NICRA
National Initiative on Climate Resilient Agriculture

Annual Report 2013-14

Technology Demonstration Component

"National Initiative on Climate resilient Agriculture"

भाकृअनुप
ICAR

Zonal Project Directorate, Zone VII
Division of Agricultural Extension
Indian Council of Agriculture Research
Adhartal, Jabalpur-482004

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Compilation and Collation

Dr. S.R.K.Singh
Sr. Scientist (AE)

Dr. Anupam Mishra
Zonal Project Director (I/C)

Technical Assistance

Dr. Dhananjay Kathal
Research Associate

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क्षेत्रीय परियोजना निदेषालय, अंचल–7
भारतीय कृषि अनुसंधान परिषद्
ज.ने.कृ.वि.वि. अधारताल, जबलपुर – 482004 (म.प्र.)

ZONAL PROJECT DIRECTORATE, ZONE-VII
INDIAN COUNCIL OF AGRICULTURAL RESEARCH

Anupam Mishra
Zonal Project Director

J.N.K.V.V, P.O. Adhartal, Jabalpur – 482 004 (MP)
Phone – 0761- 2680383, 2680158, 2680807 (O), 2680485 (Fax)
E-mail – zcunit@rediffmail.com, zpd7jabalpur@gmail.com

Foreword

Indian agriculture is progressing on the right path with record food grain production of 264.28 million tonnes during 2013-14 despite its major part being under rainfed condition. Indian agriculture is rainfed mainly depending on south-west monsoon. Zone VII operational states almost half of the area of these regions (Madhya Pradesh, Chhattisgarh and Odisha) is drought prone adding to instability of agricultural production, frequently occurring drought, scanty rains, major dry spells and uneven distribution of rain further aggravates the problem.

As we know rainfed areas are more complex, diverse, fragile, under-invested, risky, ethno-economically unique and distress prone. Though, the rainfed region contribute 60 percent of the net sown area, 100 percent of the forest, 66 percent of the livestock and provide livelihood, income, employment and environmental security. About 84-87 percent of pulses/minor millets, 80 percent of horticulture, 77 percent of oil seeds, 66 percent of cotton and 50 percent of cereals are cultivated under the un-irrigated conditions. Management of the precipitation being the ultimate source of river flows, reservoirs, lakes, ponds, tanks, in situ moisture and ground water resources is the key factor for enhancing productivity.

Besides, delayed onset and early withdrawal of monsoon, dry spells, uneven distribution of monsoon, cold and heat weaves, humidity and such other factors adversely affect the agriculture production and productivity. NICRA project is timely initiation for combating the climatic variations and protecting the farmers from its negative consequences through planned technological interventions and farmers capacity building.

I compliment the project team for their untiring efforts in publishing the activities and performance as **'Annual Report- 2013-14** a valuable document. I hope the document will be highly useful to researchers, extension agencies and farmers and all concerned in preparing and implementing the activities related with climatic aspects.

(Anupam Mishra)

PREFACE

Indian agriculture being the backbone of the Indian economy is on decreasing trend apropos contribution to our national GDP. Though around 55 percent people derive their livelihood from this sector. In fact, agriculture is the mainstay for the farmers and farms women in the states like Madhya Pradesh, Chhattisgarh & Orissa. Therefore, it was felt need for proper implementation of the NICRA activities in the region to educate the farmers and save their farming through climate vulnerability.

KVKs have been considered as catalyst for promoting climate resilient agriculture through technological interventions at the district level. It aimed at educating the farmers on the changing climate situation and providing the technical skill for using the coping and mitigation strategy in the harsh weather situation. Basically, NICRA KVKs identify the need and problems of the farming communities related with climate change and make endeavour to solve the same through available technologies using various extension methods viz., training, demonstrations, exhibitions, farmers fairs, field days and farmers friendly literature. All the activities are finalized with the presence of the experts and documented as Action Plan for the concerned year well in advance keeping in view the past experiences at the farmers fields.

It gives me immense pleasure to publish this Annual Report 2013-14. This report is based on the progress of activities reported by 14 NICRA KVKs working under ZPD Zone VII. All the officers and staffs of the NICRA KVKs deserve appreciation. We sincerely thank to all the Vice Chancellors, Chairman (NGO KVKs), Director of Extension Education and other concerned Senior Officials of the host organizations for their support to the NICRA KVKs activities.

Our team expresses profound gratitude to Deputy Director General (Agril. Extn.), for giving thrust to the NICRA KVKs in all ICAR programmes with full support. His valuable suggestions and guidance works as source of motivation for the professionals. Our team expresses hearty thanks to TDC-NICRA, Dr. B. Venkateswarlu, and all his NICRA team member for their guidance and support. We are highly grateful to Dr. Anupam Mishra, Zonal Project Director Zone VII, for his regular guidance and support in better implementation of these programmes in KVKs through Zone VII.

(**S.R.K.Singh**)
I/C NICRA Project
ZPD, Zone VII, Jabalpur

Executive Summary

Zonal Project Directorate, Zone VII monitors the performance of 14 NICRA KVKs namely Balaghat, Chhattarpur, Datia, Guna, Morena, Satna, Tikamgarh in Madhya Pradesh, Bhatapara, Bilaspur, Dantewara in Chhattisgarh, Kendrapara, Ganjam, Jharsuguda, Sonepur in Odisha. These KVKs are conducting the field activities as per the approved action plan by ZPD Zone VII & CRIDA, Hyderabad.

During 2013-14, under Natural Resource Management module**,** a total of 10160 farmers benefited covering area of the 4352.9 ha area in all activities. Detailed activities included renovation of 8 old farm ponds and 17 drainage channels to avoid flooding; 16 new check dam were constructed, 959 farmers are benefited through in-situ moisture conservation practices and covering 753.02 ha area. Soil test value based fertilizers applications were followed by 3897 farmers and 666 farmers used zero tillage technology for using residual moisture etc.

In Crop Production module, a total of 7087 demonstrations were conducted on 2479.76 ha area focused on drought tolerant varieties, advancement of planting dates of rabi crops to escape terminal heat stress, etc on chickpea, wheat, barley, green gram, pigeon pea and vegetable crops.

In Livestock and Fisheries module, 7889 farmers benefited covering the 29935 units during the year 2013-14. Out of 29935 Unit, 4029 animals were vaccinated to boost immunity through prevention and 2270 animals were de-wormed, health check-up of 3094 animals was done and 497 animals were covered under breed upgradation.

In Institutional interventions module, 4557 farmers benefited covering 2031.46 ha area in year 2013-14. Out of 4557 farmers, 2357 farmers benefited through Custom hiring service, 460 farmers by community nursery and 434 farmers through community irrigation covering the area of 1624.31 ha through custom hiring centre, 41.5 ha community nursery and 123.7 ha Community irrigation.

A total of 8705 farmers benefited through capacity building which comprised 6770 male and 1961 female through 398 courses.

In order to create awareness among the farmers in region, various extension activities were organized by KVK at the farms and the farmer's fields. A total of 10760 farmers benefited of which 1291 farmers through Field day, 1770 farmers by group discussion and 700 farmers benefited through Exposure Visit during the year.

The testimony of the success of NICRA activities is the number of visitors including dignitaries to the custom hiring centers at NICRA village also wide publicity by the print and electronic media as well as through ICAR website and CRIDA newsletter.

1. Introduction

Climate change and agriculture are interrelated processes. Global warming is projected to have significant impacts on conditions affecting agriculture, including temperature, carbon dioxide, glacial run-off, precipitation and the interaction of these elements. These conditions determine the carrying capacity of the biosphere to produce enough food for the human population and domesticated animals. Models generally predict that rising temperature, increased climate variability and extreme weather events could significantly impact food production in coming decades impacting growth of agricultural GDP. Assessment of the effects of global climate changes on agriculture might help to properly anticipate and adapt farming to maximize agriculture production. At the same time, agriculture has been shown to produce significant effects on climate change, primarily through the production and release of greenhouse gases such as carbon dioxide, methane, and nitrous oxide, but also by altering the Earth's land cover, which can change its ability to absorb or reflects heat and light, thus contributing to radiation forcing. Land use change such as deforestation and desertification, together with use of fossil fuels, are the major anthropogenic sources of carbon dioxide; agriculture itself is the major contributor to increasing methane and nitrous oxide concentrations in Earth's atmosphere. The Parliamentary committee in agriculture made a strong recommendation to strengthen research in climate change to ensure food security in the country.

It is therefore utmost important that we enhance the resilience of Indian Agriculture Production system to climate variability and climate change. Resilience is the capability of the production system to resist the negative impacts of climate change and also the capacity to recover quickly after the damage. Thus, this scheme has been formulated to develop region specific improved technologies that would enhance the resilience of Indian agriculture to climate change as well as to organize extensive demonstration of location specific best bet practice of farmer's field involving Krishi Vigyan Kendras (KVKs).

Approach of the Project

- Critical assessment of different crop/zones in the country for vulnerability to climate stresses and extreme events, in particular, intra seasonal variability of rainfall.
- Installation of the state-of-the-art equipment like flux towers for measurement of green house gases in large field areas to understand the impact of management practices and contribute data on emissions as national responsibility.
- Rapid and large scale screening of crop germplasm including wild relatives for drought and heat tolerance through phenomics platforms for quick identification of promising lines and early development and release of heat/drought tolerant varieties.
- Comprehensive field evaluation of new and emerging approaches of paddy cultivation like aerobic rice and SRI for their contribution to reduce the GHG emissions and water saving.
- Special attention to livestock and fishery sectors including aquaculture which have not received enough attention in climate change research in the past. In particular, the documentation of adaptive traits in indigenous breeds is the most useful step.
- Thorough understanding of crop-pest/pathogen relationship and emergences of new biotypes due to climate change.
- Simultaneous up scaling of the outputs both through KVKs and the National Mission on Sustainable Agriculture for wider adoption by the farmers.

Objective of the Project

- To enhance the resilience of Indian agriculture covering crops, livestock and fisheries to climatic variability and climate change through development and application of improved production and risk management technologies.
- To demonstrate site specific technology packages on farmers fields for adapting to current climate risks.
- To enhance the capacity of scientists and other stakeholders in climate resilient agriculture research and its application.

Technology demonstration components:-

Under this objective, an integrated package of proven technologies will be demonstration in one village in each district for adaptation and mitigation of the crop and livestock production system to climate variability based on the available technologies. The districts to be covered for these demonstration and list of KVKs are listed separately.

The process of finalizing demonstration package have following steps:

I. Analysis of climate constraints of villages based on long term data.

II. Assessment of the natural resources status of the villages.

III. Identification of major production systems.

IV. Studying of existing institutional structures and identify the gaps.

V. Focus group discussion with the community to finalize the interventions.

The interventions will cover the following four modules.

1. Natural Resource Management (NRM)

2. Crop Production (CP)

3. Livestock and Fishery (LAF)

4. Institutional Interventions

Besides, above technological interventions, capacity building programme (CBP) for skill up gradation and extension activity for the awareness and wide publicity of the potential climate resilience technologies.

2. Natural Resources Management

This module consists of interventions related to in-situ moisture conservation, water harvesting and recycling for supplemental irrigation, improved drainage in flood prone areas, conservation tillage where appropriate, artificial ground water recharge and water saving irrigation methods.

Silent achievements:

- Total 18 Percolation pond newly developed which are recharge by wells.
- In NICRA villages, 19 rain harvesting structure newly developed in this year out of 19 structure 6 are Check Dam and 10 Bori bandhan.
- Total 18 old Farm Pond and 12 Community Pond renovated in NICRA villages.
- In the NICRA villages 55 Tube well recharging were done.
- Renovation of 31 open well were done during the year.
- A total of 488 ha (nearly 40%) additional area was increased under irrigation

In-situ moisture conservation

In this intervention Balaghat, Datia, Morena, Tikamgarh, Guna and Satna KVK **(Madhya Pradesh)** have worked moisture conservation through ridge & furrow method. Besides, following practices across the slope sowing method of ground nut, Green manuring in kharif fallow- Mustatd, Ploughing, Deep summer ploughing, Green Manuring with dhaincha (Sesbania), One harrowing +Two ploughing + planking and sowing through seed cum fertilizer drill , Alkali soil reclamation Two ploughiung and planking. Ridge and Furrow technique in Pigeon pea, Black gram, Green gram , Soybean , Green gram + Red gram; Use of organic manure, BBF planting method in Soybean for in-situ moisture conservation and drainage; Check bunds for soil and water conservation. A total of 234 farmers have benefited and 142.9 ha area covered in the six NICRA villages.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses)	No. of farmers	Area (ha)	Yield (q/ha)	Economics of demonstration (Rs./ha)			
						Gross Cost	Gross Return	Net Return	BCR
Datia	Ridge and furrow method of sowing of soybean	Seed, JS-95-60	20	8.5	19.15	15436	47875	32439	3.1
Datia	Across the slope sowing method of ground nut	Seed, JGN-3	6	1.8	15.7	17635	54979	37344	3.1
Datia	Green mannuring in kharif fallow-Mustatd	Pusa Jai Kisan	9	5	15.3	12928	48960	36032	3.78
Balaghat	Deep summer ploughing		24	24	108	-	-	-	-
Tikamgarh	Deep summer ploughing	-	14	39	-	18256	54096	35840	2.96
Tikamgarh	Ridge and furrow method in sowing	-	10	5	-	15947	57278	41331	2.5
Morena	Green Manuring dhaincha (Sesbania)One harrowing +Two ploughing + planking and sowing through seed cum fertilizer drill	Wheat (HD3043)	5	5	53.8	27060	70800	44600	2.61
Morena	Green Manuring dhaincha (Sesbania)	Mustard (RVM-2)	12	10	21.5	20300	66650	46350	3.28
Morena	Alkali soil reclamation Two ploughiung and planking.	Gypsum 50 % + Green manuring , Mustard (NRCHB - 101)	15	10	26.3	20400	87200	66800	4.27
Satna	Ridge and Furrow technique in Pegionpea	Ridge and furrow seed drill	14	3	4.75	12125	11400	-725	0.94
Satna	Ridge and Furrow technique in Black gram	Ridge and furrow seed drill	15	5	2.2	8423.64	8796.25	372.61	1.04
Satna	Ridge and Furrow technique in Green gram	Ridge and furrow seed drill	18	3	3.12	8790.34	9350.23	559.89	1.06
Satna	Ridge and Furrow technique in Soybean	Ridge and furrow seed drill	12	4	6.04	13549.75	16901.83	3352.08	1.24
Satna	Ridge and Furrow technique in Green gram + Red gram	Ridge and furrow seed drill	12	3	0.84+0.74	12785	4410	-8375	0.34
Satna	Line sowing technique in Sesame	Seed drill	9	2.6	2.85	9010	10123.78	1113.78	1.12
Satna	Use of organic manure	Green Manuring with Green gram	3	1	2.24	9175	7849.33	-1325.67	0.86

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses)	No. of farmers	Area (ha)	Yield (q/ha)	Economics of demonstration (Rs./ha)			
						Gross Cost	Gross Return	Net Return	BCR
Satna	Use of organic manure	NADEP COMPOST @4t/ha-Paddy	25	6	28.56	16670	26780.64	10110.64	1.6
Guna	BBF planting method in Soybean for in-situ moisture conservation and drainage	JS 93-05	5	2	17.66	24284	56512	32248	2.33
Guna	Ridge Furrow planting method in Soybean for in-situ moisture conservation and drainage	JS 95-60	5	2	16.92	24336	54144	29798	2.22
Guna	Check bunds for soil and water conservation	Check bunds	1	3	Check soil erosion , land leveling and moisture conservation	49500	100800	51300	2.03

In **Chhattisgarh**, this intervention Dantewara and Bhatapara KVK have worked moisture conservation through conservation crops demonstrated Summer deep ploughing, Line sowing with seed cum fertilizer drill . Direct seeded in line followed by weed control using post emergence weedicide was demonstrated In Bhatapara and 2.26 BCR ratio obtained through this technology. A total of 36 Farmers have benefited and 13.01 ha area covered in NICRA villages.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses)	No. of farmers	Area (ha)	Measurable indicators of output*	Economics of demonstration (Rs./ha)			
						Gross Cost	Gross Return	Net Return	BCR
Dantewada	Summer deep ploughing	-	10	5	10-12 %				
Bhatapara	Direct seeded in line followed by weed control using post emergence weedicide	Indira Barani Dhan-1	8	3.2	No. of panicles /m^2	20871.5	5.381.5	26253	2.26
Bhatapara	Utera Wheat technology Vs Local Practice	Seed (Wheat-Kanchan)	8	1.81	No. of panicles /m^2	11490	19973.75	8483.85	1.74
Dantewada	Harrowing with rotawator	finger millet & black gram during kharif	5	2	10-12 %	-	-	-	-
Dantewada	Line sowing with seed cum fertilizer drill	finger millet & black gram during kharif	5	1	10-12 %	-	-	-	-

In **Odisha**, this intervention Ganjam, KVK have worked moisture conservation in paddy using Ploughing by MB plough and 1.65 BCR ratio obtained. Total 17 Farmers have benefited and 5 ha area covered In NICRA villages.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses)	No. of farmers	Area (ha)	Measurable indicators of output*	Economics of demonstration (Rs./ha)			
						Gross Cost	Gross Return	Net Return	BCR
Ganjam	Moisture conservation in Paddy	Ploughing by MB plough	17	5	Summer Ploughing by MB plough	23500	38800	15300	1.65

