ICAR – ATARI, Pune Zone-VIII
Technology Demonstration Component of NICRA

Annual Report of TDC for the year 2025-26

Village 1 : Katri **KVK and District:** KVK,**Nandurbar** **State:**Maharashtra
Village 2 : Bhujgaon
Village 3 : Umrani
Village 4: Kharwad

Table-1: Information about the NICRA villages and the focus of activities in these Villages

S No	Details	Village 1	Village 2	Village 3	village 4
1	Name of the village	**Katri**	**Bhujgaon**	**Umrani**	**Kharwad**
2	Involved in TDC since (year)	2022	2018	2011	2024
3	Cultivated area (ha)	908	132	539	268
4	Rainfed Area (ha)	830	68	200	190
5	Flood prone Area (ha)	6	0	0	5
6	Irrigated Area (ha)	78	64	339	73
7	No. of households in the village	956	133	257	360

Activities Taken up in NICRA Villages during the Year

Details	Village 1	Village 2	Village 3
Demonstrations were taken up	Katri	Bhujgaon	Kharwad
Scaling up of promising technologies	Yes	Yes	Yes

Table-2: Summary of Interventions taken up during 2025-26

Villages	FST1		FST2		FST3		FST4	
	Rain-fed without Animals		Rain-fed with Animals		Irrigated without Animals		Irrigated with Animals	
	Technology	No of Farmers	Technology	No of Farmers	Technology	No of Farmers	Technology	No of Farmers
Katri	0	0	12	20	0	0	10	24
Bhujgaon	0	0	12	20	0	0	10	24
Kharwad	0	0	12	50	0	0	10	24
Total	**0**	**0**	**36**	**90**	**0**	**0**	**30**	**72**

Table-3: Natural Resource Management Interventions taken up in farming system typology during the year 2025-26 (in all the villages)

Resilient practice	No. of Demonstrations/ Interventions	Farmers covered	Area covered (ha)
Insitu Moisture conservation Ridges and Furrows in Maize	50	50	20
Water Recycling systems Temporary Check Dam	40	40	25
Rainpipe irrigation system	50	50	20
Input production and usage (Vermicomposting)	40	40	22

Table-4: Crop Production Interventions taken up in farming system typology during the year 2025-26(in all the villages)

Resilient practice	No. of Demonstrations/ Interventions	Farmers covered	Area covered (ha)
Short duration variety of Foxtail millet (Suryanandi)	75	75	30
Short duration variety of sorghum- (Yashoda Moti)	75	75	30
Short duration variety of maize (GM-6)	50	50	20
Crop diversification with potato	10	10	4
Crop diversification with pea	5	5	2
Heat stress tolerant variety of Green gram (GM-4)	5	5	2
Drought tolerant variety of chick pea (Phule -Vikram)	10	10	4

Table-5: Livestock and Fisheries Interventions taken up in farming system typology during the year 2025-26 (in all the villages)

Resilient practice	No. Of Demonstrations/ Interventions	Farmers covered	No. Of animals covered	Area covered (ha)
Multicut fodder variety- Lucerne	10	**10**	**50**	**0.40**
Area specific Mineral mixture	20	**20**	**65**	**NA**
25 days old brooded and vaccinated chicks for backyard poultry	10	**10**	**NA**	**NA**
Multicut perennial sorghum fodder variety- COFS-29	5	**05**	**50**	**0.70**

Animal Health Camp	01	**75**	**180**	**NA**

REMAINING

Vegetable Proudction-1

Broccoli Cultivation

Navalkol

Lady Finger (lali-Kashima)

Table-7a: Impact of CRTs in each FST2* (Farming system typology – Rainfed with animals) during 2025-26

