ACTIVITY UNDERTAKEN UNDER NICRA PROJECT : 2019-20

Module-1: Natural Resource Management Interventions

Interventions	Technology demonstrat ed along	Critical inputs provided	No. of farmers involved in	Area under practice in the village (ha) n		Meas indi Cron	surable cators vields*	den	Econor nonstrat (Aver	nics of ion (Rs.// rage)	ha)
	with the crop and variety*	(Machine ry, cost for	the demonstrati on			(q (Av	/ha) erage)	Gro ss Cost	Gross Retur n	Net Retur n	BC R
		n, irrigation		After interventi	Before interventi	Dem o	Local practi				
In-situ moisture conservation measures (BBF/Ridge&furrow/cont our trenching/mulcing/conser vation furrow/bunding etc)	Soil moisture conservatio n in colocasia using straw mulch	Fertilizers	6	0.53	-	-	-		Ong	oing	
Water harvesting and recycling for supplemental irrigation (Community ponds/farmponds/jalkunds / checkdams/polybag checkdams/wells etc)											
Improved drainage in flood prone areas											
Conservation tillage where appropriate like zero tillage/ minimum tillage etc Artificial ground water											

recharge measures										
Water saving irrigation										
methods										
(Drip/sprinkler/raingun										
etc)										
Crop residue										
incorporation instead of										
burning										
Low cost vermicompost	Low cost	Bamboo,	10	10	-	-	-	Ong	oing	
	raised base	Plastic,								
	vermi-	Mother								
	composting	culture								
	unit									

Module 2: Crop Production Interventions

Interventio ns	Technolo gy demonstr ate	Critical input (Variety, Fertilize	No. of farmer	Are a (ha)	Measu indica of yield [*] (Measurable indicators of yield [*] (q/h)		Econom (Rs./ha)	nics of de	emonstra	tion	Econor	nics of I	Local (Rs	s./ha)
		r / Chemica ls doses,)			Dem o	Loc al		Gross Cost	Gross Retur n	Net Retur n	BC R	Gros s Cost	Gros s Retu	Net Retur n	BC R
													rn		
Introducing flood tolerant varieties	Scaling up of submerge nce tolerant varieties of rice 'Ranjit sub 1' in rice toria cropping system of	Seed, Urea, SSP, MOP & Plant Protectio n Chemical s	46	10	42.3	38.2 (Ran jit)	10.73	30350. 00	48645	18295	1.60	2850 0/-	43930/	15430 /-	1.54

	flash flood affected areas														
	Demonstr ation of submerge nce tolerant varieties of rice 'Bahadur Sub – 1' in rice toria cropping system of flash flood affected areas	Seed, Urea, SSP, MOP & Plant Protectio n Chemical s	27	5.0	41.8	37.6 (Ran jit)	11.17	30350. 00	48070	17720	1.58	2850 0/-	43240	14740	1.51
Introducing of short duration varieties															
Introducing drought tolerant varieties															
Introducing temperature tolerant varieties															
Advanceme nt of planting															

dates of rabi								
crops in								
areas with								
terminal								
heat stress								
Water								
saving								
paddy								
cultivation								
methods								
(SRI,								
aerobic,								
direct								
seeding)								
Frost								
managemen								
t in								
horticulture								
through								
fumigation								
Community								
nurseries for								
delayed								
monsoon								
Custom								
hiring								
centres for								
timely								
planting								
Location								
specific								
intercroppin								
g systems								
with high								
sustainable								
yield index								

Crop	Introducti	Seed,	32	5.0	8.65	6.78	27.58	20900.	34600	13700	1.66	19230.	2696	7730.	1.40
diversificati	on of high	Urea,						00	.00	.00		00	0.00	00	
on	yielding	SSP,													
	variety of	MOP,													
	Toria	Borax &													
	'TS-46'	Plant													
		Protectio													
		n													
		Chemical													
	Introducti	Seed,	32	5.0	8.52	6.70	27.16	20900.	34080	13180	1.63	1923	2680	7570.	1.39
	on of high	Urea,						00	.00	.00		0.00	0.00	00	
	yielding	SSP,													
	variety of	MOP,													
	Toria	Borax													
	'TS-38'	Plant													
	to	Protectio													
	compensa	n &													
	te losses	Chemical													
	during														
	kharif														
	crop														
	Up	Seed,	32	5.0	8.60	6.12	40.52	21800.	34400	12600	1.57	2023	2448	4250.	1.21
	scaling of	Urea,						00	.00	.00		0.00	0.00	00	
	high	SSP,													
	vielding	MOP,													
	of late	Borax													
	sown	Plant													
	variety of	Protectio													
	Toria	n &													
	'TS-67'	Chemical													
	to sustain														
	livelihood														
	in flood														
	affected														
	areas.														

