हर कदम, हर डगर
किसानों का हमसफर
भारतीय कृषि अनुसंधान परिषद

Agrisearch with a human touch

Technology Demonstration Component

Krishi Vigyan Kendra- Phek Nagaland

ACTION PLAN 2023-24

NICRA
National Initiative on Climate Resilient Agriculture

Details about the existing NICRA villages

S No	Details	Village 1	Village 2	Village 3	Village 4	Village 5
1	Name of the village	Thipuzu	K. Basa	Phusachodu	Kikruma	Pfutseromi
2	Involved in TDC	2011	2017	2018	2018	2022
3	Cultivated area (ha)	1322.08	1018.07	887.10	6671.84	470.19
4	Rainfed Area (ha)	1320.64	1017.17	885.90	6670.04	468.82
5	Irrigated Area (ha)	1.4	0.9	1.2	1.8	1.3
6	No. of households in the village	421	310	900	1190	618
7	Distance from KVK Phek	50 km	64 km	18 km	24 km	15 km

PREDOMINANT CLIMATIC AND RESOURCE CONSTRAINTS OF THE MAJOR FARMING SYSTEM TYPOLOGIES OF NICRA VILLAGES

NICRA adopted Villages	Climate constraints	Resource /Crop/Animal constraints	Other constraints
Farming System Typologies: Rainfed Upland with animal (Hills with steep slopes)			
THIPUZU	Erratic rain fall during Kharif and excess moisture stress in Rabi and windy	Crop- wilting/damping/ Plant nutrient loss/moisture stress Animal- Respiratory infections/viral disease	Soil erosion, mud slide, run off, Farm mechanization, high input cost, organic farming, lack of agricultural policy
KIKRUMA	Thunder storm, wind storm, Excess rainfall during Kharif and drought during Rabi	Crop- wilting/damping/ Plant nutrient loss/moisture stress Animal- Respiratory infections/viral disease	Soil erosion, mud slide, run off, m Farm mechanization, high input cost, organic farming, lack of agricultural policy
PFUTSEROMI	Erratic rain fall, terminal drought, hailstones and moisture stress during Rabi , Thunder storm	Crop- wilting/damping/ Plant nutrient loss/moisture stress Animal- Respiratory infections/viral disease	Soil erosion, mud slide, run off, Farm mechanization, high input cost, organic farming, lack of agricultural policy
PHUSACHODU	Excess rainfall during Kharif and drought during Rabi and Hailstones and windy	Crop- wilting/damping/ Plant nutrient loss/moisture stress Animal- Respiratory infections/viral disease	Soil erosion, mud slide, run off, Farm mechanization, high input cost, organic farming, lack of agricultural policy
K. BASA	Excess rainfall during Kharif and drought during Rabi and Hailstones and windy	Crop- wilting/damping/ Plant nutrient loss/moisture stress Animal- Respiratory infections/viral disease	Soil erosion, mud slide, run off, high input cost, damage of crops by Mithun

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KIKRUMA	Water stress, erratic rain fall during Kharif and excess moisture stress in Rabi and windy, hailstones	Crop- wilting/damping/ Plant nutrient loss/moisture stress Animal- Respiratory infections/viral disease	Soil erosion, wind erosion, mud slide, run off, lack of storage facility , organic farming, lack of agricultural policy
PFUTSEROMI	Erratic rain fall, terminal drought, hailstones and moisture stress during Rabi	Crop- wilting/damping/ Plant nutrient loss/moisture stress Animal- Respiratory infections/viral disease	Soil erosion, mud slide, run off, organic farming, lack of agricultural policy, lack of storage facility
PHUSACHODU	Excess rainfall during Kharif and drought during Rabi and Hailstones and windy	Crop- wilting/damping/ Plant nutrient loss/moisture stress Animal- Respiratory infections/viral disease	Soil erosion, mud slide, run off, Farm mechanization, high input cost, organic farming, lack of agricultural policy
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Identified promising resilient technologies for addressing the constraints

Farming System Typologies: Rainfed Upland with animal (Hills with steep slopes)