Water harvesting and recycling for supplemental irrigation

In this intervention Datia, Guna and Morena KVK (Madhya Pradesh) have worked Water harvesting and recycling for supplemental irrigation through Bori – Bandhan, Excavation of Farm pond and Renovation of old WHS in Datia KVK, Water harvesting tanks to improve ground water recharge and partial irrigation in Guna KVK and Farm pod 70 x 50 Meter (7) repairing and maintenance in storage of water use in Rabi crop irrigation in Morena KVK . Total 46 farmers have benefited and 25 ha area covered in NICRA villages. Datia KVK have observed maximum BCR 5.57 through interventions.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses)	No. of farmers	Area (ha)	Measurable indicators of output* [yield (q/ha.) & others]	Economics of demonstration (Rs./ha)			
						Gross Cost	Gross Return	Net Return	BCR
Datia	High value Vegetable production in harvested rain water Tomato	DS-22	10	1	201	36100	201100	165000	5.57
Datia	High Value Vegetable production in harvested rain water chilli	Surya-31	10	1	169	26850	135280	108430	5.04
Datia	High value Vegetable production in harvested rain water brinjal	Chamki	10	1	134	26850	80940	54090	3.01
Morena	Farm pod 70x50 Meter (7) repairing and maintenance in storage of water use in Rabi crop irrigation	Wheat (RVW-4106)	15	12	51.4	26800	79100	52300	2.95
Guna	Percolation tank for water harvesting and recycling for supplemental irrigation	Percolation tank	1	10	improve ground water recharge and partial irrigation	47800	140000	92200	2.92

In **Chhattisgarh,** this intervention Bilaspur and Dantewara KVK have worked on Water harvesting and recycling for supplemental irrigation through Farm Pond in Bilaspur KVK and renovation of defunct water harvesting structure (Stop Dam) (30.0 ha area irrigated), Renovation of Defunct Irrigation pond (40X40X1.8), Digging of Irrigation Pond (50X50X1.7m) etc. and Digging open wells with ring fitting 5.0 nos. 73 Farmers have benefited and 23.8 ha area covered In NICRA villages.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses)	No. of farmers	Area (ha)	Measurable indicators of output*
Bilaspur	Farm Pond	Dugged	15	1	Area irrigated by the farmers
Dantewara	Stop dam	Renovated	26	8	200
Dantewara	Irrigation pond	Renovated	12	6	100
Dantewara	Percolation tank	Renovated	5	3	100
Dantewara	Ring well	Renovated	5	1	50
Dantewara	Open well	Renovated	2	0.8	50
Dantewara	Sand bag Check	Constructed	8	4	100

In **Odisha,** this intervention Kendrapara and Ganjam KVK have worked on water harvesting and recycling for supplemental irrigation through Rain water harvesting structure (farm pond) and Construction of Sand filled Gunny Bag Packing in Kendrapara KVK and , Renovation of old farm ponds & old water harvesting structure in Ganjam KVK. 63 farmers have benefited and 1.5 ha area covered In NICRA villages.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses)	No. of farmers	Area (ha)	Measurable indicators of output*	Economics of demonstration (Rs./ha)			
						Gross Cost	Gross Return	Net Return	BCR
Kendrapara	Construction of Sand filled Gunny Bag Packing	Gunny Bag	25	12 ft×2.5ft	Soil Conservation	-	-	-	-
Kendrapara	Renovation of old Farm pond(Community tank)	Earthwork, Coconut and papaya seedling , Yearlings of IMC	25	1	3600 cum rain water harvest	30,000	50,000(fish)	20,000	1.66
Ganjam	Renovation of old farm ponds	Labour Payment	13	0.5	Irrigation area increased by 8 acre	-	-	-	-

Improved drainage in flood prone areas

In this intervention, Guna and Morena KVK **(Madhya Pradesh)** have worked on improved drainage in flood prone areas through Drainage channels to avoid flood hazard in Soybean crop in Guna and Bed planting sowing method Green gram, Black gram, wheat, Pigeonpea and Maize etc. A total of 161 Farmers have benefited and 89.5 ha area covered in NICRA villages.

2.29 to 8.0 BCR ranged was recorded in NICRA villages. In Chhattisgarh, KVK Dantewada has constructed bolder check in one ha area at six farmers sites.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses)	No. of farmers	Area (ha)	Measurable indicators of output*	Economics of demonstration (Rs./ha)			
						Gross Cost	Gross Return	Net Return	BCR
Morena	Bed planting sowing method	Green gram (TJM-3)	8	5	8.2	6800	28700	21900	4.22
Morena	Bed planting sowing method	Black gram (PU-35)	5	2.5	7.5	6800	26250	19450	3.86
Morena	Bed planting sowing method	Maize (NK - 6240)	8	5	45.6	13450	57570	44120	4.28
Morena	Bed planting sowing method	Soyabean (JS-9560)	8	5	19.8	12000	43080	31080	3.59
Guna	Drainage channels to avoid flood hazard in Soybean crop	Drainage channels	2	45	Avoid flood hazard in Soybean crop	22500	63000	40500	2.8

Conservation tillage

In this intervention Datia, Guna, Morena and Satna KVK (**Madhya Pradesh)** have worked on conservation tillage where appropriate through Zero tillage in wheat after direct seeded rice in datia, Moisture conservation during crop period in Soybean in Guna KVK, Zero tillage sowing method wheat and Pigeonpea crop in Morena and Deep summer ploughing in paddy in Satna KVK . A total of 103farmers have benefited and 79 ha area covered in NICRA villages. And maximum BCR was recorded 4.68 in Morena NICRA villages.

KVK	Technology demonstrate	Critical input (Variety, Fertilizer / Chemicals doses)	No. of farmers	Area (ha)	Measurable indicators of output*	Economics of demonstration (Rs./ha)			
						Gross Cost	Gross Return	Net Return	BCR
Datia	Zero tillage in wheat after direct seeded rice	GW-366	6	2.4	39.43	21450	59150	37700	2.76
Datia	Zero tillage in wheat after cluster bean	MP-1203	4	1.6	40.95	21450	61418	39968	2.86
Morena	Zero tillage sowing method		25	20	49.2	13719	64246	48712	4.68
Morena	Zero tillage sowing method	Braley (RD-2592)	18	10	43.89	18500	62249	43749	3.36
Guna	Moisture conservation during crop period in Soybean	Hand Wheel hoe	30	40	Moisture conservation during drought period	22500	5600	33500	2.48
Satna	Deep summer ploughing in paddy	Reversible MB Plough	15	3	26.22	14428	25529	11101	1.76
Satna	Zero tillage sowing technique in Mustard	Zero till drill	5	2	5.08	15555	15253	302	0.98

In this intervention Bilaspur KVK (**Chhattisgarh**) have worked on conservation tillage where appropriate through Reduced land preparation period for wheat cultivation after long duration paddy and moisture conservation for rabi. Five farmer has benefited and 1.0 ha area was covered.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses)	No. of farmers	Area (ha)	Measurable indicators of output*	Economics of demonstration (Rs./ha)			
						Gross Cost	Gross Return	Net Return	BC R
Bilaspur	Reduced land preparation period ,insect ,pest ,weeds and disease ,moisture conservation	Seed+ seed drill	5	1	30q/ha	16500	37500	21000	2.27

Artificial ground water recharge

In this intervention Morena and Guna KVK **(Madhya Pradesh)** have worked Artificial ground water recharge through De Silting of open Wells to improve irrigation water discharge capacity in Guna KVK, using Sprinkler irrigation in wheat crop in Morena KVK and The site selection for reconstruction and renovation of water harvesting bodies were compelled during the year while fund has not yet to be released in Tikamgarh. A total 7 Farmers have benefited and 16 ha area covered In NICRA villages.

KVK	Technology demonstrate	Critical input (Variety, Fertilizer / Chemicals doses)	No. of farmers	Area (ha)	Measurable indicators of output*	Economics of demonstration (Rs./ha)			
						Gross Cost	Gross Return	Net Return	BCR
Morena	Sprinkler irrigation	Wheat (RVW-4106)	5	5	54.6	28060	72800	42600	2.81
Guna	De Silting of open Wells to improve irrigation water discharge capacity	De Silting of open Wells	2	11	Increase availability of irrigation water	39700	92400	52700	2.32

Water saving irrigation methods

In this intervention Guna KVK **(Madhya Pradesh)** have worked Water saving irrigation methods through Sprinklers irrigation. A total 4 Farmers have benefited and 4ha area covered In NICRA villages.

KVK	Technology demonstrate	Critical input (Variety, Fertilizer / Chemicals doses)	No. of farmers	Area (ha)	Measurable indicators of output*	Economics of demonstration (Rs./ha)			
						Gross Cost	Gross Return	Net Return	BC R

Guna	Water saving irrigation system in Sugarcane + Coriander crop	Sprinkler System	4	4	Increasing irrigated area	48300	112000	63700	2.31

In this intervention Sonepur and Jharsuguda KVK (**Odisha**) have worked Water saving irrigation methods using Sprinkler Irrigation demonstrated A total 64 Farmers have benefited and 5 ha area covered. 3.2 to 4.79 BCR ranged was recorded in NICRA villages.

KVK	Technology demonstrate	Critical input (Variety, Fertilizer / Chemicals doses)	No. of farmers	Area (ha)	Measurable indicators of output*	Economics of demonstration (Rs./ha)			
						Gross Cost	Gross Return	Net Return	BCR
Sonepur	LLDP mulching with pot irrigation in mango plantation	LLDP	12	Home stead area	-	-	-	-	-
Jharsuguda	In-situ Moisture Conservation Through Ridge & furrow methods in Cowpea	Seeds(Var. Maharaja)	20	1	82.8 q/ha	24000	82800	58800	3.4
Jharsuguda	In-situ Moisture Conservation Through Ridge & furrow methods in Radish	Seeds(Var. Pusa chetki)	20	1	78.5 q/ha	17000	81500	64500	4.79
Jharsuguda	Dhanicha in paddy	Seeds	12	3	48q/ha.	18000	57600	39600	3.2

Glimpses of NRM Activities in NICRA

Farm Pond

Soybean in Ridge and Furrow Method

Zero Tillage in wheat

Ground water recharge through de-silting of open well

Renovated Stop Dam

In-Situ Moisture Conservation Practices

Rainwater harvesting structure

Life saving irrigation in paddy

Percolation Tank

3. Crop Production

This module consists of interventions drought/temperature tolerant varieties, advancement of planting dates of *rabi* crops in areas with terminal heat stress, water saving paddy cultivation methods (SRI, aerobic, direct seeding), frost management in horticulture through fumigation, community nurseries for delayed monsoon, custom hiring centres for timely planting, location specific system with high sustainable yield Index.

Silent achievements

- 1253 Farmers benefited using flood / drought / temperature tolerant varieties under crop production and covered 315.9 ha area
- 91 Demonstration Conducted under SRI for water saving in Paddy
- 281 Demonstration Conducted under Advancement of planting dates of rabi crops in areas with terminal heat stress and covered 58.1 ha area
- 139 Demonstration Conducted under Custom hiring centers for timely planting and covered 447.8 ha area

Introducing flood / drought / temperature tolerant varieties

In this intervention **Balaghat KVK** (Madhya Pradesh) have worked on introducing drought / temperature tolerant varieties through demonstrations in different crops viz wheat, and chickpea. A total 12 farmers benefited and 5 ha area covered under this intervention and resulted BCR ratio 2.2 to 2.7. A total 172 demonstration conducted in **Datia KVK** and covered the area 71.6 ha in Soybean Var. JS 95-60 (Short duration and high yielding variety), Ground nut Var. JGN-3, Sesame Var. JTS-8, Culster Bean Var. HG-563,Gram Wheat and Mustard. BCR ranged from 1.52 to 4.49 in all crops. In **Guna,** 95 demonstrations laid and covered the 38 ha area in different crops viz soybean, Pigeonpea ICPL-88039 and Sesame TKG-8 (using short duration, high yielding variety). BCR ranged from 2.6 to 3.2 in all crops. In **Morena**, 293 demonstrations conducted and covered the area 394.3 ha in different crops viz pigeonpea, black gram , til, mustard, green gram, barley, maize, water chestnut, soybean, wheat and gram (using Drought resistant, short duration, high yielding variety). BCR ranged from 2.4 to 8.0 in all crops. In **Tikamgarh**, 20 demonstrations laid and covered the 8 ha in JS-93-05 and black gram these

varieties are short duration and high yielding variety. BCR 3.4 and 2.1 in both crops. In **Chhattarpur,** 137 demonstrations conducted and covered the 53.0 ha in different crops viz soybean, black gram, til, moong, lentil, maize and gram (using Drought resistant, short duration, high yielding variety). Maximum percent increased the yield 25.4 in moong fallowed by 25.2 in lentil crops and BCR ranged from 2.6 to 3.7 in all crops. In **Satna** KVK, 152 demonstrations conducted and covered the 42.5 ha in different crops viz soybean, sorghum, urd, sesame, moong, pigeonpea, okra, turmeric, mustard, wheat and gram (using Drought resistant, short duration, high yielding variety with IPM and INM (organic manure 2t/ha, Imazathapyr@100gmai/ha, DAP100 and Sulphur 20 Kg/ha, One packet/10kg seed of each biofertilizer, one spray Trizophos@1000ml/ha, Cypermethrin@500ml/ha) technologies. BCR ranged from 1.15 to 3.58 in all crops

Introducing flood / drought / temperature tolerant varieties

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Area (ha)	Yield (q/ha.)		Economics of demonstration (Rs./ha)			
					Demo /ha	Local/ ha	Gross Cost	Gross Return	Net Return	BCR
Satna	Crop substitution-Paddy substituted with medium duration soybean variety JS-9752	Variety-JS-9752, Seed treatment with Thiomethoxam (1gm/kg seed), organic manure 2 t/ha, Imazathapyr@100gmai/ha, NPKS 20:60:20:20 Kg/ha, One packet/10kg seed of each biofertilizer, one spray Profenophos@1000ml/ha, Cypermethrin@500ml/ha	11	3	7.27	3.92	16325	20363.64	4038.68	1.25
Satna	Crop substitution-paddy substituted with early maturing crop black gram	Variety-IPU-94-1, Seed treatment with Thiomethoxam (1gm/kg seed), organic manure, DAP100 and Sulphur 20 Kg/ha, One packet/10kg seed of each biofertilizer, one spray Trizophos@1000ml/ha, Cypermethrin@500ml/ha	14	3	2.89	1.64	9925	10125	200	1.02
Satna	Crop substitution-Sorghum substituted with early maturing crop with Green gram	Variety-Samrat, Seed treatment with Thiomethoxam (1gm/kg seed), organic manure, Pendemethalyn@100mlai/ ha, DAP100 and Sulphur 20 Kg/ha, One packet/10kg seed of each biofertilizer, one spray Trizophos@1000ml/ha, Cypermethrin@500ml/ha	17	4	3.56	1.83	10675	12445.59	1770.59	1.17
Satna	Integrated crop management in Sesame	Variety- TKG-22, Seed treatment with carbendazym (2gm/kg seed), organic manure@4t/ha, Pendemethalyn@1000mlai	14	3	3.36	1.98	10600	15139.29	4539.29	1.43

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Area (ha)	Yield (q/ha.)		Economics of demonstration (Rs./ha)			
					Demo /ha	Local/ ha	Gross Cost	Gross Return	Net Return	BCR
		/ha, NPKS 40:20:20:20 Kg/ha, One packet/10kg seed of each biofertilizer, one spray Trizophos@1000ml/ha,								
Satna	Integrated crop management in Pigeon pea	Variety- ICPL-88039, organic manure 2t/ha, Imazathapyr@100gmai/ha, DAP100 and Sulphur 20 Kg/ha, One packet/10kg seed of each biofertilizer, one spray Trizophos@1000ml/ha, Cypermethrin@500ml/ha	13	3	7.45	4.24	14100	10625	17870.77	0.75
Satna	Integrated crop management in Mustard	Variety-Pusa Tarak, organic manure 2 t/ha, NPKS 60:40:20:20 Kg/ha, One packet/10kg seed of each biofertilizer, one spray Trizophos@1000ml/ha, Imidacloprid@150ml/ha	14	4	7.21	5.35	17792	16085	22342.14	0.90
Satna	Integrated crop management in Chickpea	Variety-JG-11, organic manure 2t/ha, DAP100 and Sulphur 20 Kg/ha, One packet/10kg seed of each biofertilizer, soil application of Trichoderma@5Kg/ha, pheromone traps@10/ha, one spray of Trizophos@1000ml/ha,	13	4	1.85	1.23	15305	14055	5538.46	0.92
Satna	Integrated crop management in Wheat	Variety- JW-17, organic manure 4t/ha, NPK 60:20:20 Kg/ha, One packet/10kg seed of each biofertilizer, Seed treatment with chloropyriphos@ 3ml/kg seed, one spray of Trizophos@1000ml/ha,	16	4	22.12	17.33	18930	17805	34544.25	0.94
Satna	Barley	JB-1	7	2	22.81	19.53	17905	16655	28517.86	0.93
Balaghat	Wheat	Seed (JW-3020)	6	2.5	35.3	25.8	17500	54715	37215	3.13
Balaghat	Chickpea	Seed (JG16)	6	2.5	13.5	11.7	18500	40500	22000	2.19
Chhattarpur	Short duration suitable for rainfed condition ,YMV resistant	Black gram PU-35	30	12	2.85	2.47	9000	9690	690	1.08
Chhattarpur	Phytopthora blight resistant,short duration	Sesame JTS-8	40	16	2.83	2.27	7500	32545	25045	4.34
Chhattarpur	Short duration,	Soybean JS-9560	30	12	4.05	3.4	9600	11340	1740	1.18
Chhattarpur	Rainfed, Good chapatti making quality,	Wheat JW -3020	5	2	21.4	17.8	12500	29960	17460	2.40

