replacement after every 2-3 years, should be the strategy under state NFSM plan.
26. The state Mission's has suggested on inter-componential change flexibility at the level of 30% from the existing 20% so as to intervene on inter-location specific requirements in a districts.
27. Bench mark surveys, cent percent soil testing of identified cluster plots, and timely availability of test report be ensured. Lacking these, it hampers the very purpose of applying micronutrients. Implements were given to farmers as Cono-weeder and SRI marker for using in fields. No conservation agriculture has been adopted for longer period of sustainability.
28. 10% limited (cap) allocation against total budget for machinery has been observed as scarce and defeat very purpose of farm mechanization and RCT. This should have been at least 20%.



**Team interaction with RAWE Student in KVK at Sidhi District**



**Field inspection of Soybean crop in Rewa district**





**Interaction with seed drill beneficiary district Sidhi**



**KVK, Majhgava: Visited Vermi production Unit farm district Satna**





**Interaction with pulse demonstration beneficiaries organized by Satna**



**KVK demonstration: Infestation of pest in Moongbean**





Flexi board/technology message on crop production techniques provided by KVK, Satna



Disst. Satna: Kisan Gosthi (Village -Nemua, Block-Rampur (Baghelan)





**District Satna: Visit of soil testing Laboratory**



**District Rewa: CSBD Paddy cluster demonstration**

**Table: District-wise/crop-wise Area, Production and Yield with Prevailing & Recommended Pulse Varieties in Madhya Pradesh**

District	Crop	Area (000 ha) *	Prod. (000 Tonnes)	Yield (Kg/ha)	Prevailing varieties	Recommended Pulse Varieties		
						Within 10Years (1999 to 2009)	(>10 Years to 15 years) (2010-2015)	Others
Jabalpur	Pigeonpea	11.23	11.53	1027	Asha, JA-4, UPAS-120	TJT-501		Asha, No-148, JKM-7, JA-4, ICPL-85063 (Laxmi),
	Urdbean	21.69	6.10	281	T-9, PDU-4, JU-2	KU-96-3		LBG 684, PU 30, 35 & 19, JBG 623
	Moongbean	1.10	0.37	333	HUM 1,2, TJM-7, PDM 139	HUM 1		PDM 54, PDM-139, Pusa Vishal
	Chickpea	63.10	71.33	1130	JG-16, JAKI-9218, Vishal	JAKI-9218 JGK-3, JGK-2 JG-322		Vishal JG 16
	Lentil	28.68	13.13	458	JL-1, L 4046, JL 3	IPL 81, JL 3		RVL 31, L 4076, JL 1
	Peas	29.97	18.47	616	Arkel, JM-3	KPMR 400, Prakash		Arkel, JP 885
	<b>Total Pulses</b>	<b>159.5</b>	<b>124.9</b>	<b>783</b>				
Katni	Pigeonpea	7.92	5.63	711	Asha, TJT-501, JA 4	JKM 189		JKM 7, Laxmi, Pragati, Jagriti
	Urdbean	4.27	1.80	422	LBG 20, PDU 1	KU 96-3		PU 30
	Moongbean	0.20	0.10	500	PDM 139, Pusa Vishal, K-851	HUM-1		JM 721, HUM 6, LGG 460
	Chickpea	31.10	28.80	926	JG 11, JG 130, JG 16	JG 130, JG 14, JG 322		JG 12, JG 11 JG-63
	Lentil	18.02	10.00	555	JL 3, JL 1	IPL 81, JL-3		JL -1, PL -8
	Peas	5.37	3.77	702	Arkel, Azad Pea 1	KPMR-400, Prakash		JM-1, JM-2, VL Matar-42
	<b>Total Pulses</b>	<b>67.37</b>	<b>50.22</b>	<b>746</b>				
Balaghat	Pigeonpea	5.33	5.43	1018	ICPL 88039, TJT 501	JKM-189		Asha, ICPL 87119, ICPL 85063, ICPL 88039
	Urdbean	5.31	2.31	435	LBG 20, T-9	KU-96-3		LBG-20, PU 30, PU 19
	Moongbean	0.10	0.00	0	TMB-37, SL-668	HUM-1		JM-721, JKM-6
	Chickpea	8.80	8.13	924	JG 315, JG 16, JG 63	JG-14	RVG 202, RVG 203	
	Lentil	0.21	0.10	498	JL-3, Malika, Shekhar M 3	IPL 81 (Noori)		JL-3
	Peas	1.00	0.40	400	Arkel, Azad 1	KPMR-400, Prakash		Rachna, Azad-1, JM-3
	<b>Total Pulses</b>	<b>36.58</b>	<b>76.71</b>	<b>2097</b>				



District	Crop	Area (000 ha)	Prod. (000 Tonnes)	Yield (Kg/ha)	Prevailing varieties	Recommended Pulse Varieties		
						Within 10Years (1999 to 2009)	(>10 Years to 15 years) (2010-2015)	Others
Chhindwara	Pigeonpea	27.59	41.51	1505	ICPL 87119, ICPL 85063	TJT-501		JA 4, Asha, ICPL 85063 (Laxmi)
	Urdbean	9.12	2.27	249	LBG 20, PDU 1	KU-96-3, RBU-38		MASH 338, PU 30
	Moongbean	2.40	0.63	264	PDM 139, Pusa Vishal, K-58	HUM-1, Pusa 9531		BM 4, Pusa 9531
	Chickpea	48.77	128.43	2634	JG 315, JG 63, Dollar chana	JG 14, JG 322	RVG 202	Vishal
	Lentil	5.40	3.23	597	JL 3, JL 1	JL-3		PL-4, PL-8
	Peas	6.77	4.37	645	Arkel, Azad pea 1	Prakash		VL Matar -42, JP-885, Azad Pea 1 & 2
	<b>Total Pulses</b>	<b>102.03</b>	<b>181.71</b>	<b>1781</b>				
Seoni	Pigeonpea	15.87	16.54	1042	ICPL 87, JKM 7, TJT 501	TJT-501		ICPL 87119, JKM 7, JA 4
	Urdbean	6.57	1.40	213	PDU 1, PU 35, T-9	KU-96-3		PU 30, PDU 1
	Moongbean	0.50	0.13	267	HUM 1, Pusa Vishal	HUM-1		JM 721, TARM 1, HUM 6
	Chickpea	48.30	40.80	845	JG 11, JG 63, JG 130	JG 14, JG 130	RVG 203	
	Lentil	21.71	10.71	494	JL 1, JL 3, JL 2, Malika	JL-3		JL-1, JLS 1
	Peas	9.73	4.97	510	Arkel, Azad 1,2 & 3	KPMR-400		JP-885, Azad 1,2& 3
	<b>Total Pulses</b>	<b>111.91</b>	<b>79.42</b>	<b>710</b>				
Mandla	Pigeonpea	6.09	3.63	595	TJT 501, ICPH 2671	TJT-501		ICPL 87119 (Asha)
	Urdbean	1.80	0.50	278	PU 35, PDU 1	KU-96-3		PU 30
	Moongbean	23.70	10.23	432	PDM 139, Pusa Vishal	HUM-1		JM 721, TARM 1, HUM 6
	Chickpea	10.07	6.40	636	JG 315, JG 11, JG 322	JG-14, JG-322		JG 63
	Lentil	23.70	10.23	432	JLS 1 & 2	JL-3		JL-1, Lens 4076
	Peas	25.13	6.17	245	Batri	KPMR 400, Prakash (IPFD 1-10)		Arkel
	<b>Total Pulses</b>	<b>69.45</b>	<b>28.09</b>	<b>405</b>				

