

# **NATIONAL FOOD SECURITY MISSION NATIONAL LEVEL MONITORING(NLMT) REPORT**



**STATE-MADHYA PRADESH**

**NLMT-RABI : 2017-18**



सत्यमेव जयते

**GOVERNMENT OF INDIA  
MINISTRY OF AGRICULTURE & FARMERS WELFARE  
(DEPARTMENT OF AGRICULTURE, COOPERATION & FARMERS WELFARE)  
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## **ABBREVIATIONS**

1. AICRP-All India Coordinated Research Project
2. BISA- Borloug Institute for South Asia
3. CCSAMMN- Sub Mission on Climate Change & Sustainable Agriculture Monitoring, Modelling & Network
4. CDDs- Crop Development Directorates
5. CHCs-Custom Hiring Centre
6. CIAE-Central Institute of Agricultural Engineering
7. CIPHET- Central Institute of Post-Harvest Engineering and Technology
8. CSBD-Cropping System Based Demonstration
9. CSS- Central Sponsored Schemes
10. DES- Directorate of Economics and Statistics
11. DFSMEC-District Food Security Mission Executive Committee
12. DSR-Direct Seeded Rice
13. FLD-Front Line Demonstration
14. GPS-Global Positioning System
15. HYV-High Yielding Varieties
16. ICAR-Indian Council of Agricultural Research
17. IGKV- Indira Gandhi KrishiVishvaVidyalaya
18. IPM-Integrated Pest Management
19. KVK- KrishiVigyan Kendra
20. MIDH-Mission for Integrated Development of Horticulture
21. MIS- Micro Irrigation System
22. MSP- Minimum Support Price
23. NCIP-National Crop Insurance Programme
24. NDC-National Development Council
25. NGO- Non Governmental Organization
26. NFSM-National Food Security Mission
27. NFSMEC-National Food Security Mission Executive Committee
28. NLMT-National Level Monitoring Team
29. NMAET - National Mission on Agricultural Extension & Technology
30. NMOOP –National Mission on Oilseeds &Oilpalm
31. NMSA- National Mission for Sustainable Agriculture
32. NRM- Natural Resource Management
33. OFWM-Sub Mission on On Farm Water Management
34. PKVY-ParamparagatKrishiVikasYojana
35. PMIS-Pradhan Mantri Irrigation Scheme
36. PMKSY-Pradhan MantriKrishiSichaiYojna
37. RAD- Rainfed Area Development
38. RCT-Resource Conservation Technology
39. RKVY- RashtriyaKrishiVikasYojana

- 40. RVSKVV- RajmataVijayarajeScindiaKrishiVishwavidyalaya
- 41. SAUs-State Agriculture University
- 42. SDA- State Department of Agriculture
- 43. SFSMEC-State Food Security Mission Executive Committee
- 44. SHC-Soil Health Card
- 45. SHM-Sub Mission on Soil Health Management
- 46. SMAE-ATMA-Sub Mission on Agriculture Extension- Agriculture Technology Management Agency
- 47. SMSP- Sub Mission on Seed and Planting Material
- 48. NeGP- National e-governance Plan
- 49. SI- Statistical Investigator
- 50. SMAM-Sub Mission on Agriculture Mechanization
- 51. SMPP- Sub Mission on Plant Protection
- 52. SRI- System of Rice Intensification
- 53. STA- Senior Technical Assistant
- 54. TA – Technical Assistant

## PREFACE

The Government of India, Department of Agriculture, Co-operation and Farmers Welfare, Ministry of Agriculture & Farmers Welfare is implementing various agricultural/development schemes/ programmes like NFSM (*NFSM-Rice, Wheat, Pulses, Coarse Cereals and Commercial Crops*), NMOOP, BGREI, NMSA, RKVY, PKVY, PMKSY, NMAET (SMAM, SMSP & Extension Reforms/ATMA), NHM, PMFBY, SHC, NAM etc. The major crop development interventions during 2016-17 are through NFSM, NMOOP and RKVY. To effectively monitor the implementation of these interventions at the field level, the GOI has constituted National Monitoring Team (NLMT) under the National Food Security Mission. The NLMT comprises of the Director, Crops Development Directorates (Directorate of Pulses Development) as Convener/Team Leader, 03 Principal/Sr. Scientists as Subject Matter Specialist (SMSs) representing ICAR/SAUs and State Mission Director, NFSM/Nodal Officer.

The Terms of Reference (TOR) of the NLMT suggest mandatory monitoring at least once in each crop season (*Kharif, Rabi & Spring/Summer*); to conduct in-depth inspection of the executed activities in consonance to Mission's mandate vis-a-vis Approved Action Plan and to study the "Local Initiatives"; quantitative and qualitative achievements and impact of the Transfer of Technology (ToT) delivery mechanism in totality taking all CSS/CS/State plan schemes in a district, and providing analytical report on observations and suggestions/recommendations for further necessary corrections at the level of state stake-holders for better implementation of the Mission and desired mandated outcome.

The Team visited in the state of MP between February 19<sup>th</sup>-24<sup>th</sup>, 2018. The composition of the Central Monitoring Team was broad based and included the experts from ICAR/SAUs. The Team interacted with the no. of farmers individually and also by organizing *KisanGosthies* and inspection of demonstration trials/beneficiaries' farmers. The head/Scientists/KVKs of the concerned districts also accompanied the team in a district. The report has tried to capture the impact of NFSM of XII<sup>th</sup> (2012-13 to 2016-17) five year plan in comparison to XI<sup>th</sup> plan (2007-08 to 2011-12).

I am thankful to the Principal Secretary, Agriculture & Director, (Agri.), Govt. of Madhya Pradesh for facilitating the monitoring/visit and the respective Vice Chancellors of RVSKVV, Gwalior and JNKVV, Jabalpur for nominating experts/SMSs to represent the NLMT.

I acknowledge the sincere efforts of my technical officers/team in compilation of the report in its present form.

**Bhopal (M.P.)  
April, 2018**

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

## EXECUTIVE SUMMARY

### **MADHYA PRADESH: REPORT OF THE NATIONAL MONITORING TEAM (NLMT) ON THE IMPLEMENTATION OF NATIONAL FOOD SECURITY MISSION, RABI, 2017-18 (WHEAT, PULSES, COARSE CEREALS AND COMMERCIAL CROPS)**

- **The total seasonal rainfall** during the current SW monsoon (01.06.2017 to 30.09.2017) was 691 mm which is 23% less as against the state's normal rainfall of 898 mm. As per the data, 17 districts received normal and 34 received deficit rainfall.
- The state's normal rabi area is >106 lakh ha. Wheat is a major rabi cereal crop occupying 52% of the total normal area. This year, as per the WWR (Weekly Weather Watch Report), wheat has been planted in 53 lakh ha which is >5% less against the targeted area of 56 lakh ha. The pulses has been planted in >47 lakh ha which is 5 % less against the targeted area of about 50 lakh ha. Gram, the major rabi pulse of the state has been planted in an area of about 36 lakh ha followed by lentil approx. 6 Lha and pea in 5 lakh ha. area respectively. The area under gram has however, been higher against the normal area during the year under report. Rabi crops have been sown in an area of 112.22 lakh ha which is also above the normal (>106 lakh ha) but shorter than targeted area (118.31 lakh ha).
- The concurrent as well as NLMT field visits have revealed an overall satisfactory crop situation, especially the pulses gram, except unseasonal rains/ hailstorm in some pockets of the state (18 districts/ 77 tehsils/ 1386 villages/ 30650 farmers in an area of 47512 ha/) between Feb. 11-13, 2018 and also after April 6<sup>th</sup> to 13<sup>th</sup>.
- The total NFSM allocation for the State during 2017-18 was Rs.628.81 cr (CS Rs.377.28+ SS Rs.251.52 cr). NFSM-Pulses had an amount Rs.386.66 cr (CS Rs. 232.00+SS- Rs. 154.67); Additional Pulses Rs. 173.00 cr (CS- Rs. 103.80 + SS- Rs. 69.20), NFSM-Rice 17.93 cr (CS- Rs10.76 + SS-Rs.7.17); NFSM-Wheat 35.66 cr (CS- Rs -21.39 + SS- Rs.- 14.26); coarse cereals14.22 cr (CS- Rs -8.53 + SS- Rs.5.69), Commercial crops 1.33 cr (CS - Rs. 0.80 + SS- 0.53).
- The production performance from base year 2007-08 to 2017-18 revealed that the cereals, pulses & oilseeds have shown increasing production trend at National level as well as in the State of Madhya Pradesh. Increment observed/noticed many folds in M.P. against the National increment of the production.
- Incorrect toll-free number/non-response, apathy/unavailability of PMFBY agency/representatives in the districts, lacking farmer-wise/ field-wise survey in the event of natural calamity etc are being considered as major bottle necks/constraints to take benefits of PMFBY by the farmers.

- Poor staff strength stagnated promotional prospects and heavy involvement of the field extension functionaries in the revenue/other district/block level activities, not related to agriculture and non-availability of mobility etc., is culminating into a discouraging extension environment, demoralising the district/block level agricultural officials. It is felt that this may lead to the collapse of the technology transfer system/ objectively implementation of crop development programmes etc. *State may take a suitable remedial action to revitalize the extension system at the grass root level.*
- Low average precipitation/erratic rainfall including poor LPA for the last 6-7 years have resulted into depletion of water table/ground water recharge in almost all the 51 districts of MP.
- It is observed that the district is merely confined to distribution part of the given interventions rather than the demonstrating of the technologies.
- For success of Parampragat Krishi Vikas Yojna the training component for cluster farmers/PGS certification/ trainers etc. need more trained resource persons/facilities.
- Recommended inputs cafeteria as per the package of practices need to be insisted for quality technology demonstrations. The in-kind DBT mode for input cafeteria may be thought of by the State Deptt. of Agriculture.
- For effective implementation of RCT/ machineries, the Deputy Director (Agriculture) should be the nodal agency in view of the feedback of the farmers.
- The PMFBY portal should have the provision of login ID for DDA to access effective monitoring at district level; inclusion of insect and diseases as local natural calamity; establishment of insurance company office/ representative and ensured toll-free number for the farmers to respond their complaints in local languages.
- Mobility is a major issue in almost all the districts which has hampered the monitoring of developmental activities.
- It is realized that ***soil and water conservation work*** in convergence with PKSY need to be initiated on priority basis. The district Irrigation Plan (DIP) prepared by the soil conservation section of the DDA, has the provision of rain water harvesting structures, as well. The qualified (degree in Engineering/Agriculture)/competent and experienced staff (ASCO/SCO/Soil Conservation Survey Officers etc.) which have been doing very good work on infrastructure development work/water harvesting structures (Khet-Talab, Balram Talab, stop dam, check dam, rapta-cum-stop dam, cause way-cum-stop dam, irrigation tank etc.) under the water shed development projects/erstwhile NWDPRA etc., is under utilized/ without work. It is suggested that the proposed activities under DIP, RKVY-Holistic Agriculture Development etc. may be implemented through this existing set-up of FW& Agriculture Development Deptt., Govt. of MP.

- An ***‘Impact evaluation study’*** of the agricultural implements/RCT distributed during the last >9 years may be conducted involving the KVKs to know the ***reduction in cost of cultivation, increase in cropping intensity and employment/ income generation*** through mechanisation and hiring of the RCT/ Machineries.
- The team is of considered opinion that ***for effective implementation of PKVY*** and proper capacity building of the cluster farmers, the District Agriculture Officers’ role should be retained upto the level of facilitating trainings, helping the cluster in the availability of market, ensuring the availability of quality bio-organic manures and building the capacity of the group to prepare the bio-intensive pesticides/ bio-fertilizers/ manures etc. It is observed that in some places (Mandla in Jabalpur division), the District Agriculture Officers are involved in the marketing of the produce while, the PKVY cluster/ group is not having their publicity and stake.
- The benefit of the PMFBY and the CSS etc were presently not reaching to the tribal farmers, cultivating lands under FRA (Pattadhari Kisan) owing to non availability of khasra, may be extended to the Vangrams. This issue may be resolved in consultation with the State Dept. of Agriculture and Govt. of India DAC& FW.
- *In Jabalpur and Shahdol divisions, based on the feedback of Baiga tribes, it is suggested that the traditional/ non-descript pigeonpea germplasm, known as baigaani arhar, need to be conserved/propagated under PKVY. The minikit demonstrations, solar fencing and solar tubewell under Mukhyamantri Solar Pump Yojana and also in projectile mode under RKVY or a composite funds/ saving under Local Initiative component of NFSM may be converged with the ongoing tribal development projects to support the Baiga farmers. Every village should be given atleast two solar tubewells and ten minikits demonstrations to motivate the Baiga farmers and upgrade their livelihood and income generation.*
- Many a places, Surajdhara/ Annapurna Yojna scheme of seed distribution is doing very well, however, the benefits are only limited to small and marginal farmers of SC/ST categories. Based on the feedback of field functionaries/ farmers, this scheme may be extended to all the small and marginal farmers irrespective of their category.
- The concurrent as well as the monitoring at the level of national team has revealed that the district and block level extension functionaries, including the contractual arrangement under ATMA and NFSM-PMT, need more facilities/ resources for their capacity building and exposure to the Good Agricultural Practices (GAP). The field functionaries involving implementation of Prampragat Krishi Vikas Yojna (PKVY), Beej Gram Yojna, cropping systems based trainings (CSBD-trainings), cluster demonstrations, Soil Health Card, RKVY-Holistic Agricultural Development and areas of IPM etc should be deputed for orientation training programmes.

- *As a policy decision the NFSM State HQ may be advised to allocate the componential targets to districts based on their potential to implement the particular component.*
- *Inclusion of KRIBHCO/ other Central Seed Producing Agencies under PACs scheme: The Co-operative deptt. of the State Government is implementing the short-term input subsidy scheme since 2015-16 for fertilizers and seeds through the PACs. The scheme has a provision of 10% subsidy, limited to Rs. 10000/- per farmer per year under Mukhyamantri Krishak Sehkari Rin Sahayta Yojna.*
- *The field visit across the state has revealed that the quality seed of pulses was not available to many farmers, however, the seeds/ varieties remained unlifted with the KRIBHCO (Dewas Plant)/ NSC. As a policy decision, the state government should include the KRIBHCO/ HIL/ NAFED/ etc. (any other reputed seed producing agencies) to be considered for Mukhyamantri Krishak Sehkari Rin Sahayta Yojna. It is noted that these central agencies are also taking the seed production programme with the funding support of the Govt. of India under NFSM-Pulses.*
- *All schemes are DBT compliant viz. NFSM, NMOOP and PMKSY are under implementation in DBT compliant. However, due to DBT, expenditure under various interventions (with 50% subsidy) has reduced to negligible due to non-availability of bills from the beneficiaries. It is also realized that the demonstrations are not being organized as full package with quality.*

# **NATIONAL MONITORING TEAM (NLMT) REPORT ON THE IMPLEMENTATION OF NATIONAL FOOD SECURITY MISSION, RABI, 2017-18 (WHEAT, PULSES, COARSE CEREALS AND COMMERCIAL CROPS) IN THE STATE OF MADHYA PRADESH**

## **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 87 kg (612 kg to 699 kg/ha) while increase in wheat and rice was 469 kg (3177 kg/ha) and 272 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 NFSM (2012-13 to 2016-17), revamped from 2014-15 and is under implementation with 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 MT over XI Plan comprising Rice-10 million tonnes, Wheat- 08 million tonnes, Pulses-04 million tonnes & Coarse Cereals-03 million tonnes, is targeted to be achieved at the end of 12<sup>th</sup> Plan (2016-17). The II<sup>nd</sup> advanced estimate of 2017-18 records a total foodgrains production of 277.49 MT comprising wheat (97.11 MT) Rice (111.01 MT), Pulses (23.95 MT) and Coarse Cereals (45.42 MT). An Additional increase of 2.23, 5.71, 6.86 and 3.41 million tonnes under wheat, rice, pulses and coarse-cereals respectively was recorded. A comparatively less than the targeted production in wheat and rice may be attributed to poor/erratic rainfall and dry spell in major producing states.
  - 1.2.3** The existing Centrally Sponsored Scheme 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). From 2016-17, the revamped NFSM under State Plan Scheme – Krishi Unnati Yojana (State Plan) with interim sharing pattern of 60:40 between Central and State is under implementation in 29 states. All India a total allocation of Rs. 3097.39 Crores with a central share- Rs. 1947.23 and state share-Rs. 1150.16 crores was approved during 2017-18,

comprises for Pulses Rs. 1638.06 crores (central-1016.10 + state-621.96 crores); Additional Pulses 491.99 crores (central-298.49 crores + state -193.49 crores); Rice Rs. 497.86 crores (central-328.37+ state-169.50 crores); Wheat Rs. 196.47 crores (central- 123.87+ state- 72.60) crores; Coarse cereals 236.44 crores (central- 156.77+ state- 79.68 crores) and Commercial crops 36.57 crores (central-23.64 + state-12.93 crores).

1.2.4 The total NFSM allocation For Madhya Pradesh during 2017-18 was Rs.628.81 crores (GoI Rs.377.28+ state Rs.251.52 crores). NFSM-Pulses had an amount Rs.386.66 crores (GoI Rs. 232.00+State- Rs. 154.67); Additional Pulses Rs. 173.00 crores (GoI Rs. 103.80 + State- Rs. 69.20), NFSM-Rice 17.93 crores (GoI Rs10.76 + State-Rs.7.17); NFSM-Wheat 35.66 crores (GoI Rs –21.39 + State Rs.- 14.26); coarse cereals14.22 crores (GoI Rs –8.53 + State Rs.5.69), Commercial crops 1.33 crores (GoI – Rs. 0.80 + State-0.53 crores).

1.3 The Mission has a basic strategy 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 are necessary for Cropping System Based Demonstrations (CSBD) with technical backstopping of ICAR/ (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 9% 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 effects of climate change for high productivity areas, value chain integration (FPOs) and assistance to Custom Hiring Centre (CHCs).

1.3.2 To ensure equity, of the total budgetary allocation to a district, proportionate expenditure under Special Component Plan (SCP) for SCs, Tribal Sub-Plan (TSP) – SMF and Women farmers at 16%, 8%, 33% and 30% respectively is mandatory.

1.3.3 Strengthening of infrastructure at ICAR/SAUs/ATARI/KVKs by *Breeder seed production programme, Seed hubs, Establishment/Strengthening of Bio-fertilizer & Bio-control production units & Cluster Front Line Demonstrations.*

## 2. AREA OF OPERATION (2017-18)

Sl. No.	Commodities(Crops) /districts Criteria	All India		Madhya Pradesh Districts (nos.)
		States (nos.)	Districts (nos.)	
i.	NFSM-Wheat <ul style="list-style-type: none"> <li>General states- (A &gt;50000 ha; Y&lt; state's ave.)</li> <li>Hill States- (A &gt;15000 ha) (HP, J&amp;K and UK)</li> </ul>	11	126	16
ii.	NFSM- RICE <ul style="list-style-type: none"> <li>General states- (A &gt;50000 ha; Y&lt; state's ave.)</li> <li>Hill States- (A &gt;15000 ha) (HP, J&amp;K and UK)</li> <li>NE states (except Assam) – (A- with atleast 5000 ha)</li> </ul>	25	206	8
iii.	NFSM-Pulse (All districts)	29	638	51
iv.	NFSM- Coarse cereals ( <i>maize, small millet, pearl millet etc.</i> ) (districts covering 70% of total state's area)	28	265	16
v.	NFSM-Commercial Crops <ul style="list-style-type: none"> <li>Cotton</li> <li>Sugarcane</li> <li>Jute</li> </ul>	15 13 09		10 13 -

(A-Area; Y- Yield)

## 3. MONITORING MECHANISM / MISSION STRUCTURE

Monitoring	Body	Composition	Review Meeting / Visit
National Level	i) General Council (GC)	Minister of Agriculture - Chairman Mission Director - Member (NFSM) Secretary	Twice a year
	ii) NFSM- Executive Committee (NFSMEC)	Secretary (DAC&FW)- Chairman Secretary (DARE)&DG (ICAR) Secretary (MoWR) / (Deptt. of Fertilizer) / (MoPR)/(MoTA)/(Deptt. of Social Justice & / Empowerment) / (MoW&CD) Adviser (Agriculture), NITI AYO Agriculture Commissioner Five Experts - Member Mission Director - Member Secretary	Quarterly
	iii) National Level Monitoring Team (NLMT)	Director CDDs- Co-ordinator Scientist SAUs/JDA –Member	Twice a year (Kharif + Rabi)

Monitoring	Body	Composition	Review Meeting /Visit
State Level	State Food Security Mission Executive Committee (SFSMEC)  Monitoring Committee	Chief Secretary – Chairman  State Mission Director - Member Secretary State Mission Director – Chairman SAU – Member DPD/CDD Govt. of India – Member SSC – Member State Certification – Member Lead Bank – Member NABARD – Member IIS/CIAE/NISR/DWR - Member	Twice a year (Kharif + Rabi)
District Level	District Food Security Mission Executive Committee (DFSMEC)	District Collector/CEO-Chairman Jila Parishad DDA/DAO- Member Secretary	Quarterly

#### 4. COMPOSITION OF NLMT

S. No.	Organization	Names and Designation
i.	Government of India, Department of Agriculture, Cooperation & Farmer's Welfare, (Ministry of Agri. & FW) Directorate of Pulses Development Vindhyachal Bhavan, Bhopal (M.P.)	Dr. A.K. Tiwari Director Email- <a href="mailto:dpd.mp@nic.in">dpd.mp@nic.in</a> Mobile - 9425010489 –Convenor and Team leader
ii.	Rajmata Viharaje Krishi Vishwavidalya RAK, CoA, Sehore (MP)	Dr. Sandip Sharma Principal Scientist (Plant Protection) Email- <a href="mailto:sharma.sandeep1410@gmail.com">sharma.sandeep1410@gmail.com</a> Mobile-9303133157 - Member
iii.	Rajmata Viharaje Krishi Vishwavidalya College of Agriculture, Indore (MP)	Dr. V.P.Katariya Senior Scientist(Milletts) Email <a href="mailto:vijaypal.kataria@yahoo.com">vijaypal.kataria@yahoo.com</a> Mobile- 9827734696 - Member
v.	Government of Madhya Pradesh Deptt. of Farmers Welfare and Agriculture Development, 2 <sup>nd</sup> floor Vindhyachal Bhavan, Bhopal- 462004 (Jabalpur & Shehdol Division)	Mission Director (represented by Joint Director, Jabalpur & Shehdol Division)) E-mail- <a href="mailto:diagri@mp.gov.in">diagri@mp.gov.in</a> <a href="mailto:dagnfsm@mp.gov.in">dagnfsm@mp.gov.in</a> <a href="mailto:zmagrijb@mp.gov.in">zmagrijb@mp.gov.in</a> <a href="mailto:zmagrishd@mp.gov.in">zmagrishd@mp.gov.in</a> Phone-0755-2551336/ 07652&240005 - Member

## 5. STATE PROFILE

Particulars		Status			
Population	(crore)	7.27 (male- 3.77, female-3.50)			
Population growth	(%)	20.35 – 2011			
Revenue districts	(nos.)	51			
Block/ Janpad Panchayat	(nos.)	313 (89 tribal blocks)			
Village Panchayats	(nos.)	23006			
Tehsils	(nos.)	364			
Total Villages	(nos.)	54903			
Krishi Upaj Mandi	(nos.)	520			
Annual Rainfall	(ave.)	1200 mm			
Land Use Pattern (Area : lakh ha)					
Geographical Area	307.56	Net sown area		154.55	
Cultivable area	158.72 (51.60%)	Double Cropped Area		77.78	
Forest area	85.88 (27.92%)	Gross cropped area		232.33	
Land under non-agricultural use	19.92 (6.48%)	Kharif Area		123.04	
Permanent pastures	13.48 (4.38%)	Rabi Area		106.42	
Cultivable wasteland	8.67 (2.82%)	Cropping Intensity		156 %	
Barren and uncultivable land	14.06 (4.57%)				
Current fallows	7.69 (2.50%)				
Particulars		Status			
Operational Land Holding (Census,2011)(Area: lakh ha, Nos.- lakh)					
Average Size of Social Groups		Avg. Size (ha)		Numbers	
Marginal (< 1 ha)		0.49		38.91 (43.85%)	
Small(1 to 02 ha)		1.42		24.49 (27.60%)	
Semi Medium (02 to 04 ha)		2.73		16.55 (18.65%)	
Medium(04 to 10 ha)		5.76		7.89 (8.90%)	
Large (10 ha & Above)		15.73		0.89 (1.00%)	
Total		1.78		88.73	
Irrigation (Area: lakh ha)		Sources of Irrigation		Area : lakh ha	
Net irrigated area	95.84 (64%)	Canals		10.91 (17.14 %)	
		Tanks		1.49 (2.34 %)	
		Open wells		24.03 (37.75%)	
Gross irrigated area	89.65	Bore wells/ Tube Wells		17.93 (28.17%)	
Rainfed area	60%	Other Sources		9.29 (14.60 %)	
		Total Irrigated Area		63.65	
Soil Type (Area - lakh ha)					
Alluvial Soil	33.5 (11%)	Deep Medium black soils		162.1 (53%)	
Shallow & Medium Black Soil	30.6 (10%)	Mixed Red &Black Soil		81.1 (26%)	
Major Agricultural Crops					
Kharif	Soybean (42%), Paddy (16%), Pigeonpea (6%), Urdbean (9%), Moongbean, Maize (9%), Jowar, Cotton				
Rabi	Wheat (55%), Gram (28%), Lentil (5%) , Field Pea (2%), Mustard (7%), Linseed (1%)				
Development Programme CSS / CS					
NFSM	NFSM-Paddy (8) ; Wheat (16) ; Pulses (51); Coarse Cereals (16); Cotton (10); Sugarcane (13) PMT District-51				
NMOOP	Mini Mission I- (Oilseeds) Mini Mission III- (TBOs)				
Production Ranks (%)	I – Pulses -32 ; Gram -41; Lentil - , Linseed- 49				

	<p>Oilseeds -24; Soybean -48, Niger-35 Mandarin; Tomato; Garlic</p> <p>II – Wheat, Maize -13, Arhar-20; Sesame-25; Pea -27; Rapeseed/Mustard-13; Aonla, Guava; Onion; Peas; chillies</p> <p>III – Milk production, Coriander, Cauliflower</p>
<b>State Initiative – 2017 - 18 (Bhavantar)</b>	<p>Beneficiaries : 10.51 Lakhs Disbursement : 1566 .00 Crore</p> <p>Bonus      Wheat- (MSP- Rs. 1733/qtls)      @ Rs. 265/qtls                  Gram- (MSP- Rs 4400/-qtls)                  Lentil- (MSP- Rs. 4250/-qtls)      @ Rs. 100/qtls                  Mustard- (MSP- Rs. 4000/qtls)</p> <p>Compensation for Hailstorm (&gt;50% affected crops) MMKUY Irrigated @ Rs. 30000/ha Unirrigated @ Rs. 16000/ha</p>