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Area (ha)	Yield (q/ha.)		Economics of demonstration (Rs./ha)			
					Demo /ha	Local/ ha	Gross Cost	Gross Return	Net Return	BCR
	tolerant to high temperature and low moisture stress									
Chhattarpur	Dual purpose fodder	Barley JB-1	5	2	19.44	16.51	8200	25272	17072	3.08
Chhattarpur	Resistance to wilt, Moderate resistant to dry root rot,early maturity	ChickpeaJG-11	40	16	3.98	3.31	7500	10348	2848	1.38
Chhattarpur	Suitable for early sowing, Average seed yield is 19.24q/ha, useful in multiple cropping system,	Mustard Pusa Jagannath	20	8	4.83	3.95	6400	14490	8090	2.26
Tikamgarh	Soybean (short duration variety)	JS-95-60 (seed @ 30Kg/acre)	10	5	15.68	13.34	16622	46023	29401	2.77
Tikamgarh	Black gram	Shekhar-2	10	5	11.04	7.3	6600	31390	24790	4.76
Datia	Short duration variety of Soybean	JS-95-60	20	8.5	1915	1454	15436	47875	32439	3.10
Datia	Short duration variety of groundnut	JGN-3	6	1.8	1570	1196	17635	54979	37344	3.12
Datia	Timely sowing of Mustard	RVM-2	12	5	1740	1057	12051	55669	43618	4.62
Datia	Short duration variety of hybrid maize	RM-1899	10	2	3889	2246	14274	58335	44061	4.09
Datia	Introduction of arid legume clusterbean	HG-563	9	3.6	791	-	13350	27681	14331	2.07
Morena	Replacement of Long duration Variety by short duration variety	PIGEONPEA (ICPL-88039)	7	3.5	23.2	17.2	20400	77920	56020	3.82
Morena		PIGEONPEA (UPAS -120)	5	3	21.5	16.8	20400	72250	51850	3.54
Morena	Drought resistant variety Improved variety	BLACKGRAM (PU-35)	8	2.8	9	7	15000	31600	16600	2.11

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Area (ha)	Yield (q/ha.)		Economics of demonstration (Rs./ha)			
					Demo /ha	Local/ ha	Gross Cost	Gross Return	Net Return	BCR
	Management of phyllody disease, Mid season drought management									
Morena	Suitable for kharif session in high yielding variety	TIL (JTS-8)s	5	4	7.4	5.1	11600	38560	26960	3.32
Morena	Early maturing variety suitable for rain fed conditions, yellow mosaic disease resistant	Agri Found Dark Red	4	0.4	220	120	22600	110000	87400	4.87
Morena	high yielding , aphid tolerant suitable for rain fed condition	Green gram TJM-3	12	5	9.6	7.8	15000	33220	18820	2.21
Morena	Evolution of relay cropping in mustard +bar seam suitable for drought condition and mordent resistant disease.	Mustard NRCHB- 101	13	5	25.2	20.4	19200	83600	64400	4.35
Morena	Good yield potential, adaptability and suitability and stability for grain yield under normal sown irrigated conditions. Resistant to rusts, for	Mustard (RVM-2)	10	5	24.4	19.34	18700	81200	62500	4.34

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Area (ha)	Yield (q/ha.)		Economics of demonstration (Rs./ha)			
					Demo /ha	Local/ ha	Gross Cost	Gross Return	Net Return	BCR
Morena	Wilt and heat tolerant variety	Barley (RD-2592)	25	7	41	36	20780	66000	45220	3.18
Morena	high yielding variety suitable for rain fed condition late Sowing suitable for pigeon pea, rice wheat cropping system	Chickpea (JG-11)	3	2	22	16	19000	67900	48900	3.57
Morena	high yielding variety suitable for dacha/ soybean and pearl millet - wheat cropping system water management for early sowing minimum tillage and ridge bed planter sowing	Wheat (RVW-4106)	22	16	51	43.4	26200	78300	52100	2.99
Morena	Replacement of low value crop (pearl millet) by high value crop (maize)	Maize (NK-30)	17	12	52.6	46	25900	80380	54480	3.10
Morena	Replacement of pearl millet crop by high value crop soyabean	Maize (NKk-6240)	7	2.5	51	20	17600	68000	50400	3.86
Morena	Waste pond used and economic generate by new crop water chasetnut	Soyabean (JS-9560)	7	2.5	48	22	17600	63000	45400	3.58

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Area (ha)	Yield (q/ha.)		Economics of demonstration (Rs./ha)			
					Demo /ha	Local/ ha	Gross Cost	Gross Return	Net Return	BCR
Morena	Drought tolerant medium and short duration variety JS 93-05 and JS 95-60	Water Chasetnut	7	2.5	13.2	19.3	17000	35040	18040	2.06
Morena	BBF planting method in Soybean for in-situ moisture conservation and drainage	93-05 and JS 95-60	12	2	1.5	-	20000	150000	130000	7.50
Guna	Ridge Furrow planting method in Soybean for in-situ moisture conservation and drainage	JS 93-05	28	11.2	17	15	23925	56457	32532	2.36
Guna	Ridge Furrow planting method in Soybean for in-situ moisture conservation and drainage	JS 95-60	5	2	17.66	14.48	24284	56512	32248	2.33
Guna	Ridge Furrow planting method in Soybean for in-situ moisture conservation and drainage		5	2	16.92	14.78	24336	54144	29798	2.22

In **Chhattisgarh, Bilaspur KVK** have worked on introducing drought / temperature tolerant varieties through 22 demonstrations at farmers fields using Indira maheshwari variety for Paddy crops, GW 273 variety for Wheat and covered the area 8.8 ha. **In Bhatapara KVK,** 20 demonstrations conducted under the different crops viz. Rice, Wheat and Gram and 8 ha area covered. BC ratio ranged from 1.28 to 1.82 in all three crops. **In Dantewara KVK,** 147 demonstrations conducted under the different crops viz. Rice, Maize, Gram, Urd, Kodo, Moong, G.nut, Wheat, Brinjal, Cowpea, onion and Okra and covered 29.0 ha area. BC ratio ranged from 1.2 to 3.6 in all crops.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Area (ha)	Yield (q/ha.)		Economics of demonstration (Rs./ha)			
					Demo/ ha	Local/ ha	Gross Cost	Gross Return	Net Return	BCR
Bilaspur	Rice Samleshwari	Seed +weedicide	10	4	38	34	18000	47500	29500	2.64
Dantewara	Rice (Samleshwari)	SeedFertilizer	8	5	33.2	19.6	13860	35059	21199	2.53
Dantewara	Rice (MTU 1001)	Seed,Fertilizer & Pesticide	12	5	39.1	26.6	15015	41013	25998	2.73
Bhatapara	Zero till Seed cum fertilizer drill Vs Local Practice	Seed (Wheat-Ratan)	7	2	15.46	14.29	13560	21364	7307.14	1.58
Dantewara	Maize JM-216		23	5	32.75	19.54	10920	24570	13650	2.25
Dantewara	Ragi (GPU-28)		9	1	16.3	9.2	8190	29295	21105	3.58
Dantewara	Kodo (JK-41)		4	1	14.8	8.6	8610	31311	22701	3.64
Dantewara	Moong (Hum-6)		4	1	3.4	1.8	14175	19057	4882	1.34
Dantewara	Field pea (Prakash)		9	2	5.9	3.5	11865	14962	3097	1.26
Dantewara	Wheat (GW-273)		3	2	14.1	7	14700	21849	7149	1.49
Dantewara	Tomato (Laxmi)		14	0.2	228	110.2	39900	114450	74550	2.87
Dantewara	Brinjal (Muktakeshi)		15	0.2	204	144	36792	102375	65583	2.78
Dantewara	Cowpea (Gomti)		19	0.2	117	71.9	33600	94080	60480	2.80
Dantewara	Onion (Nasik lal)		5	0.2	190	98.5	36750	133696	96946	3.64
Dantewara	Okra (Arka anamika)		5	0.2	61.5	37.2	21525	62475	40950	2.90

In **Odisha, Ganjam KVK,** 90 demonstrations conducted under the different crops viz. Rice, Green gram, G.nut and Black gram and 38.0 ha area covered. BC ratio ranged from 2.13 to 2.97 in all three crops. **Sonepur KVK** , 25 demonstrations conducted under the Rice crops and 10.0 ha area covered. BC ratio observed 1.9.**In Jharsuguda KVK,** 20 demonstrations conducted under the Rice crops and 2.0 ha area covered. BC ratio observed 2.0. **In Kendrapara KVK,** 10 demonstrations conducted under the Rice crops and 2.0 ha area covered.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Area (ha)	Yield (q/ha.)		Economics of demonstration (Rs./ha)			
					Demo/ha	Local/ha	Gross Cost	Gross Return	Net Return	BCR
Ganjam	Drought resistant Paddy Var. Khandagiri	Seeds and Micronutrient	14	5	8.4	7.4	12300	8400	-3900*	0.68
Ganjam	Draught resistant Paddy Var. Sahabhagi Dhan	Seeds and Micronutrient	15	5	5.6	4.9	11900	5600	-6300*	0.47
Sonepur	Variety Konark with IPM,INM in paddy	Variety (Konark)	15	10	33.4	25.6	17800	33400	15600	1.87
Jharsuguda	Varietal	Seeds (Var.	20	6	30.2	23.4	14800	32000	17200	2.16

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Area (ha)	Yield (q/ha.)		Economics of demonstration (Rs./ha)			
					Demo/ha	Local/ha	Gross Cost	Gross Return	Net Return	BCR
	replacement of drought tolerant variety	Sahabhagi dhan)								

Advancement of planting dates of rabi crops in areas with terminal heat stress

In this intervention **In Guna KVK**, 60 demonstrations conducted under different fruit crops and 24 ha area covered and BC ratio observed ranged from 2.93 to 5.75. **In Morena KVK,** 22 demonstrations conducted under wheat in rice-wheat cropping system using zero till seed drill and covered 22.0 ha area. 2.98 BC ratio was observed. **Satna KVK (Madhya Pradesh)** have worked on Advancement of planting dates of rabi crops in areas with terminal heat stress through demonstrations in (early maturing variety) Mustard, Gram and Wheat crops at farmers fields . A total 33 farmers benefited and 12 ha area covered under this intervention and resulted BCR ratio ranged from 1.85 to 2.31.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Area (ha)	Yield (q/ha)		Economics of demonstration (Rs./ha)			
					Demo/ ha	Local /ha	Gross Cost	Gross Return	Net Return	BCR
Datia	Dry sowing of wheat	Gw-366	6	2.4	4083	3542	24450	61250	37800	2.51
Morena	high yielding variety suitable for late Sowing suitable for pigeon pea/ rice - wheat cropping system in zero till seed drill sowing method	Wheat (RVW-4106)	22	16	51	43.4	26200	78300	52100	2.99
Guna	Thermo Tolerant and early variety of Gram JG - 6	JG 6	16	6.4	17	13.8	15734	42516	26781	2.70
Guna	Thermo Tolerant Wheat variety JW 3173 suitable for limited irrigation condition	JW 3173	20	8	45.8	33.9	21160	71057	48893	3.36
Guna	Green fodder Berseem variety JB – 5	JB – 5	20	4	186.9	134.2	11550	65415	53865	5.66
Satna	Paddy	IR-36	10	3	32.78	15.99	18035	13310	45636	0.74
Satna	Mustard	Varuna	12	5	4.2	3.85	14055	14055	12590	1.00
Satna	Gram	JG-315	12	4	1	0.91	16085	16085	2990	1.00
Satna	Wheat	Sujata	11	4	17	15.53	17805	17805	26524	1.00

In **Chhattisgarh, Bilaspur KVK** have worked on advancement of planting dates of rabi crops in areas with terminal heat stress through Early sowing of Gram crop in rabi season using Gram JG

11 variety. A total 5 demonstration have conducted and 2 ha area covered in NICRA villages and BCR ratio 2.9 obtained by this technology.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Area (ha)	Yield (q/ha)		Economics of demonstration (Rs./ha)			
					Demo/ha	Local/ha	Gross Cost	Gross Return	Net Return	BCR
Bilaspur	Safflower JSI7	Seed	6	2	4	3.1	7000	11200	4200	1.60
Bilaspur	Gram JAKI 9218	Seed+ seed treatment	20	8	7.9	5	7700	23700	16000	3.08

In Odisha, this intervention **In Kendrapara KVK**, 25 demonstrations conducted under black gram and green gram and 5.0 ha area coveredand 2.08 BC ratio was observed in both crops. **Sonepur KVK** have worked on advancement of planting dates of rabi crops in areas with terminal heat stress through Early sowing of rabi crops using improved varieties of black and green gram, Maize , Cowpea, okra and pumpkin etc. 135 demonstrations conducted under the different crops viz. black and green gram, Maize, water melon, Cowpea, okra and pumpkin and 15.1 ha area covered. BC ratio ranged from 2.09to 4.03 in all crops.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Area (ha)	Yield (q/ha)		Economics of demonstration (Rs./ha)			
					Demo/ha	Local/ha	Gross Cost	Gross Return	Net Return	BCR
Sonepur	Green gram	Variety (PDM 139)	19	3.6	5.1	3.8	8220	25500	17280	3.10
Sonepur	Blak gram	Variety (T 9)	19	3.4	5.2	3.9	7900	26000	18100	3.29
Sonepur	Cabbage	Variety (BC-90)	27	1.8	212	168	58600	212000	153400	3.62
Sonepur	Cauliflower	Variety (Golden acre)	27	2	178	142	54600	195800	141200	3.59
Sonepur	Tomato	Variety (Laxmi)	27	2	235	186	39900	141000	101100	3.53
Sonepur	Onion	Variety (N 53)	27	2	192	168	48600	192000	143400	3.95
Kendrapara	Improved cultivation practices of Green gram	Greengram Seed of var. (OBGG-52)	10	2	Plant Height25cm Leaf No-17	Plant Height 19cm Leaf No-14	-	-	-	-

Water saving paddy cultivation methods (SRI, aerobic, direct seeding)

In this intervention **Balagat KVK (Madhya Pradesh)** have worked on water saving paddy cultivation methods (SRI, aerobic, direct seeding) through demonstrations in (early maturing variety MTU1010) rice crops at farmers fields . A total 6 demonstration conducted and covered 2.5 ha area under this intervention and resulted BCR ratio 1.66. **In Morena KVK,** 12 demonstrations conducted under Paddy (Pusabasmathi-1) Demonstrations Resulted BC ratio 4.07 was obtained in paddy crops. **In Tikamgarh KVK,** 5 demonstrations conducted under Paddy (JRH-201) Demonstrations Resulted BC ratio 4.07 was obtained in paddy crops. **In Satna KVK,** 17 demonstrations conducted under paddy using direct seeding method (organic manure 4t/ha, NPK 60:20:20 Kg/ha, Seed treatment with salt solution@ 10%, one spray of Trizophos@1000ml/ha,one spray of Hexaconozole 1ml/L of water) and covered 4.4 ha area. BC ratio was observed 1.95 in paddy crops.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Area (ha)	Yield (q/ha)		Economics of demonstration (Rs./ha)			
					Demo /ha	Local/ ha	Gross Cost	Gross Return	Net Return	BCR
Balaghat	Paddy	Seed (MTU-1010)	6	2.5	48	43	25000	67600	44600	2.70
Balaghat	Paddy	Seed(Dantesari)	2	1.5	44.4	40.6	25000	64380	39380	2.58
Balaghat	Paddy	Seed (Karmamasuri)	2	1.5	51.3	45	25500	74385	48885	2.92
Datia	Direct seeded Rice	JR-201	8	2	26.78	-	23190	66933	43803	2.89
Morena	SRI, aerobic, direct seeding)	Paddy (Pusasugandha)	8	3	48	20	21700	76800	55100	3.54

In **Chhattisgarh** this intervention **Bilaspur KVK** have worked Water saving paddy cultivation methods (SRI, aerobic, direct seeding) through demonstration using High yielding, short duration crop in paddy. 17 demonstrations conducted under paddy and wheat using direct seeding method and covered 6.8 ha area. BC ratio ranged 2.3 to 2.8 in paddy and wheat crops.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Area (ha)	Yield (q/ha)		Economics of demonstration (Rs./ha)			
					Demo /ha	Local/ ha	Gross Cost	Gross Return	Net Return	BCR
Bilaspur	Rice SRI Durgeshwari For seed production +Green manure	Certified seed for seed production	24	8	40	35	19000	50000	31000	2.63
Dantewara	Rice (Indira Barani)	Seed	13	5	34	21.5	13860	35721	21861	2.58

Frost management in horticulture through fumigation

In this intervention **Guna KVK (Madhya Pradesh)** have worked on frost management in horticulture through Spray of wettable sulphur @ 0.3% at flowering and seed formation stage (70 & 90 DAS)

in arhar. 4 demonstrations conducted and covered 2 ha area. Demonstrations Resulted 1.75 BC ratio in paddy. **Morena KVK**, 5 demonstrations conducted and covered 2.5 ha area.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Area (ha)	Yield (q/ha)		Economics of demonstration (Rs./ha)			
					Demo/ha	Local/ha	Gross Cost	Gross Return	Net Return	BCR
Morena	Irrigation technology and Frost management by fumigation	Guava (GW-27) Lemon (kagji) ,Anole	5	2.5	-	-	-	-	-	-
Guna	Spray of wettable sulphur @ 0.3% at flowering and seed formation stage (70 & 90 DAS)	RCR-436	5	2	17.8	15.1	21230	107250	86020	5.05