Villages	Crop/ Perennials	Technology adopted/ demonstrated	Area impacted by climatic stress, crop and stage	Rainfed with animals					
				Kharif and rabi (NICRA farmers)			*Kharif and rabi (non-NICRA farmers)*		
				Area (ha)	Productivity (q/ha)	Net return (Rs./ha)	Area (ha)	Productivity (q/ha)	Net return (Rs./ha)
Katri									
Crop Based	**Sorghum**	**Short Duration variety (Yashoda moti)**		0.40	20.5	22800	0.40	13.2	13760
NRM Based	**Maize**	**Ridges and Furrows in Maize (GM-6)**		0.40	21.35	17950	0.40	16.70	10950
Animal Based	**Hedge Lucerne**	**Perennial fodder (Dashrath) for goats**		10 NOS	31 Kg Body weight	10900	Local grass feeding	22 kg Body weight	7300
Katri									
Crop Based	**Soybean + pigeonpea**	**Location specific Intercropping (3:1)**		0.40	11.80	60216	0.40	9.80	51630
	Foxtail Millet	**Suryanandi**							
NRM Based	**Maize**	**Ridges and Furrows in Maize (GM-6)**		0.40	20.10	15690	0.40	9.50	11200
Animal Based	**Hedge Lucern**	**Perennial Fooder (Dashrath) for Goats**		5 Nos	32.5 Kg Body weight	9900	Local Grass Feeding	22 KG Body weight	7780
Animal Based	**Lucerne**	**Lucerne (RL-88)**		2	--	38800	Local Grass	-	22500

Kharwad									
Farmer 1									
Crop Based	**Sorghum**	**Short Duration variety of (Yashoda-Moti)**		0.40	20.25	22520	0.40	14.3	12790
NRM Based	**Maize**	**Ridges and Furrows in Maize (GM-6)**		0.40	21.10	18490	0.40	15.50	10560
Animal Based	**Hedge Lucerne**	**Perinial Fooder (Dashrath for Goats)**		5 Nos	30 Kg Body Weight	10200	Local Grass Feeding	25.2 kg body weight	7500
Animal Based	Cactus	Spineless Cactus		**10 NOS**					

Table-7b: Impact of CRTs in each FST2 (Farming system typology) during 2025-26

Animal (NICRA Farmer)	No.	Technology adopted/ demonstrated	Production/ year*	Selling price (Rs/unit)	Gross returns (Rs./animal)	By products quantity	Unit price (Rs.)	Net Returns (ha.)
Animal (Non NICRA farmer)	**No.**	**Technology adopted/ demonstrated**	**Production/ year***	**Selling price (Rs/unit)**	**Gross returns (Rs./animal)**	**By products quantity**	**Unit price (Rs.)**	**Net Returns (ha.)**

Table-9a: Impact of CRTs in each FST4* (Farming system typology- Irrigated with animal) during 2025-26

Villages	Crop/ Perennials	Technology adopted/ demonstrated	Area impacted by climatic stress, crop and stage	Irrigated					
				Kharif and rabi (NICRA farmers)			*Kharif and rabi (non-NICRA farmers)*		
				Area (ha)	Productivity (q/ha)	Net return (Rs./ha)	Area (ha)	Productivity (q/ha)	Net return (Rs./ha)
Kharwad									
Crop Based	soybean	Intercropping of Soybean :Pigeon –Pea		0.40	12	60100	0.40	9	22000
	Maize	Ridges and Furrows in Maize		0.40	20.70	16010	0.40	3	11000
NRM Based	maize (Rabi)	suppliment irrigation through check Dam		0.40	20.50	18010	0.40	12.10	10500
	Chickpea	Suppliment Ririgation through check Dam		0.40	19.3	93200	0.40	10.5	33060
Bhujgaon									
NRM Based	Maize	Ridges and Furrows in Maize		0.4	20.20	16980	0.40	13.60	10120
Crop Based	Foxtail Millet	Short Duration varieties Foxtail Millet (SIA-3222)		0.40	10.20	19450	0.40	7.20	11520
Crop Based	Potato	Potato cultivation (Kufri-Jyoti)		0.40			0.40		
Crop based	Vegetable production	Brocoli cultivation		0.40	7 ton	85000	0.20	6 ton	42000

Table-9b: Impact of CRTs in each FST4 (Farming system typology- Irrigated with animal) during 2025-26

