ANNUAL ACTION PLAN

NICRA-TDC PROJECT

KVK – DHENKANAL

1. Details about the existing NICRA villages

Sl No	Details	Village 1	Village 2
1	Name of the village	Arachua	Ichhapur
2	Involved in TDC since (year)	2021-22	2024-25
3	Cultivated area (ha)	115	130
4	Rainfed Area (ha)	93	102
5	Irrigated Area (ha)	22	28
6	No. of households in the village	197	130
7	Drought prone area	88	90
8	Flood prone area	-	-
9	Approximate households covered so far	147	40
10	Identified FSTs	▪ Rainfed without animal ▪ Rainfed with animal ▪ Irrigated without animal ▪ Irrigated with animal	▪ Rainfed without animal ▪ Rainfed with animal ▪ Irrigated without animal ▪ Irrigated with animal

2. Predominant farming system typologies in NICRA villages

Sl No	Farming System Typologies	Village 1- Arachua			Village 2- Ichhapur		
		Area (ha)	No. of farmers	% coverage (area in the village)	Area (ha)	No. of farmers	% coverage (area in the village)
1	Rainfed without animal	10	15	8.69	4	10	3.07
2	Rainfed with animal	50	80	43.47	20	35	15.38
3	Irrigated without animal	05	10	4.34	06	12	4.61
4	Irrigated with animal	08	15	6.95	10	17	7.69

3. Predominant climatic and resource constraints of the major farming system typologies of NICRA villages

Sl No	Farming System Typologies	Village Name- Arachua & Ichhapur		
		Climate constraints	**Resource / Crop/ Animal constraints**	**Other constraints**
1	Rainfed without animal	Drought, Heat wave & dry spells	Moisture stress, unavailability of drought tolerant crop varieties, Disease & pest incidence	▪ Poor farm mechanization ▪ Wild animal depredation ▪ Shortage of labour
2	Rainfed with animal	Drought Heat wave & dry spells	Moisture stress, unavailability of drought tolerant crop varieties, Disease & pest incidence, unavailability of suitable breeds	▪ Poor farm mechanization ▪ Wild animal depredation ▪ Shortage of labour
3	Irrigated without animal	Cold wave	Disease & pest incidence, Unavailability of Improved vegetables varieties, Unavailability of cold stress tolerant crop varieties	▪ Poor farm mechanization ▪ Wild animal depredation ▪ Shortage of labour
4	Irrigated with animal	Cold wave	unavailability of suitable breeds, Unavailability of cold stress tolerant crop varieties, Unavailability of Improved vegetables varieties, Disease & pest incidence	▪ Poor farm mechanization ▪ Wild animal depredation ▪ Shortage of labour

4. Identified promising resilient technologies for addressing the constraints

Sl No	Farming System Typologies	Village Name- Arachua & Ichhapur		
		Identified Technologies	**Resource / Crop/ Animal constraints**	**Other constraints**
1	**Rainfed without animal**	Farm pond, Micro irrigation system (Drip), Mulching in vegetable, Demonstration on short duration drought tolerant crop variety, Recycling of crop residue (rice straw) in Scientific Mushroom cultivation under low cost shade net house, Covering barren homestead land with plantation of fruit plants	Moisture stress, INM, short duration drought tolerant crop varieties, mulching in vegetables	▪ Wild animal depredation ▪ Poor farm mechanization
2	**Rainfed with animal**	Farm pond, Micro irrigation, Mulching in vegetable, Demonstration on short duration drought tolerant crop variety, Demonstration on heat stress tolerant poultry breed, Recycling of crop residue (rice straw) in Scientific Mushroom cultivation under low cost shade net house, Covering barren homestead land with plantation of fruit plants	Moisture stress, INM, IPM, Animal health camp, short duration drought tolerant crop varieties, mulching in vegetables	▪ Wild animal depredation ▪ Poor farm mechanization
3	**Irrigated without animal**	Demonstration on high yielding stress tolerant crop and vegetable variety	Unavailability of cold stress tolerant crop & vegetable varieties	▪ Wild animal depredation ▪ Poor farm mechanization

