

Targeting Rice Fallow Areas in Eastern India for Pulses and Oilseeds

Operational Guidelines

Introduction:

Rice is the major crop grown over an area of >18 million ha in Eastern States comprising Assam, Bihar, Chhattisgarh, Jharkhand, Odisha and West Bengal. Due to various reasons such as cultivation of long-duration paddy varieties, water logging and excessive moisture in *Tal* areas, lack of moisture at planting time of winter crops, lack of irrigation, non-availability of seeds of short duration varieties of rabi crops and other socio-economic problems like stray cattle and blue bulls etc. an estimated area of >8 million ha remain fallow after harvest of paddy during rabi season in these States (*Annexure-I*). Mono-cropping system with low yield of paddy of 1856 kg/ha in comparison to highest yield of 3859 kg/ha of Punjab and national average of 2257 kg/ha (2009-12) is attributing to low agricultural profitability in the region.

The country has achieved self sufficiency in food grains but is deficit in production of oilseeds and pulses. Area expansion is difficult in traditional pulses and oilseeds growing states due to the pressure of other competitive crops. Considering the scope of pulses and oilseeds cultivation in the rice fallow areas of Eastern States, it has been decided to implement a sub-scheme under RKVY with focus on specific areas in the region. It is targeted to cover one million ha out of 8 million ha rice fallow land in next three years in the Eastern States. The programme will be operationalized from April, 2016.

2. Scope for cultivation of oilseeds and pulses in rice fallows:

Short-duration varieties of pulses like lentil, mungbean, urdbean, lathyrus, field peas and oilseeds such as mustard, groundnut, linseed, niger, safflower and sesame etc. could be profitably cultivated in Rabi/Summer season in rice fallows. In addition, pulses and groundnut being leguminous crops will also help in restoration of soil health through nitrogen fixation. The small seeded varieties of pulses may find prominence under *Utera* cultivation (relay cropping) in the states of Assam, Bihar, Chhattisgarh, Jharkhand and West Bengal. Relay/ *Paira* cropping of lentil, Lathyrus, chickpea and pea is getting popular under rice fallows in West Bengal. In low land areas with excessive soil moisture, lentil may be more suitable. Rice-lentil system can be popularized in the lowland areas of Bihar, Jharkhand,

Eastern UP and West Bengal. Rice fallows can also be profitably used for groundnut cultivation in *Char* area of Bihar, Eastern UP, Mahananda *Char* of Odisha, Brahmaputra valley of Assam. Mustard, sesame and linseed cultivation could be promoted in almost all the States.

3. Objectives:

- 3.1 To bring one million ha area of rice fallow under oilseeds and pulses cultivation with an estimated additional production of 2.50 lakh tonnes of pulses and 3.5 lakh tonnes of oilseeds by end of 2018-19.
- 3.2 To target specific 100 villages each in 15 districts of the region to achieve tangible results.
- 3.3 Capacity building of extension functionaries and farmers for sustainable cultivation of oilseeds and pulses in rice fallows by adopting latest crop production technologies.
- 3.4 To create need based irrigation, mechanization, post-harvest and marketing infrastructure in the project areas for sustainable cultivation of oilseeds and pulses.

4. Area of operation and funding pattern

Fifteen districts in the states of Assam, Bihar, Chhattisgarh, Jharkhand, Odisha and West Bengal with large areas of rice fallow will be covered under this scheme. The funds would be released to the states as per norms of RKVY. The expenditure will be shared between Central and State Government in the ratio of 90:10 for Assam and 60:40 for remaining States.

5. Criteria for selection of districts / villages/beneficiaries

- 5.1 Identification of 15 potential districts in 06 states of Assam, Bihar, Chhattisgarh, Jharkhand, Odisha and West Bengal with highest coverage under Kharif paddy and lowest coverage (<50%) under Rabi crops.
- 5.2 Identification of 100 villages in each district with highest coverage under Kharif paddy and lowest coverage (<25%) under Rabi crops in consultation with local KVKs. The states will send list of villages selected district wise to DAC&FW.

- 5.3 Allocation of funds will be made for general, Special Component Plan (SCP) for Scheduled Caste and Tribal Sub-Plan (TSP) for Scheduled Tribes as per their proportion in the State population.
- 5.4. The intervention supported under the scheme will not be supported from NMOOP and NFSM in the selected villages to avoid duplication of resources.

