

Activities under NICRA during 2015-16

Technology Demonstrations under different Modules

Module I : Natural resource management

Critical area	Key intervention	Resilience to climatic variability
Management of soil health	-Soil test based nutrient recommendation for major field crops. -In situ green manuring with <i>Sesbania acculeata</i> during pre-kharif -Renovation of compost pit and low cost vermicomposting unit	-Maintenance of soil fertility and productivity through judicious use of fertilizers. -Improves soil health through addition of organic matter, increase water holding capacity of soil and decrease soil loss by erosion. -Improves soil quality through conservation & restoration of bio-wastes, improves water holding capacity of soil.
Moisture conservation	-In-situ moisture conservation by using mulch in vegetable crops during rabi season -Renovation of existing farm ponds for multiple use	-Improves soil moisture by reduction of evaporation, runoff and weeds as well as increase in infiltration. -Provide life saving irrigation at critical stages of crop growth during dry spell
Drainage of water during flood	-Drainage channel to remove excess water during flood	-Reduction in duration of submergence during flood as well as crop damage.

Performance of Demonstration under Natural resource management:

Intervention	Technology demonstrate	Critical input(Variety, fertilizer/chemical doses)	No. of farmers	Area (ha)	Measurable indicator of output	Economics of demonstration	Economics		
							Gross cost	Gross return	Net return
Conservation tillage	Maize under zero tillage condition	Seed	01	0.13	Yield = 43q/ha	28000	47300	19300	1.64
Production of organic inputs for soil health management	Vermicomposting	Low cost vermicomposting unit	15	-	15 t	-	-	-	-
Demonstration on green manuring crop (Dhaincha)	Green manuring crop (Dhaincha)	Seeds	4	2	60 t/ha	-	-	-	-
Production of organic inputs for soil health management	Vermicomposting	Low cost vermicomposting unit	10	-	10t	-	-	-	-
Moisture conservation	Raised bed	Seed, fertilizers	6	1	49.5q/ha	28,850	54450	25,600	1.88

	planters in Maize cultivation								
Moisture conservation	Raised bed planters in Maize cultivation	Seed, fertilizers	6	1	Ongoing	-	-	-	-
Check dam	Restriction of flood entry into the NICRA villages by Check dam structure	-	-	1	Ongoing	58,730			

Module II : Crop Production

Critical area	Key intervention	Resilience to climatic variability
Suitable varieties of rice for flood affected areas during <i>kharif</i> season	-Introduction of submergence tolerant rice variety such as 'Swarna sub 1' during <i>kharif</i> season.	-Transplanting of HYVs of rice is not possible during <i>kharif</i> season in the selected village as it is a chronically flood affected area and farmers generally adopt traditional late transplanted rice varieties after flood. Submergence tolerant rice variety such as 'Swarna sub 1' can tolerate 12-15 days water submergence during flood after establishment of seedlings.
	-Introduction of staggered planting rice variety such as 'Gitesh' having higher flexibility in respect of seedling age during <i>kharif</i> season.	-Farmers adopt traditional photosensitive varieties with higher seedling age as they are unable to transplant rice seedlings in time due to flood water, leading to poor tillering and reduction in crop yield (30%). Staggered planting rice variety 'Gitesh' has the flexibility in respect of seedling age from 30-60 days.
	-Introduction of late planting short duration rice variety 'Luit' for pre and post flood situation.	-After recession of flood water, farmers grow traditional photosensitive varieties leading to 30 % reduction in crop yield because of higher seedling age and moisture stress. Adoption of short duration of HYV of rice resulted in higher yield than the existing varieties.
Productivity improvement in field crops during post flood period.	-Adoption of high yielding variety of summer rice (var- Joymoti). - Adoption of high yielding variety of Toria (var- TS 36).	-Crop failure or poor yield of crop is more often visualized in the farmer's field during <i>kharif</i> season due to flood and farmers put more emphasis on rabi crops. Introduction of HYV during rabi season resulted in yield improvement.