NICRA adopted Village	Climate constraints	Technology Demonstration Component
THIPUZU	Erratic rain fall during Kharif and excess moisture stress in Rabi and windy	1. Short duration millet cultivation
KIKRUMA	Thunder storm, wind storm, Excess rainfall during Kharif and drought during Rabi	1. Short duration millet cultivation
PFUTSEROMI	Erratic rain fall, terminal drought, hailstones and moisture stress during Rabi , Thunder storm	1. Short duration millet cultivation
PHUSACHODU	Excess rainfall during Kharif and drought during Rabi and Hailstones and windy	1. Short duration millet cultivation
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NICRA adopted Village	Climate constraints	Technology Demonstration Component
THIPUZU	Erratic rain fall during Kharif and excess moisture stress in Rabi and windy	1. Advancement of planting date in garden pea cultivation
KIKRUMA	Thunder storm, wind storm, Excess rainfall during Kharif and drought during Rabi	1. Advancement of planting date in garden pea cultivation
PFUTSEROMI	Erratic rain fall, terminal drought, hailstones and moisture stress during Rabi , Thunder storm	1. Advancement of planting date in garden pea cultivation
PHUSACHODU	Excess rainfall during Kharif and drought during Rabi and Hailstones and windy	1. Advancement of planting date in garden pea cultivation
K. BASA	Excess rainfall during Kharif and drought during Rabi and Hailstones and windy	1. Advancement of planting date in garden pea cultivation

Identified promising resilient technologies for addressing the constraints

Farming System Typologies: Rainfed Midland with animal (Hills with mild slopes)

NICRA adopted Village	Climate constraints	Technology Demonstration Component
THIPUZU	Erratic rain fall during Kharif and excess moisture stress in Rabi and windy	1. Minimum tillage of field pea for crop intensification in rice mono cropped area 2. Rain water harvesting through *Jalkund* for off season vegetable cultivation.
KIKRUMA	Water stress, erratic rain fall during Kharif and excess moisture stress in Rabi and windy, hailstones	1. Minimum tillage of field pea for crop intensification in rice mono cropped area
PFUTSEROMI	Erratic rain fall, terminal drought, hailstones and moisture stress during Rabi	1. Minimum tillage of field pea for crop intensification in rice mono cropped area 2. Rain water harvesting through *Jalkund* for off season vegetable cultivation.
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NICRA adopted Village	Climate constraints	Technology Demonstration Component
THIPUZU	Erratic rain fall during Kharif and excess moisture stress in Rabi and windy	1. Rain water harvesting through *Jalkund* for off season vegetable cultivation 2. Straw mulching in Garden Pea.
KIKRUMA	Water stress, erratic rain fall during Kharif and excess moisture stress in Rabi and windy, hailstones	1. Vermicompost application in Broccoli 2. Straw mulching in Garden Pea.
PFUTSEROMI	Erratic rain fall, terminal drought, hailstones and moisture stress during Rabi	1. Rain water harvesting through *Jalkund* for off season vegetable cultivation
PHUSACHODU	Excess rainfall during Kharif and drought during Rabi and Hailstones and windy	1. Vermicompost application in Broccoli 2. Straw mulching in Garden Pea.
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Minimum tillage of field pea for crop intensification in rice mono cropped area

Climatic vulnerability: Rice fallow after harvesting of paddy due to Moisture stress

Objectives of the study : To adopt minimum tillage to conserve soil moisture during rabi season and to study the economics

Details of technology:

Improved technology	Farmers practice
Variety – Aman Seed rate – 80 kg/ha Spacing – 60 x 20 cm Method of sowing – Minimum till	Variety – Local cv. Seed rate – 100 kg/ha Method of sowing – Tilling the soil

Observations to be taken:

Average yield/ha and Economics

Millet : Climate resilient crop

Climatic vulnerability: Erratic and high rainfall during kharif season

Objectives of the study : To revive the cultivation of millets and to study the economics

Details of technology:

Improved technology	Farmers practice
Variety – SiA 3085 Seed rate – 8 kg/ha Spacing – 30 x 10 cm Method of sowing – Line sowing	Variety – Local cv. Seed rate – 40 kg/ha Method of sowing – Broadcasting