	Cultivatio n of Black gram in flood affected areas in post flood situation	Seed, Urea, SSP, MOP & Plant Protectio n Chemical s	15	2.0				Crop fai	led due t	o prolong	ed rain	y period			
Control of stem borer															
Income generation crop															
Introducing temperature tolerant varieties															
Staggered planting rice variety during kharif season under aberrant weather condition	Up scaling of delayed planting rice variety 'Gitesh' under aberrant weather condition	Seed, Fertilizer & Plant Protectio n Chemical s	26	5	38.9	28.2	37.94	30500. 00	44735	14235	1.47	28800/	3243 0/-	3630/-	1.13
Demonstrati on on HYV of summer rice	Summer rice variety Bina dhan 11 to escape flood	Seed, Fertilizer & Plant Protectio n Chemical s	36	5.0	-	-	-				Ongc	bing			

Module-3: Livestock & Fisheries

Interventions	Technology demonstrate d	Critical input (Variety, Breed, etc)	No. of farmers	Unit/ Measurabl No. / indicators of Area output [*] (ha) Demo La		rable ors of ut [*]	% inc rea se	dem	Econon onstrati	iics of on (Rs./	'ha)	Eco Loo	onon cal (I	nics (Rs./h	of 1a)
					Demo	Local		Gr oss Cos t	Gros s Retu rn	Net Retu rn	B C R	G ro ss C os t	G r os s R et u r n	N et R et u r n	B C R
Use of community lands for fodder production during droughts / floods															
Improved fodder/feed storage methods															
Preventive vaccination															
Improved shelters for reducing heat stress in livestock															
Introduction of improved breeds															

Integrated duck cum fish farming	Demonstratio n on Integrated duck cum fish farming	Cost of duck shed, fingerlings, ducklings, feed etc.	2	2/ 0.5 ha	-	-	-	Ongoing
Others (Pl. specify) Low cost shelter for poultry	Low cost improved <i>Mechang</i> type poultry house for flood affected area	Cost of Bamboo, roof etc	5	5	-	-	-	Ongoing
Low cost shelter for goat	Low cost improved Mechang type Goat house for flood affected areas	Cost of Bamboo, roof etc	4	4	-	-	-	Ongoing

* Output is in terms of litres (*milk), number (eggs), kgs (meat), kg/ha (fodder yield)

Module-4: Institutional Interventions

Interventions		Detail	s of activity	Critical input	No. of	Unit
	Name of crops /varieties	Quantity produced/	Technology used in seed / fodder bank & function of groups	(Breed / Variety / Medicine	farmers involved	/ No. /
	Commodity groups / Implements	Number / Rent / Charges		doses)	involveu	Area (ha)
Seed bank	Paddy variety Ranjit Sub1	86.0	Seed production	Seed, Urea, SSP, MOP and PP Chemicals	8	2.0
	Paddy variety	73.4	Seed production	Seed, Urea, SSP,	13	2.0

	Naveen			MOP and PP		
	D 11	77.0		Chemicals	1.7	2.0
	Paddy variety	177.2	Seed production	Seed, Urea, SSP,	15	2.0
	Gitesh			MOP and PP		
	T TO 20	17.2		Chemicals	5	2.0
	1 oria variety 15-38	1/.3	Seed production	Seed, Urea, SSP,	5	2.0
				MOP and PP		
	Tania analista TO (7	16.0	Cool and footier	Chemicals	0	2.0
	Toria variety 15-0/	10.8	Seed production	MOD and DD	8	2.0
				Chemicals		
Fodder bank						
Community	Establishment of	Transplanted	Seedling production and distribution as	Seed land	9	0.60
Nurserv	community nursery	area 5 0 ha	contingency measure	preparation cost		0.00
Indisciy	in flood affosted		contingency measure	preparation cost		
	area with short					
	duration rice variety					
Commodity	_	_			_	_
groups	-	_		-		
Custom hiring	Power tiller,	-	Utilize the agricultural machineries and	-	63	1
centre	sprayer, pump set,		implements for cultivation of crops on hiring			
	reaper, plant		basis			
	protection kit, hoe,					
	sickle, rack, wheel					
	hoe, SRI marker,					
	weighing balance,					
	power sprayer,					
	drum, bucket, rope,					
	measuring cylinder,					
<u> </u>	Manual Duster etc.					
Collective	-	-	-	-	-	-
Climata						
literacy						
through a						

village level						
weather station						
Any other (Pl.	-	-	-	-	-	-
specify)						