## 6. MAJOR CROPS SCENARIO: PLAN ANALYSIS

### 6.1 Kharif Crops

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

S. No.	Crops	Districts/ State	XI Plan (2007-08 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>A.</b>	<b>Cereals</b>										
1	Paddy	MP	15.90	16.56	1041	20.50	33.90	1654	28.9	104.7	59
		<b>All India</b>	<b>392.15</b>	<b>834.02</b>	<b>2127</b>	<b>395.39</b>	<b>925.94</b>	<b>2342</b>	<b>0.8</b>	<b>11.0</b>	<b>10</b>
2	Jowar	MP	4.54	5.89	1297	2.37	4.20	1775	-47.9	-28.7	37
		<b>All India</b>	<b>30.65</b>	<b>33.33</b>	<b>1087</b>	<b>22.34</b>	<b>22.63</b>	<b>1013</b>	<b>-27.1</b>	<b>-32.1</b>	<b>-7</b>
3	Bajra	MP	1.72	2.79	1616	2.30	4.84	2103	33.6	73.9	30
		<b>All India</b>	<b>91.23</b>	<b>92.02</b>	<b>1009</b>	<b>74.03</b>	<b>89.95</b>	<b>1215</b>	<b>-18.9</b>	<b>-2.3</b>	<b>20</b>
4	Maize	MP	8.49	11.32	1333	10.41	22.04	2117	22.6	94.7	59
		<b>All India</b>	<b>71.48</b>	<b>149.29</b>	<b>2089</b>	<b>74.27</b>	<b>170.79</b>	<b>2300</b>	<b>3.9</b>	<b>14.4</b>	<b>10</b>
5	Small millet	MP	2.80	0.84	300	1.90	0.92	483	-32.3	8.88	61
		<b>All India</b>	<b>8.75</b>	<b>4.54</b>	<b>519</b>	<b>6.59</b>	<b>4.17</b>	<b>633</b>	<b>-24.7</b>	<b>-8.2</b>	<b>22</b>
6	Kharif CC	MP	17.56	20.84	1187	17.01	32.01	1869	-3.2	53.6	58
		<b>All India</b>	<b>215.11</b>	<b>299.58</b>	<b>1393</b>	<b>188.60</b>	<b>305.19</b>	<b>1623</b>	<b>-12.3</b>	<b>1.9</b>	<b>17</b>
<b>7</b>	<b>Total Cereals</b>	<b>MP</b>	<b>33.47</b>	<b>37.41</b>	<b>1118</b>	<b>37.51</b>	<b>65.91</b>	<b>1757</b>	<b>12.1</b>	<b>76.2</b>	<b>57</b>
		<b>All India</b>	<b>607.26</b>	<b>1133.61</b>	<b>1867</b>	<b>583.99</b>	<b>1231.13</b>	<b>2108</b>	<b>-3.8</b>	<b>8.6</b>	<b>13</b>
	<i>*Kharif Coarse Cereals incl. (Jawar, Bajra, Maize, Ragi, Small Millets)</i>										
<b>B.</b>	<b>Pulses</b>										
1	Arhar	MP	4.06	2.57	632	5.57	5.20	934	37.1	102.7	48
		<b>All India</b>	<b>37.89</b>	<b>26.64</b>	<b>703</b>	<b>41.90</b>	<b>32.88</b>	<b>785</b>	<b>10.6</b>	<b>23.4</b>	<b>12</b>
2	Urd	MP	5.15	1.83	354	8.38	4.64	553	62.6	153.9	56
		<b>All India</b>	<b>23.05</b>	<b>10.90</b>	<b>473</b>	<b>26.99</b>	<b>14.72</b>	<b>545</b>	<b>17.1</b>	<b>35.0</b>	<b>15</b>
3	Moong	MP	0.83	0.27	328	1.49	0.72	482	79.9	164.4	47
		<b>All India</b>	<b>26.41</b>	<b>10.49</b>	<b>397</b>	<b>24.93</b>	<b>10.50</b>	<b>421</b>	<b>-5.6</b>	<b>0.1</b>	<b>6</b>
4	Kulthi	MP	0.23	0.07	301	0.17	0.06	385	-28.3	-8.2	28
		<b>All India</b>	<b>3.29</b>	<b>1.43</b>	<b>433</b>	<b>2.40</b>	<b>1.10</b>	<b>460</b>	<b>-27.2</b>	<b>-22.7</b>	<b>6</b>
<b>5</b>	<b>Total Pulses</b>	<b>MP</b>	<b>10.32</b>	<b>4.75</b>	<b>460</b>	<b>15.82</b>	<b>10.76</b>	<b>680</b>	<b>53.3</b>	<b>126.5</b>	<b>48</b>
		<b>All India</b>	<b>111.49</b>	<b>57.33</b>	<b>514</b>	<b>111.92</b>	<b>65.90</b>	<b>589</b>	<b>0.4</b>	<b>14.9</b>	<b>14</b>
	<i>*Other Pulses incl.(Mothbean, Other &amp; Other Pulses)</i>										
<b>C.</b>	<b>Oilseeds</b>										
1	Soybean	MP	53.45	61.37	1148	58.45	62.76	1074	9.3	2.3	-6
		<b>All India</b>	<b>95.67</b>	<b>111.58</b>	<b>1166</b>	<b>112.90</b>	<b>118.57</b>	<b>1050</b>	<b>18.0</b>	<b>6.3</b>	<b>-10</b>
2	Groundnut	MP	2.00	2.56	1277	2.27	3.48	1533	13.3	36.1	20
		<b>All India</b>	<b>49.01</b>	<b>57.20</b>	<b>1167</b>	<b>41.96</b>	<b>57.52</b>	<b>1371</b>	<b>-14.4</b>	<b>0.6</b>	<b>17</b>
3	Sesamum/ Til	MP	2.46	1.12	456	3.37	1.75	519	37.2	56.2	14
		<b>All India</b>	<b>19.07</b>	<b>7.38</b>	<b>387</b>	<b>17.58</b>	<b>7.84</b>	<b>446</b>	<b>-7.8</b>	<b>6.3</b>	<b>15</b>
4	Niger/ Ramtil	MP	1.15	0.24	212	0.72	0.25	352	-37.4	4.2	67
		<b>All India</b>	<b>3.82</b>	<b>1.06</b>	<b>278</b>	<b>2.69</b>	<b>0.87</b>	<b>323</b>	<b>-29.5</b>	<b>-18.3</b>	<b>16</b>
5	Castor	MP	0.012	0.004	356	0.05	0.02	442	318.6	420.0	24
		<b>All India</b>	<b>9.48</b>	<b>13.76</b>	<b>1451</b>	<b>10.46</b>	<b>17.38</b>	<b>1661</b>	<b>10.4</b>	<b>26.3</b>	<b>14</b>
6	Sunflower	MP	0.002	0.001	444	0.01	0.01	1905	191.7	1150.0	329
		<b>All India</b>	<b>5.13</b>	<b>2.75</b>	<b>535</b>	<b>2.08</b>	<b>1.15</b>	<b>552</b>	<b>-59.4</b>	<b>-58.2</b>	<b>3</b>
<b>7</b>	<b>Total Oilseeds</b>	<b>MP</b>	<b>59.07</b>	<b>65.30</b>	<b>1105</b>	<b>64.86</b>	<b>68.27</b>	<b>1053</b>	<b>9.8</b>	<b>4.6</b>	<b>-5</b>
		<b>All India</b>	<b>182.19</b>	<b>193.73</b>	<b>1063</b>	<b>187.77</b>	<b>199.83</b>	<b>1064</b>	<b>3.1</b>	<b>3.2</b>	<b>0</b>
<b>D</b>	<b>Cotton</b>	MP	6.44	13.15	347	5.67	20.50	615	-12.0	55.9	77
		<b>All India</b>	<b>104.73</b>	<b>280.76</b>	<b>456</b>	<b>118.95</b>	<b>336.33</b>	<b>481</b>	<b>13.6</b>	<b>19.8</b>	<b>5</b>

### **KHARIF CROPS : XI<sup>th</sup> – XII<sup>th</sup> PLAN PERFORMANCE**

The comparative analysis of crop performance during the XI<sup>th</sup> Plan period and XII<sup>th</sup> Plan period reveal that the NFSM interventions since XII<sup>th</sup> Plan Paddy has paid dividends in area and production amongst cereals which is 28% and 104% ; Urd in pulses (62% & 153%); Castor and Sunflower in oilseeds (318% & 420 % and 192% & 110%) higher during XII<sup>th</sup> plan over its previous five year Plan and also seen under maize (22 %, 94%) and Arhar (37%, 102%) crop with an increase in area&production respectively. The crops replaced through diversification in kharif season are Jowar (>47%) Small Millets (>32%), Kulthi (>28%), Niger (>37%) and Cotton (>12%),of concerned here. Reduction in area under Urd and Kulthi is a major cause of concern. The production trend for kharif crops has shown an increasing trend in Paddy, Maize, Urd, Tur and Sunflower. As regards the per hectare yield, quantum jump has been recorded under Sunflower, Cotton, S. Millets, Maize and Urd at >329, 77, 61, 59 and 56% respectively.

## 6.2 Rabi Crops

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

S. No.	Crops	Districts/ State	XI Plan (2007-08 to 2011-12)			XII Plan (2012-13 to 2016-17)			Increase/decrease over XI Plan (%)		
			A	P	Y	A	P	Y	A	P	Y
A.	Cereals										
1	Wheat	MP	42.07	80.26	1908	57.24	157.60	2753	36.1	96.4	44
		All India	286.36	843.62	2946	306.27	945.81	3088	7.0	12.1	5
2	Maize	MP	0.00	0.00	0.00	0.21	0.76	3619			
		All India	12.30	48.49	3944	16.46	67.52	4103	33.8	39.2	4
3	Barley	MP	0.75	1.02	1363	0.94	1.66	1772	25.2	62.7	30
		All India	6.56	15.04	2292	6.64	16.76	2523	1.2	11.4	10
4	Jowar	MP	0.03	0.03	1325	0.01	0.01	1438	-68.3	-65.6	8
		All India	42.77	36.38	851	37.40	27.52	736	-12.6	-24.3	-13
5	Tot. Rabi Cereals	MP	42.84	81.31	1898	58.69	160.73	2739	37.0	97.7	44
		All India	392.32	1081.93	2758	408.37	1194.62	2925	4.1	10.4	6
B.	Pulses										
1	Urd	MP	0.07	0.02	348	0.17	0.14	868	141.2	501.7	149
		All India	7.74	4.05	524	8.13	6.10	749	5.08	50.4	43
2	Moong	MP	0.03	0.01	239	1.40	0.76	540	4420.6	10128.0	126
		All India	6.46	2.80	434	9.62	5.60	582	48.9	99.9	34
3	Gram	MP	29.04	27.60	951	30.76	33.97	1104	5.9	23.0	16
		All India	82.18	72.42	881	89.45	84.25	942	8.8	16.3	7
4	*Total Pulses	MP	37.47	31.24	834	52.38	49.95	954	39.8	59.9	14
		All India	128.91	101.58	788	140.85	122.95	873	9.3	21.0	11
	*Total Pulses incl. (Kulthi, Lentil, Lathyrus, Peas and Other Pulses)										
C.	Oilseeds										
1	Rapeseed /Mustard	MP	7.22	7.69	1065	7.17	8.20	1144	-0.8	6.6	7
		All India	61.01	68.85	1128	61.19	73.97	1209	0.3	7.4	7
2	Linseed	MP	1.19	0.46	390	1.14	0.58	507	-4.2	24.5	30
		All India	3.80	1.57	413	2.93	1.46	498	-22.8	-6.9	21
3	Safflower	MP	0.004	0.001	263	0.14	0.08	593	3547.4	8120.0	125
		All India	2.79	1.78	636	1.60	0.91	568	-42.7	-48.8	-11
4	Total Oilseeds	MP	8.42	8.16	969	8.44	8.86	1049	0.3	8.6	8
		All India	85.29	95.54	1120	77.32	94.22	1219	-9.3	-1.4	9
D	Sugarcane	MP	0.68	28.07	41023	0.88	40.29	45926	28.2	43.5	12
		All India	47.14	3257.87	69118	48.80	3429.12	70265	3.5	5.3	2
E	Jute & Mesta	MP	0.05	0.03	103	0.06	0.05	154	24.7	86.0	49
		All India	9.09	110.84	2194	8.39	110.67	2375	-7.8	-0.2	8

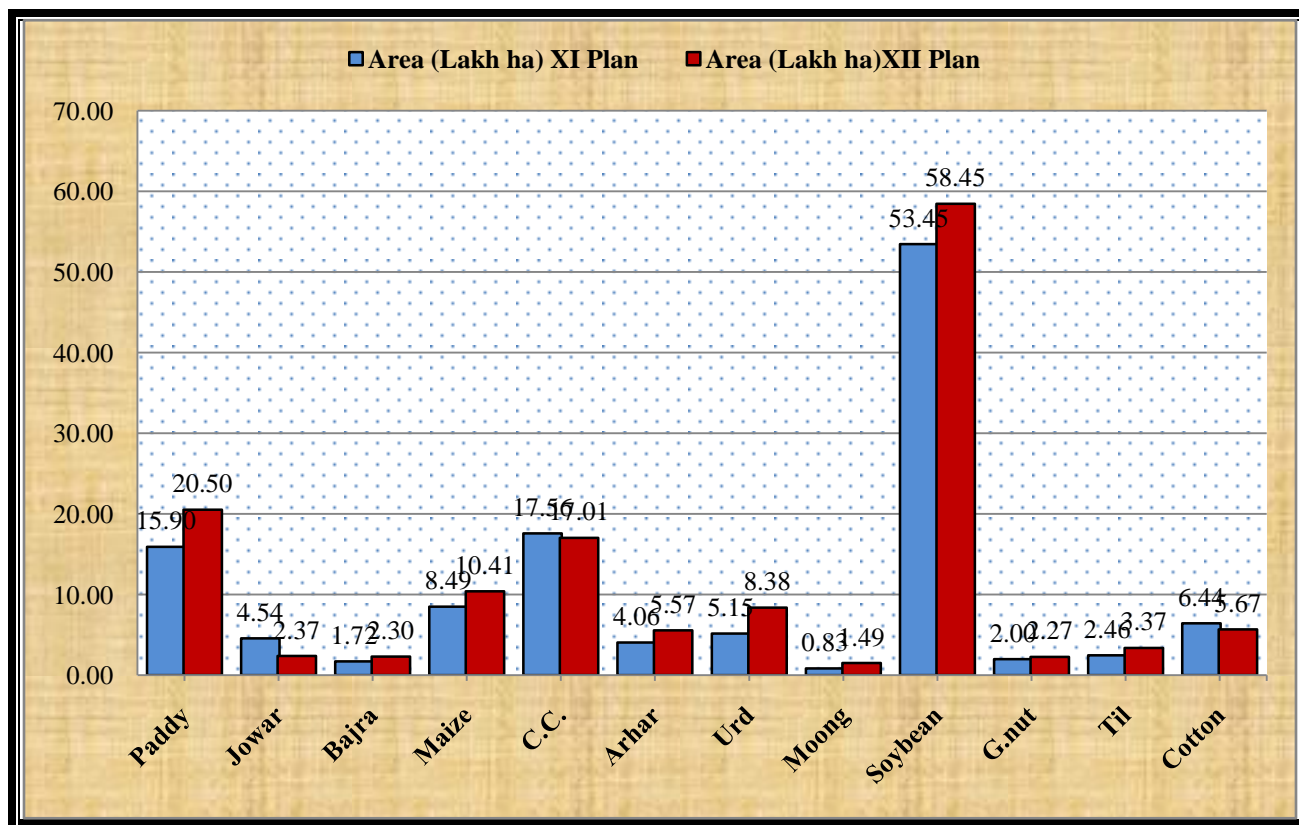
Source: DES, M/A& FW, GoI \* IV<sup>th</sup> Advance estimate of 2016-17

### RABI CROPS : XI<sup>th</sup> – XII<sup>th</sup> PLAN PERFORMANCE

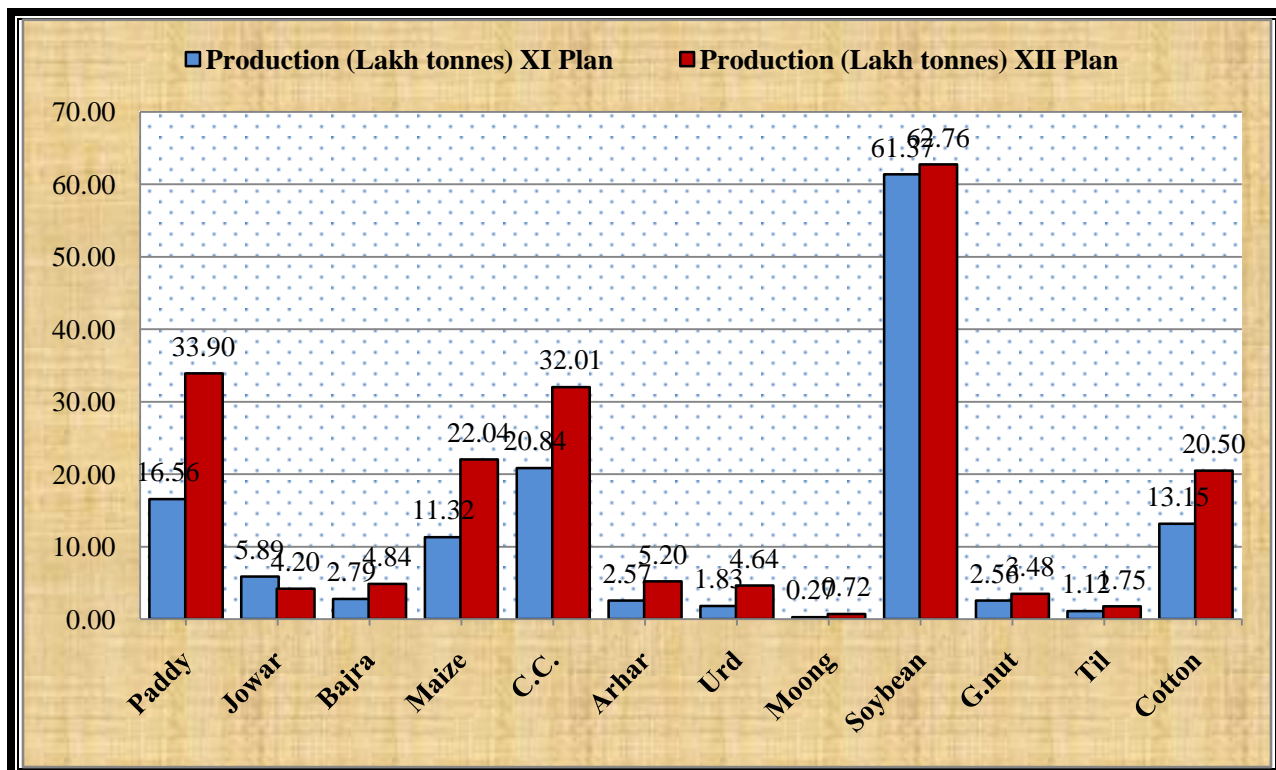
The comparative analysis of crop performance during the XI<sup>th</sup> Plan period and XII<sup>th</sup> Plan period reveal that the NFSM interventions since XII<sup>th</sup> Plan Mung has paid dividends in area and production amongst pulses which is 4420% and 10128% and Urd (141% & 507%); Safflower in oilseeds (3547% & 8120%) higher during XII<sup>th</sup> plan over its previous five year Plan and also seen under wheat (36%, 96%) and Gram(5%, 23%) crop with an increase in area & production respectively. The crops replaced through diversification in rabi season are Jowar (>68%) and Linseed (>4%) concerned here. The production trend for rabi crops has shown an increasing trend in Wheat, Barley, Urd, Mung, Gram, Sugarcane & Jute & Mesta. As regards the per hectare yield, quantum jump has been recorded under Safflower, Urd, Mung, Wheat, Barley, Gram and Linseed and at >125%, 149, 126, 44, 30, 16, 30 and respectively.

## CROPS SCENARIO: KHARIF (XI<sup>th</sup>-XII<sup>th</sup> PLAN)

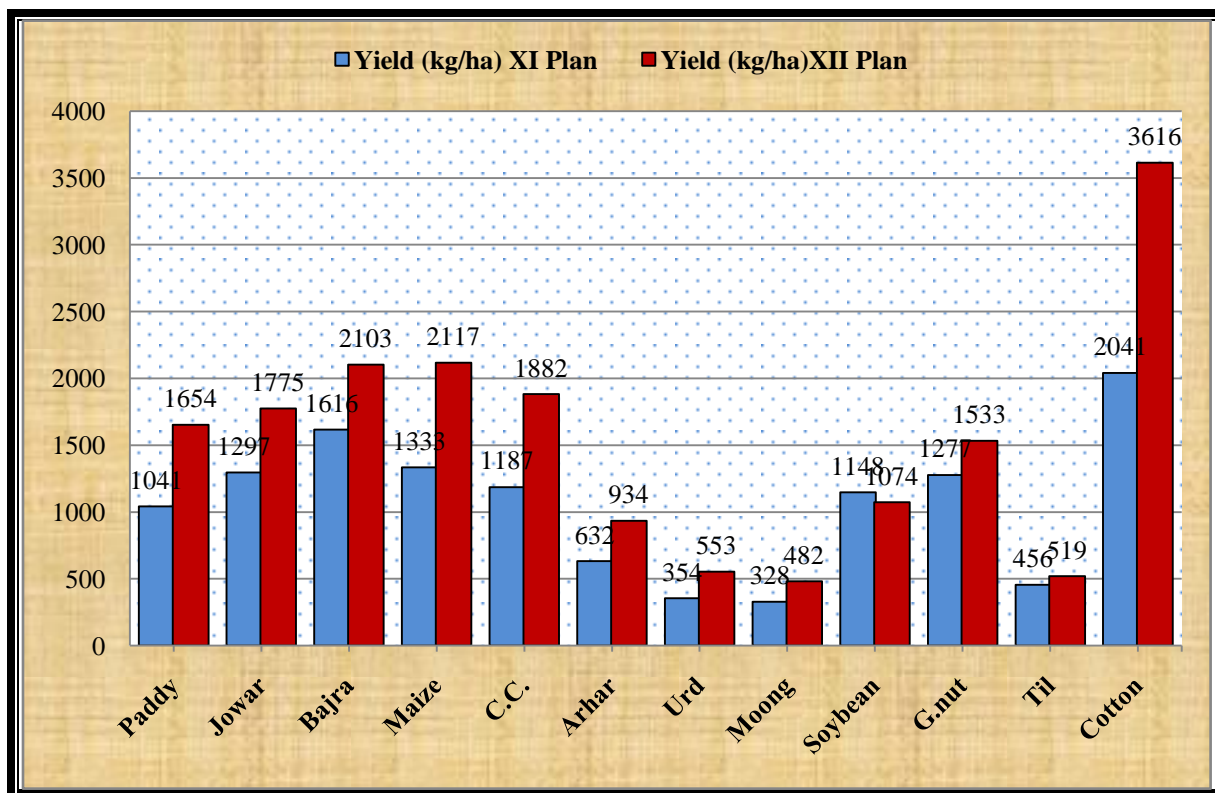
### AREA



### PRODUCTION

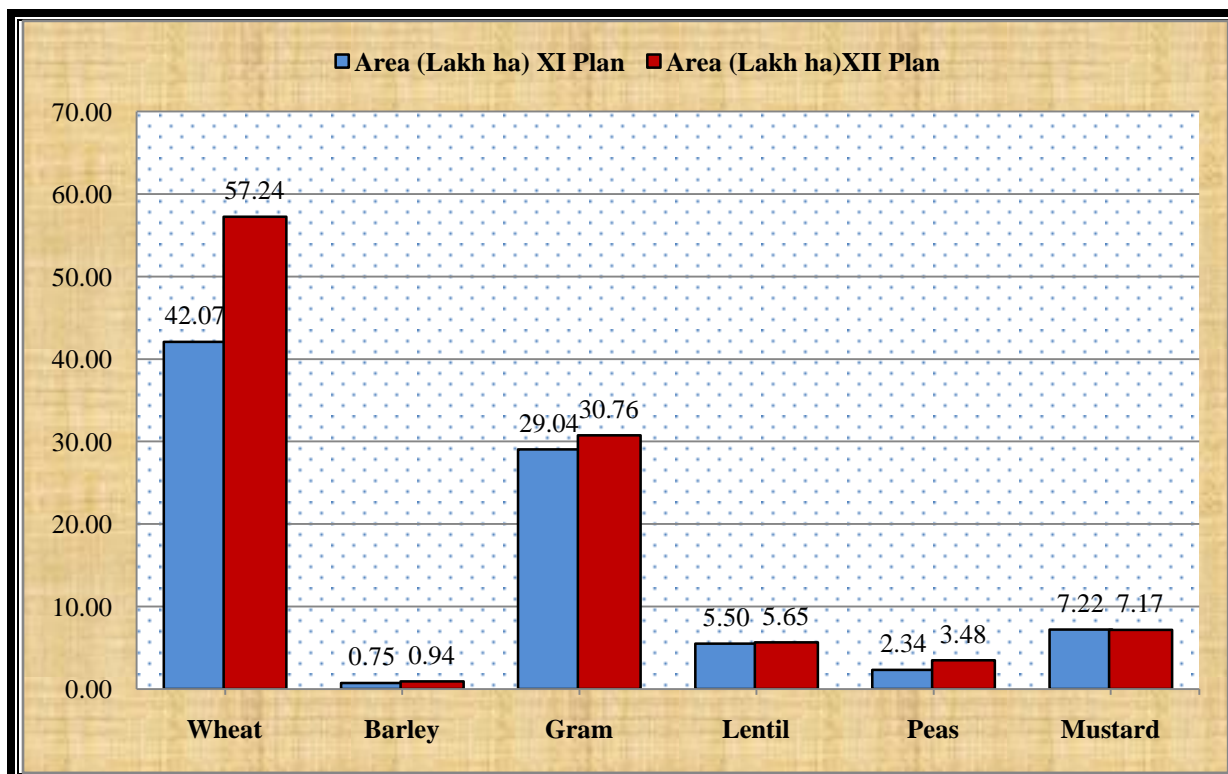


## YIELD

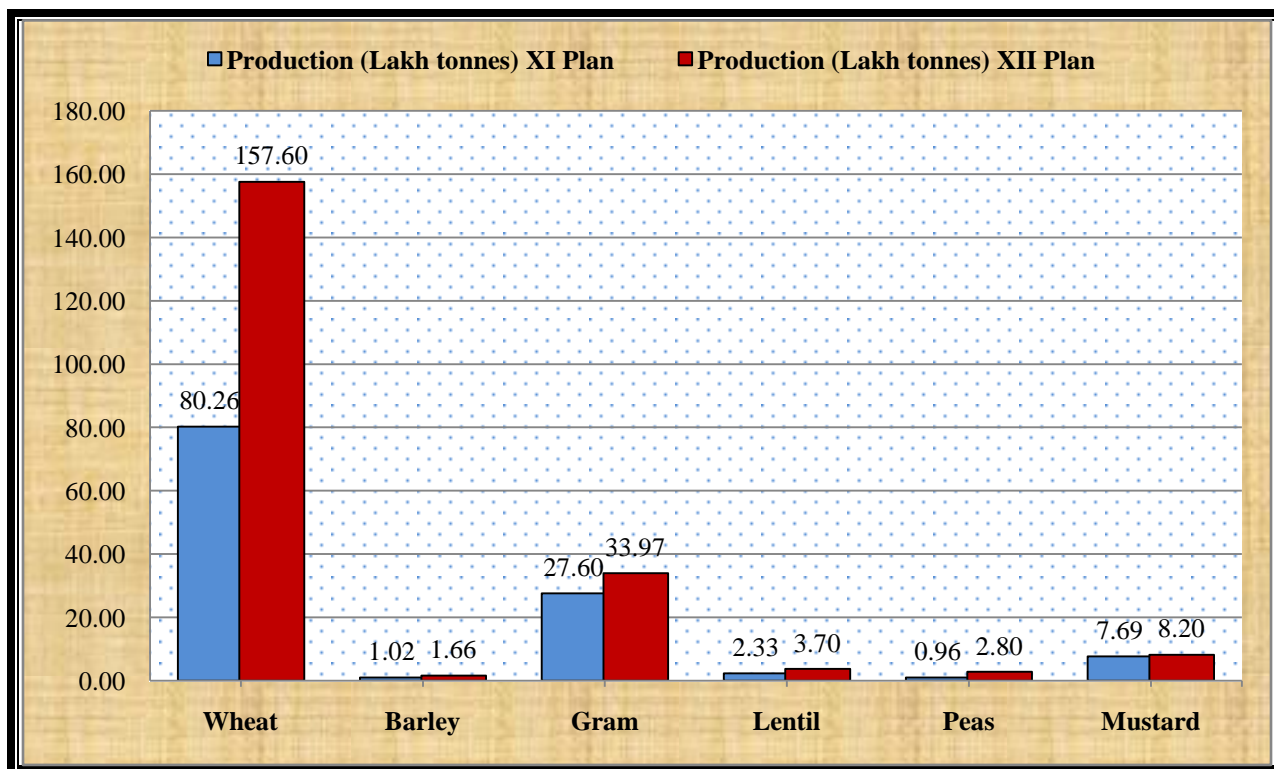


## CROPS SCENARIO: RABI (XI<sup>th</sup>-XII<sup>th</sup> PLAN)

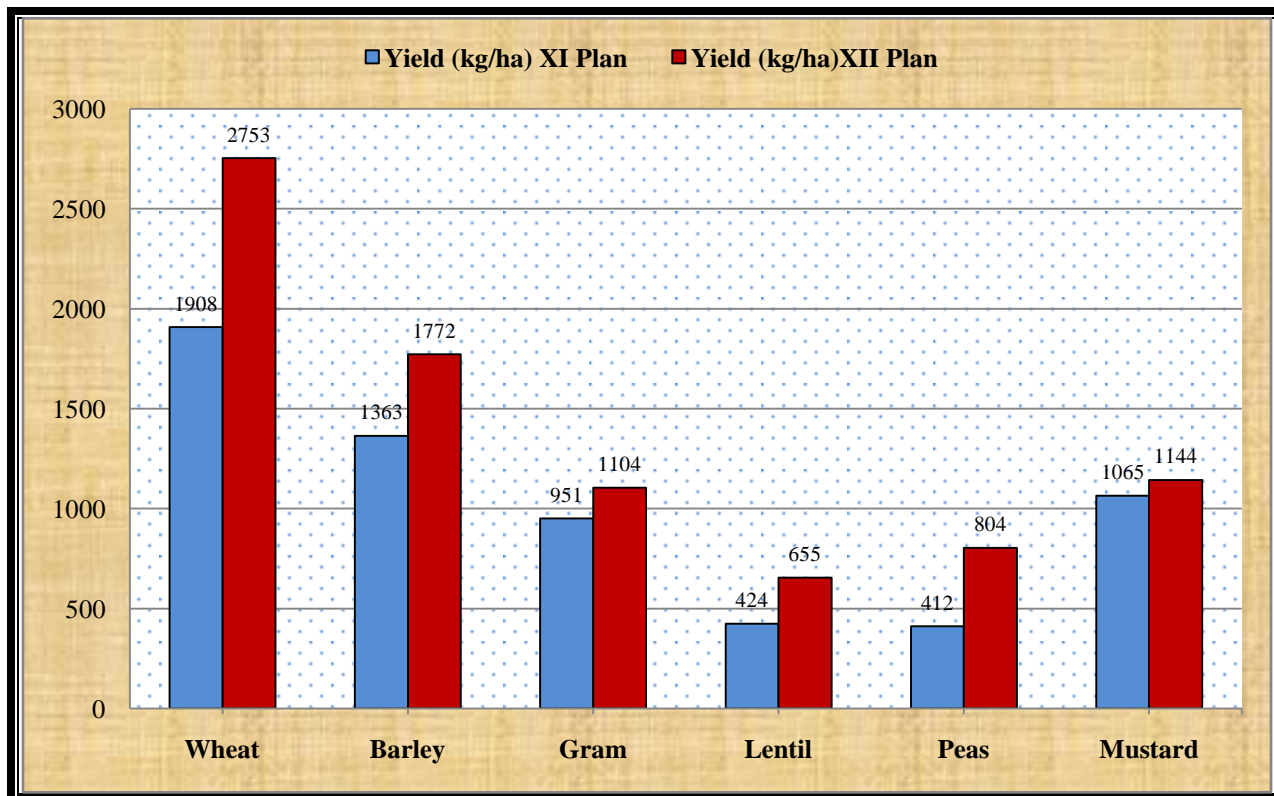
### AREA



## PRODUCTION



## YIELD



## 7. PRODUCTION PERFORMANCE: DURING NFSM (2007-08 to 2017-18) during- NFSM PERIOD

The production performance from base year 2007-08 to 2017-18 revealed that the cereals, pulses & oilseeds have shown increasing production trend at National level as well as in the State of Madhya Pradesh. Increment observed/noticed many folds in M.P. against the National increment of the production which has been depicted under Table below.