Contds....

District	Crop	Area (000 ha)	Prod. (000 Tonnes)	Yield (Kg/ha)	Prevailing varieties	Recommended Pulse Varieties		
						Within 10Years (1999 to 2009)	(>10 Years to 15 years) (2010-2015)	Others
Dindori	Pigeonpea	6.01	2.04	340	TJT 501, Asha (ICPL 87119)	TJT-501		ICPL 87119 (Asha), BSMR-175
	Urdbean	3.73	1.13	304	LBG 20,Desi urd	KU-96-3		PU 30
	Moongbean	39.38	20.80	528	-	HUM-1		HUM 6
	Chickpea	9.17	4.63	505	JG 218, JG 315, JG 130	JG-63		JG 11
	Lentil	39.38	20.80	528	-	IPL-81		L-4076, HUL 57
	Peas	9.87	4.70	476	Local Batri	Ambika		Vikas (IPFD 99-13), Matar-42
	<b>Total Pulses</b>	<b>68.26</b>	<b>33.31</b>	<b>488</b>				
Narsinghpur	Pigeonpea	43.82	48.03	1096	ICPL-87119, TJT-501, Laxmi	TJT-501		ICPL-85063, No.-148
	Urdbean	10.14	3.97	391	PDU1, T-9	KU-96-3		PDU-1, T-9
	Moongbean	2.27	1.00	441	K851, HUM-16, Samrat	HUM-1		PDM-139, K-851, HUM-16
	Chickpea	109.63	114.80	1047	JG 315, JG 16			JG-315, JG 74, JG 16,JG 63
	Lentil	33.80	20.33	602	JL-3, L 4076, JL 1	IPL-81		JL-3, L 4076, K-75
	Peas	12.50	9.37	749	Arkel, Azad 1, Rachna	Ambika		JM-1, JM-2, JM-3, Arkel
	<b>Total Pulses</b>	<b>214.22</b>	<b>198.36</b>	<b>926</b>				
Sagar	Pigeonpea	12.54	5.83	465	TJT 501, ICPL 87119, ICPL 87			JA 4, ICPL 87 (Pragati), JKM 7
	Urdbean	25.14	8.63	343	Pant U-35, PDU 1	KU-96-3		PU 30, VB 3
	Moongbean	3.47	0.90	260	HUM 1, PDM 139	HUM-1		JM 721, Pusa Vishal
	Chickpea	177.60	168.97	951	JG 74, JG 63	JG-130, KAK-2		JG 63, JGG 1
	Lentil	43.38	21.63	499	Kala Masara, JL 3	JL-1		JL-3, PL-8
	Peas	14.23	8.00	562	Arkel, Azad -1	Adarsh (IPFD 25)		JM 6, JM 3
	<b>Total Pulses</b>	<b>280.65</b>	<b>216.69</b>	<b>772</b>				

Contds....

District	Crop	Area (000 ha)	Prod. (000 Tonnes)	Yield (Kg/ha)	Prevailing varieties	Recommended Pulse Varieties		
						Within 10Years (1999 to 2009)	(>10 Years to 15 years) (2010-2015)	Others
Tikamgarh	Pigeonpea	0.17	0.00	28	ICPL 87, ICPL 87119, TJT 501	TJT-501		JKM-7, Asha,
	Urdbean	81.47	16.63	204	PU-35, Shekhar 2	KU-96-3		PU 30, PU 19
	Moongbean	5.23	1.30	248	PU 35, HUM 1	HUM-1		HUM 6, LGG 460
	Chickpea	22.20	14.87	670	Dollar Chana, JG 130, JG 315	JG-14	RVG 202, RVG 203	
	Lentil	4.56	1.25	275	JL 3, JL 2	IPL-81 (Noori)		IPL 406, L 4076
	Peas	8.97	4.77	532	Arkel, Azad 1 & 2	Ambika, Prakash		Rachna, KPMR 522 (Jai)
	<b>Total Pulses</b>	<b>122.69</b>	<b>38.9</b>	<b>345</b>				
Damoh	Pigeonpea	22.79	16.93	743	ICPL-87119, TJT 501, Laxmi			ICPL-87119, Laxmi, JA-4, KM-7
	Urdbean	24.70	9.33	378	T-9, JU-3, PDU-35			TPU-4, PDU-1,
	Moongbean	0.70	0.23	333	K-851, HUM-12, PDM-139	TJM-3		JKM-189, PDM-139
	Chickpea	136.87	106.27	776	JG-315, JG-322, JG-63, JG-74	JG-130, JAKI-9218		JG-11 JG-63
	Lentil	24.19	13.47	557	JLS-1, K-75, JL-3	JL-3		JL-3, PL-4, L-4076
	Peas	13.20	7.03	533	Arkel, JM-1	Ambika, Prakash,		Arkel
	<b>Total Pulses</b>	<b>223.15</b>	<b>159.79</b>	<b>689</b>				
Panna	Pigeonpea	14.52	7.43	512	Asha, Laxmi	JKM-189		ICPL 87, ICPL 87119(Asha)
	Urdbean	12.97	4.80	370	PU-35, Shekhar 2	KU-96-3		PU 30
	Moongbean	2.23	0.93	418	HUM 1, HUM 12, TARM 1	HU- 1		JM 721, TARM 1, HUM 6
	Chickpea	89.03	74.53	837	JG-315, JG-130, JG 322	JG-14	RVG 203	Vishal
	Lentil	38.55	23.88	619	JL-3, K-75			PL-4, K-75
	Peas	21.37	16.50	772	Vikas, KPMR-400, Arkel			Pea-1, JM-3
<b>Total Pulses</b>								

Contd....