4	**Irrigated with animal**	Demonstration on high yielding stress tolerant crop and vegetable variety, Demonstration on heat stress tolerant poultry breed	Unavailability of cold stress tolerant crop & vegetable varieties, Animal health camp	▪ Wild animal depredation ▪ Poor farm mechanization

5. Categorization of the identified technologies in to NRM, Crops and Livestock in each village for taking up demonstrations during 2025-26

Sl No	Farming System Typologies	Village Name- Arachua & Ichhapur			
		NRM	Crop	Livestock	Total
1	**Rainfed without animal**	▪ Farm pond ▪ Micro irrigation (Drip) ▪ Summer ploughing ▪ Horticulture & Land embracement ▪ Mulching in vegetables ▪ Vermicomposting from agro waste	▪ Demonstration on drought tolerant rice variety Swarna Shreya Dhan ▪ Demonstration on drought tolerant finger millet variety Arjun ▪ Demonstration on pigeon pea variety LRG-52 ▪ Demonstration on drought tolerant cowpea variety Kashi Kanchan ▪ Rice fallow management :Black gram ▪ Demonstration on cold stress tolerant horse gram local variety (Desi kolatha) ▪ Recycling of crop residue (rice straw) in Scientific Mushroom cultivation under low cost shade net ▪ Covering barren homestead land with plantation of fruit	-	14

Sl No	Farming System Typologies	Village Name- Arachua & Ichhapur			
		NRM	**Crop**	**Livestock**	**Total**
			plants		
2	**Rainfed with animal**	▪ Farm pond ▪ Micro irrigation (Drip) ▪ Summer ploughing ▪ Horticulture & Land embracement ▪ Mulching in vegetables ▪ Vermicomposting from agro waste	▪ Demonstration on drought tolerant rice variety Swarna Shreya Dhan ▪ Demonstration on finger millet variety Arjun ▪ Demonstration on pigeon pea variety LRG-52 ▪ Demonstration on cowpea variety Kashi Kanchan ▪ Rice fallow management: Black gram ▪ Demonstration on cold stress tolerant horse gram local variety (Desi kolatha) ▪ Recycling of crop residue (rice straw) in Scientific Mushroom cultivation under low cost shade net ▪ Covering barren homestead land with plantation of fruit plants	▪ Heat stress tolerant backyard poultry breed rearing ▪ Low cost poultry house ▪ Recycling of cow dung & poultry droppings for plankton production in Pisciculture tanks (farm pond)	17

Sl No	Farming System Typologies	Village Name- Arachua & Ichhapur			
		NRM	Crop	Livestock	Total
3	**Irrigated without animal**	▪ Vermicomposting from agro waste ▪ Horticulture & Land embracement ▪ Vegetable cultivation in ridge and furrow method ▪ Organic mulching in vegetables ▪ Summer ploughing	▪ Demonstration on cold stress tolerant horse gram local variety (Desi kolatha) ▪ Production of green fodder to manage diary animals during fodder stress period along with corn production ▪ Demonstration on high yielding stress tolerant vegetable varieties	-	08
4	**Irrigated with animal**	• Vermicomposting from agro waste • Horticulture & Land embracement • Vegetable cultivation in ridge and furrow method • Mulching in vegetables ▪ Summer ploughing	▪ Demonstration on cold stress tolerant horse gram local variety (Desi kolatha) ▪ Production of green fodder to manage diary animals during fodder stress period along with corn production ▪ Demonstration on high yielding stress tolerant vegetable varieties	▪ Heat stress tolerant backyard poultry breed rearing ▪ Low cost poultry house Recycling of cow dung & poultry droppings for plankton production in Pisciculture tanks (farm pond)	11

6. No. of farmers involved in each of the village for demonstrations during 2025-26

S No	Farming System Typologies	Village-1 Arachua				Village- 2 Ichhapur			
		NRM	Crop	Livestock	Total	NRM	Crop	Livestock	Total
1	**Rainfed without animal**	32	48	0	80	10	22	0	32
2	**Rainfed with animal**	135	137	10	282	30	38	5	73
3	**Irrigated without animal**	25	38	0	63	12	20	0	32