(Prod:- Lakh tonnes)

Crops	2017-18#		2007-08		% change over	
	MP	All India	MP	All India	MP	All India
<b>A. Cereals</b>						
Paddy	39.08	1110.07	14.62	966.82	167	15
Wheat	149.07	971.07	60.33	785.70	147	24
Coarse Cereals*	51.30	454.23	21.23	407.50	142	11
<b>Total Cereals</b>	<b>239.45</b>	<b>2535.37</b>	<b>96.18</b>	<b>2160.02</b>	149	17
<i>Coarse Cereals incl. Jowar, Bajra, Maize, Ragi, Barley, Other Minor Millets</i>						
<b>B. Pulses</b>						
Pigeon pea	8.07	40.24	2.18	30.76	270	31
Gram	45.09	110.98	17.35	57.49	160	93
Urd	12.99	32.29	1.66	14.57	683	122
Mung	1.37	17.36	0.26	15.22	427	14
OKP*	0.07	7.92	0.09	9.56	(-)22	(-)17
ORP**	10.34	30.71	3.00	19.80	245	55
<b>Total Pulses</b>	<b>77.93</b>	<b>239.48</b>	<b>24.54</b>	<b>147.40</b>	218	62
<i>* OKP incl. kulthi, **Pea &amp; Lentil, record has not reported by DES.</i>						
<b>C. Oilseeds</b>						
Soybean	54.55	113.90	54.81	109.68	0	4
Groundnut	3.25	82.17	1.87	91.83	74	-11
Sesamum	1.80	7.16	0.88	7.57	105	-5
Niger	0.19	0.74	0.26	1.10	-27	-33
R & Mustard	9.76	75.40	5.37	58.34	82	29
Linseed	0.86	1.77	0.33	1.63	161	9
Other Oilseeds *	0.07	17.68	0.02	27.33	250	-35
<b>Total Oilseeds</b>	<b>70.48</b>	<b>298.82</b>	<b>63.54</b>	<b>297.48</b>	11	0
<i>OKO*- Inc. Castor &amp; Sunflower</i>						
<i>ORO*- Incl Sunflower &amp; Safflower</i>						
<b>D. Commercial Crops</b>						
Cotton	18.69	339.15	8.65	258.84	116	31
Jute & Mesta	0.11	105.05	0.02	112.11	450	-6
Sugarcane	53.20	3532.26	31.80	3481.88	67	1
<b>Total Commercial Crops</b>	<b>72.00</b>	<b>3976.46</b>	<b>40.47</b>	<b>3852.83</b>	78	3

Source: DES, M/A & FW, GoI, # - (IInd Advance Estimate)

## 8. TARGET/ACHIEVEMENT

### a. Crop Scenario: Rabi

(A-lakh ha, P-lakh tons, Y-kg/ha)

Crop	AREA			PRODUCTION			YIELD		
	2016	2017*	C/O 2016	2016	2017*	C/O 2016	2016	2017*	C/O 2016
Wheat	60.28	53.9	-6.38	179.39	149.07	-30.32	2473	2766	293
Barley	1.16	1.3	0.14	2.53	2.83	0.3	2440	2177	-263
Gram	32.22	35.23	3.01	35.44	45.09	9.65	1399	1280	-120
ORP	13.25	9.47	-3.78	10.37	10.34	-0.03	780	1092	311
R & M	7.08	7.48	0.4	9.2	9.76	0.56	1379	1305	-74
Linseed	1.21	1.62	0.41	0.61	0.86	0.25	711	531	-180
Other Oilseeds	0.32	0.02	-0.3	0.17	0.02	1.57	531	1000	469
Sugarcane	0.92	0.96	0.04	47.3	53.2	5.9	51413	55417	4004
<b>Total Rabi</b>	<b>116.44</b>	<b>109.98</b>	<b>-6.46</b>	<b>285.01</b>	<b>271.17</b>	<b>-13.84</b>	<b>2448</b>	<b>2466</b>	<b>18</b>

Source: DES, Govt. of India, \* II<sup>nd</sup> Advance Estimates

### b. Crop Scenario: Kharif-

(A-lakh ha, P-lakh tons, Y-kg/ha)

Crop	AREA			PRODUCTION			YIELD		
	2016	2017*	C/O 2016	2016	2017*	C/O 2016	2016	2017*	C/O 2016
Paddy	22.60	20.23	-2.37	41.58	39.08	-2.50	1840	1932	92
Jowar	2.20	2.70	0.50	3.79	5.43	1.64	1723	2011	288
Bajra	2.80	3.10	0.30	6.81	7.55	0.74	2432	2435	3
Maize	12.63	13.17	0.54	32.65	34.04	1.39	2585	2585	0
Minor Millets	1.84	1.48	-0.36	1.13	1.44	0.31	614	973	359
Tur	6.90	6.47	-0.43	7.82	8.07	0.25	1133	1247	114
Urd	11.68	17.89	6.21	7.71	12.99	5.28	660	726	66
Moong	2.25	2.28	0.03	1.32	1.37	0.05	587	601	14
OKP	0.34	0.16	-0.18	0.26	0.07	-0.19	765	438	-327
Groundnut	2.55	2.18	-0.37	3.78	3.25	-0.53	1482	1491	8
Soybean	54.01	50.10	-3.91	66.49	54.55	-11.94	1231	1089	-142
Sesamum	3.80	4.24	0.44	1.65	1.80	0.15	434	425	-10
Niger seed	0.74	0.61	-0.13	0.27	0.19	-0.08	365	311	-53
Sunflower	0.01	0.01	0.00	0.01	0.01	0.00	1000	1000	0
Oth. Oilseeds	0.14	0.09	-0.05	0.06	0.04	-0.02	429	444	16
Jute & Mesta	0.08	0.08	0.00	0.07	0.11	0.04	875	1375	500
Cotton	5.99	6.03	0.04	20.51	18.69	-1.82	3424	3100	-325
<b>Total Kharif</b>	<b>130.56</b>	<b>130.82</b>	<b>0.26</b>	<b>195.91</b>	<b>188.68</b>	<b>-7.23</b>	<b>1501</b>	<b>1442</b>	<b>-58</b>

Source: DES, Govt. of India, \* II<sup>nd</sup> Advance Estimates

## 9. Crop Development Schemes/Programmes in Madhya Pradesh

### 9.1 Allocation & Expenditure of NFSM (2016-17)

(Rs. in Lakh)

Crop/ Scheme	Allocation	Release (GOI + State)	Unspent (2015-16)	Total Available	Expenditure	% Utilization
Paddy	2439.01	897.06	684.57	1581.63	691.19	43.70
Wheat	3879.77	801.78	745.89	1547.67	1421.99	91.88
Pulses	37949.94	20666.35	3055.38	23721.73	10373.87	43.73
Addl. Pulses	10100	10100		10100	2102.83	20.82
Coarse Cereals	1743	704.96	602.29	1307.25	398.37	30.47
Cotton	119.03	0.00	132.42	132.42	0.00	0.00
Sugarcane	32.96	12.69	3.79	16.48	8.34	50.61
<b>Total</b>	<b>56263.71</b>	<b>33182.84</b>	<b>5224.34</b>	<b>38407.18</b>	<b>14996.59</b>	<b>39.05</b>

### 9.2 Allocation & Expenditure (2017-18)

(Upto-February, 2018)

(Rs. in Lakh)

SCHEMES	Allocation			Available Fund (CS)			Expenditure *			% Utili. (CS)
	Central	State	Total	Release	Revali.	Total				
							Central	State	Total	Ava.
<b>NFSM</b>										
Pulses	23199.79	15466.53	38666.32	0	15298.7	15298.7	3356.65	2237.76	5594.41	<b>22</b>
Addl. Pulses	10380	6920	17300	10380	0	10380	1092.72	728.48	1821.2	<b>11</b>
<b>Total Pulses</b>	<b>33579.79</b>	<b>22386.53</b>	<b>55966.32</b>	<b>10380.00</b>	<b>15298.70</b>	<b>25678.70</b>	<b>4449.37</b>	<b>2966.24</b>	<b>7415.61</b>	<b>17</b>
Paddy	1076.09	717.40	1793.49	0	659.63	659.63	320.10	213.4	533.5	<b>49</b>
Wheat	2139.48	1426.32	3565.80	0	882.91	882.91	549.11	366.08	915.19	<b>62</b>
Coarse Cereals	853.20	568.80	1422.00	0	419.11	419.11	292.22	194.82	487.04	<b>70</b>
Cotton	60.00	40.00	100.00	0	0	0	1.1	0.73	1.83	-
Sugarcane	19.78	13.18	32.96	0	0	0	3.65	2.43	6.08	-
<b>NFSM Total</b>	<b>37728.34</b>	<b>25152.23</b>	<b>62880.57</b>	<b>10380.00</b>	<b>17260.35</b>	<b>27640.35</b>	<b>5615.55</b>	<b>3743.70</b>	<b>9359.25</b>	<b>34</b>
NMOOP (MM-I)	6002.96	4001.97	10004.93	496.58	2359.89	2856.47	1395.59	930.40	2325.99	<b>49</b>
RKVY	16749.00	11166.00	27914.99	5781.67	4505.33	10287.00	8107.39	5404.93	13512.32	<b>79</b>
<b>NMSA</b>										
NMSA (RAD)	813.43	542.28	1355.71	400.00	401.51	801.51	380.09	253.39	633.48	<b>47</b>
SHM	3080.77	2053.84	5134.61	0.00	3642.00	3642.00	22.90	15.26	38.16	<b>1</b>
SHC	4507.76	3003.18	7507.94	2464.47	607.91	3072.38	2716.93	1811.29	4528.22	<b>88</b>
PKVY	1514.03	1009.36	2523.39	1070.71	0.00	1070.71	1070.71	713.81	1784.52	<b>100</b>
<b>NMAET</b>										
SMAE -ATMA	4,861.82	3,241.22	8,103.04	3,040.92	571.28	3,612.20	3,549.31	2,366.21	5,915.52	<b>98</b>
SMSP	1,200.00	800.00	2,000.00	1,543.53	1,360.48	2,904.01	2,182.77	1,455.18	3,637.95	<b>75</b>
PMKSY	3,565.40	2,376.94	5,942.34	-	3,032.55	3,032.55	1,720.68	1,147.12	2,867.80	<b>57</b>
OFWM	3,755.56	2,503.70	6,259.26	3,750.00	481.08	4,231.08	1,346.24	897.49	2,243.73	<b>32</b>
<b>Total Above</b>	<b>83,779.07</b>	<b>55,850.72</b>	<b>1,39,626.78</b>	<b>28,927.88</b>	<b>34,222.38</b>	<b>63,150.26</b>	<b>28,108.16</b>	<b>18,738.78</b>	<b>46,846.94</b>	<b>50</b>

**9.3 NFSM-Physical Progress (2017-18)**  
(Upto January-2018)

Comp	Pulses (51)			Rice (08)			Wheat (16)			C. Cereals (16)			Addn. Pulses (51)			Total		
	T	A	%	T	A	%	T	A	%	T	A	%	T	A	%	T	A	%
Demo.(ha)	153000	103093	67	8300	7610	92	18485	16751	90	21000	15849	75	108000	45382	42	308785	173609	56
Prod. & dist. of Seeds (Qtls)	492000	25479	5	7980	850	11	75105	9155	12	9540	1482	16	65000	3048	5	649625	40014	6
INM (ha)	542800	20867	4	26000	0	0	71730	2954	4				430832	355	0.08	1071362	24176	2
IPM (ha)	675164	25830	4	25588	0	0	34602	1915	6				210000	190	0.09	945354	27935	3
CSBT (Nos)	2050	1212	59	125	103	82	225	79	35							2400	1394	58
Demo.(ha)	12400	3103	25	707.5	176	25	1506	319	21	1050	417	40	8350	1697	20	24014	5712	24
Prod. & dist. of Seed (Qtls)	12300	836	7	349	0	0	751	65	9	372	33	9	1625	7	0.43	15397	941	6
INM (ha)	2814	22	1	135	0.02	0.01	390	1.46	0	-	-		2405	0	0	5744	23.48	0.4
IPM (ha)	3376	53	2	128	0	0	173	7	4	-	-		1050	0	0	4727	60	1.3
CSBT (Nos)	287	179	62	17.5	14.56	83	31.5	1.82	8	-	-		-	-	-	336	194.56	58

**9.4 NFSM (2018-19) : Proposed Budgetary Allocation**

(Rs. in Lakh)

S. No.	Crops	Madhya Pradesh		
		CS	SS	Total
1	NFSM-Rice	912.060	608.040	1520.100
2	NFSM-Wheat	1969.760	1313.173	3282.933
3	a. NFSM-Pulses (without PMT)	17065.400	11376.933	28442.333
	b. NFSM-Pulses (with PMT)	468.600	312.400	781.000
	c. Total NFSM-Pulses	17534.00	11689.333	29223.333
4	NFSM-CC (for maize & Barley)	611.502	407.668	1019.170
5	NFSM- Nutri-Cereals (for Jowar, Bajra, Ragi & small millets)	675.180	450.120	1125.300
<b>Total</b>		<b>21702.502</b>	<b>14468.335</b>	<b>36170.837</b>

**10. Brief of visit/field observations are given below:**

Place/Institution visited	Activity	Brief Report
Katni	Meeting with DDA/Stake-holders	<ul style="list-style-type: none"> <li>• Against an allocation of Rs. 4.05 Cr under NFSM-Pulses, the expenditure of Rs. 0.35 Cr, observed as dismal progress.</li> <li>• The almost all the districts is poorly strengthened in terms of staff/ man power. Only share 30% post of the staff, except 01 TA, the remaining post under NFSM-PMT (01 TA + 01 DC) are vacant.</li> <li>• The NFSM demonstration crop cafeteria @ Rs. 7500/- per ha. is under implementation.</li> <li>• The district received 1140 mm rainfall. The irrigated area in the district is 1.44 Lha. Out of 1.77 Lha area during rabi, 01 Lha alone is under wheat. The major varieties of wheat are GW-322 and GW-366. Of the 06 blocks in the district, 02 blocks, Bahorivan and Dhimarkheda are concentrated for wheat cultivation.</li> <li>• Total Rabi area is 70000-73000 ha; Lentil productivity is high @ 1005 kg/ha, however, the area under lentil has reduced to 13000 ha during 2017-18 from 19000 ha in 2013-14.</li> <li>• <i>The district has been advised to increase the area under pulses, specially lentil and fieldpea. The state headquarter is also being recommended to allocate sizeable cluster demonstration and seed distribution targets to all the potential to the districts including Katni.</i></li> <li>• <i>The winter showers between Feb 12-13, at 25 mm precipitation in the district Katni have benefitted the wheat crop which is in the stage of broad leaf to milking stage.</i></li> <li>• <i>The district has also informed that contractual staff under Soil Health Card has not been paid their Honorarium for the last more than 08 years (@ 10 samples per day per staff @ Rs. 37/- per sample = Rs. 370 per day per staff).</i></li> </ul>
Village-Banda, Block-Katni	PKVY cluster	<ul style="list-style-type: none"> <li>• <i>Interacted with Jai Laxmi Khadya Surakhsa Samiti, Banda. The cluster represented by 50 farmers, is completing its 3<sup>rd</sup> year. the targeted activities is vegetable production. Soil testing of 21 farmers per year was done, 25 Bhoo NADEP were also prepared.</i></li> <li>• <i>To sustain the efforts under PKVY, the need is felt for the accessibility of Jaivik produce market in nearby area.</i></li> <li>• In this village, Pea cultivation (Var. JS-10) was also visited which was organised by the PKVY Cluster. The production of JS-10 was recorded at 90 qtl./ha green pod as compared to Pea var. Arkel yielding @ 45 qtl./ha.</li> </ul>
	Lentil CFLD	<ul style="list-style-type: none"> <li>• A CFLD on lentil var. JL-3 was also visited. The crop condition was very good, however, no weed management was demonstrated in the field. The KVK scientist could not participate in the visit owing to their pre occupation in JNKVV, Jabalpur.</li> </ul>

Place/Institution visited	Activity	Brief Report
Village-Bichiya, Block-Katni	Lentil CFLD  Micro/Minor Irrigation Plan	<p>The PC of KVK was however advised on telephone to visit the FLD and to arrange the weeding etc.</p> <ul style="list-style-type: none"> <li>• The farmers were also advised to adopt new Jowar variety (RVJ-1862- 110-112 days) brought out by CoA, Indore, (RVSKVV, Gwalior).</li> <li>• Rajya Poshit Micro/Minor irrigation plan (Nalkoop Khanan), for SC/ ST farmers @ Rs. 40000/- per unit (boring @ Rs. 25000/- + 3 HP Motor Pump @ Rs. 15000/-) with water delivery 2 inches, 50 feet suction (total depth 200 feet, was seen in the farm of Shri Ram Dayal Suri (7611161905).</li> <li>• <i>In view of large number of SMF in the OBC and General Category, many farmers have requested to extend the state plan micro/minor (Nalkoop) irrigation plan to the OBC/ General category with poor SES/ SMF farmers in the state. It is suggested that alternatively this plan may funded under RKVY in the projectile mode to achieve the target of doubling farmers income by 2022.</i></li> </ul>
Village-Dungariya, Block-Bahuriband	Mukhyamantri Solar Pump Yojna, 2017-18 Sprinkler set beneficiary	<ul style="list-style-type: none"> <li>• State plan borewell + sprinkler under NFSM was visited in the field of Smt. Shweta Jain w/o Bahubali Jain. Wheat var. HI 8498 and Manavshakti sown by the farmer was with good crop stand.</li> <li>• This farmer is also a beneficiary of Mukhyamantri Solar Pump Yojna, 2017-18. Total cost of solar panel is Rs. 4.50 lakh, farmer's share is Rs 72000/-. Earlier this area was unirrigated, now with the introduction of borewell or irrigation, the cropping intensity has been increased and 12 members labourer family is employed on this land.</li> </ul>
Village-Slimnabad, Block-Bahuriband	Seed Gram Yojna 2017-18	<ul style="list-style-type: none"> <li>• In Beej Gram Yojan (BGY), seed was distributed between Nov. 1<sup>st</sup> to 3<sup>rd</sup>, 2017 through the public representatives on the occasion of Madhya Pradesh Sthapna Diwas. Farmers Shri Ummed Singh, Smt. Radha Rani, Kusum Bai, Narendra Singh and Jitendra Singh were interacted. Gram Var. JG-63 (Category foundation, sown on Nov. 25<sup>th</sup>, was at flowering stage. <i>For effective outcome of the Beej Gram Yojna, the district functionaries have been advised to get the beneficiaries registered with the State Seed Certification and also to conduct proper trainings of the 50 farmers of the Beej Gram on the aspects of seed production. In general, it has been observed that the training component of the BGY is not being seriously conducted/ documented and it is considered namely to distribute the seeds to the farmers. Necessary directives in this regard may be issued at the level state headquarter.</i></li> </ul>

Place/Institution visited	Activity	Brief Report
Village-Slimnabad, Block-Bahuriband	Seed Gram Yojna 2017-18	<ul style="list-style-type: none"> <li>On the status of district/ block level extension administration, it is realized that very poor staff strength, stagnated promotional prospects and heavy involvement of district/ block level agricultural functionaries in the revenue/ other activities, not related to agriculture at all, have demoralised the agricultural officials and may convert into collapse of the technology transfer system/ implementation of crop development programmes etc. It is suggested that the state may take a suitable remedial action to revitalize the extension system.</li> </ul>
Village-Ligar Ratua, Sansarpur, Block- Bahuriband	RKVY-Holistic Agriculture Development	<ul style="list-style-type: none"> <li>The district is having 18 targets under Holistic Agriculture Development programme. The major component of the programme are: (i) farming system (agriculture, fruit crop, fisheries, vegetables, poultry/ duck farming), (ii) Khet-Talab, (iii) Diesel/ Vidyut Pump.</li> <li>Interacted with farmer Shri Purushotam Singh (9893562429) having 15 acre farm and equipped with sprinkler + check cutter + rotavator + seed drill + solar pump etc. This farmer is also a beneficiary of Beej Gram Yojna wheat var. GW-322.</li> </ul>
District-Umariya	Meeting with district agriculture functionaries/stake- holders  ATMA, Integrated farming,	<ul style="list-style-type: none"> <li>The district is predominantly forest oriented. Poor rainfall during kharif also had a setback to rabi crops.</li> <li>Wild animal menace and stray cattle is becoming a major issue before the farmers of this area.</li> <li>Poor staff strength, pending promotional prospects and involvement of agricultural functionaries to many activities, other than agriculture extension, is a major feedback. 61% posts of the RAEO, 86% of ADO, PMT-DC, ATMA-ATM, BTM, DPD and PD are vacant.</li> <li>RKVY-FRA farmers: The progress is NIL. It is suggested that the state headquarter should provide the targets for both the season and also finalise the rates of input (other than the seed); for NMOOP, only intercrop demo. should be given.</li> </ul>
Village-Rampur, Block- Karkeli	Mukhyamantri Solar Pump Yojna, 2017-18	<ul style="list-style-type: none"> <li>Minor irrigation (Nalkoop Khanan): Resistivity survey report costing Rs. 2000-2500 per applicant is time taking/ costly. The scheme envisages subsidy under both the circumstances i.e. failure or favourable survey report.</li> <li>NMSA: The soil survey work has a provisions 50% subsidy under this component as compared to other schemes for which the tribal farmers are unable to provide their share. The subsidy amount has therefore been enhanced for the tribal districts.</li> </ul>

Place/Institution visited	Activity	Brief Report
Village-Pathrhatha Block-Karkeli	Block Level Kishan Gosthi	<ul style="list-style-type: none"> <li>• PMFBY: Incorrect toll-free number/ non-response, apathy/ unavailability of PMFBY agency in the districts, non-provision of farmer-wise survey in the event of insect-pest infestation etc., are the major constraints of the farmers to take benefits of PMFBY. It is advised that the PMFBY portal should have the login ID of the DDA for effective monitoring at district level; inclusion of insect and diseases as local natural calamity; establishment of insurance company office/ representative and ensured toll-free number for the farmers to respond their complaints in local languages.</li> <li>• Visited Power Tiller Beneficiary field of Shri Ram Kumar Kusawaha. under RKVY.</li> <li>• With the support of Solar Pump, the cropping intensity has increased and the farmers are appreciating this initiative.</li> <li>• ATMA integrated farming approach is good concept and the BTM is doing very good work.</li> <li>• About 100 farmers of 10-12 villages viz. Patharhata Karanpura, Rampur, Banka, Koilari, Tenduha, Dhorkhow, Saliya, Tali, Hardua, Simra, Tala, Sugia participated.</li> <li>• Gram seed (JG-63 Var.) was distributed by SDA. Last year JAKI-9218 was demonstrated under cluster.</li> <li>• Non-availability of Zinc with the local dealers is a major issue, the farmers have requested to ensure the availability of Zinc to the department.</li> <li>• <i>None of the farmer received the benefits of PMFBY since 2016, hence many farmers are unwilling to take crop insurance. Farmers have a general complain that the Primary Agriculture Cooperative societies (PACs) are deducting the PMFBY premium without any authentic survey of the crop grown. It is advised that for authentic data, the PACs should confirm/ survey of the crops grown by the farmers.</i></li> <li>• The Bhavantar registration for Rabi 2017-18 is uptill 12<sup>th</sup> march, 2018, farmers have been advised to get themselves registered with the PACs. The rabi crops proposed to be covered under Bhavantar are Gram, Lentil, Mustard and Onion.</li> </ul>
Village-Rampur (Singrada), Block- Karkeli	NFSM- Gram Cluster demonstration (var- JG-63)  Biogas unit-State Govt. Scheme	<ul style="list-style-type: none"> <li>• Total 30 ha. cluster + 46 beneficiaries. DOS-09.11.2017, Line sowing followed, flowering stage, crop condition is satisfactory.</li> <li>• 75 kg seed per ha has been provided, the other inputs to be purchased by the beneficiaries and the reimbursement, if the vouchers submitted to the department, proposed to be reimbursed through DBT.</li> <li>• In this village total 34 families &amp; 24 Bio gas unit has been established; 19 Biogas units are functional.</li> </ul>

Place/Institution visited	Activity	Brief Report
Village-Rampur (Singrada), Block- Karkeli	Meeting with KVK	<ul style="list-style-type: none"> <li>• Under RKVY, 05 new biogas have been sanctioned in this village.</li> <li>Also had a meeting with Krishi Vigyan Kendra and visited the crop cafeteria and OFTs organised by the KVK.</li> </ul>
District-Shahdol	Review meeting with the officers of the DDA office, Shahdol	<ul style="list-style-type: none"> <li>• <i>The cultivable land in Shahdol is 195268 ha. of which rabi's 77000 ha., of which 23000 ha. alone is under wheat. To increase the rabi converge under wheat and the cropping intensity, the district functionaries have requested to consider district shahdol under NFSM-wheat.</i></li> <li>• <i>The district is having approximately 70% light sandy-soils with low WHC and productivity. To improve the productivity of the soil NADEP, Vermi-Pit and Biogas plants should be allocated in sizeable numbers.</i></li> <li>• <i>The irrigation is available only in 3775 ha. (20%). Thus minor irrigation projects under PMKSY need maximum targets and involvement of soil conservation staff of the department owing to their expertise in the area.</i></li> <li>• <i>The district is predominantly forest oriented, prone to heavy soil erosion of the upper layer. It is suggested that the "Med-Bandhan (Bunding) " under MGNREGA should be separately dealt through the soil conservation section of the agriculture department.</i></li> <li>• <i>For surface water management in the predominantly sloppy land in the district, the field functionaries have advised to increase the subsidy amount under Balram-Talab Yojna for SMF category upto 80-90% of the total cost.</i></li> <li>• <i>Against 180 sanctioned posts of the field level officers, only 69 posts are filled up and 111 posts are vacant. Under PMT, 01 NFSM TA and DC is also vacant, 09 posts of ATM vacant and 02 posts of BTM also vacant.</i></li> <li>• <i>With the implementation of DBT, the Data Entry Operators may be advised to be provided under state plan on out-source basis in the office of the DDA and SADO.</i></li> <li>• <i>In Shahdol, the existing office also needs to be renovated for proper upkeep and maintenance of record/ execution of the work. It is also felt that technical competency of the field staff needs to be upgraded and they may be deputed for exposure visit/ trainings, especially for IPM and Good Agriculture Practices (GAP).</i></li> <li>• <i>Mobility is a major issue in almost all the districts which has hampered the monitoring of developmental activities. It is suggested that the field staff (upto Class II) may be provided the field vehicle. The state government of Madhya Pradesh may make this provision from within the award amounts of Krishi Karman Award.</i></li> </ul>