District	Crop	Area (000 ha)	Prod. (000 Tonnes)	Yield (Kg/ha)	Prevailing varieties	Recommended Pulse Varieties		
						Within 10Years (1999 to 2009)	(>10 Years to 15 years) (2010-2015)	Others
Chhatarpur	Pigeonpea	12.35	3.18	258	ICPL-87119,ICPL-88039, ICPL 87	TJT-501		JKM-7, UPAS 120, Asha
	Urdbean	71.33	21.03	295	PU-35, LBG-20			PU-35, PU-30, Azad-2
	Moongbean	8.13	2.13	262	TJM-3, K-851, JM 3			PDM-11, HUM-16, Meha, PDM-139
	Chickpea	89.93	92.77	1032	JG-315, JG-130, ICCV-37	JG-14, JG-130		JG-11, JG-16
	Lentil	9.07	2.75	303	JL-3, K 75	JL-3		DPL-62, DPL-15
	Peas	16.20	8.33	514	Vikas, KPMR-400	Adarsh, Prakash		JP-885, KPMR-522
	<b>Total Pulses</b>	<b>207.95</b>	<b>130.43</b>	<b>627</b>				
Rewa	Pigeonpea	34.36	12.56	366	ICPL 87, ICPL 151, TJT 501	TJT-501		ICPL 87119, ICPL 87, ICPL 151, No. 148
	Urdbean	12.33	4.03	327	Pant U-35, T-9, PDU 1	KU-96-3		PU 30, Mash 338
	Moongbean	4.07	0.93	230	HUM 1, HUM 12	HUM-1, Pusa-9531		HUM 6, LGG 460
	Chickpea	52.93	55.00	1039	JG 130, JG 63	JG-14		JG 12, ICCV 2
	Lentil	39.58	12.41	314	JL 2, JL-3	JL-3		L 4076, IPL 316, HUL 57
	Peas	0.87	0.40	462	Pea-1, Arkel, Azad 1 & 2			JM 54, Arkel, JP -885, Azad(P-1)
	<b>Total Pulses</b>	<b>146.74</b>	<b>86.54</b>	<b>589</b>				
Sidhi	Pigeonpea	21.72	6.71	309	TJT 501, ICPL 87119	JKM-189		ICPL 151, ICPL 87119
	Urdbean	4.83	1.80	372	LBG 20	KU-96-3, RBU-38		PU 30, Mash 338,
	Moongbean	2.53	0.83	329	HUM 1, HUM 12	HUM-1		HUM 6, LGG 460
	Chickpea	24.13	15.63	648	JG 130, JG 16	JG-14, KAK-2 JG -322		JG 63
	Lentil	5.47	2.93	536	Malika, Desi variety			PL 639, JL 1, JL 3, K-75, RVL-31
	Peas	0.80	0.33	417	Pea -1, Arkel, Azad 1	Ambika (IM 9102), KPMR-400		KPMR 522, JM 6
	<b>Total Pulses</b>	<b>60.45</b>	<b>28.68</b>	<b>474</b>				

Contd....

District	Crop	Area (000 ha)	Prod. (000 Tonnes)	Yield (Kg/ha)	Prevailing varieties	Recommended Pulse Varieties		
						Within 10Years (1999 to 2009)	(>10 Years to 15 years) (2010-2015)	Others
Singroli	Pigeonpea	19.15	22.20	1159	Asha, Pragati, Jagriti	TJT-501		Pusa 33, JKM 7
	Urdbean	6.47	2.60	402	Desi Urd,T-9	KU-96-3 RBU-38		PU 30, Mash 338
	Moongbean	0.20	0.10	500	K 851, Pusa Vaisakhi	HUM-1		TARM 1, HUM 6, LGG 460
	Chickpea	15.63	24.13	1544	JG 11, JG 14, JG 130	KAK-2,JG 322		JG 16
	Lentil	3.98	3.41	856	JL 3	IPL-81 (Noori), JL-3		L 4076
	Peas	0.87	0.87	1000	Arkel			Pea -1, Azad, Jawahar Matar 1
	<b>Total Pulses</b>	<b>46.49</b>	<b>53.40</b>	<b>1148</b>				
Satna	Pigeonpea	32.28	7.37	228	Jagriti, ICPL 87119, JA 4	JKM-189		ICPL-87119, JKM 7, JA 4
	Urdbean	22.67	4.40	194	PDU 1, PU 35			Pant U-31, AU-86, LBG-20
	Moongbean	4.50	0.87	193	PDM 139, HUM 1			Samrat, Meha, K-851, JM-721
	Chickpea	83.57	42.83	513	JG-315, JG 11, JG 16	JG-14, JG-322		JG-11, JG-63
	Lentil	37.09	11.29	304	JL 1, JL 3	JL-3		JL-1, PL-8
	Peas	4.10	1.47	358	Arkel, Rachna, Azad 1			Arkel, JM-3, JM-2
	<b>Total Pulses</b>	<b>184.20</b>	<b>68.25</b>	<b>371</b>				
Shahdol	Pigeonpea	12.97	6.80	525	ICPL 87119, Pusa 33, JA 4	TJT 501, JKM 7		ICPL 87119, JKM 7
	Urdbean	7.37	3.67	498	T-9, PU 35, PDU 1			JU1, JU-2, Pant U-31
	Moongbean	0.30	0.20	667	K851, HUM 1, PDM 139	TJM-3, HUM-1		HUM-12,
	Chickpea	7.90	6.30	797	JG-16, JG-130, JG-11		Raj Vijay201	JG-315
	Lentil	1.53	1.23	802	K-75, JL-3	JL-3		JL-1, JM-15
	Peas	1.07	0.83	781	Arkel, Rachna	Indra (KPMR-400)		Arkel, KPMR 522
	<b>Total Pulses</b>	<b>85.33</b>	<b>19.20</b>	<b>225</b>				