Module-5: Capacity Building taken up (HRD)

SI.	Thematic area	Title of training	No. of Courses	No. of ben	eficiaries	Dat	e
No.				Male	Female	from	То
1	Crop diversification	Crop diversification through oilseed crop for sustainable livelihood	1	16	32	16.03.20	-
2	INM	Soil health card based INM in summer rice to increase crop productivity in changing climatic condition	1	33	11	18.03.20	-

Module-6: Extension Activities

Name of the activity	Details about the	Number of	Time of the programme	No. of be	neficiaries	Remarks
	activity	programmes	conducted (Fromto -)	Male	Female	
Exposure visit	Exposure visit of School Student to NICRA village	1	20 th November, 2018	20	24	Students were exposed to basic agriculture
Kisan Mela	Celebration of Kisan Mela on the occasion of World Soil Day	1	5 th December, 2019	170	130	Farmer were acquainted with new agril.

						technologies
Strengthening SHGs		-				
Strengthening kisan clubs		-				
Integrated farming						
Field day	Field Day on Staggered planting rice variety Gitesh	1	20 th November, 2018	21	30	Farmer were convince with the result of the technology
	Field Day on Submergence tolerant rice variety Ranjit Sub1	1	20 th November, 2018	21	30	-do-
Method demonstrations	Root dip treatment in paddy	2	2 nd July, 2019 & 8 th July, 2019	52	-	Conducted for skill development of farmers
Awareness						
Others (if any)						
Mahila Kisan Divas						

7. Rainfall characteristics for the year 2019-20

Kharif 2	019	JUNE	JULY	AUG	SEPTE	ОСТО	NOVE	DECE	JANUA	FEBRU	MARC	APRIL	ANNUA
				UST	MBER	BER	MBER	MBER	RY	ARY	Н		L
Rainfall													
received	in	297.8	354.1	68.9	340.3	130.2	0.6	0	0	2.3	29.6	-	1721.2
(mm)													
No. of	>10						02	02	02	02			10
dry	days	-	-	-	-		02	05	05	02	-	-	10
spells	>15							02	02	01			05
during	days	-	-	-	-	-	-	02	02	01	-	-	03
kharif	>20												
season	days	-	-	-	-	-	01	01	01	-	-	-	03
2018													
No. of	>60												
intensiv	mm												
e rain	per	02	02	-	02	-	-	-	-	-	-	-	06
spells	day												
(2018)													
Water lo	gging												
observed		-	-	-	-	-	-	-	-	-	-	-	-
(days)													

8. Impact of contingency measures (Relate the dry spells with crop and their growth stages):

S.	Dry spell (no. of	Duration (from to)	Crop	Crop stage	Intervention	Number	ofImpact on	crop yields
No	days)		name*		taken up	farmers	(q/ha)	
						involved	Farmers' practice	Demo
1	30 days	1^{st} Dec $- 31^{st}$ Dec	Toria	Active vegetative stage	One light irrigation	52	-	-
4	31 days	1^{st} Jan $- 31^{st}$ Jan	Toria	Siliqua formation stage	One light irrigation	41	7.1	6.7

			Summer	Seedling	Irrigation	60	-	-
			rice	transplanted				
				at main field				
5	16 days	$7^{\text{th}} \operatorname{Feb} - 22^{\text{nd}} \operatorname{Feb}$	Summer	Tillering	Irrigation	51	-	-
			rice	stage	-			

* List the interventions taken up for each crop

9. Adoption of successful interventions in the NICRA village & the adjoining villages

Successful							Ext	ent of	adoptio	on in t	he village in ha	•				
interventions	201	12	20	13	20	14	201	5	20	16	201	17	20	18	20	19
including crops																
and varieties				1				,				r				
Demonstration on Submergence tolerance paddy variety 'Swarna Sub1'	_	-	2	-	4	-	5	-	6	-	1630 (Dept of Agriculture Scheme) 857.5 (Seed Village Scheme) 100 (Assam Seed Certification Scheme)	_	15	-	19	5
Demonstration on staggered planting paddy variety 'Gitesh'	0.27	-	2	-	4	-	4	-	6	-	8	-	8	-	16	8
Demonstration on semi deep water Rice Variety "Dipholu"	-	-	-	-	-	-	-	-	0.4	-	5	-	8	-	11	3
Demonstration on	8	-	10	-	12	-	21.21	-	22	-	25	-	28	-	35	18