Community nurseries for delayed monsoon

In this intervention **Datia KVK** (**Madhya Pradesh)** has worked on community nurseries for delayed monsoon Through demonstration using different crop varieties High Yielding resistant to insect and disease. 10 demonstrations conducted under different crops viz. chilli and tomato and covered 2 ha area. BC ratio ranged from 5.75 to 8.26 in different crops. In **Guna KVK** 7 demonstrations conducted under Nutritional garden and covered 0.28 ha area. In **Tikamgarh KVK** 20 demonstrations conducted under Nutritional garden and covered 6.0 ha area.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Area (ha)	Yield (q/ha)		Economics of demonstration (Rs./ha)			
					Demo /ha	Local /ha	Gross Cost	Gross Return	Net Return	BCR
Guna	Nutritional garden	-	7	0.28	-	-	-	-	-	-
Dantewara	Rice (Indira Barani)	Seed(Nursery on 12 day's)	20	4						

Custom hiring centers for timely planting

In this intervention **Morena KVK (Madhya Pradesh)** have worked on custom hiring centre for timely planting through Use in zero till seed drill sowing method. 22 demonstrations conducted and 3.18 BC ratio was observed . In **Guna KVK** 106 demonstrations conducted and covered 443 ha area.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Area (ha)	Yield (q/ha)		Economics of demonstration (Rs./ha)			
					Demo /ha	Local/ ha	Gross Cost	Gross Return	Net Return	BCR
Morena	Use in zero till seed drill sowing method	Wheat (RVW-4106)	22	16	51	43.4	26200	78300	52100	2.98
Morena	Use in zero till seed drill sowing method	Barley (RD-2592)	25	7	41.7	36.4	18650	67126	48476	3.59
Guna	Custom hiring for timely operations	MB Plough, Hand wheel hoe, Seed -cum – Fertilizer drill, Rotavater, Post hole digger, Power sprayer, Reaper, Sprinkler set, Engine pump set	68	283	-	3200	-	-	-	-

In Chhattisgarh, Bilaspur KVK have worked on custom hiring centre Seed drill Reduced land preparation period for wheat cultivation after long duration paddy and moisture conservation for rabi crop. 1 demonstrations conducted and covered 0.8 ha area and resulted 2.2 BC ratio

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Area (ha)	Yield (q/ha)		Economics of demonstration (Rs./ha)			
					Demo/ha	Local /ha	Gross Cost	Gross Return	Net Return	BCR
Bilaspur	Used of the Seed drill for line sowing of Wheat GW273	Seed +Seed drill	13	5	10.5	8.2	8000	14175	6175	1.77
Dantewara	Summer deep ploughing	-	10	5	10-12%					
Dantewara	Harrowing with rotawator	finger millet & black gram during kharif	5	2	10-12 %					
Dantewara	Line sowing with seed cum fertilizer drill	finger millet & black gram during kharif	5	1	10-12 %					
Dantewara	For threshing crops used Tractor drawn Thresher	Rice	122	18						

In Odisha, Sonepur KVK have worked on custom hiring centre for timely planting through Use in Seed cum fertilizer drill sowing method in paddy crop. 5 demonstrations conducted and covered 2 ha area and resulted 2.3 BC ratio. **Kendrapara KVK** have worked on custom hiring centre for timely planting through Use in Seed cum fertilizer drill sowing method in paddy crop 5 demonstrations conducted and covered 2 ha area and resulted 2.3 BC ratio

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Area (ha)	Yield (q/ha)		Economics of demonstration (Rs./ha)			
					Demo/ha	Local/ha	Gross Cost	Gross Return	Net Return	BCR
Kendrapara	Puddling of Paddy field	Power tiller,Sprayer	10	3	-	-	10000	17500	17500	1.75
Jharsuguda	Varietal replacement disease & pest tolerant varieties of paddy	Seeds (Var.Pratikshya)	20	10	44.5	37.4	17100	45300	28200	2.65

Location specific intercropping systems with high sustainable yield index

In this intervention **In Morena KVK**, 4 demonstrations conducted under Soybean + Maize 2:1inter crop and covered 2 ha area. Demonstrations resulted BC ratio 3.47 in intercropping systems and 5 demonstrations conducted under GOUR + MAIZE 2:1 inter crop. Demonstrations resulted BC ratio 7.8 in intercropping systems **In Satna KVK,** 42 demonstrations conducted in different crops viz. Jowar- PVK-809 + Pegion pea – TJT-401 (4:2), Chickpea-JG-11 + Mustard-PusaTarak (6:2) and Wheat-JW3020 + Mustard-PusaTarak (6:2) all seed treatment with Carbendazim 2.5gm/kg seed, and covered 14.4 ha area. Demonstrations Resulted maximum percent increased the yield 111.66 in Chickpea-JG-11 + Mustard-PusaTarak (6:2) intercropping system and BC ratio was observed in ranged from 0.7 to 1.88 in different crops.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Area (ha)	Yield (q/ha)		Economics of demonstration (Rs./ha)			
					Demo/ ha	Local/ ha	Gross Cost	Gross Return	Net Return	BCR
Morena	intercropping systems	Soybean + Maize 2;1	4	2	48.72	16.4	23200	80584	57384	3.47
Satna	Green gram+ Pigeon pea	Intercropping system Green gram- Samrat + Pegion pea – ICPL-88039 (4:2) seed treatment with Carbendazym 2.5gm/kg seed, NPKS 20:60:20:20 Kg/ha, Pendemethaline @1000ml ai/ha, organic manure 2t/ha, spray of	5	1	3.34	1.69	15530	11285	10993	0.73
Satna	Chickpea +Mustard	Intercropping system Chickpea-JG-11 + Mustard-Pusa Tarak (6:2) seed treatment with Carbendazym 2.5gm/kg seed, NPK 20:40:20 Kg/ha, organic manure 2t/ha, spray of	17	4	2.21	1.59	17380	16280	6541	0.94

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Area (ha)	Yield (q/ha)		Economics of demonstration (Rs./ha)			
					Demo/ ha	Local/ ha	Gross Cost	Gross Return	Net Return	BCR
		imidacloprid@150 ml/ha,								
Satna	Wheat +Mustard	Intercropping system Wheat-JW-3020 + Mustard-Pusa Tarak (6:2 seed treatment with Carbendazym 2.5gm/kg seed, NPK 60:20:20 Kg/ha, organic manure 2t/ha, spray of Chloropyriphos @2000 ml/ha,	14	3	18.66	12.88	19280	18905	30883	0.98

Others

In Madhya Pradesh ,

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Area (ha)	Yield (q/ha)		Economics of demonstration (Rs./ha)			
					Demo/ha	Local/ha	Gross Cost	Gross Return	Net Return	BCR
Tikamgarh	Kharif season-Brinjal	Janak(Hybrid)	10	0.2	285	166	25000	116200	91200	4.65
Tikamgarh	Kharif-Tomato	BSS-99 (Hybrid)	10	0.2	276	188	34000	188000	154000	5.53
Tikamgarh	Kharif-Chilli	Disha (Hybrid)	5	0.1	129.8	67.4	41000	121320	80320	2.96
Tikamgarh	Rabi season-Brinjal	Janak(Hybrid)	5	0.1	245	147	25000	102900	77900	4.12
Tikamgarh	Rabi-Tomato	BSS-908 (Hybrid)	5	0.1	251	167	34000	167000	133000	4.91
Tikamgarh	Rabi-Chilli	Disha (Hybrid)	5	0.1	119	64	41000	115200	74200	2.81
Datia	Kharif fallow-toria (due to continuous rain)	JT-1	6	5	1362	-	11017	43600	32583	3.96
Datia	Kharif failure -toria (due to heavy rain)	JT-1	6	5	1333	-	11017	42666	31649	3.87
Satna	Introduction of new variety in paddy , (Direct sowing of Rice)	Variety- JR-201, organic manure 4t/ha, NPK 60:20:20 Kg/ha, Seed treatment with salt solution@ 10%, one spray of Trizophos@ 1000ml/ha,one spray of Propaconozo	7	1	26.78	14.23	16035	32136	16101	2.00

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Area (ha)	Yield (q/ha)		Economics of demonstration (Rs./ha)			
					Demo/ha	Local/ha	Gross Cost	Gross Return	Net Return	BCR
		le 1ml/L of water								
Satna	Introduction of new variety in paddy , System of Rice Intensification	Variety- JR-201, organic manure 4t/ha, NPK 60:20:20 Kg/ha, Seed treatment with salt solution@ 10%, one spray of Trizophos@ 1000ml/ha, one spray of Propaconozole 1ml/L of water	9	3	32.78	15.99	18035	45636	27601	2.53

In this intervention **In Bilaspur KVK**, 5 demonstrations conducted under Arhar-Upas 120 (Pre-Rabi) Short duration arhar did not disturbed the rabi and Nitrogen fixation in the soil.. Demonstrations resulted BC ratio 1.03.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Area (ha)	Yield (q/ha)		Economics of demonstration (Rs./ha)			
					Demo/ ha	Local/ha	Gross Cost	Gross Return	Net Return	BCR
Dantewara	Lakh cultivation	lakh	15	30 tree						

In Odisha, In Ganjam KVK, 94 demonstrations conducted under Application of Boron & Zinc in Paddy Var. MTU-1010, Application of Pretilachlor in Paddy, Demonstration on HYV of Maize HYV of Maize - Super-36, Oyster mushroom (Pleurotus sajarcaju) cultivation, Vermi composting and covered 140 ha area Demonstrations resulted BC ratio ranged from 1.5 to 3.0. **In Kendrapara KVK**, 95 demonstrations conducted under Demonstration dhanicha cultivation, Green Manuring in Kharif Paddy, Bio-control measures to minimize less application of pesticides, IPM for control of fruit and shoot borer in Brinjal, Crop management practices to avoid more loses of crop yield , Pointed gourd pointed gourd bitter gourd, watermelon and covered 18.5 ha area. Demonstrations resulted BC ratio ranged from 1.5 to 3.0. **In Jharsuguda KVK**, 40 demonstrations conducted under Crop production in moisture stress condition Hybrid Maize + Cowpea, Disease & pest tolerant varieties of crops, Varietal replacement disease & pest tolerant varieties of paddy and covered 9.4 ha area. Demonstrations resulted BC ratio ranged from 3.0 to 5.1.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Area (ha)	Yield (q/ha)		Economics of demonstration (Rs./ha)			
					Demo /ha	Local /ha	Gross Cost	Gross Return	Net Return	BCR
Kendrapara	Relase Parastioid *Trichogramma chillonis* in Sugarcane at vegetative stage for management of early shoot borer and inter node borer in Sugarcane	Trichogramma chillonis	20	5	Dead heart (%) 5	20	125000	198000	73000	1.58
Kendrapara	Installation of pheromone trap @ 20 numbers / ha and release of *Trichogramma japonicum*	pheromone trap and Trichogramma japonicum	10	4	Dead heart(%)3	Dead heart(%)10 White ear head(%) 8	29769	56952	27183	1.91
Kendrapara	Demonstration on cultivation Paddy Straw mushroom in backyard	Distribution of Paddy Straw mushroom spawn to SHG	45		2 qtl Paddy straw mushroom	-	5000	16000	11000	3.2
Ganjam	Application of Pretilachlor in Paddy	Weedicide	15	5	17.2	16.4	16900	17200	300	300
Ganjam	PU-31	Seeds,pesticidesMicronutrient	14	4	6.8	5.4	12900	27200	14300	2.11
Ganjam	High yielding brinjal var. blue star	Seedling	8	0.4	218	188	43500	109000	66400	2.5
Ganjam	High yielding cauliflower var. Krishna-1	Seedling	6	0.1	164	142	53000	131200	78200	2.47
Ganjam	High yielding chilli var. pusa jwala	Seedling	6	0.1	81.4	68.2	68300	162800	94500	2.38
Ganjam	HYV of Maize- ***Super-36***	Maize seed	5	2	47.5	41.8	21000	47500	26500	2.26
Ganjam	Use f Neem	Neem oil	10	2	11.4	10.2	15200	11400	-3800*	0.75

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Area (ha)	Yield (q/ha)		Economics of demonstration (Rs./ha)			
					Demo /ha	Local /ha	Gross Cost	Gross Return	Net Return	BCR
	oil @ 5ml/lt at 30 DAT in Paddy									
Ganjam	Kitchen garden	Seedling	3	03 Units	14	12.8	5300	4200	-1100	0.79
Ganjam	High yielding paddy variety MTU-1001	Seeds and Micronutrient	28	8	18.6	16.8	16300	18600	2300*	1.14
Ganjam	Micronutrient application of Boron @ 2 gram/lt in Paddy	Boron	24	10	17.7	16.9	16300	17700	1400*	1.08
Ganjam	High yielding tomato var.BT-10	Seedling,pesticidesMicronutrient	16	2	214	187	46200	107000	60800	2.32
Ganjam	Oyster mushroom (***Pleurotus sajarcaju***) cultivation	Mushroom cultivation	10	100 beds	1.6	1.3	40	96	56	2.4
Ganjam	Greengram Var. ***TARM-1***	Seeds,pesticidesMicronutrient	25	10	7.4	5.9	13700	29600	15900	2.16

Glimpses of Crop Production Activities in NICRA

Groundnut Var. JGN-3

Toria Var. JT-1

Wheat Var. GW-366

BBF planting of soybean for moisture conservation and drainage

Thermoinsensitive and short duration Gram variety JG-6

Intercropping Crop Mustard + Chickpea

Mushroom Production

Horticulture crop Lady fingure

Drought Tolerant Variety Paddy (Shahbhagi Dhan)

4. Livestock and Fisheries

Use of community lands for fodder production during drought/floods, improves fodder/feed storage methods, preventive vaccination, improved shelters for reducing heat stress in livestock, management of fish ponds/tanks during water scarcity and excess water, etc.

Silent achievements

- 197 Demonstration Conducted under Improved fodder/feed storage methods and covered 633 animals.
- 352 Demonstration Conducted under Preventive vaccination and covered 1795 animals
- 38 Demonstration Conducted under Management of fish ponds / tanks during water scarcity and excess water
- 50 Demonstration conducted under improved shelters for reducing heat stress in livestock and covered 500 animals
- 72 Demonstration conducted under use of community lands for fodder production during droughts / floods and covered 41.50 ha

Use of community lands for fodder production during droughts / floods

In this intervention **KVK Guna and Morena (Madhya Pradesh)** have worked on use of community lands for fodder production during droughts / floods through demonstrations at farmers field using high yielding fodder crop variety of Barseem. 20 demonstrations conducted and covered 4 ha area. Demonstrations were resulted maximum percent increased Green fodder yield in berseem crop and BC ratio was observed 5.66. **In Morena KVK**, 52 demonstrations conducted under berseem and oat crop and covered 37.5 ha area. Demonstrations resulted BC ratio ranged 3.54 to 4.48.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Unit/ No. / Area (ha)	Measurable indicators of output*		% increase
					Demo	Local	
Morena	Fodder Production	Barseem	45	35	350	270	29.63
Morena	Fodder Production	Oat	7	2.5	310	240	29.17
Guna	Green Fodder Berseem	JB – 5	20	4	186.9	134.2	39.27

Economic Performance KVKs in M.P.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	Economics of demonstration (Rs./ha)				Economics of demonstration (Rs./ha)			
			Demo				Local			
			Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net Return	BCR
Morena	Fodder Production	Barseem	15600	70000	54400	4.48	14450	54000	39550	3.73
Morena	Fodder Production	Oat	17500	62000	44500	3.54	16600	48000	31400	2.89
Guna	Green Fodder Berseem	JB – 5	11550	65415	53865	5.66	10500	46970	36470	4.47

In **Chhattisgarh**, this intervention **Dantewara KVK** have worked on use of community lands for fodder production during droughts / floods through demonstration under Pasture Development. 13 demonstrations conducted under maize crop and covered 4 ha area.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Unit/ No. / Area (ha)	Measurable indicators of output*		% increase	Economics of demonstration (Rs./ha)			
								Demo			
					Demo	Local		Gross Cost	Gross Return	Net Return	BCR
Dantewara	Maize	Seed,Fertilizer	5	2							
Dantewara	Pasture development	Seed/rhizome/ runner (maize/anjan Grass) and fertilizer	8	2							

In **Odisha,** this intervention **Sonepur KVK** have worked on use of community lands for fodder production during droughts / floods through demonstrations under hybrid Napier cultivation. 12demonstrations conducted under maize crop and covered 0.5 ha area.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Unit/ No. / Area (ha)	Measurable indicators of output*		% increase	Economics of demonstration (Rs./ha)			
								Demo			
					Demo	Local		Gross Cost	Gross Return	Net Return	BCR
Sonepur	Fodder cultivation	Fodder grass & Fertilizer	12	0.5	Continuing	-	-	-	-	-	-

Improved fodder/feed storage methods

In this intervention **Guna KVK (Madhya Pradesh)** have worked on improved fodder/feed storage methods through demonstrations using Storage Technology fodder Feed. 70 demonstrations conducted under mineral mixture and covered 460 units. **In Morena KVK**, 250 demonstrations conducted under dry fodder 3-4 kg Green Fodder: 20-30 kg Concentrate: 1.5-2.0 kg Mineral Mix.: 20-40g There is a requirement of 500 g and 400 g concentrate for per litre milk production in buffalos and cows respectively and covered 250 units. Demonstration resulted BC ratio was observed 2.92. **In Datia KVK**, 45 demonstrations conducted under Jawahar Chari and Berseem and 45 ha area covered. Demonstrations resulted BC ratio was observed 1.71 and 1.86.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Unit/ No. / Area (ha)	Measurable indicators of output*		% increase
					Demo	Local	
Datia	Round the year availability of Green fodder	Jwar Chari	5	5	957.6 lt/lactation period of 90 days	712.8 lt/lactation period of 90 days	34.49
Datia	Round the year availability of Green fodder	Barseem JB-1	40	40	883.1 lt/lactation period of 90 days	659.3 lt/lactation period of 90 days	34
Morena	Augmentation of Fodder production and conservation	A healthy animal requires- Dry Fodder: 3-4 kg,Green Fodder: 20-30 kg Concentrate: 1.5-2.0 kg , Mineral Mix.: 20-40g,There is a requirement of 500 g and 400 g concentrate for per litre milk production in buffalos and cows respectively.	50	50	8li/day	5li/day	
Guna	Storage Technology fodder Feed	Wheat Straw	70	460	-	-	-

Economic Performance KVKs in M.P.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	Economics of demonstration (Rs./ha)				Economics of demonstration (Rs./ha)			
			Demo				Local			
			Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net Return	BCR
Datia	Round the year availability of Green fodder	Jwar Chari	15486	28728	13242	1.86	13686	21384	7698	1.56
Datia	Round the year availability of Green fodder	Barseem JB-1	15483	26493	11010	1.71	13683	19779	6096	1.45
Morena	Augmentation of Fodder production and conservation	A healthy animal requires- Dry Fodder: 3-4 kg,Green Fodder: 20-30 kgConcentrate: 1.5-2.0 kg , Mineral Mix.: 20-40g,There	9860	28800	18940	2.92	8500	18000	10500	2.11

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	Economics of demonstration (Rs./ha)				Economics of demonstration (Rs./ha)			
			Demo				Local			
			Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net Return	BCR
		is a requirement of 500 g and 400 g concentrate for per litre milk production in buffalos and cows respectively.								