Animal (NICRA Farmer)	No.	Technology adopted/ demonstrated	Production/ year*	Selling price (Rs/unit)	Gross returns (Rs./animal)	By products quantity	Unit price (Rs.)	Net Returns (ha.)
Backyard Poultry	**10**	Brooded and vaccinated poultry chicks	1.50 kg Body weight (165) egg/yr	Rs 310 Chicken and 10 Rs/egg	2110			28300
Bullock	**5**	Multicut Perennial Lucerne(RL-88)		44100	44100			43100
Goat	**10**	Perennial Fodder (Dashrath)	38 kg (Body weight)	350 rs/kg	13100			48120
Animal (Non-NICRA Farmer)	**No.**	**Technology adopted/ demonstrated**	**Production/ year***	**Selling price (Rs/unit)**	**Gross returns (Rs./animal)**	**By products quantity**	**Unit price (Rs.)**	**Net Returns (ha.)**
Backyard Poultry	**10**	Conventional practice	1.40 kg (Body weight) 70 egg/yr	Rs 300 and Rs 8 /egg	9800			42000
Bullock	**5**	Multicut Perennial Lucerne(RL-88)						
Goat	**10**	Perennial Fodder (Dashrath)	25 kg Body weight	350 RS/kg	9200			41500

Table-10: Performance of Custom Hiring Centre during the year 2025-26

Name of Equipment in the custom hiring centre	Amount of rent obtained	Farmers covered	Area covered (ha)
Allan Cultivator	300	40	10
Bullock Drawn Ridger	400	50	20
Mogi Improved wheel- Hoe	220	60	25
Bullock DrawnCultivator	450	70	12
Hand push seeder	290	10	9
Multi-crop Thresher	450	25	NA
Hand Cultivator	120	15	5
Bullock Drawn Blade Harrow	520	35	15
Hanging weight Machine	220	10	NA
Winnowing Machine	600	40	NA
Motorized Maize Sheller	400	40	NA

Table-11: Performance of seed systems during the year 2025-26

Crop & variety	Seed produced (tons)	Farmers involved	Revenue obtained by farmer (Rupees)
Chick –Pea(Phule-Vikrant)	1	10	10000
Short Duration variety of Maize(GM-6)	1	10	5000
Yellow mosaic resistant variety of Black Gram (Guj-3)	1	20	8000

Table-12: Performance of fodder systems during the year 2025-26

Fodder crop & variety	Fodder produced (tons)	Farmers involved	Area involved (ha)	Revenue obtained by farmer (Rupees)

Lucerne(RL-88)		10	0.25	1500
Perennial Fodder (COFS-29)		10	0.40	2200
Hedge Lucerne(Dashrath)		10	0.40	3200
Perennial fodder (stylo-Hemata)		10	0.20	1200

Table-13: Capacity Building (HRD) taken up during the year 2025-26

Title of the program	No. of training programmes	Number of beneficiaries		
		Male	Female	Total
Cultivation Technology of Black -Gram	01	12	12	**24**
Short duration varieties and its importance	01	22	10	**32**
Short duration varieties and its importance	01	12	7	**19**
Fodder cultivation technology	01	55	40	**95**
Importance of soil and water conservation practises	01	12	12	**24**
Nutrient management in the Maize crop	01	20	10	**30**
Ccultivation practices of Green-Gram	01	15	10	**25**
Water management for Kharif crops	01	16	10	**26**
Pest and Disease management on Kharif crops	01	60	12	**72**
Drone Technology and its use in Agriculture	01	50	40	**90**
Enterprenuership opportunities	01	10	40	**50**
Backyard poultry management	01	40	15	**55**
Cultivation Technology of fodder crops for livestock	01	25	10	**35**
Importance of custom Hiring centre	01	12	13	**25**
Production Technology of potato and pea	01	22	10	**32**
Azolla Farming and Hydroponics	01	22	10	**32**
Crop Diversification - Cultivation practises of Potato	01	19	20	**39**
Cultivation practises of pea	01	10	8	**18**
Nutrient management for potato and pea	01	20	12	**32**
Importance of water harvesting for Rabi crops	01	22	12	**34**
Nutrient management for the Bengal Gram and pigeon pea	01	15	10	**25**
Pest and Disease management on rabi crops	01	15	10	**25**
Importance of soil and water conservation practises	01	12	12	**24**