<i>Boro</i> paddy variety 'Joymati'																
Crop Diversification with Toria variety "TS-36"	-	-	5	-	5	-	8	-	21	-	25	-	20	9	36	29
Crop Diversification with Toria variety "TS-46"	-	-	-	-	-	-	-	-	5	-	5	50** (CFLD programme)	8	60**	14	12
Crop Diversification with late sown Toria variety "TS-67"	-	-	-	-	-	-	-	-	5	-	9	-	12	7	27	9

* Deptt of Agriculture, Assam has taken up demonstration on Submergence tolerance rice variety 'Swarna sub1'

** CFLD programme was taken up by KVK, Dhubri

10. Popularization of Climate Resilient Varieties

Crop*	Climate Resilient Varieties incorporated in the <i>Kharif 2018</i> plan of the State Department	Approx. area brought under the variety by the state department during the K <i>harif</i> 2018 (ha)
Rice	Submergence tolerance rice variety 'Swarna sub1'	152
	Submergence tolerance rice variety 'Bahadur Sub 1'	60
	Submergence tolerance rice variety 'Ranjit Sub 1'	95
	Staggered planting rice variety ' Gitesh'	23
	Summer rice variety Joymati	75
Toria	Timely sown Toria Variety "TS-36" in Rice (short	25

	duration) - Toria cropping sequence	
	Timely sown Toria Variety "TS-46" in Rice (short	85
	duration) - Toria cropping sequence	
	Late sown Toria Variety "TS-67" in Rice (long	65
	duration) - Toria cropping sequence	
Black Gram	HYV Black gram variety Pratap & PU-31	80

11. Awards Received during the year for the work related to NICRA : NIL

Name of the award	Given by whom	When the award was given

12. Distinguished visitors to the NICRA village during the year: Nil

Name of the person	When the visit occurred	Significant comments/ suggestions

13. Amount (Rs.) mobilized through convergence from various departments : Nil

S.	Activity/ Intervention	Coverage	Convergence established with	Approx. amount (Rs.)
No.		[No. of farmers/Area (ha)]	(Name of the programme or	mobilized
			department)	

14. Publications and other products developed during the year

Item	Title /and Name of Journal	Authors name
Leaflet	Flood tolerant rice varieties	Dr. C. K. Deka, Mr. A. Pal, Dr. R. Islam, Dr. P. Sutradhar, Mr. G. Sharma, Mr. B. K. Das, Ms. N. Bhuyan, Ms. N. Nath, Mr. B. Borah, Ms. K. Boruah, Mr. G. S. Bordoloi
	Crop diversification through HYVs of Toria	Dr. C. K. Deka, Mr. A. Pal, Dr. R. Islam, Dr. P. Sutradhar, Mr. G. Sharma, Mr. B. K. Das, Ms. N. Bhuyan, Ms. N. Nath, Mr. B. Borah, Ms. K. Boruah, Mr. G. S. Bordoloi

15. Significant observations about the project/ the performance of interventions/ adoption of interventions/ livelihood improvement etc.

- 1. The farmers of NICRA village have shown interest for adopting HYV of rice like Swarna Sub 1, Ranjit Sub 1, Bahadur Sub 1, Gitesh & Dipholu (for *Sali* season) and Joymati (for *Boro* season)
- 2. Also adopting HYV Toria varieties TS-38 & TS 46 (as timely sown crop) and TS-67 (as late sown crop)
- 3. Few farmers are maintaining seed bank of rice varieties Swarna Sub1, Gitesh & Dipholu and Toria variety TS-67 and serving the fellow farmers by providing seeds, also generating subsidiary income for livelihood improvement.
- 4. Low cost raised bed vermicomposting Unit are adopted by most of the farmers of the village and nearby ones.
- 5. Low cost improved goat house and poultry house become highly popular among the farmers specially for flood affected areas
- 6. Farmers become alert for maintaining fodder bank (Hybrid Napier) for animal feed especially during the time of flood.

Farmers getting attracted towards IFS as it minimize the risk in farming.