In **Odisha,** this intervention **Ganjam KVK** has worked on improved fodder/feed storage methods through Supplementary feed. 24 Farmers group have formed and 70 ha area covered in NICRA villages. **Sonepur KVK** has worked on improved fodder/feed storage methods through Hay making structures. 8 Farmers group have formed and 8 ha area covered in NICRA villages.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Unit/ No. / Area (ha)	Measurable indicators of output*		% increase
					Demo	Local	
Sonepur	Azolla cultivation	Azolla, Cement ring	8	8	Continuing	-	-
Ganjam	Supplementary feed	Mineral mixture 40 g/day/animal	24	70	1400	1125	24.44

Economic Performance KVKs in Odisha

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	Economics of demonstration (Rs./ha)				Economics of demonstration (Rs./ha)			
			Demo				Local			
			Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net Return	BCR
Sonepur	Azolla cultivation	Azolla, Cement ring	-	-	-	-	-	-	-	-
Ganjam	Supplementary feed	Mineral mixture 40 g/day/animal	20700	36400	15700	1.76	17200	29250	12050	1.70

Preventive vaccination

In this intervention **Datia KVK (Madhya Pradesh)** have worked on preventive vaccination through demonstration under animal vaccination programme 111 demonstrations conducted and covered 1010 units of animals. **Guna KVK (Madhya Pradesh)** have worked on preventive vaccination through demonstration under animal vaccination programme. 52 demonstrations conducted and covered 128 animals. **In Morena KVK**, 72 demonstrations conducted and covered 150 units of animals. Demonstration resulted BC ratio was observed 2.75. **In Tikamgarh KVK**, 64 demonstrations conducted and covered 208animals. **In Satna KVK**, 100

demonstrations conducted under vaccination, deworming and animal health check up and covered 299 animals.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Unit/ No. / Area (ha)	Measurable indicators of output*		% increase
					Demo	Local	
Tikamgarh	Vaccination to prevent the FMD and HS	Vaccinated	64	208	Reduction in FMD and HS (89%)		
Datia	Vaccination for HS, FMD	Vaccine	111	1010	-	-	-
Morena	Training animal disease vaccination and management	Dairy animals – FMD and HS – and galgontu disease vaccination	72	150	7li/day	4li/day	
Guna	Training animal disease vaccination and management	Dairy animals- FMD and Galgontu disease vaccination	5.2	128	6.80 Lit. ./day	4.90 Lit./day	38.77
Satna	Vaccination and animal health camp	Vaccines(PPR, FMD, Anthrax, HS,)	37	54			72.87
Satna	Deworming	Albendazole	26	200			
Satna	Animal health check up		37	45			

Economic Performance KVKs in M.P.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	Economics of demonstration (Rs./ha)				Economics of demonstration (Rs./ha)			
			Demo				Local			
			Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net Return	BCR
Tikamgarh	Vaccination to prevent the FMD and HS	Vaccinated	-	-	-	-	-	-	-	-
Datia	Vaccination for HS, FMD	Vaccine	-	-	-	-	-	-	-	-
Morena	Training animal disease vaccination and management	Dairy animals – FMD and HS – and galgontu disease vaccination	9200	25200	16000	2.73	8100	14400	6300	1.77
Guna	Training animal disease vaccination and management	Dairy animals- FMD and Galgontu disease vaccination	9200	25200	16000	2.73	8100	14400	6300	2
Satna	Vaccination and animal health camp	Vaccines(PPR, FMD, Anthrax, HS,)	-	-	-	-	-	-	-	-
Satna	Deworming	Albendazole	-	-	-	-	-	-	-	-
Satna	Animal health check up		-	-	-	-	-	-	-	-

In **Chhattisgarh,** this intervention **In Dantewada KVK** have worked on preventive vaccination through Animal Health Camp.. 57 Farmers have benefited and covered 270 animals.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Unit/ No. / Area (ha)	Measurable indicators of output*		% increase	Economics of demonstration (Rs./ha)			
					Demo	Local		Gross Cost	Gross Return	Net Return	BCR
Dantewara	Animal health camp	Coverage with Veterinary Department	57	270 animals	-	-	-	-	-	-	-

In **Odisha,** this intervention **Ganjam and Kendrapara KVK** have worked on preventive vaccination through Animal health camp with Veterinary Department 160 and 125 demonstrations conducted and covers 422 and 151 units. **Sonepur KVK** have worked on preventive vaccination through Vaccination of goats and cow.. 50 Farmers have benefited and covered 300 goats and 150 cows.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Unit/ No. / Area (ha)	Measurable indicators of output*		% increase	Economics of demonstration (Rs./ha)			
					Demo	Local		Gross Cost	Gross Return	Net Return	BCR
Ganjam	Animal Health Camp	Convergence with Veterinary Department	86	264 Animal	-	-	-	-	-	-	-

Improved shelters for reducing heat stress in livestock

In this intervention **Morena KVK (Madhya Pradesh)** have worked on improved shelters for reducing heat stress in livestock through Training animal camp and new brides cross available (Feeding should be minimized during winter. Instead of two only one dose should be applied). 60 Farmers have benefited and covered 130 units.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Unit/ No. / Area (ha)	Measurable indicators of output*		% increase	Economics of demonstration (Rs./ha)			
					Demo	Local		Gross Cost	Gross Return	Net Return	BCR
Morena	Training animal camp and new brides cross available	Feeding should be minimized during winter. Instead of two only one dose should be applied.	60	130	-	-	-	5000	-	-	-

In **Odisha**, this intervention **Kendrapara KVK** have worked on improved shelters for reducing heat stress in livestock through Rearing of poultry bird in backyard var.-Banaraja. 50 farmers have benefited and provided 500 birds.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Unit/ No. / Area (ha)	Measurable indicators of output*		% increase
					Demo	Local	
Kendrapara	Demonstration on Semi intensive poultry farming	Distribution of Blackrock and Banaraja among SHG members	50	500	2.5	1	150

Economic Performance KVKs in Odisha

KVK	Technology demonstrated	Economics of demonstration (Rs./ha)				Economics of demonstration (Rs./ha)			
		Demo				Local			
		Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net Return	BCR
Kendrapara	Demonstration on Semi intensive poultry farming	20,000	60,000	40,000	3.0	10,000	20,000	10000	2.0

Management of fish ponds / tanks during water scarcity and excess water

In this intervention **Guna KVK (Madhya Pradesh)** have worked on management of fish ponds / tanks during water scarcity and excess water through Fisheries Programme. 1 farmer have benefited and covered 0.4 ha area and resulted BCR 3.4. **In Morena KVK,** 5 framers have benefited through Training in Maintenance of fish point, proper dose food, and grain and disease control of fish (Manuring should be checked or stopped during winter season. But lime should be used at regular intervals. Water exchange should be done at regular intervals), Fisheries Programme and Covered 2.5 ha area. Resulted 76.50 percent increased the yield and obtained BC ratio 6.0. **Datia KVK** have worked on management Fish culture in harvested rainwater Programme. 7 farmers have benefited and covered 7 ha area and resulted BCR 2.91.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Unit/ No. / Area (ha)	Measurable indicators of output*		% increase
					Demo	Local	
Datia	Fish culture in harvested rainwater	Fish seed (Catla, Rohu, Grass carp, Mrigal)	7	7	2803	1536	82.52
Morena	Training Maintenance of fish point , proper dose food ,grain and disease control of fish	Manuring should be checked or stopped during winter season. But lime should be used at regular intervals. Water exchange should be done at regular intervals.	5	2.5	150 q/ha/ year	85/q/ha/ year	76.50
Guna	Fish farming	Rohu , Katla , Mrigala	1	0.4	5.00q.	3.65q	36.98

Economic Performance KVKs in M.P.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	Economics of demonstration (Rs./ha)				Economics of demonstration (Rs./ha)			
			Demo				Local			
			Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net Return	BCR
Datia	Fish culture in harvested rainwater	Fish seed (Catla, Rohu, Grass carp, Mrigal)	57785	168205	110420	2.91	39690	92160	52470	2.32
Morena	Training Maintenance of fish point , proper dose food ,grain and disease control of fish	Manuring should be checked or stopped during winter season. But lime should be used at regular intervals. Water exchange should be done at regular intervals.	25000	150000	125000	6.00	22000	85000	63000	3.86
Guna	Fish farming	Rohu , Katla , Mrigala	10800	36800	26000	3.41	9300	19600	10300	2.11

In **Chhattisgarh,** this **intervention Dantewara KVK** has worked on management of fish ponds / tanks during water scarcity and excess water through Renovation and Digging of Ponds for Irrigation cum fish cultivation.6 Farmers have benefited and covered 0.8 ha area.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Unit/ No. / Area (ha)	Measurable indicators of output*		% increase	Economics of demonstration (Rs./ha)			
					Demo	Local		Gross Cost	Gross Return	Net Return	BCR
Dantewara	Fish farming	Fish culture span	6	0.8	-	-	-	-	-	-	-

In **Odisha,** this intervention **In Kendrapara KVK**, 25 demonstrations conducted under improved pisciculture and covered 1.0 ha. Resulted increased 74.51 percent yield.

KVK	Technology demonstrated	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Unit/ No. / Area (ha)	Measurable indicators of output*		% increase
					Demo	Local	
Kendrapara	Demonstration on Indian major carp	Releasing of fingerling in the community tank (20 farmers	25	1	890	510	74.51

Economic Performance KVKs in Odisha

KVK	Technology demonstrate	Critical input (Variety, Fertilizer / Chemicals doses,)	Economics of demonstration (Rs./ha)				Economics of demonstration (Rs./ha)			
			Demo				Local			
			Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net Return	BCR
Kendrapara	Demonstration on Indian major carp	Releasing of fingerling in the community tank (20 farmers	222,000	445000	223,000	2.00	165,000	255,000	90,000	1.55

Glimpses of Livestock Activities in NICRA

Breed Up-Gradation (Jamunapari)

Mineral Mixture Supplementation

Green Fodder Augmentation

Fisheries Motivation Programme

Azolla production at farmer field

Demonstration of Backyard Poultry Chicks (Kadaknath)

Fish seed production in Pond

Composite Fish culture Technology

Breed improved in poultry

5. Institutional Interventions

This module consist of institutional either by strengthening the existing ones or initiating new owns relating to seed ban, fodder bank, commodity groups, custom hiring centre, collective marketing group, introduction of weather index based insurance and centre, literacy through a village weather station will be part of this module.

Salient Achievements of Institutional Intervention under NICRA Villages in Zone VII

- 384 Farmers benefited under Climate literacy through a village level weather station
- 197 Farmers benefited under Collective marketing
- 270 Farmers benefited under Commodity groups
- 71 Farmers benefited under Fodder bank
- 311 Farmers benefited under Seed bank

Seed Bank

In seed bank intervention Datia **KVK (Madhya Pradesh)** have worked under participatory seed production program on Soybean and stored 138.01q seed in seed bank . **In Morena KVK** 80 demonstrations conducted under participatory seed production program on Pigenpea and wheat crop and stored 50q seed. **In Guna KVK,** 30 demonstrations conducted under participatory seed production program on soybean and stored 62.5 q seed. **In Satna** 44 demonstrations conducted under participatory seed production program on Green gram, chickpea, mustard and wheat crop and stored 28.2q seed.

KVK	Details of activity			Critical input (Breed / Variety / Medicine doses,)	No. of farmers	Quantity (q)
	Name of crops / Commodity groups / Implements	Quantity / Number / Rent / Charges	Technology used in seed / fodder bank & function of groups			
Datia	Soybean	9661 kg	Short duration variety JS-95-60	Seed JS-95-60	95	138.01
Morena	Training on Commercial seed production in Pigeonpea	Rs. 5.00 lakhs / year	One society had been developed a seed processing unit.	ICPL -88039 , Wheat (MP-RVW-4106	80	50
Guna	Soybean, Gram, Wheat	425 q.	1 group has developed	JS 93-05, 95-60, JG 6, JW 3173	30	62.5
Satna	Green gram	120 kg	Seed grading, safe storage, exchange of grains with seed	Samrat	12	8
Satna	Chickpea	250 kg	Seed grading, safe storage, exchange of grains with seed	JG-11	8	2.2
Satna	Mustard	75kg	Seed grading, safe	Pusa Tarak	11	15

KVK	Details of activity			Critical input (Breed / Variety / Medicine doses,)	No. of farmers	Quantity (q)
	Name of crops / Commodity groups / Implements	Quantity / Number / Rent / Charges	Technology used in seed / fodder bank & function of groups			
			storage, exchange of grains with seed			
Satna	Wheat	300 kg	Seed grading, safe storage, exchange of grains with seed	JW-17	13	3

In Chhattisgarh, Dantewara KVK have worked on seed bank intervention. 28 demonstrations conducted under participatory seed production program on Paddy, Green gram, crop and storage 14q seed in seed bank.

KVK	Details of activity			Critical input (Breed / Variety / Medicine doses,)	No. of farmers	Quantity (q)
	Name of crops / Commodity groups / Implements	Quantity / Number / Rent / Charges	Technology used in seed / fodder bank & function of groups			
Bilaspur	Rice/ Durgeshwari	1group	Seed production technology	Rice Durgeshwari foundation seed	20	8
Dantewara	Rice (Samleshwari)	120.0 q	Training organized for seed production	Seed-Rice (Samleshwari) and fertilizer	5	4
Dantewara	Green gram (Pusa vishal)	24.0 q	Training organized for seed production	Seed -Green gram (Pusa vishal)	3	2

In Odisha, Ganjam KVK has worked on seed bank intervention. 34 demonstrations conducted under participatory seed production program on Paddy crop and Storage 14 q seed.

KVK	Details of activity			Critical input (Breed / Variety / Medicine doses,)	No. of farmers	Quantity (q)
	Name of crops / Commodity groups / Implements	Quantity / Number / Rent / Charges	Technology used in seed / fodder bank & function of groups			
Ganjam	Paddy	-	High Yield short duration & drought resistant seed	Khandagiri, Sahabhagi Dhan	34	14

Fodder Bank

In Guna KVK (Madhya Pradesh) has worked on Fodder bank intervention. 10 demonstrations conducted under participatory fodder production program on community lands and stored 83.0 q seed. **In Morena KVK,** 50 demonstrations conducted under Training on Commercial seed production Barseem and stored 30 q seed.

KVK	Details of activity			Critical input (Breed / Variety / Medicine doses,)	No. of farmers	Quantity (q)
	Name of crops / Commodity groups / Implements	Quantity / Number / Rent / Charges	Technology used in seed / fodder bank & function of groups			
Morena	Training on Commercial seed production Barseem, Short duration var. Pigeonpea	Rs. 6.00 lakhs / year	seed production co. societies were registered and working for farming community	Barseem	50	30
Guna	Wheat	460t.	1 group has developed	Wheat Straw	10	83

In Dantewara KVK (Chhattisgarh) has worked on Fodder bank intervention. 5 demonstrations conducted under participatory fodder production

KVK	Details of activity			Critical input (Breed / Variety / Medicine doses,)	No. of farmers	Quantity (q)
	Name of crops / Commodity groups / Implements	Quantity / Number / Rent / Charges	Technology used in seed / fodder bank & function of groups			
Dantewara	Maize	10	Training organized for fodder production	JM 216	5	2

In Sonepur KVK (Odisha) has worked on Fodder bank intervention. In this intervention 6 demonstrations conducted under Hybrid Technology in Stylo and Napier Grass seed.

KVK	Details of activity			Critical input (Breed / Variety / Medicine doses,)	No. of farmers	Quantity (q)
	Name of crops / Commodity groups / Implements	Quantity / Number / Rent / Charges	Technology used in seed / fodder bank & function of groups			
Sonepur	Hybrid Napier		Hybrid Napier	Hybrid Napier	6	

Commodity Groups

In Commodity group's intervention **Guna KVK (Madhya Pradesh)** has worked and 10 groups have developed and covered 10 ha area. **In Morena KVK**, 40 farmers grouped with one society under this intervention.

KVK	Details of activity			Critical input (Breed / Variety / Medicine doses,)	No. of farmers	Quantity (q)
	Name of crops / Commodity groups / Implements	Quantity / Number / Rent / Charges	Technology used in seed / fodder bank & function of groups			
Morena	Climate risk management commeity	1	One society had been developed a climate risk processing unit. in village level	All facility in maintenances climate seed, implement , fertilizers and other document	40	-
Guna	Climate Risk Management Committee	1	1 group has developed	Technical guidance and practices related to Climate Risk Management Committee	10	10

In Odisha, In Ganjam KVK have developed Commodity groups. 146 farm families have benefited and covered 64 ha area. **Jharsuguda KVK** have developed 4 WSHG Commodity groups on commodity basis viz. Oyster mushroom , Marigold, Rose, Paddy straw mushroom and Village Climate Risk Management Committee (CRMC) to take up the overall activities of the project grouped. 40 Farmers were Rearing of poultry as backyard enterprise and 30 farmers were Up gradation of breed in buck.