Table-14: Other extension activities being taken up during the year 2025-26

Name of program	Participants
News	60
VCRMS Meetings (8)	41
Field Day on short Duration variety of sorghum (Yashoda-Moti)	56
Field Day on Diversification of wheat with Potato	60
Scientist visit to farmers fields	45
Meeting of Progressive farm women for Drudgery Reduction	45
Kharip pre- plan meeting	140
Icar foundation Day (Kisan Mela)	210
Rabi pre planning Meets	190
Exposure visit(03)	110
Kisan Mela on ICAR FOUNDATION DAY	450
Farmers meetings(10)	180
Field day on potato (Kufri-Jyoti)	150

Table-15: Summary of Up scaling of technologies taken up during the year 2025-26 and the amount mobilized through convergence from various departments

Village name	Technology scaling up/out	No. of farmers reached	Coverage (ha) / number	Convergence with the programme
Kharwad	Temporary Check Dam	50	10	State- Agril. Department.
	Biofortified variety of pearl millet (Dhanshakti)	50	20	State- Agril. Department.
	Biofortified variety of pearl millet (HB 1200)	50	20	AgroZee Pvt.Ltd,Pune
Bhujgaon	Rainpipe- Irrigation	100	40	Development Trust –Dhule.
Katri	Intercropping of Soyben:Pigeonpea	50	20	NGOS
Kharwad	Mineral –Mixture	100	NA	IGFRI,Dharwad
	Hedge lucerne(Dashrath)	80	15	TATA -CiNi
	Perennial Sorghum fodder (COFS-29)	40	10	TATA -CiNi

Table-16: Extreme events, high intensity rains and dry spells, heat wave, cold wave, hail storms, etc. observed during 2025-26

Nature of event	*Quantify the event	When it has occurred (Date)	Impact on crop, animal, horticulture, fisheries, etc.
Heavy Rainfall	**68.1** mm	**26.10.2025**	Crop losses due to lodging
Heavy Rainfall	**141** mm	**31.10.2025**	Crop losses due to lodging
Cold stress	8 degree Celsius	22.02.2025	Dropping of flowers in pigeon pea

Table-17: Distinguished visitors during the year 2025-26

Name of visitors	Date	Remarks
Shri.Jatrya Pawara Vice President,Dr.HSS,Nandurbar)	2.01.2025	Discussed issue of NICRA Activity issue with progressive farmers.
Dr.Dahat **and** His Team Head and scientist, Oilseed Research Station,Jalgaon	22.02.2025	Given appreciation to the Temporary Check Dams for water conservation.
Dr**. S**ahu Asst.professor,Navsari	21.05.2025	Interaction with NICRA progressive farmers about implements Bank.
Dr.Mittali Sethi Distrct collect**or** ,Nandurbar	14.07.2025	NICRA activity is scalable with state Govt.
Shri. Ramesh Shinde TAO,Dhagaon.	14.07.2025	Visit to the NICRA Plots. And Given appreciation about NICRA Ongoing Activity.
Shri.**S**hashank Kale District planning officer, Nandurbar.	14.07.2025	NICRA activity should be converged with various govt. departments run by state Govt.
Shri. Yogesh Valvi Asst.**S**upervisor**,**State Agril.Dept.Dhadgaon	16.07.2026	Visit to NICRA demonstrations
Shri. Dasu Gavit Asst.**S**upervisor**,**State Agril.Dept.Dhadgaon	17.07.2025	All activities of NICRA are scalable and popular among the farmers.
Adv. **Manikarao** Kokate **Guardian Minister,**Nandurbar	14.08.2025	Implements Bank visit and discussed with farmers.
D**r**.Jondand LDO,Dhadgaon	29.08.2025	Fodder plot visit at Katri. and gives satisfactory Remarks .
Shri.Manohar Padvi with Farmers. R**EEDS** NGO, Representative. along with farmers	10.10.2025	Crop diversification with Potato Plot visit at Bhujgaon.Ta-Akrani.Dist-Nandurbar
Shri.**Ravindra** More DDM.NABARD,	20.01.2026	Discussion about livestock activity in NICRA programme.