District	Crop	Area (000 ha)	Prod. (000 Tonnes)	Yield (Kg/ha)	Prevailing varieties	Recommended Pulse Varieties		
						Within 10Years (1999 to 2009)	(>10 Years to 15 years) (2010-2015)	Others
Anuppur	Pigeonpea	6.60	3.22	488	ICPL 87119, JA 4			BSMR 175, ICPL 87119, JKM 7
	Urdbean	2.80	1.37	488	T-9, PDU 1	KU 96-3		PU 30
	Moongbean	0.03	0.00	0.00	K 851, HUM 1, HUM 16	HUM 1		TARM 1, HUM 6, LGG 460
	Chickpea	6.07	3.07	505	JG 130, JG 74, JG 226	JG 130, JG 14, KAK 2, JG 322		
	Lentil	20.23	9.35	462	K-75, L-4076	JL-3		JL-1, K-75, L-4076
	Peas	2.37	1.20	507	Arkel, Rachna	Ambika		JM-2, JM-3, Rachna
	<b>Total Pulses</b>	<b>38.57</b>	<b>55.12</b>	<b>1429</b>				
Umariya	Pigeonpea	11.57	3.52	304	ICPL 87, ICPL 87119, TJT 501			ICPL 87119, JKM 7, ICPL 87,
	Urdbean	3.43	0.57	165	LBG 20, T-9, PDU-1	KU 96-3		PU 30, Mash 338
	Moongbean	0.07	0.00	0.00	HUM 1, PDM 139	HUM 1		HUM 6, LGG 460
	Chickpea	8.43	4.83	573	JG 14, JG 16, JG 63	JG 130		JG 322, JG 63
	Lentil	5.97	3.06	514	Desi Masur, JL 3	IPL 81 (Noori)		JL-3, IPL 406
	Peas	2.47	1.13	459	Arkel, Batri, Azad 2	Adarsh, Ambika		Rachna, JM-3
	<b>Total Pulses</b>	<b>31.94</b>	<b>13.12</b>	<b>411</b>				
Indore	Pigeonpea	0.57	0.30	526	ICPL87,ICPL87119,TJT5 01,			ICPL 87119, BSMR 175, JKM 7
	Urdbean	0.10	0.00	0.00	LBG 20, T-9, PDU 1	KU 96-3		LBG 23, LAM 623, LBG 685
	Moongbean	0.10	0.00	0.00	HUM 12, HUM 1, PDM 139	TJM 3, HUM 1		HUM 6, K-851
	Chickpea	62.73	76.93	1226	JG 218, JAKI 9218, JG 315	KAK 2, JG 14, JG 322		JG 63
	Lentil	0.30	0.11	355	JL 1, Kala Masara	IPL 81 (Noori) JL-3		JLS-3
	Peas	0.80	0.27	333	Arkel, Rachna, JM 3			Pea-1, JM-3, JM-6
	<b>Total Pulses</b>	<b>64.61</b>	<b>76.84</b>	<b>1189</b>				

Contd....

District	Crop	Area (000 ha)	Prod. (000 Tonnes)	Yield (Kg/ha)	Prevailing varieties	Recommended Pulse Varieties		
						Within 10Years (1999 to 2009)	(>10 Years to 15 years) (2010-2015)	Others
Dhar	Pigeonpea	3.48	2.50	718	ICPL 87119, TJT 501	TJT 501		ICPL 87119 (Asha), BSMR 175
	Urdbean	5.80	2.57	443	T-9, PU 35	KU 96-3		RBU-38, LAM 623
	Moongbean	6.20	3.60	581	HUM 1, Pusa Vishal	TJM 3		JM 721, TJM 3, HUM 1, HUM 6
	Chickpea	99.17	112.67	1136	JG 130, JG 322, KAK 2	JG 130, KAK 2, JGK 3, JG 322	RVKG101, RVG 202,	
	Lentil	0.27	0.20	758	JL 1			JL-1, PL-4, RVL-31
	Peas	1.43	0.77	535	Arkel, Rachna			Arkel, Rachna, IPFD 1-10
	<b>Total Pulses</b>	<b>120.01</b>	<b>123.58</b>	<b>1029</b>				
Jhabua	Pigeonpea	2.48	1.35	543	ICPL 87 Laxmi, TJT 501,JKM7			BSMR 736, JA 4, JKM 7
	Urdbean	8.87	4.20	474	Shekhar, T 9, LBG 20	KU 96-3, RBU-38,		LAM 623
	Moongbean	0.43	0.17	385	K 851, JM 721, Pusa Vaisakhi	HUM 1		TARM 2, K-851, JM 721
	Chickpea	19.13	14.30	747	JG 74, JG 14, JG 63, JAKI 9218, JGK 3	JG 130		JG 16, JG 11, JG 218
	Lentil	0.00	0.00	0.00	JL 3, IPL 81	IPL-81, JL-3,		JL-1, L-4076
	Peas	0.20	0.13	667	Arkel, Ambika, Rachna	KPMR 400		Vikas
	<b>Total Pulses</b>	<b>31.95</b>	<b>20.52</b>	<b>642</b>				
Burhanpur	Pigeonpea	3.50	3.51	1003	ICPL-87119 (Asha), ICPL 87			JKM 7, ICPL 87119(Asha)
	Urdbean	1.50	0.53	356	-			-
	Moongbean	0.60	0.20	333	PDM 139, Pusa Vishal	HUM 1		Pusa 105, HUM-12
	Chickpea	3.37	3.57	1059	JG 130, Vishal	KAK-2, JAKI-9218 JG-322		JG-64
	Lentil	0.01	0.01	731		JL-3		L-4076
	Peas	0.00	0.00	0.00	Arkel			Arkel
	<b>Total Pulses</b>	<b>8.98</b>	<b>7.82</b>	<b>870</b>				

Contd....