KVK	Details of activity			Critical input (Breed / Variety / Medicine doses,)	No. of farmers	Quantity (q)
	Name of crops / Commodity groups / Implements	Quantity / Number / Rent / Charges	Technology used in seed / fodder bank & function of groups			
Ganjam	6	16 member	Village Climate Risk Management Committee (CRMC): to take up the overall activities of the project	All types of help and commodity during disaster collected from different source.	146 farm family	64
Jharsuguda	Oyster mushroom			Spawn bottles & polythenes	1 WSHG	20 (200 beds)
Jharsuguda	Poultry	792 nos.	Rearing of poultry as backyard enterprise	Chicks(Rainbow)	40	30 units

KVK	Details of activity			Critical input (Breed / Variety / Medicine doses,)	No. of farmers	Quantity (q)
	Name of crops / Commodity groups / Implements	Quantity / Number / Rent / Charges	Technology used in seed / fodder bank & function of groups			
Jharsuguda	Buck	3 nos.	Up gradation of breed	Black bengal	30	10 units
Jharsuguda	Marigold		Income generation through floriculture	Seedlings	1 WSHG	200 nos.
Jharsuguda	Rose		Income generation through floriculture	Rose graft Vermi compost- 1 q.	1 WSHG	225 no.
Jharsuguda	Paddy straw mushroom			Spawn bottles & polythenes	1 WSHG	20 (200 beds)

Custom hiring centre

In Madhya Pradesh, Datia **KVK** has worked on Custom hiring centre intervention in which 77 demonstrations were conducted and covered 140 ha area. Also Custom hiring implements were used on rental basis M.B. Plough, Disk Harrow, Rotavator Ferti-seed Drill, Multicrop thresher, Sprinkler set, Diesel pump etc. **In Guna KVK** has worked on Custom hiring centre intervention in which 68 demonstrations were conducted and covered 283 ha area. Also Custom hiring implements were used on rental basis M.B. Plough, Disk Harrow, Rotavator Ferti-seed Drill, Multicrop thresher, Sprinkler set, Diesel pump.**In MorenaKVK** has worked on Custom hiring centre intervention in which 45 demonstrations were conducted and covered 52 ha area. Also Custom hiring implements were used on rental basis M.B. Plough, Disk Harrow, Rotavator Ferti-seed Drill, Multicrop thresher, Sprinkler set, Diesel pump. **In Balaghat KVK** has worked on Custom hiring centre intervention in which 32 demonstrations were conducted and covered 13.04 ha area. Also Custom hiring implements were used on rental basis Paddy reaper. **In Tikamgarh KVK** has worked on Custom hiring centre intervention in which 7 demonstrations were conducted and covered 15 ha area. Also Custom hiring implements were used on rental basis Plough, Sprinkles and Reaper. **In Chhattarpur** has worked on Custom hiring centre intervention in which 2 demonstrations were conducted and covered 8 ha area.

KVK	Details of activity			Critical input (Breed / Variety / Medicine doses,)	No. of farmers	Quantity (q)
	Name of crops / Commodity groups / Implements	Quantity / Number / Rent / Charges	Technology used in seed / fodder bank & function of groups			
Balaghat	Paddy	Rent-250/-	Harvesting of Paddy By reaper		32	13.04

KVK	Details of activity			Critical input (Breed / Variety / Medicine doses,)	No. of farmers	Quantity (q)
	Name of crops / Commodity groups / Implements	Quantity / Number / Rent / Charges	Technology used in seed / fodder bank & function of groups			
Chhattarpur	Ferti-seed drill	Rs 50 per hour			2	8
Tikamgarh	Chaff cutter	01/01/ Rs.10/hr	-	Chaff cutter	1	5
Tikamgarh	MB plough	01/01/ Rs.50/hr	-	MB plough	5	5
Tikamgarh	Sprinkler set	01/01/ Rs.10/hr	-	Sprinkler set	1	5
Datia	Ferti cum seed drill	Rs. 20/hr, Rs 150/day	Time and labour saving, water saving, drudgery reduction	Implements	77	140
Morena	Zero till seed drill, ridge bed planter, Leveller, M.B. Plough, Sprinkler set, Disc harrow, Power sprayer,	-	In-situ moisture conservation And use in difference NICRA activity	Wheat ,Barley, mustard , chickpea ,Green gram ,maize and soybean	45	52
Guna	MB Plough, Hand wheel hoe, Seed cum Ferti –drill, Rotavator, Post hole digger, Power sprayer, Reaper, Sprinkler set, Engine pump set.	Rs. 3200	Technology Demonstrate In Custom hiring	MB Plough, Hand wheel hoe, Seed-cum- fertilizer-drill, Rotavator, Post hole digger, Power sprayer, Reaper, Sprinkler set, Engine pump set.	68	283

In **Chhattisgarh, Bilaspur KVK** have worked as Custom hiring through custom hiring Reaper was used on rental basis and conducted 10 demonstration on 2.0 ha area. **In Bhatapara KVK** have worked as Custom hiring centre through Sprinkler set, HDPE pipe,Multi crop thresher, Sprayer and Seed drill cum fertilizer for sowing of Chickpea and zero till Seed cum fertilizer for sowing of wheat and conducted 33 demonstration and covered 23.21 ha area in NICRA village. **In Dantewara KVK** have worked as Custom hiring through Custom hiring centres for

timely Ploughing /field preparation/planting/irrigation/threshing was used on rental basis and conducted 640 demonstration on 138 ha area.

KVK	Details of activity			Critical input (Breed / Variety / Medicine doses,)	No. of farmers	Quantity (q)
	Name of crops / Commodity groups / Implements	Quantity / Number / Rent / Charges	Technology used in seed / fodder bank & function of groups			
Bhatapara	Sprinkler Set	10(Rs/hr)	50 Rs./day	To provide farm machinery on hire basis for timeline operation of agriculture.	4	3
Bhatapara	HDPE Pipe	-	5 Rs./day	To provide farm machinery on hire basis for timeline operation of agriculture.	22	15
Bhatapara	Seed Drill cum fertilizer	100(Rs/hr)	700 Rs./day	To provide farm machinery on hire basis for timeline operation of agriculture.	2	-
Bhatapara	Multi crop Thresher	250(Rs/hr)	800 Rs./day	To provide farm machinery on hire basis for timeline operation of agriculture.	2	2
Bhatapara	TD Leveller	100(Rs/hr)	500 Rs./day	To provide farm machinery on hire basis for timeline operation of agriculture.	1	1.21
Bhatapara	Sprayer	-	30 Rs./day	To provide farm machinery on hire basis for timeline operation of agriculture.	2	2
Bilaspur	Reaper	01	Rs.425/acre		10	2
Dantewara	Custom hiring centers for timely Ploughing /field preparation/planting/irrigation/threshing	13 Implements	Training organized for agriculture implements & there uses for crop production	All 13 implements are actively work under CHC	640	138

In **Odisha**, **Ganjam KVK** have worked as Custom hiring centre, these centers implements were used on rental basis like MB plough, Garuda Mini weeder Sprinkler, Power tiller, Power sprayer, Diesel Water pump Set multi crop thresher, leveler, for land preparation and sowing.154 farmers have benefited and covered 64 ha area. **Kendrapara KVK** have worked as Custom hiring centre, these centers implements were used on rental basis like Power tiller, reaper, Power tiller ,Paddy thresher cum winnower, Knapsack Sprayer, etc for spraying and winnowing. 102 farmers have benefited and covered 47 ha. **Sonepur KVK** have worked as Custom hiring centre, these centers implements were used on rental basis like M.B. Plough, Rotavator, seed cum fertilizer drill, power weeder, reaper, multi crop thresher, leveler, for land preparation and sowing.72 farmers benefited in NICRA village.

KVK	Details of activity			Critical input (Breed / Variety / Medicine doses,)	No. of farmers	Quantity (q)
	Name of crops / Commodity groups / Implements	Quantity / Number / Rent / Charges	Technology used in seed / fodder bank & function of groups			
Sonepur	M.B. Plough ,Rotavator ,Seed-cum-fertilizer drill, Reaper, Multicrop thresher ,Land leveler, Power weeder	Rotavator-1-Rs.20/hr,Reaper-1-Rs 100/hr,M.B.Plough-1-Rs.20/hr,Powerweeder-1-Rs20/hr,Seed-cum-fertilizer drill-1-Rs.30/hr,diesel pumpset-1-Rs.30/hr,Multicrop thresher Rs.50/hr.	Custom hiring	M.B.Plough ,Rotavator ,Seed-cum-fertilizer drill,Reaper,Multicrop thresher ,Land leveler, Power weeder,	72	1
Kendrapara	Power tiller	Rs.200 per hr	Ploughing	Implements	25	10
Kendrapara	Paddy thresher cum winnower	Rs. 20 per hr	Harvesting	Implements	31	5
Kendrapara	Power sprayer	Rs.20 per hr without fuel	Disease controll	Implements	12	11
Kendrapara	Knapsack sprayer	Rs. 5 per hr	Disease Management	Implements	15	8
Kendrapara	Diesel Water pump set (3HP)	Rs. 20 without diesel	Irrigation	Implements	8	6
Kendrapara	Diesel Water pump set (3.5 HP)	Rs. 20 without diesel	Irrigation	Implements	11	7

KVK	Details of activity			Critical input (Breed / Variety / Medicine doses,)	No. of farmers	Quantity (q)
	Name of crops / Commodity groups / Implements	Quantity / Number / Rent / Charges	Technology used in seed / fodder bank & function of groups			
Ganjam	Sprinkler(2 Nos)	Rs. 5/- per pipe Per day	Irrigation	Implements	10	3
Ganjam	Power tiller	Rs.40/- per hour	Ploughing	Implements	47	27
Ganjam	Power sprayer (1 nos.)	Rs. 30/- per hour	Disease control	Implements	21	06
Ganjam	Diesel Water pump Set (2HP)	Rs 20 /-per hour	Irrigation	Implements	12	14
Ganjam	Multi crop thresher	Rs. 40/- per hour	Harvesting	Implements	28	-
Ganjam	MB plough	Rs 10 /- per day	Tillage	Implements	18	4
Ganjam	Garuda Mini weeder	Rs 20 /-per hour	Weeding	Implements	10	8
Ganjam	Seed –cum-fertilizer Drill	Rs 50 /-per hour	Sowing	Implements	8	2
Jharsuguda	Power tiller	Rs.350/hr	Ploughing	Implements	-	26 ac.
Jharsuguda	Paddy reaper	Rs.500/hr	Reaping paddy	Implements	-	8 ac.
Jharsuguda	Power sprayer	Rs.20/day	Spraying pesticides	Implements	-	30 days
Jharsuguda	Winnower	Rs.20/day	Paddy winnowing	Implements	-	16 days

Collective marketing

In **Madhya Pradesh, Guna KVK** have worked on Collective marketing. In Collective marketing intervention 47 farmers were benefited and covered 248 ha area. In Morena KVK have worked in Collective marketing. In Collective marketing intervention different crops seed like Maize, soybean, wheat barley, rice, turmeric and mustard have marketed in NICRA villages. 150 farmers have benefited and covered 55 ha area.

KVK	Details of activity			Critical input (Breed / Variety / Medicine doses,)	No. of farmers	Quantity (q)
	Name of crops / Commodity groups / Implements	Quantity / Number / Rent / Charges	Technology used in seed / fodder bank & function of groups			
Morena	Maize , soybean , wheat barley , rice ,turmeric and mustard	-	Market facility and high value of input	Maize ,soybean , wheat, barley, rice ,turmeric and mustard	150	55
Guna	Soybean, wheat & Coriander	10	Group marketing	Soybean, wheat & Coriander	47	248

Climate literacy through a village level weather station

In Madhya Pradesh Guna KVK has worked On Climate literacy through a village level weather station. In this intervention Literacy about short duration variety of Soybean to mitigate late season drought & frost management in Coriander through spraying of Sulpher with Boron 71 farmers benefited. **In Morena** 200 farmers benefited using sowing with Zero till seed drill sowing in wheat ,barley and green gram literacy, Maize crop cultivation literacy. **In Satna** 15 Group discussion conducted using sowing with VRCMC.

KVK	Details of activity			Critical input (Breed / Variety / Medicine doses,)	No. of farmers	Quantity (q)
	Name of crops / Commodity groups / Implements	Quantity / Number / Rent / Charges	Technology used in seed / fodder bank & function of groups			
Morena	Zero till seed drill sowing in wheat ,barley and green gram literacy	-	Technology development	-	200	-
Guna	Literacy about short duration variety of Soybean to mitigate late season drought & frost management in Coriander through spraying of Sulpher with Boron	1	Technical awareness development	Gram, Wheat & Coriander	71	15
Satna	VRCMC		Group discussion		15	15

In CG Dantewara KVK has worked On Climate literacy through a village level weather station. In this intervention AWS, GPS 98 farmers benefited.

KVK	Details of activity			Critical input (Breed / Variety / Medicine doses,)	No. of farmers	Quantity (q)
	Name of crops / Commodity groups / Implements	Quantity / Number / Rent / Charges	Technology used in seed / fodder bank & function of groups			
Dantewara	Rainfall, temperature, humidity, wind speed & direction,	4 Equipments in village small weather station	Training organized for assessment of weather condition	VCRMC	98	-

Glimpses of Institutional Intervention in NICRA

M B Plough

Ferti Cum Seed Drill

Multi Crop Thresher

Seed Bank Programme in NICRA village

Hand wheel hoe for weed control

Sowing By Zero Till Seed Dril

Construction of Biogas unit at Farmers field

Demonstration of Vermicompost unit

Lac Cultivation

6. Capacity building

Under this objectives need based training will be provided to scientist on the tools and methodology of climate change research at the best of the institutions around the world as listed in the table. Simultaneously, capacity building of senior faculty through short term exposure visits, extension workers and lead farmers to filed demonstration sites will be taken up to enhance the awareness and coping capacity of different stakeholders to climate changes. The capacity building also includes visit of foreign experts to India to train India scientist.

A total 5327 farmers benefited through training /Capacity building in the Zone VII during the year 2013-14. Out of 5327 farmers (1733 male and 409 female in M.P, 1457 male and 450 female in CG, and 831 male and 447 female in Odisha) during the training, 217 courses were covered.

7. Extension activities

In order to create awareness among the farmers in region, large numbers of extension activities were organized by KVK at the farms and the farmer's fields. 4920 farmers benefited through 568 farmers Climate change, 1915 farmers by Field day, 105 farmers by Group discussion, 469 farmers by Animal Health camp, 35 farmers by Nursery Seedlings, 653 farmers by Soil Health camp, 671 farmers by Scientist -farmers interaction & Discuss about IPM, 504 farmers benefited through Exposure Visit in during the year.