4	**Irrigated with animal**	37	51	15	103	20	30	10	60

7. Scaling out of Promising Climate Resilient Technologies and proposed number of farmers to be involved (in convergence with development departments)

S No	**Farming System Typologies**	**Village Name- Arachua & Ichhapur**			
		Climate Resilient Technology	**Convergence with Scheme**	**No. of farming household covered**	**Area to be covered (ha)**
1	Rainfed without animal	Drip & Sprinkler irrigation	MIDH, Horticulture dept.	5	2
2	Rainfed with animal	Vermicomposting	State Forest Department	100	100 units
3	Irrigated without animal	Plantation of non-timber forest products	Forest environment & climate change department	50	10
4	Irrigated with animal	Demonstration on plantation crop, turmeric & Ginger	Horticulture Department	100	25

Activities and Cost

8. NRM Interventions:

8.1. Name of Intervention: Farm pond

Sl. No.	**Village**	**Intervention**	**Dimensions**	**No. of units**	**No. of farm households proposed to be involved**	**Convergence value, if any (Rs)**	**Value of farmers share (Rs)**	**Cost to project (Rs)**

1.	**Arachua & Ichhapur**	Farm Pond for providing lifesaving irrigation to kharif rice and rabi vegetable	10m x 5m x 3m	02	02	0	0	**24,000**

8.2. In situ conservation – Resource Conservation Technologies (RCTs), etc.

Sl. No.	Village	Intervention	Unit cost (Rs/ha) A*	Coverage Proposed		Total amount (Rs) A x B
				Area (ha) B	No. of farm households proposed to be involved C	
1.	**Arachua & Ichhapur**	Drip irrigation system for vegetables (Tomato & Brinjal)	125000	0.2	02	**50,000**
2.		Mulching in vegetables (Tomato & Brinjal)	30000	1.0	10	**30,000**
					Sub total	**1,04,000**

9. Crop Interventions;

9.1. Stress tolerant / improved varieties / Short duration / Legume crops, etc..

S. No.	Village	Intervention	Description		Cost (Rs/ha) A*	Coverage Proposed		Total amount (Rs) A x B
			Crop	Variety (s)		Area (ha) B	No. of farm households to be involved C	
1.	**Arachua & Ichhapur**	**Drought tolerant crop varieties**	**Rice**	Swarna Shreya Dhan/ Swarna Samruddhi	3500	10	20	**35,000**
2.			**Finger millet**	Arjun	2000	02	20	**4,000**
3.		**Rice fallow management**	**Black gram**	IPU-11-02	1800	20	40	**36,000**
4.		**Drought tolerant crop varieties**	**Horse gram**	Local variety (Desi Kolatha)	1200	5	10	**6,000**

S. No.	Village	Intervention	Description		Cost (Rs/ha) A*	Coverage Proposed		Total amount (Rs) A x B
			Crop	Variety (s)		Area (ha) B	No. of farm households to be involved C	
5.		**Production of green fodder to manage diary animals during fodder stress period along with corn production**	**Sweet corn**	Sugar 75	15,000	0.7	05	**10,500**
6.		**Drought tolerant vegetable variety**	**Cowpea**	Kashi kanchan	2000	8	20	**16,000**
7.		**Drought tolerant crop variety**	**Pigeon pea**	LRG-52	2800	10	30	**28,000**
8.	**Arachua & Ichhapur**	**Recycling of crop residue (rice straw) in mushroom production for Income generation**	Paddy straw & Oyster mushroom	Demonstration on low cost shade net house for mushroom cultivation	3000/ unit	10 unit	10	**30,000**
9.		**Stress tolerant vegetable cultivation for income generation**	Brinjal, Tomato, chilli & cabbage	Brinjal- Akshita Tomato-Arka Samrat Chill-Utkal Abha/Utkal Rashmi Cabbage-Konark	2500	20	50	**50,000**
10.		**Covering barren homestead land with plantation of fruit plants**	Papaya/ Mango/ Guava	Red lady/ Amrapalli/ VNR Bihi	120	5	100	**12,000**
							Grand total	**2,27,500**