Shri.Naman Goyal Chief executive officer,Z.P.Nandubar	21.01.2026	Visit to the Azolla Production unit and Livestock fodder plots at Katri .

Table-18: Publications from the project

Description (nature of publication)	Citation of the publication
Folder- Backyard poultry	Dr.Aditya Deshpande, Shri. J.N.Uttarwar,Shri. R.S.Dahatonde and Shri. Arun Kadam (2025), Backyard Poultry.KVK,Nandurbar

Table-19: Adoption of successful interventions in the NICRA village & the adjoining villages

Name of technology	Area (ha) (Adoption with the technology)	Farmers (No)	Mode of spread (Process)
Rain -pipe Irrigation system	140	450	Farmer to farmer and NGOS
Drought tolerant variety of soybean (AMBA)	50	250	Farmer to Farmer
Vermicomposting with Tetra Bed Technology	60	450	Farmer to farmer
Perennial sorghum Fodder (COFS-29)	90	300	Farmer to farmer and Tata Trust
Perennial Fodder (Dashrath)	75	350	Farmer to farmer and Tata Trust
Water Harvesting and Recycling for supplement irrigation Through Temporary Check Dam	120	250	Farmer to Farmer, and Agril. Dept(Govt. of Maharashtra)

Table-20: Popularization of Climate Resilient Varieties

Crop*	Climate Resilient Varieties incorporated in the *Kharif* 2025 plan of the State Department	Approx. area brought under the variety by the state department during the K*harif* 2025 (ha)	Crop	Climate Resilient Varieties incorporated in the *Rabi* 2025 plan of the State Department	Approx. area brought under the variety by the state department during the *Rabi* 2025 (ha)
Potato			**Potato**	Kufri-Jyoti	60
Pigeon pea	BDN-711	530			
Lucerne	(RL-88)	25	**Chickpea**	Phule Vikrant	190
Pearl Millet	Dhanshakti	210			
Sorghum	Yashoda Moti	550			
Black Gram	GUJ-6	250			

Table-21: Rainfall characteristics for the year 2025-26

KVK	Kharif 2025		June	July	August	Sept.	October	Annual
	Rainfall received in (mm)		229	90	228	283	295	June to sep (830) mm
	No. of dry spells during kharif season	**>10 days**	1				1	
		>15 days	1	1				
		>20 days		0	1			
	No. of intensive rain spells	**>60 mm per Day**	0	0	0	0		0
	Water logging observed (days)						31.10.2025(141) MM-3 days	

Table-22: Day-wise rainfall distribution in the village during *kharif* 2025-26;

Rainfall recorded circle - (NICRA village- Katri)

Date	April	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
1	0	0	0	08	0	02	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	04	0	0	0	0	0	0	0	0
4	0	0	0	00	0	16	0	0	0	0	0	0
5	0	0	0	00	0	54	0	0	0	0	0	0
6	0	0	0	22	0	08	0	0	0	0	0	0
7	0	0	0	03	00	45	3	00	0	0	0	0
8	0	0	0	0	3	07	4	0	0	0	0	0
9	0	0	0	02	0	0	0	0	0	0	00	0
10	0	0	0	0	0	0	0	0	0	0	00	0
11	0	0	0	0	0	0	4	0	0	0	0	0
12	0	0	0	0	0	0	8	0	0	0	0	0
13	0	0	0	0	0	0	5	00	0	0	0	0
14	0	0	1	0	0	0	3	0	0	0	000	0
15	0	0	0	4	20	0	0	00	0	0	0	0
16	0	0	5	0	15	6	00	0	0	0	0	0
17	0	0	4	0	27	0	0	0	0	0	0	0
18	0	0	23	0	15	0	0	0	00	0	0	0
19	0	0	18	0	1	0	0	0	0	0	00	0
20	0	0	07	0	0	51	0	0	0	0	0	0
21	0	0	03	0	6	0	0	0	0	0	0	0
22	0	0	7	0	15	11	0	0	0	0	0	0
23	0	0	02	4	04	0	0	0	0	0	0	0
24	0	0	78	0	50	13	0	0	0	0	0	0
25	0	0	32	0	19	0	0	0	0	0	0	0
26	0	0	07	0	9	0	68.1	0	0	0	0	0
27	0	0	09	0	7	0	42	0	0	0	0	0
28	0	0	02	14	7	0	15	0	0		0	0
29	0	0	13	23	9	32	02	0	0	0	0	0
30	0	0	18	05	21	38	0	0	0	0	0	0
31			0	1	0	0	141	0	0	0	0	0
			229	**90**	**228**	**283**	**295**					