Glimpses of Extension activities & Capacity Building in NICRA

VCRMC Meeting

Exposure Visit

Field day on Berseem (JB 5)

Animal Health Camp

Krishak Sangosthi

Visit of NICRA village farmers to Crop Cafeteria

Celebrate Parthenium Awareness Week

Monitoring of NICRA projects VIP Visitor's

Farmers Training

8. Status of custom hiring Services

KVK Bhatapara

S. No.	Name of implements	Date of Purchase	Operational performance		Revenue Generated (Rs.)	No. of Farmers benefited
			No. of hrs.	Area covered (ha)		
1	Sprinkler Set	29-03-11	2 days	3	600	4
2	HDPE Pipe	3/29/2012	20 days	15	5380	22
3	Seed Drill cum fertilizer	29-03-13	2 days	-	1050	2
4	Multicrop Thresher	29-03-14	1hr.	2	250	2
5	Chaff cutter	29-03-15	-	-	-	-
6	MB Plough	29-03-16	-	-	-	-
7	TD Leveller	29-03-17	1 hr	1.21	100	1
8	Cycle wheel hoe	26-03-11	-	-	-	-
9	Hand hoe	28-03-11	-	-	-	-
10	Sprayer	26-03-11	4 days	2	120	2
11	Power tiller	26-03-11	-	-	-	

KVK Bilaspur

S. No	Name of implements	Date of Purchase	Operational performance		Revenue Generated (Rs.)	No. of Farmers benefited
			No. of hrs.	Area covered (ha)		
1	Rotavator	31/3/2011	2	0.8	500	1
2	Reaper	31/3/13	60	24	16000	45
3	Tractor drawn seed cum fertilizer drill	31/3/13	2	0.8	500	1

KVK Chhatarpur

S. No	Name of implements	Date of Purchase	Operational performance		Revenue Generated (Rs.)	No. of Farmers benefited
			No. of hrs.	Area covered (ha)		
1	Ferti-seed drill	20/03/2012	20	8	1000	2

KVK Dantewara

S. No.	Name of implements	Date of Purchase	Operational performance		Revenue Generated (Rs.)	No. of Farmers benefited
			No. of hrs.	Area covered (ha)		
1	Seed cum ferti. Drill 9 Tynes	11.01.12	32	20.5	1600	38

2	Hymetic Power Operated Sprayer cum Duster	28.03.11	32Day	32	1600	64
3	5 HP Botliboi Diesel Pump	28.03.11	8 Day	4	2000	24
4	Sprinkler set (7 Nozzles)	28.03.11	16 Day	16	800	41
5	Tractor Drawn Rotavator	28.03.11	16	5	800	34
6	Tractor Drawn Land Leveller	28.03.11	10 Day	4	1000	40
7	Hand Rotted Chap Cutter	28.03.11	80	Nil	1200	70
8	Bull Drawn Bhoram Dev Seed Drill	28.03.11	16 Day	8	800	35
9	Cycle while hand hoe	28.03.11	8 Day	10	900	2
10	Tractor Drawn Thresher	28.03.11	42	18	13642	122
11	Motor Drawn Reaper	28.03.11	20	7	2000	71
12	Tractor Drawn Cultivator	28.03.11	24	8	1200	33
13	Hand Rotted Paddy Weeder	28.03.11	12 Day	6	600	36

KVK Datia

S. No.	Name of implements	Date of Purchase	Operational performance		Revenue Generated (Rs.)	No. of Farmers benefited
			No. of hrs.	Area covered (ha)		
1	M B Plough	March 2011	30	15	300	6
2	Disk Harrow	March 2011	33	16.5	330	21
3	Ferti-cum-seed drill	March 2011	66	33	1250	7
4	Rotavator	March 2011	17	8.5	340	4
5	Leveler	March 2011	4	1	20	1
6	Groundnut decorticator	June 2011	6 days	3	-	6
7	Bullock drawn seed drill	September 2012	6	1	60	1
8	Multi crop thresher	March 2011	104	52	5200	29
9	Rain gun	March 2012	5 Days	10	50	2

KVK Ganjam

S. No.	Name of implements	Date of Purchase	Operational performance		Revenue Generated (Rs.)	No. of Farmers benefited
			No. of hrs.	Area covered (ha)		
1	Sprinkler(2 Nos)	March 2011	14	3ha	400	10
2	Power tiller	March 2011	140	27ha	5600	47
3	Power sprayer(1 nos.)	March 2011	20	06ha	600	21
4	Diesel Water pump Set (2HP)	March 2011	60	14ha	600	12
5	Multi crop thresher cum winnower	March 2011	30	-	1200	28
6	MB plough	March 2011	10	4ha	100	18
7	Garuda Mini weeder	March 2011	20	8 ha	400	10
8	Seed cum fertilizer drill	March 2011	5	2ha	250	8

KVK Guna

S. No.	Name of Implements	Date of Purchase	Operational performance		Revenue Generated (Rs.)	No. of Farmers benefited
			No. of hrs.	Area covered (ha)		
1	MB Plough	18-06-2011	2	3	600	5
2	Hand wheel hoe	15-07-2011	3	3	300	6
3	Seed cum Fertilizer – drill	06-06-2011	5	18	500	12
4	Rotavator	09-07-2011	3	30	500	15
5	Post hole digger	23-07-2011	-		-	-
6	Power sprayer	07-05-2011	8	195	600	17
7	Reaper	06-06-2011	6	30	600	11
8	Sprinkler set	23-07-2011	1	4	100	2
9	Engine pump set	05-08-2011	-	-	-	-

KVK Jharsuguda

S. No.	Name of implements	Date of Purchase	Operational performance		Revenue Generated (Rs.)	No. of Farmers benefited
			No. of hrs.	Area covered (ha)		
1	Power tiller	31/03/11	54 hrs.	24 ac.	13,500/-	21

2	Paddy reaper	31/03/11	12 hrs.	8 ac.	2750/-	6
3	Power sprayer	31/03/11		30 days	600/-	10
4	Winnower	31/03/11		16 days	320/-	

KVK Kendrapara

S. No.	Name of implements	Date of Purchase	Operational performance		Revenue Generated (Rs.)	No. of Farmers benefited
			No. of hrs.	Area covered (ha)		
1	Power tiller	March 2010	15hr	10 ha	3000/-	25
2	Paddy thresher cum winnower	March 2010	50hr	5ha	1000/-	31
3	Power sprayer	March 2010	42.5 hr	11ha	850/-	12
4	Knapsack sprayer	March 2010	46 hr	8ha	230/-	15
5	Diesel Water pump set (3HP)	March 2010	46hr	6ha	920/-	8
6	Diesel Water pump set (3.5 HP)	March 2010	53hr	7ha	1060/-	11

KVK Morena

S. No.	Name of implements	Date of Purchase	Operational performance		Revenue Generated (Rs.)	No. of Farmers benefited
			No. of hrs.	Area covered (ha)		
1	Zero till seed drill,	20/02/2012	315	189	8600	350
2	Seed cum fertilizer drill	20/02/2012	148	150	2000	210
3	Tractor drawn bad planter	20/02/2012	58	150	5200	120
4	Multi crop turbo seeder	20/02/2012	35	9.6	500	25
5	Tractor drawn land leveller	27/02/2012	35	12	830	22
6	Disc Tractor drawn R.B. plough	27/02/2012	30	5	800	45
7	Tractor drawn disk harrow	27/02/2012	28	5.24	420	40
8	High Power sprayer aspee	21/03/2012	15	5	500	24
9	Power sprayer cum duster	27/02/2012	34	15	500	140
10	Hand sprayer	27/02/2012	58	15	550	40

S. No.	Name of implements	Date of Purchase	Operational performance		Revenue Generated (Rs.)	No. of Farmers benefited
			No. of hrs.	Area covered (ha)		
11	Seed treated drum	27/02/2012	5	3	300	25

KVK Satna

S. No.	Name of implements	Date of Purchase	Operational performance		Revenue Generated (Rs.)	No. of Farmers benefited
			No. of hrs.	Area covered (ha)		
1	MB Plough	02.12.11	16	3	1600	15
2	Seed cum fertilizer drill	30.03.11	14	4	1400	12
3	Zero Tillage		7.5	2	750	5
4	Shahdol Plough		-	14	-	28
5	Desi Plough		8	3	-	5

KVK Sonepur

S. No.	Name of implements	Date of Purchase	Operational performance		Revenue Generated (Rs.)	No. of Farmers benefited
			No. of hrs.	Area covered (ha)		
1	Land Leveller	March 2011		2.4	720/-	7
2	M.B. Plough	March 2011		0.3	880/-	16
3	Rotavator	March 2011		22	1920/-	28
4	Reaper	March 2011		6.6	2080/-	12
5	Diesel pump set	March 2011		5.4	1040/-	9

KVK Tikamgarh

S. No.	Name of implements	Date of Purchase	Operational performance		Revenue Generated (Rs.)	No. of Farmers benefited
			No. of hrs.	Area covered (ha)		
1	Chaff cutter	March2012	240	5	100	1
2	M.B. plough	March2012	10	5	500	5
3	Reaper	March2012	10	10	500	6
4	Sprinkler set	March2012	5	5	50	1

9. Monitoring of NICRA Projects

KVK Balaghat

Name of KVK	Name of NICRA Village	Name & designation of visitors	Date of visit
Balaghat	Koste	Shri S S Maravi (PD - Atma), Balaghat	12/11/2013
Balaghat	Koste	Dr. N K Seth (Senior Scientist) Deputy Director Extant ion Services JNKVV Jabalpur , MP	19/12/2013
Balaghat	Koste	Dr. S R K Singh, ZPD Zone Vii , Jabalpur M.P.	15/03/2014

KVK Chhattarpur

Name of KVK	Name of NICRA Village	Name & designation of visitors	Date of visit
Chhatarpur	Pannapura	Dr. SRK Singh (Senior Scientist) ZPD Jabalpur	04/04//2014

KVK Tikamgarh

Name of KVK	Name of NICRA Village	Name & designation of visitors	Date of visit
Tikamgarh	Kanti	Dr. S.R.K. Singh, Sr. Scientist, ZPD Zone-VII, Jabalpur	5/10/2013
Tikamgarh	Kanti	Japani agricultural scientists visited the Kanti village during Kharif 2013	10/8/2013

KVK Bhatapara

Name of KVK	Name of NICRA Village	Name & designation of visitors	Date of visit
Bhatapara	Bakulahi	Dr. S.S. Tomar, DES , RSKVV, Gwalior	3/9/2013
Bhatapara	Bakulahi	Dr. S.R.K. Singh, Senior Scientist ZPD, Jabalpur	3/9/2013
Bhatapara	Bakulahi	Dr. D.S. Thakur	3/9/2013
Bhatapara	Bakulahi	DR. D.K. Sharma , Dean, DKSCA, Bhatapara	3/9/2013
Bhatapara	Bakulahi	Dr. K.L. Nandeha , Senior Scientist,	3/9/2013
Bhatapara	Bakulahi	Dr. J.M. Pandagare, Principle Scientist ,DKS Farm Bhatapara	3/9/2013
Bhatapara	Bakulahi	Dr. Dhananjay Kathal, RA, ZPD, Jabalpur	3/9/2013
Bhatapara	Bakulahi	Dr. Chandravanshi, PC KVK, Dhamtari	10/12/2013
Bhatapara	Bakulahi	Dr. A.P.Agrawal, Principal Scientist AICRP, Wheat, Bilaspur	10/12/2013
Bhatapara	Bakulahi	Dr. V. Verma, Principal Scientist, LWM,	10/12/2013

KVK Dantewara

Name of KVK	Name of NICRA Village	Name & designation of visitors	Date of visit
Dantewara	Heeranar	Shri J.L. Chaudhri, Principal Scientist, I.G.K.V. Raipur	20/12/13
Dantewara	Heeranar	Dr. A.P. Dwivedi Sr. Scientist, ZPD, J.N.K.V. Jabalpur	21/03/2013
Dantewara	Heeranar	Dr. R.N. Sahu Programme CoordinatorKVK Bijapur	28/03/13
Dantewara	Heeranar	Shri K.C. Devsenapati ,Collector & DM Dantewada	22/07/13
Dantewara	Heeranar	Dr. N.Pandey	25/07/13

Name of KVK	Name of NICRA Village	Name & designation of visitors	Date of visit
Dantewara	Heeranar	HOD, AgronomyIGKV Raipur	21/08/13
Dantewara	Heeranar	Dr. (Major) G.K.Shrivastav	12/9/2013
Dantewara	Heeranar	Prof. AgronomyIGKV Raipur	25/09/13
Dantewara	Heeranar	Dr. S.R. Patel, Principal Scientist, I.G.K.V. Raipur	25/09/13
Dantewara	Heeranar	Dr. S.S. Shaw, DSW, I.G.K.V. Raipur	31/03/13
Dantewara	Heeranar	Dr. D.A. Sarnaik DRS, I.G.K.V. Raipur	31/03/13
Dantewara	Heeranar	Dr. D. Kathal R.A.(NICRA) ZPD Jablpur	18/05/13
Dantewara	Heeranar	Dr. R.N.S. Banafar DEAN, COA Janjgir	11/9/2013
Dantewara	Heeranar	Dr. B. Sahu Programme Coordinator	4/2/2014
Dantewara	Heeranar	KVK Kanker	26/02/14

KVK Datia

Name of KVK	Name of NICRA Village	Name & designation of visitors	Date of visit
Datia	Sanora, Barodi, Rajpur, Kharag	Dr. U. P. S. Bhadauria, Jaoint Dyrecter Extension, RVSKVV, Gwalior	10.06.2013
Datia	Sanora, Barodi, Rajpur, Kharag	Dr. A.K.Singh, ZPD Zone …	23.09.2013
Datia	Sanora, Barodi, Rajpur, Kharag	Sh. H. C. Mehar, Registrar, RVSKVV, Gwalior	10.10.2013
Datia	Sanora, Barodi, Rajpur, Kharag	Dr. Dhananjay Kattal, Research Associate,ZPD Zone-7 Jabalpur	20.11.2013
Datia	Sanora, Barodi, Rajpur, Kharag	Sh. Shashikant Pandey, Documentary Film Maker, Appointed from CRIDA Hyderabad, New Delhi	10-12.03.2014

KVK Morena

Name of KVK	Name of NICRA Village	Name & designation of visitors	Date of visit
Morena	Jigni	ICAR Reporting Team	13-16.03.2014
Morena	Jigni	Dr. Dhananjay kathal Research associate ZPD Jabalpur	21.11.2013
Morena	Jigni	Dr. S.S.Tomar Directar of Extension Service R.V.S.K.V.V. Gwalior (M.P.)	17/01/2013
Morena	Jigni	Dr. B.S. Reddy Scientist C.R.I.D.A. Hyderabad (A.P	27/02/2013
Morena	Jigni	Dr. A. Dubey Scientist C.I.A.E. BHOPAL (M.P.)	27/02/2013
Morena	Jigni	Hon'able V.C Prof. AK, Sing R.V.S.K.V.V. Gwalior (M.P.)	2/4/2013
Morena	Jigni	Dr. S.S.Tomar Directar of Extension Service R.V.S.K.V.V. Gwalior (M.P.)	2/4/2013
Morena	Jigni	Collector, Morena & PI NICRA	6/6/2013

KVK Guna

Name of KVK	Name of NICRA Village	Name & designation of visitors	Date of visit
Guna	Sarkho	Dr. Y.P. Singh, Programme Coordinator, KVK, Morena	03.06.2013
Guna	Sarkho	Shri U.S. Tomar, PD-ATMA, Guna	22.09.2013
Guna	Sarkho	Dr. S.S. Tomar, ADR, ZARS, Morena, Dr. Y.D. Mishra, SMS, DES, RVSKVV, Gwalior	27.09.2013
Guna	Sarkho	Dr. Dhananjay Singh Kathal, RA, ZPD, Jabalpur	19.11.2013
Guna	Sarkho	Shri U.S. Tomar,PD ATMA & I/c D.D.A, Guna	08.02.2014

KVK Satna

Name of KVK	Name of NICRA Village	Name & designation of visitors	Date of visit
Satna	Bhargawan	Students from IIT Kharagpur	29.12.13

KVK Sonepur

Name of KVK	Name of NICRA Village	Name & designation of visitors	Date of visit
Sonepur	Badmal	Dr. S.R.K. Singh, Sr. Scientist, ZPD unit, Jabalpur, MP	06.09.13
Sonepur	Badmal	Dr. S.S.Tomar, Dean , DES, Gwalior, MP	06.09.13
Sonepur	Badmal	Dr. Ashok Mishra, Sr. Scientist, DLA Project, Phulbani	06.09.2013
Sonepur	Badmal	Dr. R.K. Raj,Deputy Director, DEE,OUAT, Bhubaneswar	23.07.2013
Sonepur	Badmal	Dr. Subash Chandra Mohapatra ,Join Director, DEE,OUAT, Bhubaneswar	12.02.2014

KVK Kendrapara

Name of KVK	Name of NICRA Village	Name & designation of visitors	Date of visit
Kendrapara	Kasotibali	Dr. Sreenath Dixit	19.07.2013
Kendrapara	Kasotibali	Dr. SRK Singh	25.11.2013

KVK Jharsuguda

Name of KVK	Name of NICRA Village	Name & designation of visitors	Date of visit
Jharsuguda	Bhoimunda	Zonal review team	9/5/2013

KVK Ganjam

Name of KVK	Name of NICRA Village	Name & designation of visitors	Date of visit
Ganjam-I	Chopara	Mr. Prasanta Ku. Panda, SMS (P.P), SANTOSH Ku. Samatray, SMS, Agril. Extension	8-4-2013, 4-5-2013, 11-6-2013,9-7-2013
Ganjam-I	Chopara	Debasis Sadangi, SMS (Soil.Sc.) Co-PI Prasanta Ku. Panda, SMS (P.P), Dr. Geetanjali Subudhi, SMS (Home Sc.), SANTOSH Ku. Samatray, SMS, Agril. Extension Mr. Dr. Smrutirekha Mallick SMS (Animal Sc.)	21-6-2013,17-9-2013, 16-10,13, 11-11-13,
Ganjam-I	Chopara	Prasanta Ku. Panda, SMS (P.P), SANTOSH Ku. Samatray, SMS, Agril. Extension Dr. Smrutirekha Mallick SMS (Animal Sc.)	13-6-2013, 8-7-2013, 2-8-2013, 14-8-2013,

7. Budget Allotted & Utilized for 2013-14

(Rs. in lakhs)

Zone/KVK	BE 2013-14	RE 2031-14	Expenditure as per AUC
ZPD	8.00000	6.00064	5.07254
Balaghat	7.50000	4.15000	4.07880
Bhatapara	7.50000	3.60000	3.59692
Bilaspur	7.50000	2.25000	2.06386
Chhattarpur	7.50000	3.15000	2.11466
Dantewada	7.50000	5.87546	5.87546
Datia	9.50000	6.35000	6.28871
Ganjam	7.50000	5.15000	4.97000
Guna	7.50000	4.80000	5.43476
Jharsuguda	7.50000	4.00000	4.31404
Kendrapara	7.50000	6.35000	6.20596
Morena	7.50000	6.05390	6.04505
Satna	7.50000	6.00000	5.94674
Sonepur	7.50000	5.95000	5.95000
Tikamgarh	7.50000	4.77000	4.48636
Total	**115.00000**	**74.45000**	**72.44386**

Zonal Summary of Module-wise Progress Report

Format NICRA Report (April, 2013 to March2014)