Place/Institution visited	Activity	Brief Report
District-Shahdol	Review meeting with the officers of the DDA office, Shahdol	<ul style="list-style-type: none"> <li>• The DDA was assigned with the other work given by the District Collector. Hence Shri R.K. Singh, ADA (9755400009), B.K. Sharma participated in the review meeting.</li> <li>• <i>Low average precipitation for the last 06-07 years have depleted the water table/ ground water recharge in almost all the districts, including the districts of Shahdol Division.</i></li> <li>• <i>It is realized that soil and water conservation work need to initiated on priority basis. The DIP prepared by the soil conservation section of the DDA, has the provision of water harvesting structures. The department is having the qualified (degree in Engineering/ Agriculture)/ competent and experienced staff (ASCO/ SCO/ soil conservation survey officers etc.) which have been doing very good work of water harvesting structures (Khet-Talab, Balram Talab, stop dam, check dam, rapta-cum-stop dam, cause way-cum-stop dam, irrigation tank etc.) under the water shed development projects/ NWDPA etc.</i></li> <li>• <i>The qualified/ experienced soil and water conservation staff of department is under utilized/ without work, hence it is suggested that the various works proposed in the DIP may be given to this staff.</i></li> <li>• <i>State Micro Irrigation Mission has a subsidy of Rs. 12000/- , having no provision for top-up subsidy. Whereas, under all other schemes, there is a provision of top-up on MIS. This has resulted in poor/ no utilization of this component. It is, therefore, suggested that either there should be an uniform subsidy norms (including top-up) are else State Micro Irrigation scheme should be allocated to the districts like Malwa and Nimaad divisions, where SES of the famers is comparatively better.</i></li> <li>• <i>NMOOP-Mustard demonstrations should be allocated under intercropping in the district like Shahdol and Umariya with &gt;80% farmers of SMF category who do not take sole crop of mustard.</i></li> <li>• <i>The districts with higher percentage of SMF with poor SES have shown very poor utilization of the NFSM crop development programme in particular. The farmers/ districts functionaries have requested to provide in kind DBT input cafeteria for demonstrations and seed components.</i></li> </ul>
	Mukhyamantri Solar Pump programme	<ul style="list-style-type: none"> <li>• Under Mukhyamantri Solar Pump programme, against 198 applications, 63 have been registered. Further against the 63 registered applications, the solar pump has been installed only for 17 beneficiaries. It is recommended that Madhya Pradesh Rajya Urja Vikas Nigam may be instructed to execute the pendency on priority basis.</li> </ul>

Place/Institution visited	Activity	Brief Report
Village-Bodri, Block-Shahdol	RKVY- Paddy Crop Transplanter (2016-17)	<ul style="list-style-type: none"> <li>• It has been advised to the DDAs that impact evaluation of the agricultural implements distributed under NFSM/ other CSS during the last &gt;9 years, be done to know the reduction in cost of cultivation, increase in crop intensity and income generation of the farmers by way of using these implements to other farmers on hiring basis.</li> <li>• The paddy transplanter provided during 2016-17 to Shri Brajendra Gupta (9926314402) Rs.1.96 lakh, subsidy amount Rs. 1.44 lakh. However, the transplanter could not be used uptill now as the company dealer did not give the demonstration to the farmer and the District Agriculture officer did not follow up the activity.</li> <li>• NFSM- Gram Cluster demonstration (var- JG-130) DOS-05.11.2018, Line sowing followed; crop condition is normal &amp; grain filling stage. The district has been advised to adopt new varieties like JAKI-9218 for demonstration.</li> </ul>
Village-Bodri, Block-Shahdol	Crop Demonstration	<ul style="list-style-type: none"> <li>• Cluster demonstration Gram var. JG-130; beneficiary Sh. Barelal Dongre, DOS-05.11.2018, line sowing, crop condition is normal/grain filling stage. Normally 1-3 irrigation followed. The farmer has yet to submit bills for reimbursement towards input cafeteria.</li> <li>• Intercropping demonstration with Linseed + Coriander, with good crop stand. However, the team has advised to adopt line sowing/ratio with such demonstration for better returns.</li> <li>• Non-scientific method of planting i.e. non-line sowing, both in demonstrations as well as the existing farmers practice, is a major observation in Shahdol Division in general and the Shahdol district, in particular.</li> </ul>
Village-Bodri, Block-Shahdol	Seed Production (Breeder Seed Beneficiary)	<ul style="list-style-type: none"> <li>• Sh. Surendra Singh (9993407287), a Breeder Seed beneficiary, availed the subsidy of Rs. 20300/- towards 02 qtls. Gram (JG-12) under NFSM-Pulses. The seed was lifted from KVK, Damoh.</li> <li>• The seed production society “Annapurna Beej Utpadak Sehkari Samiti, Mithori” has also availed the Breeder Seed subsidy, the society has organized the foundation seed production programme of wheat (GW-273, MP-1203), Gram (JG-12).</li> <li>• The DDA, Shahdol has purchased Gram seed (JG-130, 68 qtls. + Vaibhav (RG-2918, Rel. 2001, 10 qtls.) both foundation category for utilization in organization of cluster demonstration under NFSM). Both the varieties are although improved but are &gt;10 years old and should have not been demonstrated under cluster demonstration.</li> </ul>

Place/Institution visited	Activity	Brief Report
Village-Sigudi, Block-Sohagpur	Beej Gram Yojna  RKVY-JG-12 Gram Breeder Seed Production	<ul style="list-style-type: none"> <li>• <i>Sh. Sitaram (7692866124), crop-wheat (HI-1544, Certified seed) distributed to the farmer; line sowing with bullock/ traditional method; crop stage-milking; overall crop condition is very good. Linseed/ Coriander also broadcasted in the same field as mixed crop and likely to be harvested.</i></li> <li>• <i>The NLMT has recommended to demonstrate the Beej Gram Yojna as a sole crop with proper method of planting and adoption of all seed production techniques (line sowing, spacing, rouging etc.), as taught in the seed production trainings (one of the components of SBS). Further the Beej Gram Yojna should also be registered with seed certification agency for seed production.</i></li> <li>• <i>Further, the mixed cropping of linseed or coriander etc. should be demonstrated with descript var. with proper method of planting, i.e., line sowing, ridge-furrow planting technique etc.</i></li> <li>• <i>Wild animal menace, especially the wild boar is a major issue. The team has advised to use ITK/ traditional method of control of wild animals/boar by using castor oil (a product in the name of Nelbo, i.e., Ricinoleic acid may also be used). dipped 1.5 feet height of jute rope fencing for wild boar and 3 feet height rope for blue bull, being practiced in Karnataka and Tamilnadu.</i></li> <li>• <i>It is suggested that in view of wild boar menace especially in Jabalpur, Shahdol divisions, the areas adjacent to forest facing considerable economic losses, may be notified by PCCF to allow the wild boar to be shot dead by farmers living on the periphery of forests. Recently, the PCCF Karnataka has permitted killing of crop raiding wild boars in the Ramnagara district through a notification which says that "in exercise of the powers conferred by section 11 of the Wild Life (Protection) Act, 1972, the state government hereby declares wild pig (Sus scrofa) to be 'vermin' for a period of one year. This notification was issued on January 13<sup>th</sup>, 2018. Declaring the wild boar as 'vermin' is easy, compared to other wild animals as it's not an endangered species.</i></li> </ul>

Place/Institution visited	Activity	Brief Report
Vill- Semriha, Block- Sohagpur	Yantra Doot Village	<ul style="list-style-type: none"> <li>• Surendra Singh –Annapurna Seed Grower Cooperative Society.</li> <li>• Last five year animals compost use. 2 qtl. Seed 10150 @ qtl. Purchased to KVK, Damoh.</li> <li>• The farmers gave a feedback of Yanta Doot Village activities by the Department of Agriculture. This programme is being appreciated. However, it is realised that the mechanization is a much needed activity in a district like Shahdol.</li> </ul>
Village-Sigudi, Block-Sohagpur	SVP-Wheat demonstration. (Wheat var-HI-1544)	<ul style="list-style-type: none"> <li>• Sitaram Kol-7692866124</li> <li>• Sown on Dec- 26th; seed rate- 40 kg. Seed, Crop Milking stage. The farmer proposes to give 3 more irrigation.</li> </ul>
Village-Kthotia, Block-Sohagpur	<ul style="list-style-type: none"> <li>• Visit of Seed grower society</li> <li>• Kishan Gosthi</li> </ul>	<ul style="list-style-type: none"> <li>• Visited the “<i>Maikalsuta Beej Utpadak Sahkari Samithi</i>” (President-Shri. Abhay Rawat Singh Jodhavat, Mo. No.9425182228). The society is engaged in production of quality seed of wheat, pulses and soybean. The society has requested to consider them in indenting of Breeder seeds for taking further programme of quality seed production.</li> <li>• The Kisan Gosthi was participated by more than 50 farmers including the women farmers. The farmers interactions have given a very good feedback on crop scenario, cropping system, constraints and issues etc.</li> <li>• Soybean covers an area of about 15 to 20,000 ha. JS-335, a long duration variety is popular in the district, need demonstration of short duration varieties to be popularized. Soybean is facing productivity constraints for the last more than 3 years due to erratic rainfall/ drought coupled with the new emerging threat of charcoal rot/insect pests.</li> <li>• <b>Charcoal rot</b>, also known as dry-weather wilt is caused by the fungus <i>Macrophomina phaseolina</i>. The fungus has a widespread distribution and large host range and also affects corn and sorghum. Microsclerotia (hardened fungal survival bodies) are formed inside infected tissue. These microsclerotia are how the fungus overwinters in infested crop debris and free in soil. Survival of microsclerotia is several years in dry soil but only a few weeks in wet, saturated soils.</li> </ul>

Place/Institution visited	Activity	Brief Report
Village-Kthotia Block- Sohagpur	<ul style="list-style-type: none"> <li>• Kishan Gosthi</li> </ul>	<ul style="list-style-type: none"> <li>• Infection of soybean typically occurs early in season at emergence and early seedling growth stages. These seedling infections remain latent until environmental stresses (drought and high ambient temperatures) occur during the R1 (flowering) to R7 (mature pod) growth stages.</li> <li>• Early Symptoms of Charcoal Rot are visible during the reproductive stages of soybean development and are first evident in the driest areas of the field</li> <li>• Earliest symptoms include smaller than normal leaves, reduced vigor, premature yellowing of top leaves and plants wilting during the midday heat</li> <li>• A light gray discoloration develops on the surface tissues of the roots and lower stem</li> </ul> <p><b>Outer and Inner Stem Symptoms of Charcoal Rot</b></p> <ul style="list-style-type: none"> <li>• Scraping the outer tissues reveals black, dusty microsclerotia (a diagnostic symptom of charcoal rot). —A hand lens is useful in detecting microsclerotia.</li> <li>• As drought persists and charcoal rot progresses, plants reach the permanent wilt point and die prematurely.</li> <li>• As the long dry spell at flowering to grain filling stage is prone to charcoal rot disease in patches.</li> <li>• <i>The farmers have been advised to opt. drenching with trichoderma viridae as an effective control measure; crop diversification; ridge furrow/BBF method of planting; intercropping with jowar (Jowar roots are known to secrete a chemical HCN (Dhurrin) which control wilt; pheromone trap (lure/septa) to be made available through the seed societies/KVKs.</i></li> <li>• The farmers have been advised to grow new jowar variety RVJ-1862 (105-112 days) recently released by RVSKVV, Gwalior and also to replace pigeonpea variety- JKM-7 with that of wilt resistance TJT-501.</li> <li>• The farmers also briefed about the interest rates on crops loan through PACS. The PACS charges 0% interest rate only towards the loan in kinds (input only).</li> <li>• The survey of soybean crop damage during kharif 2017 and the compensation thereon, still awaits at the level of the revenue department/state department of agriculture. The farmers grievances may be resolved quickly</li> </ul>

Place/Institution visited	Activity	Brief Report
Dist- Anuppur Vill- Bagaihatola , Block-Kotama)	Holistic Agriculture Development Programme Under RKVY Scheme)	<ul style="list-style-type: none"> <li>• The Beneficiary is Smt. Terasiya Bai in this village.</li> <li>• In district Anuppur a- total of 12 targets have been given.</li> <li>• National Bio-gas programme (2 m<sup>3</sup> for <i>Deen bandhu</i> model) at a total cost of Rs. 16,000/-. The subsidy for general category is 9000/-, for SC/ST is Rs. 11,000/-. The State Government has further added Rs. 2500/- top up subsidy.</li> <li>• Total Cost Rs.3.00 Lakh (Rs. 1.5 Subsidy + 1.5 Farmer Share)</li> </ul>
	Biogas Unit	<ul style="list-style-type: none"> <li>• Ram krapal Sahu</li> <li>• Total Cost Rs.16000 (Rs. 11000 MP Agro+2500 Top Up Subsidy)</li> </ul>
Village- Bagaihatola Block- Kotama	ATMA Demonstration	<ul style="list-style-type: none"> <li>• Govind Prajapati (9644665140).</li> <li>• In this village, under ATMA demonstration Safflower (var. JSI-97, non-spiny) have been demonstrated for the first time. The seed was provided under Surajdhara Scheme (Seed is provided for 1 ha area with 75% subsidy). Further, the crop was sown under zero till conditions.</li> <li>• The farmer had taken maize-toria-safflower sequence on the same field. The crop condition was very good and expected yield may be 15 q/ha.</li> </ul>
	Beej Gram Yojana	<ul style="list-style-type: none"> <li>• Wheat var.JW-3211 (certified seed) was sown on Dec. 16<sup>th</sup>, 2017 in this village (with the same farmer). The sowing was done under zero till method, the crop condition was satisfactory.</li> </ul>
Vill panchayat- Thudaha, Block- Kotama	Diversified Agriculture activity	<ul style="list-style-type: none"> <li>• It was observed that the training component of the Beej gram Yojana has not been implemented, as such details were not available with the Department.</li> <li>• Visited the field of Shri. Suresh Tiwari (9669086804). Here strawberry programme in 10 decimal area under ATMA demonstration was organized.</li> <li>• Drip supported strawberry is being sold @ Rs. 300/- per kg. The farmer has sold upto 30 kg uptill now. The fruiting had started since 15 Jan.</li> <li>• Under ATMA programme, 10 such farmers have been given the demonstration of strawberry.</li> </ul>

Place/Institution visited	Activity	Brief Report
Vill panchayat- Thudaha, Block- Kotama	Kisan Gosthi	<ul style="list-style-type: none"> <li>• A kisan gosthi was also organized in the village panchayat which was participated by &gt; 40 farmers. The farmers have given the feedback about the poor market support for their produce and also the issues related to transparency in PMFBY.</li> </ul>
Village-Parsi Block-Anuppur	RKVY-Power Tiller- (Year-2016-17)	<ul style="list-style-type: none"> <li>• Farmer Name- Shri. Gulab Singh Total Cost Rs.1.65.00 Lakh (Rs. 1.5 Farmer Share)</li> </ul>
Village-Shikarpur, Block-Anuppur	ATMA– demonstration	<ul style="list-style-type: none"> <li>• Smt. Bhgvania Bai was given the wheat demonstration (var.- HI-1544) grown under Zero Tillage Crop Condition was Normal.</li> </ul>

## **11. OBSERVATIONS**

- 11.1** The total seasonal rainfall during the current SW monsoon (01.06.2017 to 30.09.2017) was 691.12 mm which is 23% less as against the state's normal rainfall of 898.40 mm. As per the data, 17 districts received normal and 34 received deficit rainfall.
- 11.2** The state's normal area (Ave. 2011-12 to 2015-16) under rabi crops is >106 lakh ha. Wheat is a major rabi cereal crop occupying 52% of the total normal area. This year, as per the WWWR (Weekly Weather Watch Report), wheat has been planted in 53 lakh ha which is >5% less against the targeted area of 56 lakh ha. The pulses has been planted in >47 lakh ha which is 5 % less against the targeted area of about 50 lakh ha. Gram, the major rabi pulse of the state has been planted in an area of about 36 lakh ha followed by lentil approx. 6 Lha and pea in 5 lakh ha. area respectively. The area under gram has however, been higher against the normal area during the year under report. Rabi crops have been sown in an area of 112.22 lakh ha which is also above the normal (>106 lakh ha) but shorter than targeted area (118.31 lakh ha).
- 11.3** The concurrent as well as NLMT field visits have revealed an overall satisfactory crop situation, especially the pulses gram, except unseasonal rains/ hailstorm in some pockets of the state (18 districts/ 77 tehsils/ 1386 villages/ 30650 farmers in an area of 47512 ha/) between Feb. 11-13, 2018 and also after April 6<sup>th</sup> to 13<sup>th</sup>.
- 11.4** In view of the potentials, the districts have been advised to increase the area under pulses, specially lentil and fieldpea. The state headquarter is also being recommended to allocate sizeable cluster demonstrations and *seed distribution* targets to all the potential districts including Katni.

The winter showers between Feb 12-13, at 25 mm precipitation in district Katni have benefitted the wheat crop which is in the stage of broad leaf to milking stage.

- 11.5** Delays in honorarium payments to PMT (NFSM)/ contractual (under Soil Health Card) was brought to the notice of Team. Honorarium pending towards contractual staff under SHC is for

>08 months (The rates are @ 10 samples/ day/ staff @ Rs. 37/sample = Rs. 370 /day / person) in Katni.

- 11.6** To sustain the efforts under PKVY, the need is felt for the accessibility of Jaivik inputs and market in nearby area.
- 11.7 *Beej Gram Yojana (BGY/SMSP):*** In general, the seed has been distributed between Nov. 1<sup>st</sup> to 3<sup>rd</sup>, 2017 through the public representatives on the occasion of MP “*State Foundation Day*”, however, the basic objectives of the BGY are not well understood by the field functionaries. The general principles and guidelines of seed production are not being followed. It has been observed that the training component of the BGY is not being seriously conducted/documentated and the scheme is considered mainly as distribution of seeds.
- 11.8** In Datia and Gwalior also the Beej Gram Yojna is partially implemented, 50% of the cost of the seed is provided to the seed suppliers (PACS, NSC/SSC etc) directly under DBT mode, the remaining 50% being farmers share, is collected by the RAEO/ADO/SADOs in cash to be further deposited in the accounts of seed suppliers. It is observed that this amount is between Rs 5-10 lakhs depending on the coverage of the scheme in a block/district. The field functionaries have appraised the constraints in depositing of the cash with the bank. As the personal PAN numbers of the officials is being asked by the banks. Similarly, the funds towards training components of this scheme is also being forwarded in the individual accounts of the block level officers.
- 11.9 *Status of district/block level extension administration:*** It is realized that very poor staff strength (In district Umaria alone, 61% posts of the RAEO, 86% of ADOs, 100% of SADOs, NFSM-PMT-DC, ATMA-ATM/ BTM/ DPD and PD are vacant), stagnated promotional prospects and heavy involvement of the field extension functionaries in the revenue/other district/block level activities, not related to agriculture and non-availability of mobility etc., is culminating into a discouraging extension environment, demoralising the district/block level

agricultural officials. *It is to record that the district administrations even do not spare the DDA to accompany the National Level Monitoring Team visiting to their district eg- district Shahdol.* It is felt that this may lead to the collapse of the technology transfer system/ objectively implementation of crop development programmes etc.

*It is suggested that the state may take a suitable remedial action to revitalize the extension system at the grass root level.*

**11.10 RKVY-VANGRAM (FRA) Yojana:** The progress under this component has been NIL.

Although this programme aimed at to benefit the tribals of Vangram. However, due to lack of clarity, the benefits of this scheme could not reach to targeted groups. For success of this scheme, it is suggested that under this project, the targets should be specified for both the crop seasons with the demonstrations on intercropping only. The input rates (other than seed) for cafeteria should also be fixed either by state HQ or the DDAs should be authorised to take decision.

**11.11 NMSA:** Under National Mission on Sustainable Agriculture, very poor progress, especially in tribal districts like Umaria is attributed to poor SES of the tribal farmers. Under value addition and resource conservation, post harvest storage, tube-well, water distribution, *in-situ* moisture conservation and water lifting devices have a provision of 50% subsidy, while the other schemes have a subsidy provision of 75%. With poor SES, the tribal farmers are unable to provide their share, hence, the subsidy amount may be enhanced for the tribal districts, with certain top-up provision.

**11.12 PMFBY:** The Team interacted with a good number of farmers to take a feedback on PMFBY.

Incorrect toll-free number/non-response, apathy/unavailability of PMFBY agency/representatives in the districts, lacking farmer-wise/ field-wise survey in the event of insect-pest infestation etc., have been considered as the major bottle necks/constraints to take benefits of PMFBY by the farmers.

- 11.13** Further, Many farmers did not receive the benefits of PMFBY since 2016, hence farmers, especially the non-loany, are showing reluctance to take crop insurance. Farmers have a general complaint that the Primary Agriculture Cooperative Societies (PACS) are deducting the PMFBY premium without any authentic survey of the crop grown.
- 11.14** Non-availability of Zinc with the local dealers is a major issue, the farmers have requested to ensure the availability of Zinc to the department.
- 11.15** The cultivable land in Shahdol is 195268 ha. of which rabi area is 77000 ha. In total rabi, 23000 ha alone is under wheat. To further increase the rabi coverage under wheat and the cropping intensity, the district functionaries have suggested either to consider district Shahdol under NFSM-wheat or to provide critical support under RKVY. Shahdol is predominantly forest oriented, prone to heavy soil erosion of the upper layer.
- 11.16** In Shahdol, the existing office premises also need to be renovated for proper up-keep and maintenance of record/ execution of the work. Similar situation has been reported in Sagar district, where, the DDA office is on rent while the RKVY infrastructure in Cant area is lying unutilized for the last 03 years.
- 11.17 Poor Rainfall Scenario:** Low average precipitation/erratic rainfall including poor LPA for the last 6-7 years have resulted into depletion of water table/ground water recharge in almost all the 51 districts of MP, including the districts of Shahdol division.
- 11.18 Poor Technology Transfer:** Non-scientific method of planting *i.e.* non-line sowing, both in demonstrations as well as the existing farmers practice, is a major observation in Shahdol Division in general and the Shahdol district, in particular. The accountability of the DDA is strongly felt for quality demonstrations, either for tools, techniques or cultivation method. *It is observed that the district is merely confined to distribution part of the given interventions rather than the demonstrating of the technologies.* For example a Paddy transplanter (cost Rs.1.96 lakh, subsidy amount Rs. 1.44 lakh) provided (during 2016-17) to Shri Brajendra Gupta (9926314402)

of village Singhpura was lying unutilized/ not demonstrated after a lapse of two crop season. Neither the Company/dealer nor the District Agriculture Officer followed- up the activity/ intervention for which it was provided.

**11.19** Many cluster demonstrations and Beej Gram Yojana fields were found sown as mixed cropping with linseed or coriander etc. It is advised that these should be demonstrated with newer and descript varieties with proper method of planting, *i.e.* line sowing, ridge-furrow planting technique etc.

**11.20 Demonstrations with KVK:** Visit of KVK has revealed that the funds towards cluster FLD on Pulses and Oilseeds are not being released on time. In Umaria, against an allocation of Rs. 5.58 lakh, Rs. 1.078 lakh were released as on 5<sup>th</sup> December, 2017. Rs. 3.65 lakh is the pending liability during 2017-18 at the time of visit.

As regards, the yield gaps under FLD and farmers field, during 2015-16, chickpea (JG-63) with 13.63 qtls./ha in FLD was 135% higher than the check yield (7.84 qtls./ha). In linseed (JLS-27) with 8.5 qtls., the yield gap was 95.85%.

During 2016-17, the chickpea FLD yield (JG-63, JG-14, JG-226) was 8 qtls./ha against the check yield of 4.98 qtls./ha, the yield gap was 66.6%. In pigeonpea, the FLD yield (TJT-501, seed treatment with line sowing) was 11.41 qtls./ha against the check yield of 2.98 qtls./ha., the yield gap being >35%. In var. TJT-501 with transplanting, the yield was 20.97 qtls./ha against the check yield of 8.43 qtls./ha., the yield gap being 12.54 qtls/ha. *i.e.* >148%. In linseed (JLS-27) with yield at 11 qtls/ha, gap was 56%.

**11.21 Prampragat Krishi Vikas Yojna:** In Umariya, 15 PKVY clusters are being implemented. A total of Rs. 44.72 lakh (allocation Rs. 105.955 lakh) was the expenditure. During 2016-17, the expenditure was Rs. 10.96 lakh. During interactions, it is realised that the training component for cluster farmers, training on PGS certification, training of trainers etc. are hampered in the

absence of trained resources persons/facilities. Similar situation was observed in the PKVY programmes in Mandla district.

**11.22 Cluster Demonstrations:** It is major programme of NFSM with a lion share of 30% of total allocation under this component. Generally, owing to the poor socio-economic status of farmers of the state, including the tribal dominated divisions, the recommended inputs (input cafeteria) as per the package of practices are not being used in laying out the cluster demonstrations. Regular field visits have revealed that quality demonstrations are seriously hampered to achieve the mandated objectives of transfer of technology. All the earlier NLMT Reports have given this observation in the past, as well.

*Cluster Demo./CSBD:* Incomplete recommended input cafeteria resulting into poor quality of demonstrations.

**11.23 Status of Mechanization/Custom Hiring Centre:** The progress of the implementation of resources conservation tools/ machineries have been highly disappointing during 2017-18 due to lack of synergy between the main district level agricultural functionary i.e. DDA and the poorly strengthened Dte. of Engg. Representatives in the districts/blocks (even their absence in certain districts eg. Harda). Since 2016-17, the accountability clause under this component is fully compromised; the progress is not being reported/ maintained at the level of DDA, while there is no representative of engineering deptt. to explain the fact.

**11.24 Seed Distribution:** Seed distribution component has a 15% share in total allocation of NFSM funds to a state. The monitoring across the state has observed that this component also had a setback, especially with DBT mode of implementation since 2017-18.

## 12 Suggestions

- 12.1** In view of large number of SMF with poor Socio-economic status in the OBC and General Category, many farmers have requested to extend the *“state plan micro/minor (Nalkoop) irrigation plan”* to the OBC/ General category with poor SES/ SMF farmers in the state. It is suggested that alternatively this plan may also be funded for SMF OBC/General category under RKVY in the projectile mode to achieve the target of doubling farmers income by 2022.
- 12.2** For effective outcome of the Beej Gram Yojna, first of all, the district functionaries need an orientation training. State-wise plan should be prepared for identification of crop/ varieties. The beej gram beneficiaries should be in cluster. Method of planting/time of planting/seed treatment/thinning/rouging etc., should be followed. The beneficiaries may be registered with the State Seed Certification; proper seed production trainings and their documentation on the aspects of seed production should be followed. Necessary directives in this regard may be issued at the level state headquarter.
- 12.3** It is advised that the PMFBY portal should have the provision of login ID for DDA to access effective monitoring at district level; inclusion of insect and diseases as local natural calamity; establishment of insurance company office/ representative and ensured toll-free number for the farmers to respond their complaints in local languages. It is advised that for authentic data, the PACs should confirm/survey of the crops grown by the farmers.
- 12.4** District Shahdol is having approximately 70% light sandy-soils with low WHC and productivity. To improve the productivity of the soil, NADEP, Vermi-Pit and Bio-gas plants may be allocated in sizeable numbers. Further, the irrigated area is only 20%. In view of potential irrigation area, minor irrigation projects under PMKSY need maximum targets with the involvement of soil conservation staff of the department owing to their expertise in soil and water conservation sector. It is suggested that the “Med-Bandhan (Bunding) ” under MGNREGA should be separately dealt.