Table-23: Impact of contingency measures taken up in the village (Relate the dry spells/floods/heat wave/cold wave/etc., with crops and their growth stages)

Duration of dry spell	Crop stage impacted and duration	Interventions taken
16.07.2025 to 27.07.2025	Sorghum-Vegetative growth	Life saving Irrigation to all Field crops and Demos under NICRA Project.
30.07.2025 to 14.08.2025	Soybean-filling Pod Formation Sorghum-	Foliar application of Nutrition Management((13.00.45)
15.10.2025 to 25.10.2025	Soybean-pre maturity Maize-pre maturity	Protective irrigation
Heavy rains	Crop stage impacted and duration	Interventions taken
26.10.2025 31.10.2025 Heavy Rainfall- 2 Days	Potato	Drain out excess water Protect and keep harvested yields at safe places
	CoFS-29	Drain out excess water
	Groundnut	Drain out excess water
	Rabi-Maize	Drain out excess water

Table-24: Details about agro advisories issued Organization giving the forecast:
KVK, Nandurbar –GKMS -DAMU

Forecast is based on the block: Organization giving the agro-met advisory Department of Meteorology: KVK-Nandurbar-GKMS-DAMU

How the advisories are disseminated in the NICRA village: (through message, whatsapp, other)

Forecast is based on the District or the Block: District
Organization giving the agro met Advisory: DAMU, KVK, Nandurbar.
The advisories and Agro met advisory Bulletins are issued and Disseminated in the NICRA Village:
1. Through whatsapp
2. Through News-papers
3. Through Face-Book
4. Written on Notice Boards in the village-Katri,Umrani,Kharwad.

Agro-met advisory Bulletins issued

Month	June	July	Aug.	Sept.	October	Novembe	Decemb	Januar

						r	er	y
Number of agro-met bulletins issued	08	08	09	08	06	07	08	08
Other advisories issued (Mobile Advisory)	02	03	04	03	02	04	01	03

How the advisories are disseminated and their reach

Method	Number of farmers reached during the year
Whats-app Groups	580
Display On Black Boards, at Panchyat etc	540
Any other methods	450

Table-25: Photographs of significant achievements of the year 2025-26



Celebration of ICAR Foundation Day at Village : Kharwad



Diagnostic visit of KVK scientists



Intercropping of Soybean : Pigeon pea

 Harvesting of Lucerne for cattle	 VCRMC meeting

26. Success story

Efficient utilization of water through rainpipe irrigation systems for the farmers in hilly terrain of Satpuda

Introduction

Rainpipe irrigation system is low cost irrigation system , slope friendly, water saving and making it one of the best irrigation system for the small and marginal farmers in the hill terrain of Satpuda ranges. The suitabillity of this irrigation system for various crops enhances yield of crops and the adoption among the farmers.

Problem identified

Irrigation with the traditional irrigation, i,e flood irrigation method in the undulating terrains of NICRA villages in Satpuda ranges is not only makes wastage of precious irrigation water but also tedious and time consuming process.

The Intervention of Rain pipe irrigation system

The Rain pipe system irrigates the crop intensely under optimum pressure with large coverage area. The rain pipe irrigation system consists of a micro-opening over a flexible pipe with specific intervals and having specific discharge capacity. The system works under low operating pressure. The system is easy to install, simple to maintain, low cost . The system is suitable for loamy

soil having high infiltration rate. It helps in conserving water by providing moisture nearly to plant roots with fined droplets. The other advantage of rain pipe irrigation is its flexibility and adaptability to different types of crops and field conditions. The system easily customized and installed and allowing for efficient irrigation in various agricultural cropping systems. The same layout of rain pipe irrigation system (RPIS) can be used for different crop geometry and crop type. The proper irrigation method provides favourable conditions for plant growth as well enhances the output and system efficiency.