6. Interventions

An assistance of Rs.5.00 lakh will be provided for each village. Out of which 50% funds (Rs. 2.50 lakhs) would be incurred on organizing cluster demonstration of improved production technologies and remaining (Rs. 2.50 lakhs) will be utilized for supply of other inputs like supply of certified seed, micro-nutrient, soil ameliorant (lime/gypsum) PP chemicals, irrigation equipments, farm machinery etc. in nearby area of cluster demonstration. The cost norm under /NFSM will be followed.

Cluster demonstration: Demonstration of improved production technology of pulses and oilseed would be organized in a cluster of around 50 ha in each village continuously for 3 years/ seasons within the total allocation of Rs. 2.50 lakh/year/season. In case of non-availability of 50 ha area in a village, the cluster will be contiguous in the neighboring villages. The size of cluster will vary depending upon the crops covered under the cluster due to different rate of assistance prescribed for each crop. For individual farmer the area under demonstration shall not be more than 2 ha.

The status of soil fertility of the selected farmers should be tested before undertaking the demonstration for optimum use of nutrients. The proven technology to be demonstrated in cluster should be identified in consultation with SAUs/KVKs. The details of inputs for these demonstrations will be finalized by the States in consultation with ICAR/SAUs/KVKs within the approved norms of NMOOP for oilseeds and NFSM for pulses. The cost of chemical fertilizers as may be required will be borne by the beneficiary farmers. High Yielding Varieties (HYVs) / hybrids of oilseeds /pulses, which are <15 year old should only be used under cluster demonstration. The AAPs should indicate break up for cafeteria of activities for each cluster demonstration as given below:

Cafeteria of interventions	Cost in Rs. per ha
Seeds	
Seed treatment	
Micro-nutrient including soil ameliorant	
Bio-fertilizers	
PP chemicals including bio-agent	
Irrigation appliances/equipments	
Custom hiring charges for seed drill/planter	
Publicity, field days , Kisan Goshti etc.	

A field day should be organized at the stage of physiological maturity of the crop with participation of beneficiary and non-beneficiary farmers from the neighboring villages, scientists of SAUs / KVKs and extension workers from SDAs.

7. **Action Plans:**

- 7.1** An assistance of Rs.5.00 lakh will be provided for each village, out of which 50% fund would be incurred on cluster demonstration of improved production technologies and remaining may be utilized for supply of other inputs.
- 7.2.** Beneficiaries will be identified and village level Action Plan will be prepared by a Committee headed by Agriculture Supervisor/VLEW, and 2-3 progressive farmers and a farmer facilitator of ATMA as members. Priority may be given to the farmers, who have facility for protective irrigation.
- 7.3.** The villages covered under this scheme shall be excluded from the ongoing centrally sponsored schemes of NFSM and NMOOP to avoid the duplication of resources.
- 7.4.** The village level Action Plans will be consolidated for each district in the format given in *Annexure-II* and approved by the following District Level Committee:

S. No.	Designation	Position
1	Chairman, Governing Board (GB) of ATMA	Chairman
2	Programme Coordinator/In-charge of KVK	Member
3	District Head of Agriculture Department	Member Secretary

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The Committee will also be responsible for implementation and monitoring of the programme. The Committee will meet atleast once in a crop season.

- 7.5** The District Action Plans will be consolidated into State Action Plans. Thereafter, State Action Plans along with district-wise statements will be sent to DAC&FW, Govt. of India for approval. On receipt of the approval of GoI, the State Plans will be approved by State Level Sanctioning Committee (SLSC) of RKVY.

8. Reporting system: Each state will submit a Quarterly Progress Report (QPR) by 15th of the month following each quarter. Subsequently, final Annual Progress Report (APR) will be submitted within 03 months after the closing of financial year in the format given at *Annexure-III* along with district-wise details.

9. Monitoring: The programme will be monitored by National Level Monitoring Teams (NLMTs) of NSFM and NMOOP.

10. Impact Assessment: Impact evaluation study will be undertaken through an independent agency to assess the impact of the programme in targeting the rice fallow areas and increasing the production and productivity of oilseeds and pulses.