- 12.5** For surface water management in the predominantly sloppy land in the district, the field functionaries have advised to increase the subsidy amount under Balram-Talab Yojna for SMF category upto 80-90% of the total cost, it is suggested that a proper cost-assessment should be done.
- 12.6** With the implementation of DBT, and increased work load at the district level, Data Entry Operators may be provided on contractual roll under state plan on out- source basis in the office of the DDA and SADO. *The State of UP is already having this provision.*
- 12.7** It is also felt that technical competency of the field staff needs to be upgraded and they may be deputed for exposure visit/ trainings, especially for IPM and Good Agriculture Practices (GAP).
- 12.8** Mobility is a major issue in almost all the districts which has hampered the monitoring of developmental activities. It is suggested that the field staff (upto Class II) may be provided the field vehicle. The state government of Madhya Pradesh may make this provision from within the award amounts of Krishi Karman Award.
- 12.9** It is realized that *soil and water conservation work* in convergence with PKSY need to be initiated on priority basis. The district Irrigation Plan (DIP) prepared by the soil conservation section of the DDA, has the provision of rain water harvesting structures, as well. The qualified (degree in Engineering/Agriculture)/competent and experienced staff (ASCO/SCO/Soil Conservation Survey Officers etc.) which have been doing very good work on infrastructure development work/water harvesting structures (Khet-Talab, Balram Talab, stop dam, check dam, rapta-cum-stop dam, cause way-cum-stop dam, irrigation tank etc.) under the water shed development projects/erstwhile NWDPRAs etc., is under utilized/ without work. It is suggested that the proposed activities under DIP, RKVY-Holistic Agriculture Development etc. may be implemented through this existing set-up of FW& Agriculture Development Deptt., Govt. of MP.
- 12.10** *State Micro Irrigation Mission* has a subsidy of Rs. 12000/ha., having no provision for top-up subsidy. Whereas, under the CSS, the drip/sprinkler (MIS) has the provision of Top-up. This has

resulted in poor/no utilization of this component (State Micro Irrigation Mission). It is, therefore, suggested that either there should be an uniform subsidy norms (including top-up) or else State Micro Irrigation scheme should be allocated to the non-tribal districts like Malwa and Nimaad divisions, where SES of the farmers is comparatively much better.

- 12.11** The state HQ/ scheme's Nodal Officers may be advised to allocate judicious targets to districts based on the potential, feasibility etc. NMOOP-Mustard demonstrations should be allocated under intercropping in the district like Shahdol and Umaria with >80% farmers of SMF category who do not take sole crop of mustard.
- 12.12** The districts with higher percentage of SMF with poor SES, have shown very poor utilization of the NFSM crop development programme. The farmers/districts functionaries have given a feedback to provide in kind DBT '*input cafeteria*' for demonstrations and seed components.
- 12.13** *Mukhyamantri Solar Pump Scheme* is gaining popularity in the state. However, slow pace of execution of work is a major feedback. In Shahdol, against 198 applications, 63 were registered, but the solar pump could be installed only for 17 beneficiaries. In Umaria, out of 459 accepted cases, 151 solar pumps with 2, 3 and 5 HP have been executed. It is, therefore, recommended that *Madhya Pradesh Rajya Urja Vikas Nigam* may be instructed to execute the pendency on priority basis.
- 12.14** The NLMT has advised to the visiting districts/recommends to State Mission Director to conduct '*Impact evaluation study*' of the agricultural implements/RCT distributed (under NFSM/other CSS) during the last >9 years. The evaluation should be done with KVK to know the *reduction in cost of cultivation, increase in cropping intensity and employment/ income generation* through mechanisation and hiring of the RCT/ Machineries.
- 12.15** To contain Wild animal menace, especially the wild boar, the farmers may be advised to use ITK/traditional method by using castor oil or (a product in the name of Nelbo, i.e Ricinoleic

acid) dipped Jute rope fencing (1.5 feet height jute rope fencing for boar and 3 feet height rope for blue bull) as practiced in Karnataka and Tamilnadu.

The Jabalpur, Shahdol, Narmadapuram divisions and other divisions/districts adjacent to forest are facing considerable economic losses due to wild animals. Recently on January 13<sup>th</sup>, 2018, the PCCF Karnataka has permitted killing of crop raiding wild boars in the Ramnagara district through a notification which says that "*in exercise of the powers conferred by section 11 of the Wild Life (Protection) Act, 1972, the state government hereby declares wild pig (Sus scrofa) to be 'vermin' for a period of one year*". Declaring the wild boar as 'vermin' is easy, compared to other wild animals as it's not an endangered species/PCCF, Govt. of MP may also be requested to review the situation for farmers living in the periphery of forests.

**12.16** In Shahdol, Soybean covers an area of about 15 to 20,000 ha. JS-335, a long duration variety, is popular in the district. It is suggested that demonstration of short duration varieties be organised to sustain productivity. The farmers/extension workers informed that the soybean is facing productivity constraints for the last >3 years due to erratic rainfall/ drought coupled with the *new emerging threat of charcoal rot/ insect pests*.

- *Charcoal rot*, also known as *dry-weather wilt* is caused by the fungus **Macrophomina phaseolina**, which has a widespread distribution and large host range and also affects corn and sorghum. Microsclerotia (hardened fungal survival bodies) are formed inside infected tissue. These microsclerotia are how the fungus overwinters in infested crop debris and free in soil. Survival of microsclerotia is several years in dry soil but only a few weeks in wet, saturated soils.
- Infection of soybean typically occurs early in season at emergence and early seedling growth stages. These seedling infections remain latent until environmental stresses (drought and high ambient temperatures) occur during the R1 (flowering) to R7 (mature pod) growth stages.

- Early Symptoms of Charcoal Rot are visible during the reproductive stages of soybean development and are first evident in the driest areas of the field. Earliest symptoms include smaller than normal leaves, reduced vigor, premature yellowing of top leaves and plants wilting during the midday heat; a light gray discoloration develops on the surface tissues of the roots and lower stem; scraping the outer tissues reveals black, dusty microsclerotia (a diagnostic symptom of charcoal rot). —A hand lens is useful in detecting microsclerotia; As drought persists and charcoal rot progresses, plants reach the permanent wilt point and die prematurely.
- During the forthcoming kharif season, the farmers may be advised to opt. drenching with trichoderma viridae as an effective control measure; crop diversification; ridge furrow/BBF method of planting; intercropping with jowar (Jowar roots are known to secrete a chemical HCN (Dhurrin) which control wilt; pheromone trap (lure/septa) to be made available through the seed societies/KVKs.

**12.17** The team is of considered opinion that *for effective implementation of PKVY* and proper capacity building of the cluster farmers, the District Agriculture Officers' role should be retained upto the level of facilitating trainings, helping the cluster in the availability of market, ensuring the availability of quality bio-organic manures and building the capacity of the group to prepare the bio-intensive pesticides/ bio-fertilizers/ manures etc. It is observed that in some places (Mandla in Jabalpur division), the District Agriculture Officers are involved in the marketing of the produce while, the PKVY cluster/ group is not having their publicity and stake.

**12.18 Complete Input Cafeteria:** In general the input cafeteria for sole demo. (@ Rs. 7500/ha) incorporates **Light Trap** (@Rs. 1800/unit/ha), should be done away with as farmers disagree with the practical performance of Light trap (individual area of pulses being much less than the 01 ha, installation/electric supply/AMC difficult).

*For effective organisation of quality cluster demonstrations from 2018-19 onwards with the enhanced per hectare cost norms (sole demonstrations @ Rs. 9000/- per ha; CSBD @ Rs.*

*15000/- per ha), it is advised that the input cafeteria may be provided in the form of a kit by the district level dealers directly to the field level extension workers under DBT mode and the farmer's share and subsidy amount may be credited to the dealers account under stringent quality monitoring/ inspection by SADO.*

*For more equitable technology demonstration benefits, the field functionaries' feedback on minimising the general demonstration/ cluster demonstration area, to reach to maximum number of SMF beneficiaries, may be considered at the level of State Food Security Mission Executive Committee/ District Food Security Mission Executive Committee.*

**12.19 RKVY-Holistic Agriculture Development:** It is a very good programme. However, the programme has a provision to release the subsidy after completion/ execution of all the sub-components of the plan. The field functionaries/ beneficiaries request to release the execution linked componential subsidy, may be considered at the state level based on the performance evaluation report at the district level. This provision will help the beneficiary to proceed for another activity and timely execution of the project.

**12.20 Viability of the Custom Hiring Centres established since 11<sup>th</sup> plan (2007-08 onwards) need to be studied by the Directorate of Engineering.** In district Shahdol, there are 11 CHCs with the PACs and all of them are non-functional. This scenario is also seen in other districts of the state and need an immediate intervention at the level of State Mission Director (NFSM)/ Director Agriculture.

It is suggested that the CHCs may be auctioned to NGOs/ farmer producer organisations (FPOs)/ farmer producer companies (FPCs)/ private institutions in the interest of the small and marginal farmers/ tribal communities of the state and vitality of the infrastructure created and utilization of public money.

**12.21 Extending benefits of CSS/PMFBY to Van Grams/FRA farmers:** It is suggested that the benefit of the PMFBY, presently not reaching to the tribal farmers, cultivating lands under FRA

(Pattadhari Kisan) owing to non availability of khasra, may be extended to the Vangrams. This issue may be resolved in consultation with the State Dept. of Agriculture and Govt. of India DAC& FW.

RCT component has also not been implemented as the farmers do not have access to online submission of request. *In Van Grams, it is therefore suggested that 0.4 ha sprinkler set may jointly be given to 2-3 farmers who may share their contribution and take the benefit of the scheme.*

**PMFBY:** The Team interacted with a good number of farmers to take a feedback on PMFBY. Incorrect toll-free number/non-response, apathy/unavailability of PMFBY agency/representatives in the districts, lacking farmer-wise/ field-wise survey in the event of insect-pest infestation etc., have been considered as the major bottle necks/constraints to take benefits of PMFBY by the farmers.

**12.22 Local initiative/ flexi funds to benefit Baiga Tribes:** *In Jabalpur and Shahdol divisions, based on the feedback of Baiga tribes, it is suggested that the traditional/ non-descript pigeonpea germplasm, known as baigaani arhar, need to be conserved/propagated under PKVY. The minikit demonstrations, solar fencing and solar tubewell under Mukhyamantri Solar Pump Yojana and also in projectile mode under RKVY or a composite funds/ saving under Local Initiative component of NFSM may be converged with the ongoing tribal development projects to support the Baiga farmers. Every village should be given atleast two solar tubewells and ten minikits demonstrations to motivate the Baiga farmers and upgrade their livelihood and income generation.*

**12.23** The Govt. of MP should use Local Initiative (Flexi fund) which have not been used since 2013-14. Local initiatives of Govt. of UP and their efforts may be replicated in MP. The UP state has used Local initiative funds by including Mini Dal Mill (@ Rs. 80,000/unit with 40% subsidy); **community storage for inputs** (48 X 12 X 4 Meters) @ Rs. 94.77 lakh/unit with 100% subsidy;

**construction of community threshing floor** (each of 20 X 10 M rectangular) Rs. 1.7 lakh/floor with 100 % subsidy and **tarpaulin for grain protection** (i) 7 X 7 M with single joint (Rs. 2650/- each with 50 % subsidy i.e. Rs. 1325/- per unit) (ii) 3.5 X 3.5 M without joint (@ Rs. 700/- each with 50% subsidy i.e. Rs. 350/unit).

**12.24 Convergence of flexi funds with RKVY/other CSS:** *The wild animal- men conflict is a major issue in all the tribal and Forested districts of Jabalpur, Shahdol and Narmadapuram divisions.*

- *The migration is taking place due to heavy crop damage by wild animals, resultantly unemployment of the tribals of Baiga, Bhariya etc.*
- *During 2013-14, under RKVY, the solar fencing (@ Rs. 1.65 lakh per km, at a total cost of Rs. 4.20 crore) was provided in forest adjoining belt of Mandla and Balaghat districts. The fencing has proved very useful.*
- *It is suggested that the tribal villages already covered with the solar fencing (water table is 25-30 feet) may be supported with solar tube well with 100 per cent subsidy in a projectile mode under RKVY. Here, the PMKSY may also be converged. The bee keeping component under NFSM/ NMOOP may also be implemented in these villages. The tribals are hard working and receptive to new agricultural practices and look forward for employment. The objective of Doubling Farmer's income by 2020-22 could be achieved for tribals as well, subject to availability of irrigation water (solar tube well) and protection from wild animals (solar fencing).*
- *For effective monitoring and implementation of the programme, appointment of the DC under the PMT may be ensured and appropriate steps may be taken to enhance the utilization of crop development funds under NFSM.*

**12.25 Adequate Contingent fund of monitoring/ input delivery at block levels:** Almost all the districts in the state are constrained with the mobility. This has resulted into very poor

monitoring and difficulties in timely delivery of minikits and other necessary inputs upto the block/ panchayat/ village level.

- *It is, therefore, suggested that for facilitating the mobility/ POL, adequate contingent fund under different schemes should be provided to the districts till the regular mobility arrangement at the district/ sub-divisional level may be ensured alternatively till the regular districts/ SADO level field vehicle/ mobility arrangement is finalised.*

**12.26 State plan Surajdhara/ Annapurna Yojna:** Many a places, this scheme of seed distribution is doing very well, however, the benefits are only limited to small and marginal farmers of SC/ST categories. Based on the feedback of field functionaries/ farmers, this scheme may be extended to all the small and marginal farmers irrespective of their category.

**12.27 Uniform seed rates under seed subsidy:** The differential seed rates prevailing under different seed companies/ agencies having a subsidy component need to be uniform to avoid confusion/ mis-trust about the field functionary and to facilitate a better extension environment. The state government may remove such anomaly by fixing the rates or by bridging the gap through top-up subsidy under state plan or by way of convergence with some other schemes.

**12.28 Status of training/capacity building:** The concurrent as well as the monitoring at the level of national team has revealed that the district and block level extension functionaries, including the contractual arrangement under ATMA and NFSM-PMT, need more facilities/ resources for their capacity building and exposure to the Good Agricultural Practices (GAP). The field functionaries involving implementation of Prampragat Krishi Vikas Yojna (PKVY), Beej Gram Yojna, cropping systems based trainings (CSBD-trainings), cluster demonstrations, Soil Health Card, RKVY-Holistic Agricultural Development and areas of IPM etc should be deputed for orientation training programmes.

**12.29 Allocation of targets to districts/ blocks:** *As a policy decision the NFSM State HQ may be advised to allocate the componential targets to districts based on their potential to implement the particular component.*

*The area under oilseed, being very less, it is very difficult to utilize the allotted funds under seed distribution, block demonstration and other 50% intervention etc. The expenditure is therefore negligible.*

*The state nodal officer NMOOP may be advised to allocate the targets to the districts on the criteria of the potentiality of the particular crop.*

**12.30 Inclusion of KRIBHCO/ other Central Seed Producing Agencies under PACs scheme:** *The Co-operative deptt. of the State Government is implementing the short-term input subsidy scheme since 2015-16 for fertilizers and seeds through the PACs. The scheme has a provision of 10% subsidy, limited to Rs. 10000/- per farmer per year under Mukhyamantri Krishak Sehkari Rin Sahayta Yojna.*

*The field visit across the state has revealed that the quality seed of pulses was not available to many farmers, however, the seeds/ varieties remained unlifted with the KRIBHCO (Dewas Plant)/ NSC. As a policy decision, the state government should include the KRIBHCO/ HIL/ NAFED/ etc. (any other reputed seed producing agencies) to be considered for Mukhyamantri Krishak Sehkari Rin Sahayta Yojna. It is noted that these central agencies are also taking the seed production programme with the funding support of the Govt. of India under NFSM-Pulses.*

**12.31 Status of implementation of training component:** *The training component under NFSM/ NMOOP/ Beej Gram Yojna (SMSP) could not be implemented owing to non-release of funds to Block level. The modus operandi for release of funds towards this component is **direct release of funds to SADOs/ RAEOs in their personal accounts.***

- *It is suggested that the state Govt. may allow SADOs/SDOs to open institutional accounts so that PFMS mode of fund transfer could be regularised in public interest.*

- *In such institutional accounts of the farmers' share towards Beej Gram Yojna (SMSP) or training funds could be kept.*

**12.32 Containing Wild animal menace:** Blue bull, Boar, stray-cattle (post cattle slaughter ban) is a major issue. *The wild animal- men conflict in almost all the tribal districts of Shahdol Division and other forest adjoining districts of MP, coupled with Poor infrastructure, lack of irrigation facilities has resulted into high migration due to unemployment of the tribal youth of Baiga, Bhariya and Gonds etc.*

*The tribals are hard working and receptive to new agricultural practices and look forward for employment. The objective of Doubling Farmer's income by 2020-22 could be achieved for tribals as well, subject to ensured availability of irrigation water (solar tube well) and protection from wild animals (solar fencing). (Cost of solar tube well is Rs.6.50 lakhs (5hp motor pump) with 95% subsidy (farmer's share Rs 72,285/-).*

- *During 2013-14, the Govt. of MP has already executed a solar fencing project under RKVY in the forest adjoining villages of Mandla, Balaghat, Pipariya/Bankhedi etc. The cost of solar fencing was @ rs. 1.65 lakh per running km, at a total cost of Rs. 4.20 crore. The farmers feedback has been extremely satisfactory and they are cultivating their lands (coupled with day and night vigil./ hard work).*

**12.33** *It is suggested that the solar fencing projects may extended to other forest adjoining districts of MP. Further, the tribal villages, already covered with the solar fencing and where water table is nearing 25-30 feet, now be supported with State plan solar tube well with 100 per cent subsidy in a projectile mode under Mukhyamantri Solar Tubewell Yojna. The PMKSY, the bee-keeping component of NFSM/ NMOOP/ MIDH may also be converged.*

**12.34 DBT compliance-** All schemes viz. NFSM, NMOOP and PMKSY are under implementation in DBT compliant. However, due to DBT, expenditure under various interventions (with 50%

subsidy) has reduced to negligible due to non-availability of bills from the beneficiaries. It is also realized that the demonstrations are not being organized as full package with quality.

## Field Photographs

### District- Katni



State Plan: Minor irrigation plan (Nalkoop Khanan) tube well  
Village-Bichiya, Block-Katni



State Plan: Mukhyamantri Solar Pump Yojna (2017-18)  
Village-Dungariya, Block-Bahuriband



(NMAET-SMSP)- Beej Gram Yojana: Chickpea Demo. (Var. JG-163)  
Village –Slimnabad, Block-Bahuriband



RKVY-Holistic Agriculture Development Programme: Chickpea Demo. (Var. JG-63)  
Village-Ligar Ratua, Sansarpur, Block-Bahuriband

## District- Umaria



NFSM Demo: Chickpea Cluster demo.(Var.-JG-63)  
Village-Pathrhatha, Block-Karkeli



NFSM Demo: Chickpea Cluster demo.(Var.-JG-63)  
Village-Rampur, Block-Karkeli



RKVY (2015-16): Power Tiller, Beneficiary Farmer - Ramkumar Kushwaha  
Village-Pathrhatha, Block-Karkeli



Integrated Farming System: Solar Pump, Beneficiary Farmer-Ramkumar Kushwaha  
Village-Pathrhatha, Block-Karkeli



State Pan: Gobar Gas Unit  
Village-Rampur (Singrada), Block-Karkeli



NMOOP Demo: Mustard Field: Village-Rampur (Singrada), Block-Karkeli

## District- Shahdol



SMAM (2016-17): Paddy Transplanter  
Beneficiary - Shri Brajendra Gupta



NFSM Demo: Chickpea (Var.-JG -130), Village-Bodri, Block-Shahdol



RKVY (2017-18):Breeder Seed Production Component- Chickpea (Var.- JG 12)  
Beneficiary – Shri. Surendra Singh, Village-Bodri, Block-Sohagpur, Distt- Shahdol



Beej Gram Yojna (NMAET-SMSP): Wheat Demo. (Var.- HI-1544)  
Beneficiary –Shri. Sitaram, Village-Sigudi, Block-Sohagpur, Distt- Shahdol



Kishan Gosthi, Village-Khotia, Block-Sohagpur, Distt.- Shahdol



IPM: Insect Trap, KVK-Shahdol

## District- Anuppur



RKVY: Holistic Agriculture Development Programme under  
Vill- Bagaihatola , Block-Kotama, Distt.- Anuppur



Bio-Gas Unit Construction, Beneficiary- Shri. Ram Krapal Sahu  
Vill- Bagaihatola , Block-Kotama, Distt- Anuppur



Surajdhara Scheme: Safflower Demo. (Var. JSI-97). Village- Bagaihatola,  
Block-Kotama, Distt Anuppur



Beeh Gram Yojma.: Wheat (Var.- JW-3211) under Zero tillage Method  
Village- Bagaihatola, Block- Kotama, Distt- Anuppur



ATMA: Diversified Agriculture activity (Strawberry cultivation)  
Beneficiary - Shri. Suresh Tiwari, Vill.- Thudaha, Block- Kotama, Distt- Anuppur



Kishan Chaupal , Village- Thudaha, Block-Kotama, Distt- Anuppur



RKVY- (2016-17): Power Tiller under  
Village –Parsi, Block –Anuppur, Distt- Anuppur



Mukhyamantri Solar Pump Yojna (2017-18)- Solar Pump  
Wheat Demo.-(Var.-HI 1544), Village- Shikarpur, Block-Anuppur, Distt- Anuppur

**APPROVED COST NORMS & INPUT CAFETERIA****1. Cluster Demonstration : Coarse Cereals - Sole Crop****A. Maize***(Amount in Rs.)*

S. No.	Interventions/Input	Recommendation	Total Cost /ha
1.	Hybrid Maize Seed	20 kg/ha	1150.00
2.	Seed treatment fungicides/Molybdenum		100.00
3.	Zinc (Based on soil testing value)	25 kg/ha	500.00
4.	Weedicides		350.00
5.	Bio-fertilizers (Azotobacter and Azospirillum, PSB & PMB, ZSB)	2-3 kg/Inoculant	300.00
6.	Demonstration on IPM	Use of Light Trap	1800.00
7.	Publicity material /Visit of Scientists/Field Day		800.00
	<b>Total</b>		<b>5000.00</b>

**B. Millets***(Amount in Rs.)*

S. No.	Interventions/Input	Recommendation	Total Cost /ha
1.	Seed (Incl. Seed Treatment)	5-10 kg/ha	500.00
2.	Promotion of line sowing		500.00
3.	Micro-nutrient-Zinc/Boron (Based on soil testing value)	25kg/ha/10kg/ha	400.00
4.	Weedicides		300.00
5.	Insecticides		400.00
6.	Bio-fertilizers (Azotobacter and PSB & PMB, ZSB)	3 kg/Inoculant	300.00
7.	Demonstration on IPM	Use of Light Trap	1800.00
8.	Publicity material /Visit of Scientists/Field Day		800.00
	<b>Total</b>		<b>5000.00</b>

**C. Intercropping Demonstration:Maize***(Amount in Rs.)*

S. No.	Interventions/Input	Recommendation	Total Cost /ha
1	Soybean (Main Crop)+ Maize/Jowar/Bajra/Kodokutki		2500.00
2	Seed treatment fungicides		200.00
3.	Zinc Sulphate	25 kg/ha	500.00
4.	Weedicides		900.00
5	Azotobacter, PSB and PMB	5 g each ino. /kg seed	100.00
6.	Publicitymaterial/Visit of Scientists/Field Day		800.00
	<b>Total</b>		<b>5000.00</b>

#### D. Wheat

(Amount in Rs.)

S. No.	Interventions/Input	Recommendation	Total Cost /ha
1	<b>Popularization of improved varieties</b>		
	HYVs	100 kg/ha	2800.00
2.	Promotion of use of Micro Nutrients and bio-fertilizers		
2.1	Zinc Sulphate (Soil test based)	25 kg/ha	900.00
2.2	Boron	10 kg/ha	800.00
3.	Promotion of line sowing using seed drills with the Custom Hiring		700.00
4.	Weedicides		1500.00
5.	Publicity material/Visit of Scientists/Field Day		800.00
	<b>Total</b>		<b>7500.00</b>

#### E. Pulses

(Amount in Rs.)

S. No.	Interventions/Input	Recommendation	Total Cost /ha
1	<b>Popularization of improved varieties</b>		
1.1	Urd Moong, Moth, Cowpea, Pigeon pea	20 kg/ha	3000.00
1.2	Chick Pea/field pea	80 kg/ha	
1.3	Lentil/Horse gram	40 kg/ha	
2	Seed treatment fungicides/Molybdenum		100.00
3	Promotion of use of Micro Nutrients and bio-fertilizers		
3.1	Zinc/Boron/Molybdenum (Based on soil testing value)		500.00
3.2	Rhizobium and PSB, PMB and ZSB		300.00
4	Plant Protection		1000.00
5	Demonstration on IPM	Use of Light Trap	1800.00
6	Publicity material /Visit of Scientists/Field Day		800.00
	<b>Total</b>		<b>7500.00</b>

#### F. Rice High Yielding (Direct Seeded Rice)

(Amount in Rs.)

S. No.	Name of Interventions	Recommended by Agri. Scientist	
		Recommendation	Total Cost /ha
1.	<b>Demonstration of High Yielding Varieties</b>		
1.1	Direct Seeded Rice	60 kg/ha	2000.00
1.2	Transplanted Rice	25 kg/ha	
2.	Seed treatment fungicides/Molybdenum		250.00
3.	<b>Promotion of use of micro-nutrient and bio-fertilizer</b>		
3.1	Zinc/ Boron (Based on soil testing value)	25 kg/ha / 10kg/ha	900.00
3.2	Blue Green Algae		300.00
4.	Weedicides		400.00
5.	Insecticide		1050.00
6.	Demonstration on IPM	Use of Light Trap	1800.00
7.	Publicity material /Visit of Scientists/Field Day		800.00
	<b>Total</b>		<b>7500.00</b>

**G. Rice Hybrid (System of Rice Intensification)***(Amount in Rs.)*

S. No.	Name of Interventions	Recommended by Agri. Scientist	
		Recommendation	Total Cost /ha
<b>1.</b>	<b>Demonstration of Hybrid Varieties of rice</b>		
1.1	Systematic Rice Intensification	05 kg/ha	2000.00
2.	Seed treatment fungicides/Molybdenum		250.00
<b>3.</b>	<b>Promotion of use of micro-nutrient and bio-fertilizer</b>		
3.1	Zinc/ Boron (Based on soil testing value)	25 kg/ha / 10kg/ha	900.00
3.2	Blue Green Algae		300.00
4.	Weedicides		400.00
5.	Insecticide		1050.00
6.	Demonstration on IPM	Use of Light Trap	1800.00
7.	Publicity material /Visit of Scientists/Field Day		800.00
	<b>Total</b>		<b>7500.00</b>

**H. Rice High Yielding varieties (Stress Tolerant Variety)***(Amount in Rs.)*

S. No.	Name of Interventions	Recommended by Agri. Scientist	
		Recommendation	Total Cost /ha
<b>1.</b>	<b>Demonstration of High Yielding Varieties of rice</b>		
1.1	Systematic Rice Intensification		2000.00
2.	Seed treatment fungicides/Molybdenum		250.00
<b>3.</b>	<b>Promotion of use of micro-nutrient and bio-fertilizer</b>		
3.1	Zinc/ Boron (Based on soil testing value)	25 kg/ha /10kg/ha	900.00
3.2	Blue Green Algae		300.00
4.	Weedicides		400.00
5.	Insecticide		1050.00
6.	Demonstration on IPM	Use of Light Trap	1800.00
7.	Publicity material /Visit of Scientists/Field Day		800.00
	<b>Total</b>		<b>7500.00</b>

**I. Rice High Yielding Varieties (Line Transplanting)***(Amount in Rs.)*

S. No.	Name of Interventions	Recommended by Agri. Scientist	
		Recommendation	Total Cost /ha
<b>1.</b>	<b>Demonstration of High Yielding Varieties of rice</b>		
1.1	Systematic Rice Intensification		2000.00
2.	Seed treatment fungicides/Molybdenum		250.00
<b>3.</b>	<b>Promotion of use of micro-nutrient and bio-fertilizer</b>		
3.1	Zinc/ Boron (Based on soil testing value)	25 kg/ha /10kg/ha	900.00
3.2	Blue Green Algae		300.00
4.	Weedicides		400.00
5.	Insecticide		1050.00
6.	Demonstration on IPM	Use of Light Trap	1800.00
7.	Publicity material /Visit of Scientists/Field Day		800.00
	<b>Total</b>		<b>7500.00</b>

## 2. Cluster Demonstration: Cropping System Based Demonstration (CSBD)

### I. PULSE-WHEAT

#### A. CSBD: PULSE

(Amount in Rs.)