The Results:

KVK,Nandurbar demonstrated the Rain pipe irrigation system in NICRA villages to irrigate the crops in shallow to medium soils.There has been huge loss of water using the conventional–flood irrigation method while irrigating the crops cultivated on predominently undulating terrains.The lateral of rain pipe irrigation system were placed at a distance of 3m with a length of 30m.The operating pressure was 0.8-1 kg per sq.m. The water distribution was uniform with this system.The installation, operation and handling of the rain pipe irrigation system was found easy for the farmers. There was saving of 30-40% of irrigation water with this system.

The farmers are using the rain pipe irrigation system for various crops like chick pea, garlic, ground nut, onion, summer green gram. It has been also good option for irrigating the crops in crop development stage of crops in drought situation.

Realizing the benefits and the affordability of the system, this technology has been popularized among the farmers. About 1650 farmers in the Dhadgaon taluka has been adopting rain pipe irrigation system on about 2000 ha area.

Scope for upscaling :

The Rain pipe irrigation system can be upscaled in the areas having low water availability as well as well suited to undulating terrains also.It can be well adopted in shallow to medium soils. The system is much affordable to small and marginal farmers due to its low cost.





2. Rainwater harvesting and recyclying with temporary check dams through community mobilization.

Introduction

Harvesting of rainwater flowing through the natural streams in post rainy season can be utilized for irrigating rabi crops. Availability of irrigation water ensures profitable cultivation of crops in rabi season. The harvesting of rainwater flowing through these natural streams can be done with help of Temporary check dams with community mobilization.

Problem identified

Crops can not be grown profitably in the hilly terrain of the area and light soils due to non availability of sufficient moisture. Income from rabi crops is low due to the unavailability of water for preirrigation, sowing and also to provide irrigations at the critical crop growth stages of the rabi crops. The harvesting of rainwater flowing through natural streams can be done with help of Temporary check dams and utilized for cultivation of rabi crops.

The Intervention of Temporary check dams

Rainwater harvesting and recyclying was demonstrated with construction of temporary check dams through voluntarily contribution of villagers in the NICRA villages.

- These temporary check dams were constructed using empty cement bags. The cement bags were filled with sand from stream beds. The bags filled with sand were placed one above other in two or more rows. There is gap between these rows of bags which is filled with clay soil. This layer of black soil helps to check water leakages. For each dam, an outlet was made for ecsaping the excess water to the downstream side.

- The harvested and stored water in these dams is used for irrigating the crops in rabi season.
- The stored water is also useful for the livestock for drinking and for the people for daily uses.
- These check dams helps in recharging of ground water and increasing water table in the surrounding area.

The Results:

Before the commencement of the NICRA project in the NICRA villages, the tribal farmers were cultivating crops in only kharif season. Most of these farmers could not grow crops in rabi season due to scarcity of water. Assessment of water resources like natural streams, wells, borewells was done. KVK, Nandurbar mobilized the villagers through meetings , awareness drives for making of temporary check dams. The temporary check dams were made through voluntary contribution of villagers . The storage and availability of water in these temporary check dams made the farmers to cultivate crops in rabi as well as summer season. KVK,Nandurbar (MS) demonstrated rainpipe irrigation system for efficient utilization of the stored water in the undulating terrain of Satpuda ranges.

The mobilization of villagers of various villages was carried out for construction of temporary check dams through voluntary contribution (Shramdan) in the Dhadgaon cluster with organization of meetings, awareness programmes. The demonstration of construction of TCDs was organized in the presence of Village Sarpanchs.As a result of this, 96 TCDs were constructed in 11 villages. Due to these TCDs, 213 ha area brought under irrigation. Thus 327 farmers were benefitted through these TCDs.The farmers cultiuvated chick pea, garlic and brinjal as well as leafy vegetables.

Scope for upscaling :

The area having natural drains which flows in post rainy season can be benefitted with this low cost water harvesting and recycling technology.The additional yield and livelihood opportunities in the areas with non availability of irrigation water can be availed through temporary check dams.The social mobilization is important for peoples participation in development of water resources.

	