Annexure-I

State wise estimated area of rice fallows in Eastern States

(Area in lakh ha)

State	Total food grains-kharif-2013	Paddy-Kharif 2013	Area under Rabi crops – 2013-14						Total area of Rabi crops	Estimated area of rice fallows
			Rabi food grains	Rabi oilseeds	Cabbage + Cauliflower	Potato	Tomato	Total rabi vegetable		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9) =6+7+8	(10) =4+5+9	(11) =3-11
Assam	20.86	20.50	5.74	2.64	0.54	0.98	0.18	1.70	10.08	10.42
Bihar	33.86	36.54*	30.10	1.23	1.06	3.18	0.48	4.72	36.05	0.49
Chhattisgarh	42.38	38.02	7.44	0.74	0.40	0.38	0.50	1.28	9.46	28.56
Jharkhand	18.51	12.56	4.16	2.37	0.53	0.49	0.26	1.28	7.81	4.75
Odisha	45.16	38.80	6.28	0.94	0.85	0.15	0.97	1.97	9.19	29.61
West Bengal	43.86	42.27	18.90	5.55	1.54	4.12	0.57	6.23	30.68	11.59**
Total	204.63	188.69	72.62	13.47	4.92	9.3	2.96	17.18	103.27	85.42

* Includes area of 30.39 lakh ha under kharif -paddy, area of 2.77 lakh ha of kharif- maize and area of 3.38 lakh ha of kharif vegetables.

** An area of about 3 lakh ha is being used for cultivation of summer sesame, groundnut and moong.

Annexure – II

Annual Action Plan (AAPs) of Targeting Rice Fallow Areas for the year

District/State:

(Financial Rs. in lakhs)

S.No.	Intervention	Approved rate of assistance	Target proposed by the State	
			Phy.	Fin
1	Cluster demonstration			
	Chick pea	Rs. 7500 / ha		
	Lentil			
	Green gram			
	Black gram			
	Grass pea			
	Field pea			
	Mustard	Rs.3000 / ha		
	Linseed			
	Safflower			
	Sesame			
	Sunflower	Rs. 4000 / ha		
	Groundnut	Rs.7500 / ha		
Total				
2	Supply of certified seed of varieties / hybrids pulses & oilseeds not older than 15 years			
	Varieties	Rs. 2500 / Qtl.		
	Hybrids	Rs. 5000 / Qtl.		
3	Other inputs			
	Micro nutrients	Rs. 500 / Ha		
	Gypsum	Rs. 750 / Ha		
	Lime	Rs. 1000 / Ha		
	Bio-fertilizer	Rs. 300 / Ha		
	PP Chemicals including bio-agent	Rs. 500 / Ha		
4	Irrigation equipment			
	Sprinklers	Rs. 10,000 / unit		
	Pipes	@		
	Pump sets	10, 000 / unit		
5	Farm Machinery	As per NMOOP/NFSM / SMAM		

@ 50% of the cost limited to Rs.50/- per meter for HDPE pipes, Rs. 35/- per meter for PVC pipes and Rs. 20/- meter for HDPE laminated woven lay flat tubes with maximum ceiling of Rs. 15000/- per farmer / beneficiary for water carrying pipes under NMOOP and NFSM".

Annexure – III

Quarterly / Annual Progress Report (QPR/APR) of Targeting Rice Fallow Areas

State:

(Financial Rs. in lakhs)

S.No.	Intervention	Approved rate of assistance	Targets approved by GoI		Quarterly/APR			
			Phy	Fin	Ach. for qtr. I/II/III		Ach. till 31 st March	
					Phy	Fin	Phy	Fin
1	Cluster demonstration							
	Chick pea	Rs. 7500 / ha						
	Lentil							
	Green gram							
	Black gram							
	Grass pea							
	Field pea							
	Mustard		Rs.3000 / ha					
	Linseed							
	Safflower							
	Sesame							
	Sunflower	Rs. 4000 / ha						
	Groundnut	Rs.7500 / ha						
2.	Supply of certified seed of varieties / hybrids pulses & oilseeds not older than 15 years							
	Varieties	Rs. 2500 / Qtl.						
	Hybrids	Rs. 5000 / Qtl.						
3	Other inputs							
	Micro nutrients	Rs. 500 / Ha						
	Gypsum	Rs. 750 / Ha						
	Lime	Rs. 1000 / Ha						
	Bio-fertilizer	Rs. 300 / Ha						
	PP Chemicals including bio-agent	Rs. 500 / Ha						
4	Irrigation equipment							
	Sprinklers	Rs. 10,000 / unit						
	Pipes	@						
	Pump sets	10, 000 / unit						
5	Farm Machinery	As per NMOOP/NFSM /SMAM						