S. No.	Interventions/Input	Recommendation	Total Cost /ha
1	Popularization of improved varieties		
1.1	Urd, Moong, Moth, Cowpea, Pigeon pea	20 kg/ha	3000.00
1.2	Chick Pea/field pea	80 kg/ha	
1.3	Lentil/Horse gram	40 kg/ha	
2	Seed treatment fungicides/Molybdenum		100.00
3	Promotion of use of Micro Nutrients and bio-fertilizers		
3.1	Zinc/Boron/Molybdenum (Based on soil testing value)		800.00
3.2	Rhizobium and PSB, PMB and ZSB		300.00
4	Plant Protection		700.00
5	Demonstration on IPM	Use of Light Trap	1800.00
6	Publicity material /Visit of Scientists/Field Day		800.00
	<b>Total</b>		<b>7500.00</b>

#### B. CSBD: WHEAT

(Amount in Rs.)

S. No.	Interventions/Input	Recommendation	Total Cost /ha
1	Demonstration on HYVs	100 kg/ha	1600.00
2.	Promotion of use of micro-nutrient and bio-fertilizer		
2.1	Zinc Sulphate (Based on soil testing value)	25 kg/ha	800.00
2.2	Boron	10 kg/ha	600.00
3	Weedicides		1200.00
4	Publicity material /Visit of Scientists/Field Day		800.00
	<b>Total</b>		<b>5000.00</b>

### II. RICE-PULSE

#### A. CSBD: RICE

(Amount in Rs.)

S. No.	Interventions/Input	Recommendation	Total Cost /ha
<b>1.</b>	<b>Demonstration of High Yielding Varieties of rice (<i>Transplanted &amp; DSR</i>)</b>		
1.1	Systematic Rice Intensification	60 kg/ha (DSR) 25 kg/ha (Trans.)	2000.00
2.	Seed treatment fungicides/Molybdenum		100.00
<b>3.</b>	<b>Promotion of use of micro-nutrient and bio-fertilizer</b>		
3.1	Zinc Sulphate (Based on soil testing value)	25 kg/ha	400.00
3.2	Boron	10 kg/ha	700.00
3.3	Blue Green Algae		300.00
4.	Weedicides		350.00
5.	Insecticide		1050.00
6.	Demonstration on IPM	Use of Light Trap	1800.00
7.	Publicity material		250.00
8.	Visit of Scientists		300.00
9.	Field Day		250.00
	<b>Total</b>		<b>7500.00</b>

## B. CSBD: PULSE

(Amount in Rs.)

S. No.	Interventions/Input	Recommendation	Total Cost /ha
1	Popularization of improved varieties ( <i>Including Seed Treatment</i> ).		
1.1	Urd, Moong, Moth, Cowpea, Pigeon pea	20 kg/ha	1800.00
1.2	Chick Pea/field pea	80 kg/ha	
1.3	Lentil/Horse gram	40 kg/ha	
2.	Promotion of use of Micro Nutrients and bio-fertilizers		
2.1	Rhizobium and PSB, PMB and ZSB		250.00
2.2	Demo. on use of Sulphur as a nutrient	20kg S /ha	600.00
3.	Demonstration on IPM	Use of Light Trap	1800.00
4.	Visit of Scientists		300.00
5.	Field Day		250.00
	<b>Total</b>		<b>5000.00</b>

## III. RICE-WHEAT

### A. CSBD: RICE

(Amount in Rs.)

S. No.	Interventions/Input	Recommendation	Total Cost /ha
1.	<b>Demonstration of High Yielding Varieties of rice (<i>Transplanted &amp; DSR</i>)</b>		
1.1	Direct Seeded Rice	60 kg/ha	2000.00
1.2	Transplanted Rice	40 kg/ha	
2.	Seed treatment fungicides/Molybdenum		100.00
3.	<b>Promotion of use of micro-nutrient and bio-fertilizer</b>		
3.1	Zinc Sulphate (Based on soil testing value)	25 kg/ha	400.00
3.2	Boron	10 kg/ha	700.00
3.3	Blue Green Algae		300.00
4.	Weedicides		350.00
5.	Insecticide		1050.00
6.	Demonstration on IPM	Use of Light Trap	1800.00
7.	Publicity material		250.00
8.	Visit of Scientists		300.00
9.	Field Day		250.00
	<b>Total</b>		<b>7500.00</b>

### B. CSBD: WHEAT

(Amount in Rs.)

S. No.	Interventions/Input	Recommendation	Total Cost /ha
1	<b>Popularization of improved varieties</b>		
	HYVs	100 kg/ha	1600.00
2.	Promotion of use of Micro Nutrients and bio-fertilizers		
2.1	Zinc Sulphate (Soil test based)	25 kg/ha	800.00
2.2	Boron	10 kg/ha	600.00
4.	Weedicides		1200.00
5.	Publicity material/Visit of Scientists/Field Day		800.00
	<b>Total</b>		<b>5000.00</b>

#### IV. Intercropping Demonstration for Pulses

(Amount in Rs.)

S. No.	Interventions/Input	Recommendation	Total Cost /ha
1	Wheat. Jowar, Soybean, Mustard (Main Crop) +Urd/Mung/Moth/Cowpea/Tur/Gram/Pea/ Lentil/Gram (Intercrop)		2800.00
2.	Seed treatment fungicides		100.00
3.	Promotion of use of micro-nutrient and bio-fertilizer		
3.1	Zinc/Boron/Molybdenum	25 kg/ha	800.00
	Rhizobium & PSB		100.00
4.	Plant Protection		1100.00
5	Demo. on IPM	Use of Light Trap	1800.00
6.	Publicity material /Visit of Scientists/Field Day		800.00
	<b>Total</b>		<b>7500.00</b>

#### V. Intercropping Demonstration for Sugarcane (Commercial Crops)

(Amount in Rs.)

S. No.	Interventions/Input	Recommendation	Total Cost /ha
1	Seed (Incl. Seed Treatment)	Wheat- 40 kg/ha & Gram-35 kg/ha	1400.00
2.	Soil treatment fungicides		200.00
3.	Promotion of use of micro-nutrient and bio-fertilizer		
3.1	Zinc/Boron/Molybdenum	25 kg/ha	500.00
3.2	Boron	10 kg/ha	600.00
4.	Plant Protection		2500.00
5	Demo. on IPM	Use of Light Trap	1800.00
6.	Publicity material /Visit of Scientists/Field Day		1000.00
	<b>Total</b>		<b>8000.00</b>

**CAFETERIA OF INTERVENTIONS FOR CLUSTER DEMONSTRATIONS**

**CLUSTER DEMONSTRATION: MAIZE (COARSE CEREALS)**

			<i>Amount in Rs.</i>
<b>S.No</b>	<b>Name of Interventions</b>	<b>Recommended by Agriculture Scientist</b>	<b>Total cost/ha</b>
1	Demonstration of Hybrid Maize :- Introducing newly released hybrids and quality protein maize varieties with specific to region	Seed rate 20 kg/ha	1150
2	Seed treatment (appropriate & recommended)	Seed treatment with Trichoderma viride @ 5 g/ kg seed or carbendazem 3 g/kg seed	100
3	Zinc	<b>Zinc</b> : Zinc sulphate @ 25 kg/ha is recommended as basal application for every three cropping sequences. If deficiency of Zinc is appears on the standing crop, 0.5% foliar application of Zinc sulphate is recommended (Neutrilize with 0.25% lime) two to three spray at the interval of 10-15 days are required.	500
4	Weedicide (appropriate & recommended)	· Atrazine/Simazine 1.0 Kg a.i./ha as pre-emergence (2.0 Lt/ha commercial prod.)	350
		· 2,4-D (Ethyl ester) 0.5 Kg a.i. /ha as post emergence	
		( 1.33 kg/ha commercial product)	
5	Bio-fertilizers (Azotobactor, PSB, Potash mobilizing)	<b>Azotobacter, Azosprillum and PSB</b>	300
		2- 3 kg of each inoculant should be taken.	
		· It should be mixed with 150 kg well powered FYM/Compost/Vermicompost/soil and incubate in shade for 7 days before soil treatment (about 40% moisture should be maintained).	
		· Broadcast the mixture over one hectare land before sowing	
	Demonstration on IPM	Light trap safer to beneficial and light trap for managing insect (Without ballast )	1800
	Publicity material/Visit of Scientists/Field Day	-	800
	<b>Total</b>		<b>5000</b>

## CLUSTER DEMONSTRATION : MILLETS (COARSE CEREALS)

			Amount in Rs
S.No.	Name of Interventions	Recommended by Agriculture Scientist	Total cost /ha
1	Seed including seed treatment	Seed rate 5-10 kg/ha	500
		Seed treatment with Trichoderma virideor Carbendazim 3 g/ kg seed.	
		For Shoot fly : Chloropyriphos @2ml/kg of seed	
2	Promotion of line sowing	Same as recommended	500
3	Micro nutrients (zinc, boron)	25 kg Zinc Sulphate/ha & Borex 10 kg/ha at the time of sowing(as per deficiency)	400
4	Weedicide (appropriate & recommended)	<ul style="list-style-type: none"> <li>• 2,4-D (Ethyl ester) 0.5g a.i. /hg as post emergence ( 1.33 Lit/ha commercial product)</li> </ul>	300
		<ul style="list-style-type: none"> <li>• Fenoxaprop-ethyl 100 g a.i./ha as post -emergence (1Lit/ha commercial prod., 20 to 25 day after sowing)</li> </ul>	
5	Insecticides (appropriate & recommended)	For Stem borer: Carbaryl 85% WP @ 5.75 kg/ha	400
6	Bio-fertilizers (Azotobacter, PSB, Potash mobilizing bacteria and zinc solubilizing bacteria)	<b>Azotobacter, Azospirillum and PSB</b>	300
		<ul style="list-style-type: none"> <li>• 3 kg of each inoculant should be taken.</li> </ul>	
		<ul style="list-style-type: none"> <li>• It should be mixed with 150 kg well powered FYM/Compost/Vermicompost soil and incubate in shade for 7 days before soil treatment (about 40% moisture should be maintained).</li> </ul>	
		<ul style="list-style-type: none"> <li>• Broadcast the mixture over one hectare land.</li> </ul>	
7	Demonstration on IPM	Use of Light traps as developed/ recommended by ICAR/SAU and it should be need based.	1800
8	Publicity material/Visit of Scientists/Field Day	-	800
<b>Total</b>			<b>5000</b>

Note : 1.If the seed is already treated, amount on seed treatment will not be used

2. Above intervention may be changed region wise according to the availability of inputs

## INTERCROPING DEMONSTRATION FOR MAIZE (COARSE CEREALS)

(Amount in Rs.)

S.No.	Name of Interventions	Recommended by Agriculture Scientist	Total cost /ha
1	Soybean(Main crop) + Maize/Jowar/Bajra/ kodo kutki ( Intercrop)	Seed	2500
2	Seed treatment (appropriate & recommended)	Seed treatment with Trichoderma viride @ 5 g/ kg seed or carbendazem 3 g/kg seed	200
3	Zinc	<b>Zinc</b> : Zinc sulphate @ 25 kg/ha is recommended as basal application for every three cropping sequences.	500
4	Weedicide (appropriate & recommended)	Pendimethalin 1.0 kg a.i./ ha (3.33 Lit/ha Commercial Product)	900
5	Bio-fertilizers (Azotobacter, PSB, Potash mobilizing)	Rhizobium, Azotobacter, Azospirillum and PSB - 5 g each inoculant /kg seed with crop specific.	100
7	Publicity material/Visit of Scientists/F. Day	-	800
	<b>Total</b>		<b>5000</b>

## CLUSTER DEMONSTRATION:WHEAT

(Amount in Rs.)

S.No.	Name of Intervention	Recommended by Agriculture Scientist	Total Cost/ha.
1	Demonstration on new HYV		
	Introducing newly released high yielding varieties with specific to region	Seed rate 100 kg/ha	2800.00
2	Promotion of use of Micro Nutrients and bio-fertilizers		
2.1	a) Zinc Sulphate (Soil test based)	<b>Zinc</b> : Zinc sulphate @ 25 kg/ha is recommended as basal application for every three cropping sequences. If deficiency of Zinc is appears on the standing crop, 0.5% foliar application of Zinc sulphate is recommended (Neutrilize with 0.25% lime) two to three spray at the interval of 10-15 days are required.	900.00
2.2	Boron (Borax Deca hydrate, Borax penta hydrate (Soil test based)	<b>Boron</b> :10 kg Borex /ha is recommended in Boron deficient soils as basal application. If deficiency of Boron is appears on the standing crop, 0.2% foliar application of Borex is recommended. Two to three sprays at the interval of 10-15 days are required.	800.00
3	Promotion of line sowing using seed drills with the Custom Hiring	Same as recommended	700.00
4	Demonstration on use of chemical weedcides (appropriate&recommended)	<ul style="list-style-type: none"> <li>· Metsulfuran – 4.0 g a.i./ha as post emergence (20 g/ha commercial prod.)</li> <li>· Fenoxoprop-P-ethyl 100g. a.i./ha as post emergence (1000 g/ha commercial product)</li> <li>· 2,4-D (Ethyl ester) 0.5 kg a.i. /ha as post emergence ( 1.33 kg/ha commercial product)</li> </ul>	1500.00
5	Publicity material/ Visit of Scientists / Field Day		800.00
	<b>Total</b>		<b>7500.00</b>

## CLUSTERDEMONSTRATION: PULSES

Amount in Rs.

S.No.	Name of Interventions	Recommended by Agriculture Scientist	Total cost /ha
1	Popularization of improved varieties		
1.1	Urd Moong, Moth, Cowpea, Pigeon pea	Seed rate 20 kg/ha	3000.00
1.2	Chick Pea/field pea	Seed rate 80 kg/ha	
1.3	Lentil/Horse gram	Seed rate 40 kg/ha	
2	Seed treatment fungicides/Molybdenum	For disease control	100.00
		Seed treatment with Trichoderma viride 5 g/kg seed or Carbendazim + Thiram (1:2) @ 3 g/kg seed.	
		Pigeonpea- Seed treatment with Metalaxyl @ 3 g/kg seed and foliar spray of Metalaxyl @ 3 g/lit of water, at appearance of phytophthora blight	
		Chickpea – Soil incorporation of Trichoderma viride @ 2.5 kg/ha along with FYM	
3	Promotion of use of Micro Nutrients and bio-fertilizers		
3.1	Zinc/Boron/Molybdenum (Based on soil testing value)	Zinc : Zinc sulphate @ 25 kg/ha is recommend -ed as basal application for every three cropping sequences. If deficiency of Zinc is appears on the standing crop, 0.5% foliar application of Zinc sulphate is recommended (Neutrilize with 0.25% lime) two to three spray at the interval of 10-15 days are required. Supplement Molybdenum @ 1 g AmoniumMolibdate/kg seed with Rhizobium + PSB inoculation.	500.00
3.2	Rhizobium and PSB, Potash mobilizing bacteria and zinc solubilizing bacteria)	Specific Rhizobium, PSB and Trichoderma	300.00
		<b>Rhizobium</b>	
		- Every year each pulse crop should be inoculated with appropriate Rhizobial inoculants.	
		- Seed should be treated first with fungicide as per recommendations.	
		- Prepare a slurry of 1 kg of Rhizobium culture in one litre of jaggery solution (by dissolving 200 g Jaggery in one litre of hot water and cool it.)	
		- Spread inoculants slurry over 80-100 kg of seed	
		- It found difficult to treat such a vig quantity of seed then it should be divided in 3-4 parts and accordingly inoculants slurry should also be divided.	
		- Mix the inoculants slurry in shade with seed so that every seed should be coated well.	
		- Molybdenum Supplement @ 1 g AmoniumMolybdate/kg seed(as seed inoculation with Rhizobium + PSB in Chickpea).	
		- Sow the inoculated seed as early as possible and do not keep the treated seeds overnight.	
		- NPV virus	
		<b>PSB and Trichoderma</b>	
		- 3 kg of each inoculants should be taken.	
		- It should be mixed with 150 kg well powered FYM/Compost/Vermicompost (about 40% moisture should be maintained)	
		-Broadcast the mixture over one hectare land.	

4	Plant Protection	Pigeonpea: Profenofos 50 EC @ 1.5 Lit/ha, Dimethoate 30 EC@1 Lit/ha, Chickpea : Profenofos 50 EC @ 1.5 Lit/ha, Letnil :Dimethoate 30 EC@1 Lit/ha, Field pea, Cowpea, Urd, Moong :Triazophos 40EC @ 1 Lit/ha	1000.00
5	Demonstration on IPM	Use of Light traps as developed/ recommended by ICAR/SAU and it should be need based.	1800.00
6	Publicity material/Visit of Scientists/F. Day		800.00
	<b>Total</b>	<b>-</b>	<b>7500.00</b>

# CLUSTER DEMONSTRATION : RICE HIGH YIELDING (DIRECT SEEDED RICE)

Amount in Rs.

S. No.	Name of Interventions	Recommended by Agriculture Scientist	Total cost /ha
1	Demonstration of potential of high yielding varieties of rice. (Transplanted and directed seeded)	Seed rate 60 kg/ha (directed seeded rice) 25 kg/ha (transplanted rice)	2000.00
2	Seed treatment (appropriate and recommended)	Seed treatment with Thiram @ 2 g/kg seed or carbendazim 1.5 g. + Streptocycline 2.5 g per 10 kg seed.	250.00
<b>3</b>	<b>Promotion of use of micro nutrients and biofertilizers</b>		
3.1	Zinc/Boron (Based on soil testing value)	<b>Zinc</b> : Zinc sulphate @ 25 kg/ha is recommended as basal application for every three cropping sequences. If deficiency of Zinc is appears on the standing crop, 0.5% foliar application of Zinc sulphate is recommended (Neutrilize with 0.25% lime) two to three spray at the interval of 10-15 days are required. <b>Boron</b> : 10 kg Borex /ha is recommended in Boron deficient soils as basal application If deficiency of Boron is appears on the standing crop, 0.2% foliar application of Borex is recommended. Two to three sprays at the interval of 10-15 days are required.	900.00
3.2	Blue green alage	<b>BGA</b> · 3 kg of each inoculants should be taken. <b>For transplanted rice</b> · Inoculants slurry is to be prepared in 150 liter of water. · Dip the roots of seedlings (required for 1 ha) in inoculants slurry for 10 min. · Root dipping should be done in shade. · Inoculants seedlings should be transplanted as early as possible. <b>Direct seeded rice</b> · It should be mixed with 150 kg well powered FYM/Compost/Vermicompost soil and incubate in shade for 7 days before soil treatment (about 40% moisture should be maintained). · Broadcast the mixture over one hectare land before sowing. <b>Blue Green Algae</b> · Soil based BGA inoculums @ 10 kg/ha for both the conditions.	300.00
4	Demonstration on effectiveness of weedicides (appropriate and recommended)	Herbicide for direct seeded rice (DSR) · Butachlor 1.5 kg a.i./ha (3.0 kg/ha commercial product) · 2,4 D (Ethyl ester) 0.5 kg a.i./ha (1.33 kg/ha commercial product) · Bispyribac – Na 20 g a.i/ha (0.2 kg/ha commercial product)	400.00
5	Insecticide	Fipronil G 10kg/ha, Chlorpyriphos 20 EC@1 Lit/ha	1050
6	Demonstration on IPM	Use of Light traps as developed/ recommended by ICAR/SAU and it should be need based.	1800
7	Publicity material/Visit of Scientists/Field Day	-	800.00
	<b>Total</b>	-	<b>7500.00</b>

## CLUSTER DEMONSTRATION: RICE HYBRID (SYSTEM OF RICE INTESIFICATION)

			Amount in Rs.
S.No.	Name of Interventions	Recommended by Agriculture Scientist	Total cost /ha
1	Demonstration of potential of Hybrid varieties of rice. (Transplanted SRI system)	Seed rate 05 kg/ha	2000.00
2	Seed treatment (appropriate and recommended)	Seed treatment with Thiram @ 2 g/kg seed or carbendazim 1.5 g. + Streptocycline 2.5 g per 10 kg seed.	250.00
3	<b>Promotion of use of micro nutrients and biofertilizers</b>		
3.1	Zinc/Boron (Based on soil testing value)	<b>Zinc</b> : Zinc sulphate @ 25 kg/ha is recommended as basal application for every three cropping sequences. If deficiency of Zinc is appears on the standing crop, 0.5% foliar application of Zinc sulphate is recommended (Neutrilize with 0.25% lime) two to three spray at the interval of 10-15 days are required. <b>Boron</b> : 10 kg Borex /ha is recommended in Boron deficient soils as basal application If deficiency of Boron is appears on the standing crop, 0.2% foliar application of Borex is recommended. Two to three sprays at the interval of 10-15 days are required.	900.00
3.2	Blue green alage	<b>BGA</b> · 3 kg of each inoculant should be taken. <b>For transplanted rice</b> · Inoculant slurry is to be prepared in 150 liter of water. · Dip the roots of seedlings (required for 1 ha) in inoculants slurry for 10 min. · Root dipping should be done in shade. · Inoculant seedlings should be transplanted as early as possible. <b>Direct seeded rice</b> · It should be mixed with 150 kg well powered FYM/Compost/Vermicompost soil and incubate in shade for 7 days before soil treatment (about 40% moisture should be maintained). · Broadcast the mixture over one hectare land before sowing. <b>Blue Green Algae</b> · Soil based BGA inoculums @ 10 kg/ha for both the conditions.	300.00
4	Demonstration on effectiveness of weedcides (appropriate and recommended)	Herbicide for direct seeded rice (DSR) · Butachlor 1.5 kg a.i./ha (3.0 kg/ha commercial product) · 2,4 D (Ethyl ester) 0.5 kg a.i./ha (1.33 kg/ha commercial product) · Bispyribac – Na 20 g a.i./ha (0.2 kg/ha commercial product)	400.00
5	Insecticide	Fipronil G 10kg/ha, Chlorpyriphos 20 EC@1 Lit/ha	1050
6	Demonstration on IPM	Use of Light traps as developed/ recommended by ICAR/SAU and it should be need based.	1800
7	Publicity material/Visit of Scientists/Field Day	-	800.00
	<b>Total</b>	-	<b>7500.00</b>

**CLUSTER DEMONSTRATION : RICE HIGH YIELDING VARIETIES (STRESS TOLERANT VARIETY)**

(Amount in Rs.)

S. No.	Name of Interventions	Recommended by Agriculture Scientist	Total cost /ha
1	Demonstration of potential of high yielding varieties of rice. (Stress Tolerant variety )		2000.00
2	Seed treatment (appropriate and recommended)	Seed treatment with Thiram @ 2 g/kg seed or carbendazim 1.5 g. + Streptocycline 2.5 g per 10 kg seed.	250.00
<b>3</b>	<b>Promotion of use of micro nutrients and biofertilizers</b>		
3.1	Zinc/Boron (Based on soil testing value)	Zinc : Zinc sulphate @ 25 kg/ha is recommended as basal application for every three cropping sequences. If deficiency of Zinc is appears on the standing crop, 0.5% foliar application of Zinc sulphate is recommended (Neutrilize with 0.25% lime) two to three spray at the interval of 10-15 days are required. <b>Boron:</b> 10 kg Borex /ha is recommended in Boron deficient soils as basal application If deficiency of Boron is appears on the standing crop, 0.2% foliar application of Borex is recommended. Two to three sprays at the interval of 10-15 days are required.	900.00
3.2	Blue green alage	BGA	300.00
		· 3 kg of each inoculant should be taken.	
		For transplanted rice	
		· Inoculants slurry is to be prepared in 150 liter of water.	
		· Dip the roots of seedlings (required for 1 ha) in inoculants slurry for 10 min.	
		· Root dipping should be done in shade.	
		· Inoculants seedlings should be transplanted as early as possible.	
		Direct seeded rice	
		· It should be mixed with 150 kg well powered FYM/Compost/Vermicompost soil and incubate in shade for 7 days before soil treatment (about 40% moisture should be maintained).	
		· Broadcast the mixture over one hectare land before sowing.	
		Blue Green Algae	
		· Soil based BGA inoculums @ 10 kg/ha for both the conditions.	
4	Demonstration on effectiveness of weedicides (appropriate and recommended)	Herbicide for Stress Tolerant variety (STV) · Butachlor 1.5 kg a.i./ha (3.0 kg/ha commercial product) · 2,4 D (Ethyl ester) 0.5 kg a.i./ha (1.33 kg/ha commercial product) · Bispyribac – Na 20 g a.i./ha (0.2 kg/ha commercial product)	400.00
5	Insecticide	Fipronil 0.3% G@ 15kg/ha, Chlorpyriphos 20 EC@1.25 Lit/ha	1050
6	IPM	Use of Light traps as developed/ recommended by ICAR / SAU and it should be need based.	1800
7	Publicity material/Visit of Scientists/F. Day	-	800.00
	<b>Total</b>	-	<b>7500.00</b>

**CLUSTER DEMONSTRATION : RICE HIGH YIELDING VARIETIES (LINE TRANSPLANTING)**

(Amount in Rs.)

S. No.	Name of Interventions	Recommended by Agriculture Scientist	Total cost /ha
1	Demonstration of potential of high yielding var. of rice.	Seed	2000.00
2	Seed treatment (appropriate and recommended)	Seed treatment with Thiram @ 2 g/kg seed or carbendazim 1.5 g. + Streptocycline 2.5 g per 10 kg seed.	250.00
<b>3</b>	<b>Promotion of use of micro nutrients and biofertilizer</b>		
3.1	Zinc/Boron (Based on soil testing value)	Zinc : Zinc sulphate @ 25 kg/ha is recommended as basal application for every three cropping sequences. If deficiency of Zinc is appears on the standing crop, 0.5% foliar application of Zinc sulphate is recommended (Neutrilize with 0.25% lime) two to three spray at the interval of 10-15 days are required. <b>Boron:</b> 10 kg Borex /ha is recommended in Boron deficient soils as basal application If deficiency of Boron is appears on the standing crop, 0.2% foliar application of Borex is recommended. Two to three sprays at the interval of 10-15 days are required.	900.00
3.2	Blue green alage	<b>BGA</b>	300.00
		· 3 kg of each inoculant should be taken.	
		<b>For transplanted rice</b>	
		· Inoculants slurry is to be prepared in 150 liter of water.	
		· Dip the roots of seedlings (required for 1 ha) in inoculants slurry for 10 min.	
		· Root dipping should be done in shade.	
		· Inoculants seedlings should be transplanted as early as possible.	
		<b>Direct seeded rice</b>	
		· It should be mixed with 150 kg well powered FYM/Compost/Vermicompos soil and incubate in shade for 7 days before soil treatment (about 40% moistur should be maintained).	
		· Broadcast the mixture over one hectare land before sowing.	
		<b>Blue Green Algae</b>	
		· Soil based BGA inoculums @ 10 kg/ha for both the conditions.	
4	Demonstration on effectiveness of weedicides (appropriate and recommended)	Herbicide for Line Transplanted (LT)	400.00
		· Butachlor 1.5 kg a.i./ha (3.0 kg/ha commercial product)	
		· 2,4 D (Ethyl ester) 0.5 kg a.i./ha (1.33 kg/ha commercial product)	
		· Bispyribac – Na 20 g a.i./ha (0.2 kg/ha commercial product)	
5	Insecticide	Fipronil 0.3% G@ 15kg/ha, Chlorpyriphos 20 EC@1.25 Lit/ha	1050
6	IPM	Use of Light traps as developed/ recommended by ICAR/SAU/KVK.	1800
7	Publicity material/Visit of Scientists/Field Day	-	800.00
	<b>Total</b>	-	<b>7500.00</b>

# CROPPING SYSTEM BASED DEMONSTRATION: PULSES – WHEAT CSBD: PULSE

Amount in Rs.