District	Crop	Area (000 ha)	Prod. (000 Tonnes)	Yield (Kg/ha)	Prevailing varieties	Recommended Pulse Varieties		
						Within 10Years (1999 to 2009)	(>10 Years to 15 years) (2010-2015)	Others
Khargone	Pigeonpea	14.19	6.52	459	ICPL-87119, ICPL 87	TJT-501		BSMR-175
	Urdbean	3.23	0.80	247	T-9, PU 35			JU-3
	Moongbean	7.27	1.93	266	HUM-12, HUM-16, K 851	HUM-1		Pant Mung-3
	Chickpea	13.93	12.57	902	JG-130, JG-11, JG-218	JAKI-9218		Vishal
	Lentil	0.04	0.003	87	-			-
	Peas	0.07	0.00	0.00	Arkel, Hema	Ambika, Prakash		Matar-42
	<b>Total Pulses</b>	<b>39.1</b>	<b>15.83</b>	<b>404</b>				
Barwani	Pigeonpea	4.46	2.11	475	ICPL 87119, JKM 7			JA 4, ICPL 87, ICPL 87119 (Asha)
	Urdbean	6.83	4.90	717	PDM-139, T-9			LAM 623, LBG 685
	Moongbean	5.47	3.10	567	Pusa Vaishaki, JM 4	TJM -3, HUM 1		TARM 2
	Chickpea	4.83	5.13	1062	JG 130, JG 315	JG 130, JG 322		JG 11
	Lentil	0.00	0.00	0.00	JL 3, IPL 81 (Noori), L 4076	IPL 81, JL-3		JL-1, RVL 31, HUL-57
	Peas	0.00	0.00	0.00	Malviya Matar- 15, Arkel	KPMR 400		KPMR 522, JM-6
	<b>Total Pulses</b>	<b>24.69</b>	<b>15.83</b>	<b>641</b>				
Khandwa	Pigeonpea	9.18	6.23	678	Asha (ICPL 87119), TJT 501	TJT 501		JKM 7 ICPL 87119 (Asha)
	Urdbean	2.50	0.70	280		KU 96-3		LAM 623, LBG 685
	Moongbean	2.30	0.60	261	PDM 139, HUM 12	HUM 1		TARM 2, K-851, Pusa Vishal
	Chickpea	18.60	23.97	1289	JG 16, JG 315	JG 130, JG 322	RVG 203, RVG 201, PKV 4	
	Lentil	0.74	0.31	414	JL 3	IPL 81 (Noori), JL-3		IPL-406
	Peas	0.73	0.33	455	Arkel, Desi Batri	Adarsh (IPFD 99-25)		Arkel, Malviya Pea-15
	<b>Total Pulses</b>	<b>34.85</b>	<b>32.29</b>	<b>926</b>				

Contd....



District	Crop	Area (000 ha)	Prod. (000 Tonnes)	Yield (Kg/ha)	Prevailing varieties	Recommended Pulse Varieties		
						Within 10Years (1999 to 2009)	(>10 Years to 15 years) (2010-2015)	Others
Alirajpur	Pigeonpea	2.84	1.14	401	ICPL 87, Asha	TJT 501		ICPL 87119, ICPL 87119(Asha)
	Urdbean	53.73	22.50	419	LBG 20, Uttra	KU 96-3		LAM 623, LBG 685
	Moongbean	1.43	0.47	326	PDM 139, K-851	HUM 1		TARM 2, K-851, Vishal, JM 721
	Chickpea	9.07	6.50	717	JG 16, JG 130	JG 130		JG 16, JG 218, JG 11
	Lentil	0.00	0.00	0.00		IPL 81, JL 3		PL-639, JL 1
	Peas	0.00	0.03	0.00	Arkel	Prakash (IPFD 1-10), Ambika		
	<b>Total Pulses</b>	<b>75.20</b>	<b>34.44</b>	<b>457</b>				
Ujjain	Pigeonpea	1.35	0.77	569	ICPL 87, Laxmi	TJT 501		ICPL 87119,
	Urdbean	2.13	0.80	375	T 9, LBG 20	KU 96-3		LAM 623, LBG 685,
	Moongbean	0.27	0.10	375	K 851, JM 721, Pusa Baisakhi	HUM 1		Vishal, K-851, JM 721
	Chickpea	176.27	154.30	875	JG 74, JAKI 9218	KAK 2, JG 322,		JG 64, JG 16
	Lentil	0.23	0.10	429				K-75, JLS-3
	Peas	0.63	0.27	421	Arkel, Rachna	Adarsh (IPFD 99-25)		Arkel, Rachna, JM-3
	<b>Total Pulses</b>	<b>180.88</b>	<b>156.33</b>	<b>864</b>				
Mandsaur	Pigeonpea	1.00	0.52	525	ICPL 87, Laxmi	TJT 501		JKM 7, ICPL 87119 (Asha),
	Urdbean	14.23	8.07	567	T 9, LBG 20	KU 96-3		TPU 4, LBG 23, LBG 685
	Moongbean	0.70	0.30	429				K-851, TARM 2, Pusa Vishal
	Chickpea	38.60	39.90	1034	JG 74, JG 14	KAK 2, JGK 1, JG 322	PKV 4	
	Lentil	2.93	1.75	598		IPL 81 (Noori), JL-3		
	Peas	0.33	0.20	600	Arkel, Rachna	Adarsh, Prakash, Ambika		
	<b>Total Pulses</b>	<b>57.79</b>	<b>50.74</b>	<b>878</b>				

Contd....