Observations to be taken:

Average yield/ha and Economics

Advancement of planting date in garden pea cultivation

Climatic vulnerability: Terminal drought during rabi season

Objectives of the study : To advance the planting date of garden pea to escape moisture stress during maturity stage

Details of technology:

Improved technology	Farmers practice
Variety – Arkel Seed rate – 80 kg/ha Spacing – 60 x 20 cm Date of sowing - September	Variety – Arkel Seed rate – 100 kg/ha Spacing – no specific spacing Date of sowing - October

Observations to be taken:

Average yield/ha and Economics

Straw Mulching in Garden Pea

Climatic vulnerability: Soil moisture stress due to dry spell during winter season

Objectives of the study : To escape moisture stress by using straw mulch and to study the growth, yield and economic parameters.

Details of technology:

Improved technology	Farmers practice
Garden Pea Variety – Arkel Seed rate – 80 kg/ha Spacing – 60 x 20 cm Date of sowing – September Use of straw as mulch material (paddy straw)	Variety – Arkel Spacing – no specific spacing Date of sowing – September No mulch

Observations to be taken:

Average yield/ha and Economics

Vermicompost application in Broccoli

Climatic vulnerability: **Soil Moisture stress due to dry spell during winter season**

Objectives of the study : **To enhance the soil nutrient by application of vermicompost and to study the growth, yield and economic parameters.**

Details of technology:

Improved technology	Farmers practice
Broccoli Var. Green Magic SR – 500 g/ha Spacing – 45x30 cm MOS - September Vermicompost @5 t/ha	Broccoli Var. Green Magic Without vermicompost

Observations to be taken:

- **Growth and yield**
- **Soil parameters**
- **BC ratio**

Rain water harvesting through "*Jalkund*" for off season vegetable cultivation

Climatic vulnerability: **Water scarcity during lean season (winter) for crop cultivation.**

Objectives of the study : To harvest rain water and recycle for supplemental irrigation

Details of technology:

Improved technology	Farmers practice
Jalkund (size-5x4x2 cu.m) lined with silpaulin (200 GSM) can store rain water upto 30,000 litres . Harvested water used for agricultural use for 0.34 ha/Jalkund during lean season.	**Farmers' dependent on rainfed agriculture**

Observations to be taken:

- **Quantity of water stored during lean period**
- **Water used for different agricultural activity**
- **BC ratio**

CAPACITY BUILDING (HRD) ACTIVITIES (2023-2024)

Sl. No	Title	No. of Participants		
		Male	Female	Total
1	Production technology in millet (5 nos)	50	75	125
2	Minimum tillage in field pea cultivation (5 nos)	50	75	125
3	Production technology in garden pea (5 nos)	50	75	125
4	Straw mulching in Garden Pea (4 nos)	40	60	100
5	Organic management in Broccoli (4 nos)	20	60	100
6	Low cost water harvesting (2nos)	40	10	50
	Total	250	355	625

EXTENSION ACTIVITIES (METHOD DEMONSTRATION, FIELD DAY, KISAN GHOSTHI ETC) (2023-24)

Sl. No	Title	No. of programmes
1	Kisan Gosthi	1
2	Exposure visit	2
3	Field days	8
4	Method demonstrations	13
5	Diagnostic Visits	10
6	Mobile Advisory Services	48
	Total	82

BUDGET REQUIREMENT

S. No	Items of Expenditure	Budget required (Rs)
1	Non-recurring contingencies – Equipment Proposal for Procurement of farm machinery/ implements for Custom Hiring centre	550000.00
2	NRM	70350.00
3	Crop production	182000.00
4	Capacity Building Activities	96450.00
5	Extension Activities	200000.00
6	Contractual Manpower (YP II) @ Rs 35000.00 per month	420000.00
7	Media Products to be developed (video films/brochures/bulletins proposed to be developed)	25000.00
8	TA and vehicle hire charges, POL	150000.00
9	Other operational expenses	70000.00
	TOTAL	**1763800.00**


thank
you