## A. CSBD: PULSE

S.No.	Name of Interventions	Recommended by Agriculture Scientist	Total cost /ha
1	Popularization of improved varieties		
1.1	Urd Moong, Moth, Cowpea, Pigeon pea	Seed rate 20 kg/ha	3000.00
1.2	Chick Pea/field pea	Seed rate 80 kg/ha	
1.3	Lentil/Horse gram	Seed rate 40 kg/ha	
2	Seed treatment fungicides/Molybdenum	For disease control Seed treatment with Trichoderma viride + Carboxin (1:1) @ 5 g/kg seed or Carbendazim + Thiram (1:2) @ 3 g/kg seed. Pigeonpea- Seed treatment with Metalaxyl @ 3 g/kg seed and foliar spray of Metalaxyl @ 3 g/lit of water, at appearance of phytophthora blight Chickpea – Soil incorporation of Trichoderma viride @ 2.5 kg/ha along with FYM	100.00
3	Promotion of use of Micro Nutrients and bio-fertilizers		
3.1	Zinc/Boron/Molybdenum (Based on soil testing value)	Zinc : Zinc sulphate @ 25 kg/ha is recommend -ed as basal application for every three cropping sequences. If deficiency of Zinc is appears on the standing crop, 0.5% foliar application of Zinc sulphate is recommended (Neutrilize with 0.25% lime) two to three spray at the interval of 10-15 days are required. Suppliment Molybdenum @ 1 g Amonium Molibdate/kg seed with Rhizobium + PSB inoculation.	800.00
3.2	Rhizobium and PSB, Potash mobilizing bacteria and zinc solubilizing bacteria)	Specific Rhizobium, PSB and Trichoderma <b>Rhizobium</b> · Every year each pulse crop should be inoculated with appropriate Rhizobial inoculants. · Seed should be treated first with fungicide as per recommendations. · Prepare a slurry of 1 kg of Rhizobium culture in one litre of jaggery solution (by dissolving 200 g Jaggary in one litre of hot water and cool it.) · Spread inoculants slurry over 80-100 kg of seed · It found difficult to treat such a vig quantity of seed then it should be divided in 3-4 parts and accordingly inoculants slurry should also be divided. · Mix the inoculants slurry in shade with seed so that every seed should be coated well. · Molybdenum Suppliment 1 g Amonium Molibdate/kg seed(as seed inoculation with Rhizobium + PSB in Chickpea. · Sow the inoculated seed as early as possible and do not keep the treated seeds overnight. <b>PSB and Trichoderma</b> · 3 kg of each inoculants should be taken. · It should be mixed with 150 kg well powered FYM/Compost/Vermicompost (about 40% moisture should be maintained) · Broadcast the mixture over one hectare land.	300.00
4	Plant Protection	Pigeonpea:Profenofos 50 EC @ 1.5 Lit/ha, Dimethoate 30 EC@1 Lit/ha, Chickpea : Profenofos 50 EC@1.5 Lit/ha, Lentil :Dimethoate 30 EC@1 Lit/ha, Field pea, Cowpea, Urd, Moong :Triazophos 40EC @ 1 Lit/ha	700.00
5	Demonstration on IPM	Use of Light traps as developed/ recommended by ICAR/SAU and it should be need based.	1800.00
6	Publicity material/Visit of Scientists/F.Day		800.00
	<b>Total</b>	-	<b>7500.00</b>

## B. CSBD: WHEAT

			Amount in Rs.
S.No.	Name of Intervention	Recommended by Agriculture Scientist	Total Cost/ha.
1	Demonstration on new HYV		
	Introducing newly released high yielding varieties with specific to region	Seed rate 100 kg/ha	1600.00
2	Promotion of use of Micro Nutrients and bio-fertilizers		
2.1	a) Zinc Sulphate (Soil test based)	<b>Zinc :</b> Zinc sulphate @ 25 kg/ha is recommended as basal application for every three cropping sequences. If deficiency of Zinc appears on the standing crop, 0.5% foliar application of Zinc sulphate is recommended (Neutrilize with 0.25% lime) two to three spray at the interval of 10-15 days are required.	800.00
2.2	Boron (Borax Deca hydrate, Borax penta hydrate (Soil test based)	<b>Boron:</b> 10 kg Borex /ha is recommended in Boron deficient soils as basal application. If deficiency of Boron appears on the standing crop, 0.2% foliar application of Borex recommended. Two to three sprays at the interval of 10-15 days are required.	600.00
3	Demonstration on use of chemical weedcides (appropriate&recommonded)	<ul style="list-style-type: none"> <li>· Metsulfuran – 4.0 g a.i./ha as post emergence (20 g/ha commercial prod.)</li> <li>· Fenoxoprop-P-ethyl 100g. a.i./ha as post emergence (1000 g/ha commercial product)</li> <li>· 2,4-D (Ethyl ester) 0.5 kg a.i. /ha as post emergence ( 1.33 kg/ha commercial product)</li> </ul>	1200.00
4	Publicity material/ Visit of Scientists / Field Day		800.00
	<b>Total</b>		<b>5000.00</b>

## CROPPING SYSTEM BASED DEMONSTRATION: RICE – PULSES

### A. CSBD: RICE

			Amount in Rs.
S.No.	Name of Interventions	Recommended by Agriculture Scientist	Total cost /ha
1	Demonstration of potential of high yielding varieties of rice. (Transplanted and directed seeded).	Seed rate 60 kg/ha(directed seeded rice) 25 Kg/ha (transplanted rice)	2000.00
2	Seed treatment (appropriate and recommended)	Seed treatment with Thiram @ 2 g/kg seed or carbendazim 1.5 g.+Streptocycline 2.5 g per 10 kg seed.	100.00
3	<b>Promotion of use of micro nutrients and bio-fertilizers</b>		
3.1	Zinc sulphate	<b>Zinc :</b> Zinc sulphate @ 25 kg/ha is recommended as basal application for every three cropping sequences. If deficiency of Zinc is appears on the standing crop, 0.5% foliar application of Zinc sulphate is recommended (Neutrilize with 0.25% lime) two to three spray at the interval of 10-15 days are required.	400.00
3.2	Blue green algae	<b>BGA</b> · 3 kg of each inoculant should be taken. <b>For transplanted rice</b> · Inoculant slurry is to be prepared in 150 liter of water. · Dip the roots of seedlings (required for 1 ha) in inoculants slurry for 10 min. · Root dipping should be done in shade. · Inoculant seedlings should be transplanted as early as possible. <b>Direct seeded rice</b> · It should be mixed with 150 kg well powered FYM/Compost/Vermicompost soil and incubate in shade for 7 days before soil treatment (about 40% moisture should be maintained). · Broadcast the mixture over one hectare land before sowing. <b>Blue Green Algae</b> · Soil based BGA inoculums @ 10 kg/ha for both the conditions.	300.00
3.3	Boron (BoroxDeca hydrate, Borox Penta hydrate)	<b>Boron:</b> 10 kg Borex /ha is recommended in Boron deficient soils as basal application If deficiency of Boron is appears on the standing crop, 0.2% foliar application of Borex is recommended. Two to three sprays at the interval of 10-15 days are required.	700.00
4	Demonstration on effectiveness of weedicides (appropriate and recommended)	Herbicide for direct seeded rice (DSR) -Butachlor 1.5 kg a.i./ha (3.0 kg/ha commercial product) -2,4 D (Ethyl ester) 0.5 kg a.i./ha (1.33 kg/ha commercial product) · Bispyribac – Na 20 g a.i./ha (0.2 kg/ha commercial product)	350.00
5	Insecticide	Fipronil G 10kg/ha, Chlorpyriphos 20 EC@1 Lit/ha	1050.00
6	Demonstration on IPM	Use of Light traps as developed/ recommended by ICAR / SAU and it should be need based	1800.00
7	Publicity material	-	250.00
8	Visits of Scientists	-	300.00
9	Field days	-	250.00
	<b>Total</b>	-	<b>7500.00</b>

## B. CSBD: PULSES

			Amount in Rs.
S.No.	Name of Interventions	Recommended by Agriculture Scientist	Total cost /ha
1	Popularization of improved varieties		
1.1	Urd Moong, Moth, Cowpea, Pigeon pea including seed treatment	Seed rate 20 kg/ha	1800.00
1.2	Chick Pea/field pea including seed treatment	Seed rate 80 kg/ha	
1.3	Lentil/Horse gram including seed treatment	Seed rate 40 kg/ha	
2	Promotion of use of Micro Nutrients and bio-fertilizers		
2.3	Rhizobium and PSB, Potash mobilizing bacteria and zinc solubilizing bacteria)	Specific Rhizobium, PSB and Trichoderma	250.00
		Rhizobium	
		· Every year each pulse crop should be inoculated with appropriate Rhizobial inoculants.	
		· Seed should be treated first with fungicide as per recommendations.	
		· Prepare a slurry of 1 kg of Rhizobium culture in one litre of jaggery solution (by dissolving 200 g Jaggery in one litre of hot water and cool it.)	
		· Spread inoculant slurry over 80-100 kg of seed	
		· It found difficult to treat such a big quantity of seed then it should be divided in 3-4 parts and accordingly inoculants slurry should also be divided.	
		· Mix the inoculants slurry in shade with seed so that every seed should be coated well.	
		· Sow the inoculated seed as early as possible and do not keep the treated seeds overnight.	
		PSB and Trichoderma	
		· 3 kg of each inoculants should be taken.	
		· It should be mixed with 150 kg well powered FYM/Compost/Vermicompost (about 40% moisture should be maintained)	
		· Broadcast the mixture over one hectare land.	
3	Demonstration on use of sulphur as a nutrient	Sulphur: 20 kg S/ha.	600.00
4	Demonstration on IPM	Light trap safer to beneficial insect and light trap for managing insect (Without Blast )	1800.00
5	Visit of Scientists	-	300.00
6	Field Day	-	250.00
	<b>Total</b>	<b>-</b>	<b>5000.00</b>

- Note :
1. If the seed is already treated, amount on seed treatment will not be used
  2. Above intervention may be changed region wise according to the availability of inputs

## CROPPING SYSTEM BASED DEMONSTRATION:RICE – WHEAT

### A. CSBD: RICE

			Amount in Rs.
S.No.	Name of Interventions	Recommended by Agriculture Scientist	Total cost /ha
1	Demonstration of potential of high yielding varieties of rice. (Transplanted and directed seeded)	Seed rate 60 kg/ha(directed seeded rice) 40 Kg/ha (transplanted rice)	2000.00
2	Seed treatment (appropriate and recommended)	Seed treatment with Thiram @ 2 g/kg seed or carbendazim 1.5 g. + Streptocycline 2.5 g per 10 kg seed.	100.00
3	Promotion of use of micro nutrients and biofertilizers		
3.1	Zinc sulphate	Zinc : Zinc sulphate @ 25 kg/ha is recommended as basal application for every three cropping sequences. If deficiency of Zinc is appears on the standing crop, 0.5% foliar application of Zinc sulphate is recommended (Neutrilize with 0.25% lime) two to three spray at the interval of 10-15 days are required.	400.00
3.2	Blue green alage	BGA	300.00
		· 3 kg of each inoculant should be taken.	
		For transplanted rice	
		· Inoculant slurry is to be prepared in 150 liter of water.	
		· Dip the roots of seedlings (required for 1 ha) in inoculants slurry for 10 min.	
		· Root dipping should be done in shade.	
		· Inoculant seedlings should be transplanted as early as possible.	
		Direct seeded rice	
		· It should be mixed with 150 kg well powered FYM/Compost/ Vermicompost soil and incubate in shade for 7 days before soil treatment (about 40% moisture should be maintained).	
		· Broadcast the mixture over one hectare land before sowing.	
		Blue Green Algae	
		· Soil based BGA inoculums @ 10 kg/ha for both the conditions.	
3.3	Boron (BoroxDeca hydrate, Borox Penta hydrate)	Boron: 10 kg Borex /ha is recommended in Boron deficient soils as basal application If deficiency of Boron is appears on the standing crop, 0.2% foliar application of Borex is recommended. Two to three sprays at the interval of 10-15 days are required.	700.00
4	Demonstration on effectiveness of weedicides (appropriate and recommended)	Herbicide for direct seeded rice (DSR)	350.00
		· Butachlor 1.5 kg a.i./ha (3.0 kg/ha commercial product)	
		· 2,4 D (Ethyl ester) 0.5 kg a.i./ha (1.33 kg/ha commercial product)	
		· Bispyribac – Na 20 g a.i./ha (0.2 kg/ha commercial product)	
5	Insecticide	Fipronil G 10kg/ha, Chlorpyriphos 20 EC@1 Lit/ha	1050.00
6	Demonstration on IPM	Light trap safer to beneficial insect and light trap for managing insect (Without Blast )	1800.00
7	Publicity material	-	250.00
8	Visits of Scientists	-	300.00
9	Field days	-	250.00
<b>Total</b>			<b>7500.00</b>

## B.CSBD: WHEAT

			Amount in Rs
S.No.	Name of Interventions	Recommended by Agriculture Scientist	Total cost /ha
1	<u>Demonstration on new HYV</u>	Seed rate 100 kg/ha	1600.00
	Introducing newly released high yielding varieties with specific to region including seed treatment		
2	Promotion of use of Micro Nutrients and bio-fertilizers		
2.1	a)Zinc Sulphate	Zinc : Zinc sulphate @ 25 kg/ha is recommended as basal application for every three cropping sequences. If deficiency of Zinc is appears on the standing crop, 0.5% foliar application of Zinc sulphate is recommended (Neutrilize with 0.25% lime) two to three spray at the interval of 10-15 days are required.	800.00
2.2	Boron (Borax Deca hydrate, Borax penta hydrate	Boron: 10 kg Borex /ha is recommended in Boron deficient soils as basal application. If deficiency of Boron is appears on the standing crop, 0.2% foliar application of Borex is recommended. Two to three sprays at the interval of 10-15 days are required.	600.00
4	Demonstration on use of chemical weedicides (appropriate&recommonded)	· Metsulfuran – 4.0 g a.i/ha as post emergence (20 g/ha commercial prod.)	1200.00
		· Fenoxoprop-P-ethyl 100g. a.i./ha as post emergence (1000 g/ha commercial product)	
		· 2,4-D (Ethyl ester) 0.5 kg a.i. /ha as post emergence ( 1.33 kg/ha commercial product)	
5	Publicity material/Visit of Scientists/Field Day		800.00
	Total		5000.00

- Note :
1. If the seed is already treated, amount on seed treatment will not be used
  2. Above intervention may be changed region wise according to the availability of inputs
  3. For Hybrid rice Demonstrations B. wheat Part should be followed this same

## INTERCROPING DEMONSTRATION : PULSES

			Amount in Rs.
S.No.	Name of Interventions	Recommended by Agriculture Scientist	Total cost /ha
1	<b>Popularization of improved varieties</b>		
	Wheat, Jowar, Soybean, Mustard (Main crop) + Urd /Moong/ Moth/Cowpea/ Pigeon pea/Chick Pea/field pea/Lentil/ Gram( Intercrop)	Seed	2800.00
2	Seed treatment	Trichoderma viride 5 g/kg seed or Carbendazim + Thiram (1:2) @ 3 g/kg seed.	100.00
3	<b>Promotion of use of Micro Nutrients and bio-fertilizers</b>		
3.1	Zinc/Boron/Molybdenum (Based on soil testing value)	<b>Zinc</b> : Zinc sulphate @ 25 kg/ha is recommend -ed as basal application for every three cropping sequences. Molybdenum Suppliment @ 1 g Ammonium Molybdate/kg seed(as seed inoculation with Rhizobium + PSB in Chickpea).	800.00
3.2	Rhizobium and PSB	Specific Rhizobium, PSB Culture	100.00
		Every year each pulse crop should be inoculated with appropriate Rhizobial inoculants.	
		Seed should be treated first with fungicide as per recommendations.	
		Prepare a slurry of 500 g each of Rhizobium and PSB culture in one litre of jaggery solution (by dissolving 50 g Jaggary in one litre of hot water and cool it.	
		Spread inoculants slurry over 80-100 kg of seed	
		If found difficult to treat such a big quantity of seed then it should be divided in 3-4 parts and accordingly inoculants slurry should also be divided.	
		Mix the inoculants slurry in shade with seed so that every seed should be coated well. Treat with Molybdenum.	
		Sow the inoculated seed as early as possible and do not keep the treated seeds overnight.	
4	Plant Protection	<b>Pigeonpea</b> : Profenofos 50 EC @ 2 Lit/ha, Dimethoate 30 EC@1 Lit/ha, <b>Chickpea</b> : Profenofos 50 EC @ 2 Lit/ha, <b>Letnil</b> : Dimethoate 30 EC@1 Lit/ha, <b>Field pea, Cowpea, Urd, Moong</b> : Triazophos 40EC @ 1 Lit/ha or need based application of NPV 250 LE /ha.	1100.00
5	IPM	Light trap as recommended by ICAR/SAU/KVK and it should be need based.	1800.00
6	Publicity material/Visit of Scientists/Field Day		800.00
	<b>Total</b>	-	<b>7500.00</b>

### Note :

1. If the seed is already treated, amount on seed treatment will not be used
2. Above intervention may be changed region wise according to the availability of inputs.

### FRONT LINE DEMONSTRATION ON INTERCROPING (COTTON)

			Amount in Rs.
S.No.	Name of Interventions	Recommended by Agriculture Scientist	Total cost /ha
1	Cotton Seed	12.5 kg	1875
2	Arhar/ Moong Seed	600 gm	375
3	Micro Nutrient /Zinc Sulphate	25 kg	3750
4	PSB Culture	5 kg	
5	Triazophos 40EC	1.25 lit.	
6	Neem Oil / NPV 500 LE	2 lit.	
7	Publicity material/Visit of Scientists/Field Day	-	1000
	<b>Total Cost</b>		<b>7000</b>

### FRONT LINE DEMONSTRATION ON DESI AND ELS COTTON /ELS COTTON SEED PRODUCTION (COTTON)

			Amount in Rs.
S.No.	Name of Interventions	Recommended by Agriculture Scientist	Total cost /ha
1	Desi Cotton Seed JK-5, Jawahar Tapti	12.5 kg	1875
2	PSB Culture	5 kg	5125
3	Neem Oil / NPV 500 LE	2 Liter	
4	Pendimethalin	5 Liter	
5	Triazophos 40EC	1.25 lit.	
6	Fenvalerate 20EC	500 ml	1000
7	Publicity material/Visit of Scientists/Field Day	-	
	<b>Total</b>		<b>8000</b>

### FRONT LINE DEMONSTRATION ON INTEGRATED CROP MANAGEMENT (ICM) (COTTON)

			Amount in Rs.
S.No.	Name of Interventions	Recommended by Agriculture Scientist	Total cost /ha
1	Cotton Seed	10 kg	1500
2	Azotobacter	400 Gm	4500
3	PSB Culture	5 kg	
4	Neem Oil / NPV 500 LE	2 Liter	
5	Imidacloprid 17.8 SL	250 ml	
6	Pendimethalin	5 Liter	1000
7	Planofix / Plant Growth	150 ml	
8	Publicity material/Visit of Scientists/Field Day	-	
	<b>Total</b>		<b>7000</b>

### TRAILS ON HIGH DENSITY PLANTING SYSTEM (COTTON)

			Amount in Rs.
S.No.	Name of Interventions	Recommended by Agriculture Scientist	Total cost /ha
1	Desi Cotton Seed	12.5 kg	1875
2	PSB Culture	5Kg	6125
3	Zinc Sulphate	25 Kg.	
4	Fenvalerate 20EC	500ml.	
5	Neem Oil /NPV 500 LE	2 lit.	
6	Triazophos 40 EC	1.25 lit.	
7	Pendimethalin	5lit.	
8	Publicity material/Visit of Scientists/Field Day	-	1000
<b>Total Cost</b>			<b>9000</b>

### INTERVENTIONS FOR INTERCROPPING DEMONSTRATION FOR SUGARCANE (COMMERCIAL CROP)

			Amount in Rs.
S.No.	Name of Interventions	Recommended by Agriculture Scientist	Total cost /ha
1	Intercropping Demonstration of Sugarcane :- Certified seed. (Seed including seed treatment)	Seed Wheat 40Kg or Gram 35 kg / Hect.	1400.00
2	soil treatment (appropriate & recommended)	soil treatment with Trichoderma viride @ 5 g/ kg	200.00
3	Zinc Sulphate	Zinc : Zinc sulphate @ 25 kg/ha is recommended as basal application for every three cropping sequences. If deficiency of Zinc is appears on the standing crop, 0.5% foliar application of Zinc sulphate is recommended (Neutrilize with 0.25% lime) two to three spray at the interval of 10-15 days are required.	500.00
4	Boron	Borex 10 kg	600.00
5	Plant Protection	Neem oil 1500 ppm 3 liter chlorpyrifos 20% EC 1.5 liter Prophenophos 50% EC 2 liter	2500.00
6	IPM	Use of Light traps as developed/ recommended by ICAR/SAU/KVK and it should be need based.	1800.00
7	Publicity material/Visit of Scientists/Field Day	Crop cutting	1000.00
<b>Total</b>			<b>8000.00</b>

## Physical and Financial Progress Report: (2017-18)

## 1. NFSM-Rice

Month-December 2017

(Rs. In lakh)

S. No.	Intervention	Approved Rate /Unit	Target		Achiev.	
			Phy.	Fin.	Phy.	Fin.
1	(a)Direct seeded Rice/Line Transplanting/SRI (Target 1.5% of area of District)					
	(i) Direct seeded rice	Rs.7500/ha.	600	45.00	600	13.36
	(ii) Line transplanting		1900	142.50	1800	32.37
	(iii) SRI		1800	135.00	1800	35.85
	(b) Cluster Demonstrations on Hybrid Rice (One cluster of 100 ha)	Rs.7500/ha	2000	150.00	1500	27.44
	(c) Demonstration on Stress tolerant varieties of 100 ha.each	Rs.7500/ha	300	22.50	300	6.08
	(d) Cropping System based demonstrations					
	(i) (Rice-Pulses (Rabi gram))	Rs.12500/ha	1100	137.50	1050	38.77
	(ii) Rice-Wheat		600	75.00	560	21.57
Sub total 1 (a to d)			8300	707.50	7610	175.44
2	Seed Distribution					
	(a) Hybrid Rice Seed	Rs.5000/qtl	6730	336.50	700	0.00
	(b) HYVs Seeds	Rs.1000/qtl	1250	12.50	150	
	Sub total 2 (a to b)			7980	349.00	850
3	Soil Management					
	(a) Micronutrients	Rs.500/ha	25000	125.00	0	0.02
	(b) Liming in Acidic Soils	Rs.1000/qtl	1000	10.00	0	0.00
	Sub Total 3 (a+b)			26000	135.00	0
4	Plant Protection Management					
	(i) Plant Protection Chemicals and bio-agents	Rs.500/ha	20588	102.94		
	(ii)Weedicides	Rs.500/ha	5000	25.00		
	Sub total 4 (a+b)			25588	127.94	0
5	Resource Conservation Techniques/Tools					
	(a) Cono-weeder	Rs.600/Unit	400	2.40		
	(b) Manual Sprayer	Rs.600/Unit	7400	44.40		
	(c) Power Sprayer	Rs.15000/Unit	65	9.75		
	(d) Drum seeders	Rs.1500/Unit	40	0.60		
	(e) Paddy thresher/ multi crop thresher	Rs.40000/Unit	57	22.80		
	(f) Self Propelled paddy transplanter	Rs.75000/Unit	25	18.75	20	15.00
Sub total 5 (a+f)			7987	98.70	20	15
5	Water Application Tools					
	(a) Pumpsets	Rs.10000/Unit	850	85.00	28	2.86
	(a) Water carrying pipes	Rs.50/M for HDPE pipes, Rs.35/-M for PVC pipes and Rs.20/-M for HDPE laminated woven lay flat tubes	232500	116.25	4	0.39
	Sub total 5 (a+b)			233350	201.25	32

(NFSM-Rice, Contd.,,,)

S. No.	Intervention	Approved Rate /Unit	Target		Achiev.	
			Phy.	Fin.	Phy.	Fin.
6	Cropping System based trainings (Four Sessions i.e. one before Kharif and rabi seasons, One each during Kharif and Rabi crops and one after rabi harvest )	Rs.3500/Session Rs.14000/Training	125	17.50	103	14.56
7	<b>Local Initiatives</b>					
	(a) Rice Straw Reaper* (as per SMAM guideline: above 35BHP)	Rs.63000/Unit.	120	75.60	0	0.00
	(a) Power Tiller** (as per SMAM guideline)	Rs.60000/Unit.	135	81.00	0	0.00
	<b>Sub total 7 (a+b)</b>		<b>380</b>	<b>174.10</b>	<b>103</b>	<b>14.56</b>
	<b>Total (2017-18)</b>			<b>1793.49</b>		<b>208.27</b>
	<b>Last year pendency (2016-17)</b>					<b>282.9</b>
	<b>Grand Total</b>					<b>491.17</b>

\*For SC, ST, Small &amp; Marginal farmer, Woman beneficiary.

\*\* For other beneficiary, power Tiller (8BHP & above). **Phy. & Fin. Targets RCT not including.****2. NFSM-Coarse Cereals**

Month-December 2017

(Rs. In lakh)

Sl.No	Interventions	Apporved Rate /Unit	Target		Achievement	
			Phy.	Fin.	Phy.	Fin.
1	(a)Demonstration of Improved package					
	(i) Maize	Rs. 5000/ha	16200	810.00	14549	384.42
	(ii) Jowar (Sorghum)	Rs. 5000/ha	600	30.00	300	7.40
	(iii)Bajra (Pear Millet)	Rs. 5000/ha	3200	160.00	600	16.80
	(iv) Any Other (kodo-Kutki)	Rs. 5000/ha	500	25.00	0	0.00
	(b) Demonstration on intercropping	Rs. 5000/ha	500	25.00	400	8.00
	Sub-total 1 (a to b)		21000	1050	15849	416.62
2	Distribution of Certified Seed					
	(a) HVY seeds	Rs.1500/Qtls	3000	45.00	600.00	0.66
	(b) Hybrid Seeds	Rs.5000/Qtls	6540	327.00	882.15	31.76
	Sub-total 2 (a to b)		9540	372.00	1482.15	32.42
	Grand Total			1422.00		449.04

### 3. NFSM-Wheat

Month- December 2017

(Rs. In lakh)

S. No.	Interventions	Approved Rate of Assistance	Target		Achiev.	
			Phy.	Fin.	Phy.	Fin.
1	*Demonstrations on Improved Technologies:					
	a. Cluster Demo. (100 ha each )	Rs.7500/ha	16100	1207.5	15791	299.44
	b. Cropping system based demonstrations(Rice-Wheat, Pulse-Wheat)					
	(i) Wheat-Moong	Rs.12500/ha	1685	210.63	760	17.37
	(ii)Wheat-Urd		700	87.50	200	1.75
2	Seed Distribution: HYVs seeds	Rs.1000/qtl	75105	751.05	9155	64.41
3	Need Based Plant/Soil Management					
	Soil Management:					
	(a) Micronutrients	Rs.500/ha	59180	295.90	2747	1.38
	(b) Gypsum	Rs.750/ha	12550	94.13	7	0.073
	Plant Protection Management:					
	(c) Plant Protection Chemicals & bio-agents	Rs.500/ha	32802	164.01	1750	6.40
	(d) Weedicides	Rs.500/ha	1800	9.00	165	0.77
4	Resource Conservation					
	(a) Manual Sprayer	Rs. 600/Unit	6500	39.00		
	(b)Laser land leveler	Rs. 150000/Unit	5	7.50		
	(c) Multi Crop Thresher	Rs. 40000/Unit	265	106.00		
4	Efficient Water Application Tools:					
	(a) Water carrying pipes	Rs.50/M for HDPE pipes, Rs.35/-M for PVC pipes and Rs.20/-M for HDPE laminated woven lay flat tubes	1000	150.00	45	7.68
	(b) Pumpsets	Rs.10000/Unit	1281	128.10	42	5.09
	(c) Sprinkler sets	Rs.10000/ha	1290	129.00	114	9.33
	(d) Mobile Rain Gun	Rs. 15000/Unit	47	7.05	0	0.00
5	Cropping system based trainings (Four Sessions i.e. one before Kharif and rabi seasons. One each during Kharif and Rabi crops )	Rs.3500/ session Rs.14000/Training	225	31.50	79	1.82
	Local Initiatives				0	0.00
	(a) Rice Straw Reaper* (as per SMAM guideline: above 35BHP)	Rs.63000/Unit.	115	72.45		
	(a) Power Tiller** (as per SMAM guideline)	Rs.60000/Unit.	120	75.60		
	Total (2017-18)			3565.92		415.51
	Last year pendency (2016-17)					437.68
	Grand Total					853.19

#### 4. NFSM-Pulses

Month-December 2017

(Rs. In lakh)