District	Crop	Area (000 ha)	Prod. (000 Tonnes)	Yield (Kg/ha)	Prevailing varieties	Recommended Pulse Varieties		
						(Within 10 Years 1999 to 2009)	(>10 Years to 15 years) (2010-2015)	Others
Neemuch	Pigeonpea	0.51	0.24	469	ICPL 87, Laxmi	TJT 501		ICPL 87119 (Asha)
	Urdbean	3.80	1.60	421	T 9, LBG 20			TPU 2, LAM 623, LBG 685
	Moongbean	0.10	0.00	0.00				K-851, TARM 2, Vishal
	Chickpea	18.30	20.93	1144	JG 74, JG 14, JAKI 9218	KAK 2, JGK 1, JG 322	PKV 4	JG 412
	Lentil	0.46	0.34	729	JL 3, IPL 81	IPL 81, JL-3		
	Peas	0.10	0.07	667	Arkel, Rachna	Adarsh, Prakash, Ambika		
	<b>Total Pulses</b>	<b>23.27</b>	<b>23.17</b>	<b>995</b>				
Ratlam	Pigeonpea	1.16	0.93	797	TJT-501, JKM-7			ICPL-87119,BSMR-175
	Urdbean	6.53	4.70	719	T-9			JU- 2 & 3, KU-91-2 (Azad Urd 1)
	Moongbean	0.87	0.73	846	HUM-1 & HUM-12	TJM-3, HUM-1		HUM-12
	Chickpea	75.57	56.07	742	Vishal, JAKI 9128	KAK-2, JAKI-9218		JG-218, JG-16
	Lentil	0.84	0.50	599	Desi Moong			ML-337, J-45, IPL-316
	Peas	1.53	1.57	1022	Arkel Matar			Arkel Matar
	<b>Total Pulses</b>	<b>86.49</b>	<b>23.17</b>	<b>267</b>				
Shajapur	Pigeonpea	2.66	1.10	413	ICPL 87, Laxmi	TJT 501		ICPL 87119 (Asha)
	Urdbean	2.33	0.57	243	T 9, LBG 20			TPU 4, LBG 23, LAM 623, LBG 685
	Moongbean	0.53	0.13	250	K 851, JM 721			K-851, TARM 2, Vishal
	Chickpea	141.17	100.83	714	JG 74, JG 14, JG 63, JAKI 9218	KAK 2, JGK 1, JAKI 9218	PKV 4	JG 322
	Lentil	10.82	4.40	407	JL 3, IPL 81	IPL 81		JL-4, PL-639
	Peas	0.60	0.27	444	Arkel, Rachna	Ambika		Azad Pea 3
	<b>Total Pulses</b>	<b>158.11</b>	<b>107.30</b>	<b>678</b>				

Contd....

District	Crop	Area (000 ha)	Prod. (000 Tonnes)	Yield (Kg/ha)	Prevailing varieties	Recommended Pulse Varieties		
						Within 10Years (1999 to 2009)	(>10 Years to 15 years) (2010-2015)	Others
Morena	Pigeonpea	7.49	7.88	1052	ICPL 87119, TJT 501	TJT 501		ICPL 87119, JA 4
	Urdbean	0.53	0.27	500	T-9	KU 96-3		LAM 623, LBG 685
	Moongbean	0.47	0.23	500	PDM 139, Pusa Vaishal	TJM -3, HUM 1		JM 721, TARM 2
	Chickpea	7.13	8.41	1179	JG 315, JAKI 9218	JG 130 JAKI 9218,	RVG 201	JG 16, JG 322
	Lentil	0.87	0.51	592		IPL 81 (Noori), JL-3		JL-2, RVL-31
	Peas	0.80	0.57	708	Rachna, Arkel			JM-3, Matar-42, JP 885
	<b>Total Pulses</b>	<b>17.45</b>	<b>17.94</b>	<b>1028</b>				
Aagar**	Pigeonpea	0.00	0.00	0.00	Laxmi, TJT 501	TJT 501		ICPL 87119 (Asha)
	Urdbean	0.00	0.00	0.00	PDU 14, T 9,			TPU 2, LBG 23, LAM 623, LBG 685
	Moongbean	0.00	0.00	0.00	K 851, JM 4, JM 721, Pusa Vaisakhi			K-851, TARM 2, Vishal
	Chickpea	0.00	0.00	0.00	JG 74, JG 14, JG 63, JAKI 9218	KAK 2, JGK 1, JAKI 9218, JG 322	PKV 4	JG 412
	Lentil	0.00	0.00	0.00		IPL 81 (Noori)		JMS-1, JL-4, PL-639
	Peas	0.00	0.00	0.00	Arkel, Ambika, Rachna	Ambika		AP 3, PSM 3
	<b>Total Pulses</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>				
Dewas	Pigeonpea	6.21	3.82	615	TJT 501	JKM 189		ICPL 87119, BSMR 175
	Urdbean	0.17	0.03	200	T 9, LBG 20			PDU-1, LAM 623, LBG 685
	Moongbean	0.20	0.03	167		HUM 1		JM 721, K-851
	Chickpea	127.67	139.80	1095	JG 130, JG 218	JG 130, JGK 3, KAK 2, JG 322		JG 218
	Lentil	0.17	0.13	797		JL-3		PL-8, RVL-31, PL-639
	Peas	1.00	0.70	700	Arkel, Ambika			JP 885, JM-54, Arkel
	<b>Total Pulses</b>	<b>135.58</b>	<b>157.06</b>	<b>1158</b>				

Contd....

District	Crop	Area (000 ha)	Prod. (000 Tonnes)	Yield (Kg/ha)	Prevailing varieties	Recommended Pulse Varieties		
						Within 10 Years (1999 to 2009)	(>10 Years to 15 years) (2010-2015)	Others
Sheopurkal an	Pigeonpea	1.63	1.35	831	ICPL-87119 (Asha)	JKM 189		BSMR 175
	Urdbean	1.70	0.93	549	T-9, Desi	KU 96-3		PDU-1, LAM 623, LBG 685
	Moongbean	0.40	0.23	583		TJM 3, HUM 1		TARM 2
	Chickpea	10.77	15.81	1469	JG-218, JG-322	JG 130, JAKI 9218, JG 322, JG-14	RVG 203	
	Lentil	0.08	0.05	716		JL-3		PL-4, HUL 57
	Peas	0.00	0.00	0.00	Arkil, Azad 2	Adarsh , Prakash		JM-2, Matar-42
	<b>Total Pulses</b>	<b>99.23</b>	<b>91.84</b>	<b>925</b>				
Bhind	Pigeonpea	4.95	3.44	694	Laxmi, UPAS-120	TJT-501		ICPL87119
	Urdbean	1.03	0.30	290	T-9, Shekhar-2			JU-3, JU-86, PU-30
	Moongbean	1.63	1.03	633	HUM-2, PDM-139	TJM-3		JM-721, TM-99
	Chickpea	19.50	25.91	1329	JG-11, JG-315, JG-74	JAKI-9218		JG-16, JG-11
	Lentil	5.83	3.47	596	JLS-1, JL-3	JL-3		JL-1, RVL-31
	Peas	3.10	3.67	1183	Rachna, Arkel			AP-3, JM-6
	<b>Total Pulses</b>	<b>36.05</b>	<b>37.82</b>	<b>1049</b>				
Gwalior	Pigeonpea	0.75	0.30	398	ICPL-87119 (Asha)			CORG-7, ICPL-87119, LRG-41
	Urdbean	5.10	1.70	333	T-9, PU-35			LBG-685, LBG 23
	Moongbean	0.30	0.13	444	TJM-3, PDM-139, Hum-16	HUM 1		K-851, HUM 12
	Chickpea	17.77	26.98	1519	JG-315, JG-63, JG-218, JG-322	JAKI-9218		JG-315, JG218
	Lentil	1.11	0.46	420				HUL-57, Pusa-5
	Peas	2.33	1.17	500	Arkel, Azad 2			Rachna, Arkel, Jawahar Matar 1
	<b>Total Pulses</b>	<b>27.35</b>	<b>30.75</b>	<b>1124</b>				