Performance of demonstration under crop production

Crop	Variety	No. of farms	Area	Measurable indicators of	% increase	Economics of demonstration (Rs./ha) ¹	Economics of Local (Rs./ha)
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aerobic, direct seeding)	(var-Luit)													
Rice(Pre flood)	Luit	1	2	Ongoin g	-	-	-	-	-	-	-	-	-	-
Green Gram	Pratap	4	0.5	Ongoin g										

Module III : Livestock and Fisheries

Livestock:

Critical area	Key intervention	Resilience to climatic variability
Mortality and morbidity losses due to biotic and abiotic stresses	-Prophylaxis of livestock and poultry	- Enhance immunity of livestock during stress
Housing	-Low cost housing for poultry	- Protect birds from flood
Poor productive and reproductive performance in cattle in post flood situation due to scarcity of natural feeds	-supplementation of area specific mineral mixture	- Boost the productive and reproductive performance of livestock through supplementation of AAU VETMIN
Rearing of indigenous pig varieties which have poor productive and reproductive performance	-Breed Upgradation	-Introduction of improved breed for better livelihood and nutritional security

Fishery:

Critical area	Key intervention	Resilience to climatic variability
Pond management and productivity improvement during flood and post flood condition	-Liming in fish pond to raise the pH to desired level	-Increase the pH to neutral to slightly alkaline
	-Application of potassium permanganate @ 2-5 ppm	-Disinfection of pond water from various pathogenic micro organisms. -Compensate lose of oxygen as KMnO ₄ release nascent oxygen into pond water. Temporarily it also help to overcome suffocation problem of fish arise due to the depletion of

of fish ponds / tanks during water scarcity and excess water														
Poultry house in flood affected areas	Low cost housing of poultry for small scale intensive system of rearing	6	6 units		-	-	3500	5640.87	2140.87	1.61	3000		1331.65	1.44
Improved fodder production*	Demonstration on year round production of green fodder	5	0.67	81	-	-	-	-	-	-	-	4331.65	-	-
Fish seed rearing in flood affected areas	Cage culture technology for fish seed rearing	4	4 units	2323 no.s	600 no.s	287.17 no.s	4276	6968	2692	2.00	3200	3000	200	0.93
Breed up gradation	Introduction of improved cross bred pig (Hampshire) for better livelihood	3	3 units	Ongoing	-	-	-	-	-	--	-	-	-	-
Mineral Mixture supplement	Augmenting productive and reproductive performance of cattle through supplementation of area specific mineral mixture in flood affected area	12	12 no.	Ongoing	-	-	-	-	-	--	-	-	-	-

Fishery	Contingency measures for fish pond in post flood situation	20	20	1040 per 7 months no records of disease outbreak	187.5 per 7 months sindrom of ulcer was objerved in fishes where KMNO4 was not applied in Pond	742	25000	104000	79000	4.16	20300	18750	-1550	0.92
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Module IV: Institutional Interventions

Critical area	Key Interventions	Out come
Poor access to quality seed	-Introduction of seed production programme for maintenance of seed bank through farmer groups in rice and toria.	-Timely availability of quality seed of suitable varieties for flood affected areas
Poor access to farm machineries	- Establishment of farm machinery custom hiring centre	-Ensures timely availability of farm implement to carry out various agricultural activities.
Poor access to weather information.	-Agro advisory based on IMD weather forecast and village weather observatory -Kisan Mobile Advisory Service	-Selection of suitable varieties and agricultural practices depending upon climatic variability - Management of pest and disease fluctuations occurring due to climatic variability

Performance of seed production programme:

Interventions	Details of activity			Critical input (Breed / Variety / Medicine doses.)	No. of farmers	*Unit / No. / Area (ha)
	Crops	Quantity	Technology used in seed / fodder bank & function of			

			groups			
Seed bank	Rice, Variety-Gitesh	54 q	Seed production	Seed, Urea, SSP, MOP and Chemicals	7	1
Seed bank	Rice, Variety Swarna sub 1	60 q	Seed production	Seed, Urea, SSP, MOP and Chemicals	3	1

Performance of Custom Hiring Centre

Year	Amount Received (Rs.)	Amount Spent (Rs.)	Amount Deposited (Rs.)	Remarks
2011-12	-	-	-	-
2012-13	26,000.00	21,981.00	4,019.00	Expenditure made for repairing of pumpset, power tiller and making of shed for power tiller.
2013-14	22,575.00	5,000.00	17,575.00	Servicing of power tiller and pumpset.
2014-15 (April-Jan)	21,903.00	3,200.00	18,703.00	Servicing of power tiller and pump set.
2015-16	13,800.00	2,000.00	4,000.00	Servicing of power tiller

Capacity building:

Thematic area	Title of training	No. of Courses	No. of beneficiaries		Date
			Male	Female	
Mushroom Cultivation	Vocational training on Scientific cultivation of Oyster mushroom	1	-	25	11/5/15

Module-6: Extension Activities

Name of the activity	No .of KVKs	Number of programmes	No. of beneficiaries		Remarks
			Male	Female	
Exposure visit of farmers		-	-	-	
Diagnostic visit		50	-	-	
Field days		-	-	-	
Method demonstrations					
Group Discussion		7	67	26	