S.No.	Interventions	Approved Rate /Unit	Target		Achievement	
			Phy.	Fin.	Phy.	Fin.
1	<b>*Demonstrations on Improved Technologies:</b>					
	(a)Cluster Demonstrations (of 100 ha each) Moong, Urd. Pigeonpea					
	Arhar	Rs.7500/ha	11800	885.00	10367	338.44
	Gram	Rs.7500/ha	46000	3450.00	34866	1192.80
	Urd	Rs.7500/ha	15100	1132.50	12082	454.46
	Moong	Rs.7500/ha	14400	1080.00	6848	265.01
	Lentil	Rs.7500/ha	14800	1110.00	9333	142.84
	(b) Demo. on intercropping	Rs.7500/ha	32400	2430.00	15730	378.32
	(c) Cropping System Based Demonstrations					
	(i) Maize-Pulse	Rs.12500/ha	1700	212.25	247	11.52
	(ii) Pulse - Wheat	Rs.12500/ha	16800	2100.00	13620	319.27
	Sub total 1 (a to c)		153000	12399.75	103093	3102.66
2	Production and Distribution of HYVs Seeds					
a)	Distribution of Seeds					
	Arhar	Rs.2500/qtl	20000	500.00	2565	91.55
	Gram	Rs.2500/qtl	132000	3300.00	12209	521.77
	Urd	Rs.2500/qtl	15000	375.00	1400	40.08
	Moong	Rs.2500/qtl	60000	1500.00	4614	157.26
	Lentil	Rs.2500/qtl	20000	500.00	453	0.65
	Sub Total 2-(a)		247000	6175.00	21241	811.31
b)	Assistance for seed production					
	Arhar	Rs.2500/qtl	20000	500.00	548	3.49
	Gram	Rs.2500/qtl	130000	3250.00	2368	20.81
	Urd	Rs.2500/qtl	15000	375.00	408	1.03
	Moong	Rs.2500/qtl	60000	1500.00	464	0.30
	Lentil	Rs.2500/qtl	20000	500.00	450.00	0.00
	Sub total 2 (b)		245000	6125.00	4238	25.63
3	Integrate Nutrient Management:					
	(a) Micro-nutrients	Rs.500/ha	332800	1664.00	9478	15.58
	(b) Gypsum/80% WG Sulphur	Rs.750/ha	100000	750.00	4673	2.51
	(c) Lime	Rs.1000/ha	10000	100.00	460.00	1.87
	(d) Bio-fertilizers	Rs.300/ha	100000	300.00	6258	2.03
	Sub total 3 (a to d)		542800	2814	20869	21.99
4	Integrated Pest Management (IPM)					
	(a) Distribution of PP chemicals	Rs.500/ha	595164	2975.82	21328	44.73
	(b) Weedicides	Rs.500/ha	80000	400.00	4501.6	7.89
	Sub total 4 (a to b)		675164	3375.82	25829.6	52.62
5	Resource Conservation Technologies/Tools					
	(a) Power Knap sack Sprayer	Rs.3000/Unit	700	21.00	00	0.00
	(b) Manual Sprayer	Rs.600/Unit	32800	196.80	00	0.00
	(C) Rotavator	Rs.35000/Unit	2600	910.00	212	93.35
	(d) Laser land leveler	Rs.150000/Unit	12	18.00	00	0.00
	(e) Tractor mounted sprayer	Rs.10000/Unit	170	17.00	00	0.00
	(f) Multi crop thresher	Rs.40000/Unit	1205	482.00	25	9.57
	Sub total 5 (a to f)		37487	1644.8	237	102.92

<b>6</b>	<b>Efficient Water Application Tools:</b>					
	(a) Sprinkler Sets	Rs.10000/ha	24500	2450	1859	121.90
	(b) Pump Sets	Rs.10000/Unit	9000	900.00	873	29.21
	(c) Pipe for carrying water from source to the field	Rs.50/M for HDPE pipes, Rs.35/-M for PVC pipes and Rs.20/-M for HDPE laminated woven lay flat tubes	12300	1845.00	751	70.10
	(d) Mobile Rain gun	Rs. 15000/Unit	18	2.70	1	0.05
	<b>Sub total 6 (a to d)</b>		<b>45818</b>	<b>5197.7</b>	<b>3484</b>	<b>221.26</b>
<b>7</b>	<b>Cropping System based trainings</b> (4 Sessions i.e. 1 before Kharif and rabi seasons, 1 each during Kharif and Rabi Crops)	Rs.3500/ Session Rs.14000/ Training	2050	287.00	1212	179.19
<b>8</b>	<b>Miscellaneous Expenses</b> PMT Miscellaneous Expenses at District level		-	602.00	-	197.24
	Other Miscellaneous Expenses at District level		-	45.00	-	39.16
<b>9</b>	Demonstration by NGO/KVKs	Rs. 7500/ha				
<b>Total (2017-18) (A)</b>				<b>38666.07</b>		<b>4753.38</b>
<b>Last Year Pendency (2016-17) (B)</b>						<b>727.53</b>
<b>Grand Total (A+B)</b>						<b>5480.91</b>

## 5. NFSM-Cotton

Month-December 2017

(Rs. In lakh)

S. No.	Intervention	Approved Rate /Unit	Target		Achievement	
			Phy.	Fin.	Phy.	Fin.
1	Front Line Demonstration (FLD) on Integrated Crop Management (ICM)	Rs.7000/ha. (Rs.6000-input & Rs.1000-conti.)	400	28.00	70	0.60
2	FLD on Deshi and ELS Cotton /ELS Cotton Seed Production.	Rs.8000/ha.(Rs.7000- input & Rs.1000 contin.)	150	12.00	10	0.00
3	FLD on Intercropping	Rs.7000/ha.(Rs.6000-input & Rs.1000-conti.)	600	42.00	60	1.234
4	Trials on High Density Planting System HDPS	Rs.9000/ha.(Rs.8000 - input & Rs.1000-contin)	200	18.00	20	0.00
<b>Grand Total</b>				<b>100.00</b>		<b>1.834</b>

Note: Less progress due to anability deshi Cotton Seed.

## 6.NFSM-Sugarcane

Month- December 2017

(Rs. In lakh)

SI. No	Interventions	Apporved Rate of Assistance	Target		Achievement	
			Phy.	Fin.	Phy.	Fin.
1	Demonstration on intercropping and single bud chip technology with sugarcane	Rs. 8000 per ha. (Rs.7000 - inputs & Rs.1000-Contingency)	392	31.36	260	6.08
2	State level training by sugarcane research institutes, SAUs, KVK etc.	Rs. 40000/Training	4	1.60	0	0.00
<b>Grand Total</b>				<b>32.96</b>		<b>6.08</b>

## 7. NFSM-Additional Pulses

Month-December 2017

(Rs. In lakh)

S.No.	Interventions	Approved Rate /Unit	Target		Achievement	
			Phy.	Fin.	Phy.	Fin.
1	<b>*Demonstrations on Improved Technologies:</b>					
	(a)Cluster Demonstrations (of 100 ha each) Moong, Urd. Pigeonpea					
	Gram	Rs.7500/ha	36000	2700.00	33573	727.28
	Urd	Rs.7500/ha	15000	1125.00	3484	155.56
	Moong	Rs.7500/ha	40000	3000.00	0	661.38
	Lentil	Rs.7500/ha	3000	225.00	1000	25.00
	Pea	Rs.7500/ha	1000	75.00	1000	
	(b) Demo. on intercropping	Rs.7500/ha	8000	600.00	2975	44.25
	(c) Cropping System Based Demonstrations					
	(ii) Wheat -Moong	Rs.12500/ha	5000	625.00	4300	82.98
	Sub total 1 (a to c)		108000	8350.00	46332	1696.45
2	Production and Distribution of HYVs Seeds					
a)	Distribution of Seeds					
	Gram	Rs.2500/qtl	25000	625.00		
	Urd	Rs.2500/qtl	15000	375.00		
	Moong	Rs.2500/qtl	25000	625.00	3048	6.87
	Sub Total 2-(a)		65000	1625.00	3048	6.87
3	Integrate Nutrient Management:					
	(a) Micro-nutrients	Rs.500/ha	200498	1002.49	150	
	(b) Gypsum/80% WG Sulphur	Rs.750/ha	80334	602.51	135	
	(c) Lime	Rs.1000/ha	50000	500.00		
	(d) Bio-fertilizers	Rs.300/ha	100000	300.00	70	
	Sub total 3 (a to d)		430832	2405.00	355	0.00
4	Integrated Pest Management (IPM)					
	(a) Distribution of PP chemicals	Rs.500/ha	200000	1000.00	150	
	(b) Weedicides	Rs.500/ha	10000	50.00	40	
	Sub total 4 (a to b)		210000	1050.00	190	0.00
5	Resource Conservation Technologies/Tools					
	(a) Manual Sprayer	Rs.600/Unit	15000	90.00		
	(b) Seed drill	Rs.15000/Unit	1200	180.00	245	41.89
	Sub total 5 (a to f)		16200	270.00	245	41.89
6	Efficient Water Application Tools:					
	(a) Sprinkler Sets	Rs.10000/ha	15000	1500.00		
	(b) Pump Sets	Rs.10000/Unit	6000	600.00		
	(c) Pipe for carrying water from source to the field	Rs.50/M for HDPE pipes, Rs.35/-M for PVC pipes and Rs.20/-M for HDPE laminated woven lay flat tubes	10000	1500.00		
	Sub total 6 (a to d)		31000	3600.00	0	0
Grand Total (2017-18)				17300.00		1745.21

## PATTERN OF ASSISTANCE: NFSM –PULSES

S. No.	Intervention	Approved rates /Unit
1	<b>*Demonstrations on Improved Technologies:</b>	
	Cluster Demonstrations (of 100 ha each) (Arhar, Urd, Moong, Gram, Lentil)	Rs.7500/-ha
	Cropping System based Demonstration (Paddy- Pulses, Pulses- Wheat)	Rs.12500/-ha
	Demo. Intercropping	Rs. 7500/-ha
2	<b>Production &amp; Distribution of HYVs seed</b> (Arhar, Urd, Moong, Gram, Lentil)	Rs.2500/-Qtl.
3	<b>Integrate Nutrient Management:</b>	
	Micro-nutrients	Rs.500/-ha or 50% of the cost whichever is less
	Gypsum/80% WG Sulphur	Rs.750/-ha or 50% of the cost whichever is less
	Lime	Rs.1000/-ha or 50% of the cost whichever is less
	Bio-fertilizers	Rs.300/-ha or 50% of the cost whichever is less
4	<b>Integrated Pest Management (IPM)</b>	
	Distribution of PP Chemicals	Rs.500/-ha or 50% of the cost whichever is less
	Weedicides	Rs.500/-ha or 50% of the cost whichever is less
5A.	<b>Resource Conservation Technologies/Tools:</b>	
	Manual Sprayer	Rs. 600/Unit or 50% of the cost whichever is less
	Power Knap Sack Sprayer	Rs.3000/Unit or 50% of the cost whichever is less
	Zero Till Seed Drills	Rs.15000/Unit or 50% of the cost whichever is less
	Multi Crop Planters	Rs.15000/Unit or 50% of the cost whichever is less
	Seed Drills	Rs.15000/Unit or 50% of the cost whichever is less
	Zero Till Multi -Crop Planters	Rs.15000/Unit or 50% of the cost whichever is less
	Ridge Furrow Planter	Rs.15000/Unit or 50% of the cost whichever is less
	Chiseller	Rs.8000/Unit or 50% of the cost whichever is less
	Rotavator	Rs.35000/Unit or 50% of the cost whichever is less
	Laser Land Leveler	Rs.150000/Unit or 50% of the cost whichever is less
	Tractor mounted sprayer	Rs. 10000/Unit or 50% of the cost whichever is less
	Multi crop thresher	Rs. 40000/Unit or 50% of the cost whichever is less
5B.	<b>Other machinery approved by SMAM</b>	
	Reversible plough	Rs. 35000/Unit or 50% of the cost whichever is less
6	<b>Efficient Water Application Tools:</b>	
	Sprinkler Sets	Rs.10000/ ha or 50% of the cost whichever is less
	Pump Sets	Rs.10000/Unit or 50% of the cost whichever is less
	Pipe for carrying water from source to the field	@ 50% of the cost limited to RS. 50/ m for HDPE pipes, RS. 35 / m for PVC pipes & Rs 20/ m for HDPE laminated woven lay flat tubes with maximum ceiling of Rs. 15000 per beneficiary for water carrying pipes.
	Mobile Rain gun	Rs. 15000/Unit or 50% of the cost whichever is less
7	<b>Cropping System based trainings</b>	Rs.3500/ Sess. Rs.14000/ Trai.
8	<b>Miscellaneous Expenses :.</b>	
	PMT& Other Misc. Exp. at District Level & State Level	
9	<b>Local Initiative</b>	
	Power weeder	Rs. 15000/Unit or 50% of the cost whichever is less
	Raised bed planter	Rs. 44000/ Unit or 50% of the cost whichever is less
	Manual/ Bullock drawn Implements	Rs. 5000/ Unit or 50% of the cost whichever is less
	Movable Threshing Floor	Rs. 1338/ha or 50% of the cost whichever is less
	Happy seeder	Rs. 63000/Unit
10	Demonstrations by (KVK)	Rs.7500/ha

**PATTERN OF ASSISTANCE: NFSM –WHEAT**

S. No.	Intervention	Approved rates /Unit
1	<b>*Demonstrations on Improved Technologies:</b>	
	Cluster Demonstrations (of 100 ha each)	Rs.7500/-ha
	Cropping System based Demonstration (Paddy-Wheat, Pulses-Wheat)	Rs.12500/-ha
2	<b>Production &amp; Distribution of HYVs seed</b>	Rs.1000/-Qtl.
3	<b>Integrate Nutrient Management:</b>	
	Micro-nutrients	Rs.500/-ha or 50% of the cost whichever is less
	Gypsum	Rs.750/-ha or 50% of the cost whichever is less
4	<b>Integrated Pest Management (IPM)</b>	
	Distribution of PP Chemicals & bio-agents	Rs.500/-ha or 50% of the cost whichever is less
	Weedicides	Rs.500/-ha or 50% of the cost whichever is less
5	<b>Resource Conservation Technologies/Tools:</b>	
	<b>A. Under NFSM</b>	
	Manual Sprayer	Rs. 600/Unit or 50% of the cost whichever is less
	Power Knap Sack Sprayer	Rs.3000/Unit or 50% of the cost whichever is less
	Zero Till Seed Drill	Rs.15000/Unit or 50% of the cost whichever is less
	Multi Crop Planter	Rs.15000/Unit or 50% of the cost whichever is less
	Power Weeders	Rs.15000/Unit or 50% of the cost whichever is less
	Seed drill	Rs.15000/Unit or 50% of the cost whichever is less
	Zero Till Multi Crop Planter	Rs.15000/Unit or 50% of the cost whichever is less
	Chiseller	Rs.8000/Unit or 50% of the cost whichever is less
	Rotavator/Turbo seeder	Rs.35000/Unit or 50% of the cost whichever is less
	Laser Land Leveler	Rs.150000/Unit or 50% of the cost whichever is less
	Tractor mounted sprayer	Rs. 10000/Unit or 50% of the cost whichever is less
	Multi crop thresher	Rs. 40000/Unit or 50% of the cost whichever is less
	<b>B. Other machinery approved under SAMA (Sub Mission on Agriculture Mechanization)</b>	As per approved norms of SMAM
	Reaper cum Binder	Rs. 125000/Unit or 50% of the cost whichever is less
6	<b>Efficient Water Application Tools:</b>	
	Sprinkler Sets	Rs.10000/ ha or 50% of the cost whichever is less
	Pump Sets	Rs.10000/Unit or 50% of the cost whichever is less
	Pipe for carrying water from source to the field	@ 50% of the cost limited to RS. 50/ m for HDPE pipes, RS. 35 / m for PVC pipes & Rs 20/ m for HDPE laminated woven lay flat tubes with maximum ceiling of Rs. 15000 per beneficiary for water carrying pipes
	Mobile Rain gun	Rs. 15000/Unit or 50% of the cost whichever is less
7	<b>Cropping System based trainings</b>	Rs.3500/ Sess. Rs.14000/ Trai.
8	<b>Miscellaneous Expenses :.</b>	
	PMT& Other Misc. Exp. at District Level & State Level	
9	<b>Local Initiative</b>	
	Straw Reaper	Rs. 40000/Unit or 50% of the cost whichever is less
	Spiral Grader	Rs. 2362/Unit or 50% of the cost whichever is less
10	<b>Other Initiative</b>	
	Demonstrations by NGOs	Rs. 8250/ha
	Assistance of Custom Hiring Centres	Rs. 1500/ha

### PATTERN OF ASSISTANCE: NFSM- RICE

S.No.	Name of Interventions	Pattern of Assistance
<b>1</b>	<b>Cluster Demonstrations by State Department of Agri. With the technical backstopping of ICAR/SAUs/IRRI (One Cluster of 100 ha)</b>	
	Cluster Demonstrations on DSR	Rs.7500 per ha
	Cluster Demo. on Line transplanting	Rs.7500 per ha
	Cluster Demonstrations on SRI	Rs.7500 per ha
	Cluster Demo. on Hybrid Rice	Rs.7500 per ha
	Demo. on Stress tolerant var.	Rs.7500 per ha
	Cropping system based Demonstrations	Rs.12500 per ha
<b>2.</b>	<b>Seed Distribution</b>	
	High Yielding Varieties of Rice	Rs.1000/q or 50% of the cost whichever is less
	Hybrid Rice Seed	Rs. 5000/q or 50% of the cost whichever is less
<b>3.</b>	<b>A. Soil &amp; Plant Protection Management</b>	
	Micronutrients	Rs. 500/ha or 50% of the cost whichever is less
	Lime	Rs.1000/q or 50% of the cost whichever is less
	<b>B. Plant Protection Management</b>	
	PP Chemicals & bio agents	Rs. 500/ha or 50% of the cost whichever is less
	Weedicides	Rs. 500/ha or 50% of the cost whichever is less
<b>4</b>	<b>Resource Conservation Techniques/Tools</b>	
	<b>A. Under NFSM</b>	
	Cono-weeder	Rs.600/ unit or 50% of the cost whichever is less
	Manual Sprayer	Rs.600/ unit or 50% of the cost whichever is less
	Power Sprayer	Rs.3000/ unit or 50% of the cost whichever is less
	Seed drills	Rs.15000/ unit or 50% of the cost whichever is less
	Multi crop Planter	Rs.15000/ unit or 50% of the cost whichever is less
	Power weeder	Rs.15000/ unit or 50% of the cost whichever is less
	Zero Till Multi Crop Planter	Rs.15000/ unit or 50% of the cost whichever is less
	Drum Seeder in rice	Rs.1500/ unit or 50% of the cost whichever is less
	Rotavators /turbo seeder	Rs.35000/ unit or 50% of the cost whichever is less
	Laser Land Leveler	Rs.150000/ unit or 50% of the cost whichever is less
	Paddy Thresher/Multi crop thresher	Rs.40000/unit or 50% of the cost whichever is less
	Self Propelled Paddy Transplanter	Rs.75000/unit or 50% of the cost whichever is less
	Power sprayer	Rs.3000/powered sprayer or 50% of the cost whichever is less
	<b>B. Other machinery approved under SAMA</b>	As per approved norms of SMAM
	Rice Straw Reaper	Rs. 63000/Unit or 50% of the cost whichever is less
<b>5</b>	<b>Water Application Tools</b>	
	Pump Sets	Rs. 10000/Unit or 50% of the cost whichever is less
	Pipe for carrying water from source to the field	@ 50% of the cost limited to RS. 50/ m for HDPE pipes, RS. 35 / m for PVC pipes & Rs 20/ m for HDPE laminated woven lay flat tubes with maximum ceiling of Rs. 15000 per beneficiary for water carrying pipes
<b>6</b>	<b>Cropping System based trainings</b>	Rs.3500/ Sess. Rs.14000/ Trai.
<b>7</b>	<b>Miscellaneous Expenses:.</b>	
	PMT& Other Misc. Exp. at District Level & State Level	
<b>8</b>	<b>Local Initiative</b>	
	Happy Seeder	Rs. 63000/Unit or 50% of the cost whichever is less
	Reaper Cum Binder	Rs125000/Unit or 50% of the cost whichever is less
<b>9</b>	<b>Other Initiative</b>	
	Demonstrations by NGOs	Rs. 7500/ha
	Assistance of Custom Hiring Centers	Rs. 1500/ha

## PATTERN OF ASSISTANCE: NFSM- COARSE CEREALS

S.No.	Name of Interventions	Pattern of Assistance
<b>1</b>	<b>Demonstrations</b>	
	<b>A.Improved packages</b>	
	Coarse cereals- Maize, Jowar, Bajra, Kodo-Kutki,	Rs.5000/ ha
	<b>B.Demo. on Intercropping</b>	Rs.5000 / ha
<b>2</b>	<b>Distribution of Certified Seed</b>	
	Hybrids Seeds	Rs.5000/q or 50% of the cost whichever is less
	HYV Seeds	Rs.1500/q or 50% of the cost whichever is less

## PATTERN OF ASSISTANCE: NFSM- COTTON

S. No.	Name of Interventions	Pattern of Assistance
<b>1</b>	Front Line Demonstration (FLDs) on Integrated Crop Management (ICM)	Rs.7000/ha (Rs. 6000 for inputs & Rs. 1000 for Contingency)
<b>2</b>	FLDs on Deshi & ELS Cotton/ELS Cotton Seed Production	Rs.8000/ha (Rs. 7000 for inputs & Rs. 1000 for Contingency)
<b>3</b>	FLDs on Intercropping	Rs.7000/ha (Rs. 6000 for inputs & Rs. 1000 for Contingency)
<b>4</b>	Trials on High Density Planting System HDPS	Rs.9000/ha (Rs. 8000 for inputs & Rs. 1000 for Contingency)

## PATTERN OF ASSISTANCE: NFSM -SUGARCANE

S. No.	Name of Interventions	Pattern of Assistance
<b>1</b>	Demonstration on Intercropping & Single Bud chip technology with Sugarcane	Rs.8000/ha (Rs. 7000 for inputs & Rs. 1000 for Contingency )
<b>2</b>	State level training by Sugarcane research institutes, SAUs, KVKs, etc.	Rs.40000/ Training

**Pattern of Assistance (NFSM-Rice): 2017-18**

S. No.	Interventions	Approved Rate of assistance	% share to total allocation
1	Cluster Demonstrations	Rs 9000/- ha	40
	CSBD	Rs 15000/- ha	
2	Seed Distribution		20
	Hybrid rice seed	Rs 10000/q or 50 % of cost whichever is less	
	HYVs seeds of rice (older than 10 yrs) limited to 20% of total seed distribution target.	Rs 1000/q or 50 % of cost whichever is less	
	HYVs seeds of rice (less than 10 yrs varieties)	Rs 2000/q or 50 % of cost whichever is less	
3	Plant and soil Protection Management		15
a)	Soil Management		
	i) Micronutrients	Rs 500/ha or 50%	
	ii) Liming in acidic soil	Rs 1000/ha or 50%	
b)	Plant Protection Management		
4	Flexi Components	As per SMAM Norms	25
	Water application tools		
i)	Incentive for pump sets	Rs 10000/unit or 50%	
ii)	Water Carrying Pipes	Rs 15000/- per farmer/beneficiary for water carrying pipes	
	CS based trainings	Rs 3500/-session: Rs 14000/- training	
	Demo by NGOs	Rs 9900/- ha	
	Assistance for CHC	Rs 1500/- ha	

**Pattern of Assistance (NFSM-Coarse cereals): 2017-18**

S. No.	Interventions	Approved rate of Assistance	% share to total allocation
1	Demonstrations	Rs. 6000/ha	
2	Distribution of certified seeds		
2 (a)	HYVs Seeds (less than 10 years of age)	Rs. 3000/ qtls	
2 (b)	HYVs Seeds (more than 10 years of age)	Rs. 1500/ qtls	
2(C)	Hybrid seeds of Maize	Rs. 10000/ qtls	

### Pattern of Assistance (NFSM-Pulses): 2017-18

S. No.	Interventions	Approved rate of Assistance	% share to total allocation
1 a	Demonstration on improved technologies	Rs. 9000/- per ha	30
b	CSBD	Rs. 15000/- per ha	
c	Demonstration on Intercropping	Rs. 9000/- per ha	
2	Assistance for distribution & Production of seeds		15
a	For varieties < 10 years	Rs 5000/- or 50%	
b	For varieties > 10 years (limited to 20% of total seed target)	Rs 2500/- or 50%	
	Production of seeds (For varieties < 10 years)	Rs 5000/- or 50%	15
3	Plant and soil protection management		15
	<b>Soil Management</b>		
a	Micronutrients	Rs 500/- ha or 50 %	
b	Gypsum/ 80 % WG Sulphur	Rs 750/- ha or 50 %	
c	Lime	Rs 1000/- ha or 50 %	
d	Bio-Fertilisers	Rs 300/- ha or 50 %	
	Plant Protection Management	Rs 500/- ha or 50 %	
4	Flexi Components	As per SMAM norms	30
	Efficient Water application tools		
	Sprinkler Sets	Rs 10000/ha or 50 %	
	Pump Sets	Rs 10000/ha or 50 %	
	Pipe for carrying water	Rs 15000/ farmer	
	Mobile Rain gun	Rs 15000/ unit or 50 %	
	CS based trainings	Rs 3500/-session: Rs 14000/- training	
	Demo by NGOs	Rs 9900/- ha	
	Assistance for CHC	Rs 1500/- ha	

**Pattern of Assistance (NFSM-Nutri-Cereals): 2017-18**

S. No.	Interventions	Approved rate of Assistance	% share to total allocation
1	CFLD by State (60:40)	Rs 6000/ha	30
2 (a)	Distribution of seed (60:40)	Rs 10000/ql	30
(b)	HYVs Seeds		
	For varieties <10 Years	Rs 3000/ql	
	For varieties>10 Years	Rs 1500/ql	
3	Certified seed production of HYVs seeds by state <10 years old Varieties (60:40)	Rs 3000/qls	
4	INM	Rs 500/ha	15
5	IPM	Rs 500/ha	
6	Flexi Components		25
a)	Farm implements and equipments		
	i) Manual Sprayer for SC/ST , women farmer, small and Marginal Farmers	50 % of the cost or Rs 600/ unit	
	ii) Manual Sprayer for other Farmers	40 % of the cost or Rs 500/ unit	
b)	Water application tools		
	Sprinklers	50 % of the cost or Rs 10000/ unit	
	Cropping system based training	Rs 14000 per training of 4 season	

## Annexure-VI

### SCHEME-WISE SUBSIDY PATTERN: AGRICULTURAL MACHINERY

(Amount in Rs.)

S. No.	Name of Scheme	Component	Category of Farmers	Subsidy rate	Remarks
1	RKVY, NMOOP, NMSA	Sprinkler Set	Marginal & Small Farmers	Rs.9800/- per ha or 50% of cost whichever less.	
			Others farmers	Rs.6860/- per ha or 35% of cost whichever less.	Farmers have more than 2 ha land, subsidy have been reduced from 50% to 35 %. This is discrepancy in the scheme of NMOOP, RKVY & NMSA. The pattern of subsidy should be equal to NFSM.
2	NFSM	Sprinkler Set	All Category Farmers	Rs.10000/- per ha or 50% of cost whichever less.	
3	NMOOP, SMAM	Thresher and Rotavator	20 -35 HP, Marginal, Small, SC & ST farmers	Rs.25000/- per Machine or 50% of cost whichever less.	The discrepancy have been found in the Scheme of SMAM & NMOOP in the subsidy pattern. The pattern of subsidy should be equal to NFSM.
			20 -35 HP, Other Farmers	Rs.20000/- per Machine or 40% of cost whichever less.	
			More than 35HP, Marginal, Small, SC & ST farmers	Rs.63000/- per Machine	
			More than 35 HP, Other Farmers	Rs.50000/- per Machine	
4	NFSM	Rotavator	All Category Farmers	Rs.35000/-per Machine or 50% cost whichever less	
		Thresher	All Category Farmers	Rs.40000/-per Machine or 50% cost whichever less	

Note: Variation in subsidy pattern in various schemes *i.e* RKVY, NMSA, NMOOP, SMAM and NFSM. Field level functionaries are facing a lot of problem in this regard to satisfy the farmers.

**SCHEME-WISE AGRI. MACHINERY SUBSIDY PATTERN**

(Amount in Rs.)

S. No.	Scheme	Component	Category of Farmers	Scheme proposed Subsidy	Top-Up Proposed	Total Subsidy
1	NFSM	Sprinkler	All Category Farmers	Rs.10000/-ha or 50% of cost whichever less	4500/-	14500/-
2	RKVY, NMOOP, NMSA	Sprinkler	Marginal & Small Farmer	Rs.9800/-ha or 50% of cost whichever less	4500/-	14300
			Large Farmer (2 ha. above lend )	Rs.9800/-ha or 35% of cost whichever less	4500/-	11360
3	NMOOP, SMAM	Thresher and Rotavator	20 -25 HP Small, Marginal, SC & ST	Rs.25000/-ha or 50% of cost whichever less	-	-
			20 -25 HP Other Farmer	Rs.2000/-ha or 40% of cost whichever less	-	-
			35HP Small, Marginal, SC & ST	Maximum 63000/-	-	-
			35 HP Other Farmer	Maximum 50000/-	-	-
4	NFSM	Rotavator	All Category Farmers	Rs.35000/-ha or 50%	-	-
		Thresher	All Category Farmers	Rs.40000/-ha or 50%	-	-

Note: Therefore, according to the above, variation in subsidy pattern in various scheme, field functionaries facing problem for satisfying farmers.