Contd....

District	Crop	Area (000 ha)	Prod. (000 Tonnes)	Yield (Kg/ha)	Prevailing varieties	Recommended Pulse Varieties		
						Within 10Years (1999 to 2009)	(>10 Years to 15 years) (2010-2015)	Others
Shivpuri	Pigeonpea	1.32	0.45	339	ICPL 87119 (Asha), Laxmi	TJT 501		JKM 7
	Urdbean	20.64	6.90	334	T-9, PU-35	KU 96-3, RBU-38		PDU-1, LBG 23
	Moongbean	4.77	1.60	336	TJM 3, HUM-12	TJM -3, HUM 1		TARM 2
	Chickpea	65.60	80.20	1223	JG 130, JG 322, JAKI 9218	JG 130, JG 322 JAKI 9218	RVG 202	
	Lentil	5.13	1.83	356	Malika Masur, K-75			PL 639, JL 1, K-75, RVL 31
	Peas	1.77	0.87	491	Arkel, Azad 1	Adarsh (IPFD 99-25)		JP 885
	<b>Total Pulses</b>	<b>99.23</b>	<b>91.84</b>	<b>925</b>				
Guna	Pigeonpea	1.58	0.70	444	ICPL 87119 (Asha), Laxmi	TJT 501, JKM-189		Asha, RVICPH 2671
	Urdbean	4.23	2.47	583	T-9, PU-35	KU 96-3, RBU-38		PDU-1, LBG 685
	Moongbean	0.60	0.30	500	K -851	TJM-3, HUM-1	TJM-3	JM-721, TARM -2
	Chickpea	80.57	106.45	1321	JG 130, JG 315	JG 130, JAKI 9218, JG 322	RVG 202	
	Lentil	1.19	0.88	735	IPL 81 (Noori)	JL 3		JL 4, K-75, PI-8, L-4076
	Peas	0.20	0.17	833	Adarsh, Arkel	Adarsh,		Arkel, JP 885
	<b>Total Pulses</b>	<b>88.81</b>	<b>111.14</b>	<b>1251</b>				
Ashoknagar	Pigeonpea	0.90	0.45	506	TJT 501, ICPL 87119 (Asha)	TJT 501		RVICPH 2671, RVA 28, JKM 7,
	Urdbean	52.04	17.57	338	T-9, PU-35	KU 96-3, RBU-38		PDU-1
	Moongbean	1.07	0.47	438	PDM 139, HUM-12	TJM 3, HUM 1	TJM 3	JM 721, TARM 2
	Chickpea	115.77	136.45	1179	JG 130, JG 315	JAKI 9218, JG 322	RVG 202	
	Lentil	22.12	21.79	985	JL 3, PL 8	IPL 81		K-75, IPL-406, L-4076
	Peas	1.83	1.13	618	Arkel, Azad 2 & 3	KPMR 400, Prakash		JP-885, Azad 2
	<b>Total Pulses</b>	<b>194.23</b>	<b>178.28</b>	<b>917</b>				

Contd....

District	Crop	Area (000 ha)	Prod. (000 Tonnes)	Yield (Kg/ha)	Prevailing varieties	Recommended Pulse Varieties		
						Within 10Years (1999 to 2009)	(>10 Years to 15 years) (2010-2015)	Others
Datia	Pigeonpea	0.97	0.44	453	-	-		-
	Urdbean	8.07	2.13	264	T-9, LBG 20			JU-2, PDU-1, PU-30, PU-19
	Moongbean	1.37	0.47	341	PDM-139	TJM-3		PDM-139,
	Chickpea	21.45	27.28	1272	JG-315	JG-130		JG-11, JG-218
	Lentil	3.50	2.34	668	Mallika (K-75)	JL-3		Mallika, IPL-316
	Peas	23.97	38.93	1624	Rachna	Prakash		Vikas (IPFD 99-13), JM-6
	<b>Total Pulses</b>	<b>59.37</b>	<b>71.62</b>	<b>1206</b>				
Bhopal	Pigeonpea	2.43	2.09	860	ICPL-87119, Prabhat			ICPL-87119, ICPL-87119, ICPL-151
	Urdbean	0.30	0.10	333	JU-2, JU-3, Pant U-30	KU-96-3		VB-3, PU-30, LBG-20
	Moongbean	0.30	0.10	333	PDM-11, HUM-12	TJM-3		TMB 37, JM-721, HUM-1
	Chickpea	32.53	41.27	1268	JG-130,11,16&135, Ujjain-21	JG-14, JG-6, JG-226		Vishal, ICCV-2, JG-6, JG-63
	Lentil	2.53	2.89	1141	JL-2, JL-3	IPL-81 (Noori), JL-3		Lens-4076
	Peas	0.97	0.43	448	Arkel, Rachna	KPMR-400, Adarsh (IPFD 99-25)		Arkel
	<b>Total Pulses</b>	<b>39.30</b>	<b>47.15</b>	<b>1199</b>				
Sehore						JKM 189, TJT 501		
	Urdbean	0.47	0.17	357	JU 3, Uttra			JU 3, Uttra
	Moongbean	0.27	0.03	125	HUM 12, HUM 16			HUM 12, HUM 16, PDM 139
	Chickpea	104.98	104.38	994	JG 315, JG 11, JG 130	JG 130		JG 16, JG 315, JG 11
	Lentil	2.90	2.24	773	JL 1, JL 3	JL 3		JL 1, RVL 31, HUL 57
	Peas	1.23	0.57	459	Arkel, Rachna			Arkel, Rachna, JM-3
	<b>Total Pulses</b>	<b>124.16</b>	<b>113.34</b>	<b>912</b>				

Contd....