10. Livestock and Fisheries

10.1. Name of Intervention: Heat stress tolerant poultry breed, Low cost poultry house & Pisciculture in farm pond

Season	Name of fodder/feed demo/type of shelter created or renovated / enterprises /others, if any	Variety	Area (ha)	Unit cost of demo (Rs)*	No. of demos/units	Amount (Rs)*	Remarks (purpose of intervention& farmers covered)
Kharif & Rabi	**Heat stress tolerant backyard poultry breed rearing**	Aseel & Kadaknath	30 units	1500	30	**45,000**	For income generation
	Low cost poultry house	Aseel & Kadaknath	02	12,000	02	**24,000**	Protect against predators & reduce mortality rate
	Recycling of cow dung & poultry droppings for plankton production in Pisciculture tanks (farm pond)	Fingerling/yearling	10 units	2000	10	**20,000**	For income generation

					Grand total	**89,000**	

11. Non-recurring contingencies – Equipment

Proposal for Procurement of climate related farm machinery/ implements for Custom Hiring Centre

S.No.	Item	Unit cost (Rs)	No. of units	Amount (Rs)
1.	Power tiller	2,50,000	01	2,50,000
2.	Solar pump 5 HP	90,000	01	90,000
3.	Battery operated knapsack sprayer	5000	02	10,000
			Grand total	**3,50,000**

12. Capacity Building & Other extension activities

12.1. Training programmes proposed for the year 2025-26

Theme	Title of training programme	Proposed month	No. of participants	Cost (Rs.)
Summer vegetable cultivation	Capacity building of farmers & farm women on summer vegetable cultivation.	May	25	4000
Mushroom cultivation	Capacity building of farmers / farm women on mushroom cultivation	June	25	4000
Backyard poultry rearing	Capacity building of farmers & farm women on backyard poultry rearing.	September	25	4000
Micro-irrigation systems	Capacity building of farmers & farm women on use of micro-irrigation systems for fruits & vegetables	October	25	4000
Integrated pest and disease management	Capacity building of farmers & farm women on Integrated pest and disease management in vegetable & field crops.	August-February	25	4000
Scientific Crop production	Capacity building of farmers / farm women on scientific Crop production	June-February	25	4000

			Sub Total	**24,000**

12.2. Field Days/Exposure visits/Awareness programmes/Kisan melas/Kisan ghosti/any other/ proposed for the year

Theme	Title of	Proposed month	No. of participants	Cost (Rs.)
Rice-fallow management	Field Day on Black gram	February	100	**10,000**
Exposure Visits proposed	Exposure visit to farmers fair	October - December	50	**30,000**
Animal health camp	Animal health camp for cattle and small ruminants	August-September	50	**10,000**
			Grand total	**50,000**

Contractual Manpower (SRFs)

Category	Rate/month (Rs.)	No. of positions	No. of months	Amount (Rs.)
SRF	3 month @ 41,400/month 9 month @ 47,040/ month	01	12	5,47,560/-
Total				**5,47,560/-**

Any other contingencies	Amount (Rs.)
TA, repairing of weather station, data collection, administrative cost, etc.	TA & FUEL - 50,000/-
Grand Total	**50,000/-**

14. Summary of cost Estimates for 2025-26

Item	Approximate Amount (Rs)
NRM Interventions Farm pond	24,000
In situ conservation – Resource Conservation Technologies (RCTs)	80,000
Crop Interventions Stress tolerant / improved varieties / Short duration / Legume crops	2,27,500
Livestock and Fisheries	89,000
Non-recurring contingencies – Equipment	3,50,000
Capacity Building training programmes	24,000
Other extension activities	50,000

Publications and Media products proposed to be Developed	20,000
Contractual Manpower (SRFs)	5,47,560
TA, repairing of weather station, data collection, administrative cost, etc.	50,000
Grand total (Rupees Fourteen Lakhs Sixty two Thousand Sixty Only)	14,62,060