District	Crop	Area (000 ha)	Prod. (000 Tonnes)	Yield (Kg/ha)	Prevailing varieties	Recommended Pulse Varieties		
						Within 10Years (1999 to 2009)	(>10 Years to 15 years) (2010-2015)	Others
Rajgarh	Pigeonpea	2.58	1.57	609	ICPL-87119, ICPL-85063	TJT-501, JKM-189		JA-4, ICPL-87119, ICPL-85063,
	Urdbean	2.90	1.23	425	T-9, JU-2, JU-3			JU-2, JU-3, TPU-4, JU-88
	Moongbean	0.83	0.33	400	HUM-12 &16, HUM-1	HUM-1		HUM-12 &16, JM-1
	Chickpea	109.75	131.35	1197	JG-322,11, 16,11, 130	JGK-1		JG-16, Vijay Jg-11,
	Lentil	9.60	7.13	743	JL-1, JL-3, Desi Masur	JL-3		JL-1,K-75, IVL-31
	Peas	1.73	1.27	731	Arkel, KPMR-400			Arkel, Azad Pea 3, Pragati, JM-6
	<b>Total Pulses</b>	<b>127.39</b>	<b>142.88</b>	<b>1121</b>				
Raisen	Pigeonpea	31.48	14.23	452	TJT-501,ICPL-87119	TJT 5014		ICPL 87119 (Asha), JA-4
	Urdbean	2.93	0.60	205	JU-2, JU-3, PDU-1, Shekhar 2	KU 96-3		VB 3, PU 30
	Moongbean	1.03	0.23	226	PDM-139, HUM-1	HUM 1		JM 71, Pusa Vishal
	Chickpea	128.05	139.91	1093	JG-16, JG-63, JG-315	JG130, JGK 3, KAK 2, JG 322,	RVG 202,	Vishal,
	Lentil	19.33	11.71	606	JLS-1, JLS-3, Mallika	JL 3		K-75, L-4076
	Peas	7.90	7.03	890	Arkel, Azad-1, Prakash,			Arkil, Malviya Pea 15
	<b>Total Pulses</b>	<b>197.49</b>	<b>180.95</b>	<b>916</b>				
Vidisha	Pigeonpea	3.18	1.85	582	TJT-501,ICPL-87119, Upas-120	TJT-501	TJT-501	ICPL-87119, JA-4
	Urdbean	50.27	27.20	541	PDU-1, Shekhar			JU-2, JU-3, PDU-1
	Moongbean	0.97	0.37	379	PDM-139, HUM-1	TJM-3, HUM-1		PDM-139
	Chickpea	174.85	169.88	972	JG-63, JG-315	JG-226		JG-16 JG-63,
	Lentil	43.15	23.11	536	JLS-1, JLS-3	IPL-81, JLS-3		JLS-1
	Peas	5.07	3.00	592	Arkel, Azad-1	KMPR-400		Arkel, Azad P-1
	<b>Total Pulses</b>	<b>284.82</b>	<b>230.76</b>	<b>810</b>				

Contd....

District	Crop	Area (000 ha)	Prod. (000 Tonnes)	Yield (Kg/ha)	Prevailing varieties	Recommended Pulse Varieties		
						Within 10Years (1999 to 2009)	(>10 Years to 15 years) (2010-2015)	Others
Hosangabad	Pigeonpea	6.61	5.51	834	TJT 501, ICPL 87119	TJT-501		ICPL 87119, ICPL 88039, JA 4
	Urdbean	2.90	1.23	425		KU-96-3		PU 30, MASH 338
	Moongbean	0.10	0.00	0.00	PDM 139, HUM 12	HUM 1		JM 721, TARM 1, HUM 6, LGG 460
	Chickpea	27.81	35.42	1273	JG 11, JAKI 9218, JG 315	JG-130, JG-322	RVG 202, RVG 203	JG 63
	Lentil	0.44	0.21	480		JL-3		JL1, K-75, IPL 406, RVL 31
	Peas	0.67	0.30	450	Arkel. Rachna	KPMR-400		IM 9101 (Subhra), Rachna
	<b>Total Pulses</b>	<b>36.46</b>	<b>41.70</b>	<b>1143</b>				
Harda	Pigeonpea	0.65	0.67	1034		TJT-501		ICPL 87119, JA-4
	Urdbean	0.00	0.00	0.00	T-9, Uttra, IPU-94-1			JU-2, JU-3
	Moongbean	0.00	0.00	0.00	HUM-1, HUM-12	HUM-1		HUM-12, J-45
	Chickpea	23.45	32.78	1398	JG 11, JG 16, JG 130, JAKI 9218	KAK-2, JAKI-9218 JG-322		
	Lentil	0.08	0.04	472	JL 3, Mallika, DPL 62, IPL 81	IPL-81, JL-3		L 4076
	Peas	0.33	0.17	500	Arkel, Azad-1	KMPR-400		Vikas
	<b>Total Pulses</b>	<b>24.54</b>	<b>33.65</b>	<b>1371</b>				
Betul	Pigeonpea	25.82	18.23	706	TJT-501, KP-87119	TJT-501		Pusa -991, JKM-7
	Urdbean	5.19	1.70	327	TU-9, T-9, T-44			JU-1, JU-2
	Moongbean	1.13	0.33	294	HUM-12, HUM-2	J-45, TM-37		J-45, TM-37
	Chickpea	39.68	41.31	1041	JG-11, JG-74, JAKI-9218	JG-130		JG-11
	Lentil	2.47	1.43	580	JL-1, JL-3	JL-1, JL-3		JL-1
	Peas	3.47	1.90	548	Arkel, Ambika			Vikas (IPFD-99-143)
	<b>Total Pulses</b>	<b>78.23</b>	<b>65.08</b>	<b>831</b>				

Note- \*Area, Production and yield -Average from 2011-12 to 2013-14

\*\* - Newly carved district.