Module: 1. Natural Resource Management

Interventions	Technology demonstrate	No. of farmers	Area (ha)	Measurable indicators of output*	Economics of demonstration (Rs./ha)			
					Gross Cost	Gross Return	Net Return	BCR
1	2	3	4	5	6	7	8	9
Water saving irrigation methods	LLDP mulching with pot irrigation in mango plantation; In-situ Moisture Conservation Through Ridge & furrow methods in Cowpea, Radish; Dhanicha in paddy; Water saving irrigation system in Sugarcane + Coriander crop	68	9	Yield (q/ha), Increasing irrigated area	33983	92983	59000	3.05
Water harvesting and recycling for supplemental irrigation	Renovation of old Farm pond(Community tank), High value Vegetable production in harvested rain water Tomato, Chilli, Brinjal; Farm pod 70x50 Meter (7) repairing and maintenance in storage of water use in Rabi crop irrigation; Percolation tank for water harvesting and recycling for supplemental irrigation	84	26.5	3600 cum rain water harvest; Irrigation area increased by 8 acre; Improve ground water recharge and partial irrigation	31440	88,642	57202	2.78
In-situ moisture conservation RCT	Across the slope sowing method of ground nut, Green manuring in kharif fallow- Mustatd, Ploughing, Deep summer ploughing, Green Manuring dhaincha (Sesbania) One harrowing +Two ploughing + planking and sowing through seed cum fertilizer drill , Alkali soil reclamation Two ploughiung and planking. ; Direct seeded in line followed by weed control using post emergence weedicide; Utera Wheat technology	287	160.91	Moisture conservation and drainage; Check soil erosion , land leveling and moisture conservation; Yield (q/ha); No. of panicles /m2; 10-12 %; Summer Ploughing by MB plough	19530	35659	20673	2.01

Interventions	Technology demonstrate	No. of farmers	Area (ha)	Measurable indicators of output*	Economics of demonstration (Rs./ha)			
					Gross Cost	Gross Return	Net Return	BCR
1	2	3	4	5	6	7	8	9
	Vs Local Practice; Harrowing with rotawator; Line sowing with seed cum fertilizer drill ; Moisture conservation in Paddy							
Improved drainage in flood prone areas	Bed planting sowing method; Drainage channels to avoid flood hazard in Soybean crop	31	62.5	Avoid flood hazard in Soybean crop	12310	43720	31410	3.75
Conservation tillage where appropriate	Zero tillage in wheat after direct seeded rice, Moisture conservation during crop period in Soybean, Deep summer ploughing in paddy; Reduced land preparation period ,insect ,pest ,weeds and disease ,moisture conservation	108	80	Moisture conservation during drought period; q/ha	35175	83865	56788	1.49
Artificial ground water recharge	Sprinkler irrigation; De Silting of open Wells to improve irrigation water discharge capacity	7	16	Increase availability of irrigation water	33880	82600	47650	2.57
Any other (Micro irrigation systems, Recycling of organic matter, Soil reclamation, Vermicomposting unit, Bio gas)	Renovation of compost pit and use waste materials for vermi-compost; Utilization of available irrigation water through sprinkler; Minimization of nutrient cost through Vermicomposting; Reclamation of acidic soil in Maize by applying Lime; Energy generation through Biogas	36	7.21	Improves soil quality through conservation & restoration of bio-wastes, Soil status and keeping quality of produce increased; Yield increase by 12%, Saving of firewood 4.6 ton/year	12465	27894	15429	2.09

Module:2. Crop Production

Interventions	Technology demonstrated	No. of farmers	Area (ha)	Measurable indicators of output*		Economics of demonstration (Rs./ha)				Economics of Local (Rs./ha)			
				Demo/ ha	Local/ ha	Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net Return	BCR
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Advancement of planting dates of rabi crops in areas with terminal heat stress	Safflower var.JSI7, Gram var.JAKI 9218, , Dry sowing of wheat, high yielding variety suitable for late Sowing suitable for pigeon pea/ rice -wheat cropping system in zero till seed drill sowing method, Thermo Tolerant and early variety of Gram JG - 6, Thermo Tolerant Wheat variety JW 3173 suitable for limited irrigation condition , Green fodder Berseem variety JB – 5 , Paddy, Mustard, Gram, Green gram, Blak gram, Cabbage, Cauliflower, Tomato, Onion, Improved cultivation practices of Green gram	311	79.6	212.34	179.54	20665	63900	46659	3.09	20093	52285	33289	2.6
Custom hiring centres for timely planting	Used of the Seed drill for line sowing of Wheat GW273, Summer deep ploughing , Harrowing with rotawator, Line sowing with seed cum fertilizer drill , For	300	350	33.78	28.5	14658	39429	26438	2.69	14700	35343	20643	2.4

Interventions	Technology demonstrated	No. of farmers	Area (ha)	Measurable indicators of output*		Economics of demonstration (Rs./ha)				Economics of Local (Rs./ha)			
				Demo/ ha	Local/ ha	Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net Return	BCR
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	threshing crops used Tractor drawn Thresher, Use in zero till seed drill sowing method, Custom hiring for timely operations , Puddling of Paddy field, Varietal replacement disease & pest tolerant varieties of paddy												
Frost management in horticulture through fumigation	Irrigation technology and Frost management by fumigation, Spray of wettable sulphur @ 0.3% at flowering and seed formation stage (70 & 90 DAS)	10	4.5	17.8	15.1	21230	107250	86020	5.05	20850	95150	74300	3.98
Introducing flood /drought / temperature tolerant varieties	Rice var. Samleshwari, Rice (MTU 1001), Maize JM-216 ,Ragi (GPU-28), Kodo (JK-41), Moong (Hum-6), Field pea (Prakash), Wheat (GW-273), Tomato (Laxmi), Brinjal (Muktakeshi), Cowpea (Gomti), Onion (Nasik lal), Okra (Arka anamika); Zero till Seed cum fertilizer drill Vs Local Practice, Drought resistant Paddy Var. Khandagiri,	791	279.3	110.17	71.9	17375	43586	27084	2.51	15360	31008	15782	2.02

Interventions	Technology demonstrated	No. of farmers	Area (ha)	Measurable indicators of output*		Economics of demonstration (Rs./ha)				Economics of Local (Rs./ha)			
				Demo/ ha	Local/ ha	Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net Return	BCR
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Sahabhagi Dhan, Variety Konark with IPM,INM in paddy, Varietal replacement of drought tolerant variety , Crop substitution- Paddy substituted with medium duration soybean variety JS-9752, Crop substitution- paddy substituted with early maturing crop black gram, Crop substitution- Sorghum substituted with early maturing crop with Green gram, Integrated crop management in Sesame, Integrated crop management in Pigeon pea, Integrated crop management in Mustard, Integrated crop management in Chickpea, Integrated crop management in Wheat, Barley, Wheat, Chickpea, Short duration suitable for rainfed condition ,YMV resistant, Phytopthora blight resistant,short duration,												

Interventions	Technology demonstrated	No. of farmers	Area (ha)	Measurable indicators of output*		Economics of demonstration (Rs./ha)				Economics of Local (Rs./ha)			
				Demo/ ha	Local/ ha	Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net Return	BCR
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Short duration,, Rainfed, Good chapatti making quality, tolerant to high temperature and low moisture stress, Dual purpose fodder, Resistance to wilt, Moderate resistant to dry root rot,early maturity, Suitable for early sowing, Average seed yield is 19.24q/ha, useful in multiple cropping system,, Soybean (short duration variety), Black gram, Short duration variety of Soybean , Short duration variety of groundnut, Timely sowing of Mustard , Short duration variety of hybrid maize , Introduction of arid legume clusterbean, Replacement of Long duration Variety by short duration variety, Drought resistant variety Improved variety Management of phyllody disease, Mid season drought management, Suitable												

Interventions	Technology demonstrated	No. of farmers	Area (ha)	Measurable indicators of output*		Economics of demonstration (Rs./ha)				Economics of Local (Rs./ha)			
				Demo/ ha	Local/ ha	Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net Return	BCR
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	for kharif session in high yielding variety, Early maturing variety suitable for rain fed conditions, yellow mosaic disease resistant, high yielding , aphid tolerant suitable for rain fed condition, Evolution of relay cropping in mustard +bar seam suitable for drought condition and mordent resistant disease., Good yield potential, adaptability and suitability and stability for grain yield under normal sown irrigated conditions. Resistant to rusts, for, Wilt and heat tolerant variety, high yielding variety suitable for rain fed condition late Sowing suitable for pigeon pea, rice wheat cropping system, high yielding variety suitable for dacha/ soybean and pearl millet - wheat cropping system water management for early sowing minimum												

Interventions	Technology demonstrated	No. of farmers	Area (ha)	Measurable indicators of output*		Economics of demonstration (Rs./ha)				Economics of Local (Rs./ha)			
				Demo/ ha	Local/ ha	Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net Return	BCR
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	tillage and ridge bed planter sowing, Replacement of low value crop (pearl millet) by high value crop (maize), Replacement of pearl millet crop by high value crop soyabean, West pond used and economic generate by new crop water chasetnut, Drought tolerant medium and short duration variety JS 93-05 and JS 95-60, BBF planting method in Soybean for in-situ moisture conservation and drainage, Ridge Furrow planting method in Soybean for in-situ moisture conservation and drainage												
Location specific intercropping systems with high sustainable yield index	intercropping systems, Green gram+ Pigeon pea, Chickpea +Mustard, Wheat +Mustard	40	10	18.23	8.14	18848	31764	26450	1.69	21505	24841	9492	1.16
Water saving paddy cultivation methods (SRI, aerobic, direct	Rice SRI Durgeshwari For seed production +Green mannure; Rice (Indira Barani), Direct	63	23.5	42.46	32.7	20254	56440	36392	2.79	17576	42897	25320	2.44

Interventions	Technology demonstrated	No. of farmers	Area (ha)	Measurable indicators of output*		Economics of demonstration (Rs./ha)				Economics of Local (Rs./ha)			
				Demo/ ha	Local/ ha	Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net Return	BCR
1	2	3	4	5	6	7	8	9	10	11	12	13	14
seeding)	seeded Rice, SRI, aerobic, direct seeding												
Any other (Inter node borer Management in Sugarcane, IPM for stem borer in Paddy, Application of Weedicide , Blackgram, Brinjal, Cauliflower, Chilli, Demonstration on HYV of Maize, ITK, Kitchen garden, Micronutrient application, Micronutrient application of Boron @ 2 gram/lt, Tomato, Mushroom cultivation, Short duration Green gram)	Release parastioid Trichogramma chillonis in Sugarcane at vegetative stage for management of early shoot borer and inter node borer in Sugarcane, Installation of pheromone trap @ 20 numbers / ha and release of Trichogramma japonicum, Demonstration on cultivation Paddy Straw mushroom in backyard, Application of Pretilachlor in Paddy , PU-31, High yielding brinjal var. blue star, High yielding cauliflower var. Krishna-1, High yielding chilli var. pusa jwala, HYV of Maize-Super-36, Use f Neem oil @ 5ml/lt at 30 DAT in Paddy , Kitchen garden, High yielding paddy variety MTU-1001, Micronutrient application of Boron @	313	67.4	116.86	79.26	25853	77229	51413	2.99	28902	112502	83600	3.89

Interventions	Technology demonstrated	No. of farmers	Area (ha)	Measurable indicators of output*		Economics of demonstration (Rs./ha)				Economics of Local (Rs./ha)			
				Demo/ ha	Local/ ha	Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net Return	BCR
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	2 gram/lt in Paddy, High yielding tomato var.BT-10, Oyster mushroom (Pleurotus sajarcaju) cultivation, Greengram V ar. TARM-1, Kharif season-Brinjal, Kharif-Tomato, Kharif-Chilli, Rabi season-Brinjal, Rabi-Tomato, Rabi-Chilli, Kharif fallow-toria (due to continuous rain), Kharif failure - toria (due to heavy rain), Introduction of new variety in paddy , (Direct sowing of Rice), Introduction of new variety in paddy , System of Rice Intensification												

Module: 3. Livestock & Fisheries

Interventions	Technology demonstrate	No. of farmers	Unit/ No. / Area (ha)	Measurable indicators of output*		% increase	Economics of demonstration (Rs./ha)				Economics of demonstration (Rs./ha)			
							Demo				Local			
				Demo	Local		Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net Return	BCR
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Improved fodder/feed storage methods	Round the year availability of Green fodder; Augmentation of Fodder production and conservation, Azolla cultivation, Supplementary feed	197	633	1008.12	792.02	27.28	17155	32204	15049	1.88	14578	24486	10074	1.68
Improved shelters for reducing heat stress in livestock	Demonstration on Semi intensive poultry farming	50	500	2.5	1.0	150	20000	60000	40000	3.0	10000	20000	10000	2.0
Management of fish ponds / tanks during water scarcity and excess water	Fish culture in harvested rainwater, Training Maintenance of fish point , proper dose food ,grain and disease control of fish , Fish farming, Demonstration on Indian major carp	38	10.9	938	525.78	78.4	126598	281668	155070	2.22	94332	160293	65962	1.7
Preventive	Vaccination to	352.2	1795	6.9	4.45	55.06	9200	25200	16000	2.74	8100	14400	6300	1.78

Interventions	Technology demonstrate	No. of farmers	Unit/ No. / Area (ha)	Measurable indicators of output*		% increase	Economics of demonstration (Rs./ha)				Economics of demonstration (Rs./ha)			
							Demo				Local			
				Demo	Local		Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net Return	BCR
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
vaccination	prevent the FMD and HS, Training animal disease vaccination and management , Training animal disease vaccination and management, Deworming, Animal health check up													
Use of community lands for fodder production during droughts / floods	fodder production, Green fodder Berseem variety JB – 5	72	41.5	282.3	214.73	31.47	14883	65805	50922	4.42	13850	49657	35807	3.59
Any other (Backyard poultry, Mushroom Production, Composite Pisciculture)	Rearing of backyard poultry, Mushroom Cultivation, Stocking yearlings of IMC @ 5000/ ha, Deworming with	107	676.05	12.42	9.03	37.45	37560	98412	60852	2.62	32282	73591	41310	2.28

Interventions	Technology demonstrate	No. of farmers	Unit/ No. / Area (ha)	Measurable indicators of output*		% increase	Economics of demonstration (Rs./ha)				Economics of demonstration (Rs./ha)			
							Demo				Local			
				Demo	Local		Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net Return	BCR
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	Albendazole @ 30 ml/ Calf , Dual purpose poultry bird – Rainbow rooster , Growing of Oat as fodder crop													

Module: 4. Institutional Intervention

Interventions	Details of activity			Critical input (Breed / Variety / Medicine doses,)	No. of farmers	Unit / No. / Area (ha)
	Name of crops / Commodity groups / Implements	Quantity / Number / Rent / Charges	Technology used in seed / fodder bank & function of groups			
1	2	3	4	5	6	7
Climate literacy through a village level weather station	Rainfall, temperature, humidity, wind speed & direction, , Zero till seed drill sowing in wheat ,barley and green gram literacy , Literacy about short duration variety of Soybean to mitigate late season drought & frost management in Coriander through spraying of Sulpher with Boron, VRCMC	5	Training organized for assessment of weather condition, Ridge and furrow technology in soybean, Technology development , Technical awareness development, Group discussion	VCRMC, Gram, Wheat & Coriander	384	30
Collective marketing	Maize, Soybean , Wheat, barley , Rice ,Turmeric and Mustard & Coriander	10	Market facility and high value of input , Group marketing	Maize ,soybean , wheat, barley,rice ,turmeric and mustard & Coriander	197	303
Commodity groups	Climate Risk Management Committee , Oyster mushroom, Poultry , Buck, Marigold, Rose, Paddy straw mushroom	811	One society had been developed a climate risk processing unit. in village level , 1 group has developed , Village Climate Risk Management Committee (VCRMC): to take up the overall activities of the project , Rearing of poultry as backyard enterprise, Up gradation of breed, Income generation through floriculture	All facility in maintenances climate seed, implement , fertilizers and other document , Technical guidance and practices related to Climate Risk Management Committee , All types of help and commodity during disaster collected from different source., Spawn bottles & polythenes, Chicks(Rainbow), Black bengal, Seedlings, Rose graft Vermin compost- 1 qui., Spawn bottles & polythenes	270	579
Custom hiring centre	M.B.Plough ,Rotavator ,Seed-cum-fertilizer drill,Reaper,Multicrop thresher ,Land leveler, Power weeder,	6793	Custom hiring, Ploughing, Harvesting, Disease controll, Disease Management, Irrigation, Tillage, Weeding,	M.B.Plough ,Rotavator ,Seed-cum-fertilizer drill,Reaper,Multicrop thresher ,Land leveler,	1242	866.25

Interventions	Details of activity			Critical input (Breed / Variety / Medicine doses,)	No. of farmers	Unit / No. / Area (ha)
	Name of crops / Commodity groups / Implements	Quantity / Number / Rent / Charges	Technology used in seed / fodder bank & function of groups			
1	2	3	4	5	6	7
	Power tiller, Paddy thresher cum winnower, Power sprayer, Knapsack sprayer, Diesel Water pump set (3HP), Diesel Water pump set (3.5 HP), Sprinkler(2 Nos), Power tiller, Power sprayer (1 nos.), Diesel Water pump Set (2HP), Multi crop thresher ,Garuda Mini weeder, Paddy, Ferti-seed dril, Chaff cutter, MB plough, Sprinkler set, Ferti cum seed drill, Disk herrow, Multi crop thresher, M B Plough, Rotavator, Leveler, Raingun, Diesel Pump, Power spreyer, Ground nut decorticator, Maize sheller, Hand wheel hoe, Seed grader, Bullock drawn seed drill, Zero till seed drill, ridge bed Planter, Disc harrow, Power sprayer, Hand wheel hoe, Seed cum Firti –drill, Rotavator, Post hole digger, Engine pump set., Sprinkler Set , HDPE Pipe , Seed Drill cum fertilizer , Multi crop Thresher , Chaff cutter , MB Plough , TD Leveller , Cycle wheel hoe , Hand hoe , Sprayer , Power tiller, Reaper , Custom hiring centres for timely Ploughing /field preparation/planting/irrigation/threshing		Sowing, Reaping paddy, Spraying pesticides, Paddy winnowing, Harvesting of Paddy By reaper, Time and labour saving, water saving, Drudgery reduction, In-situ moisture conservation and use in difference NICRA activity , Technology Demonstrate In Custom hiring, Training organized for agriculture implements & there uses for crop production	Power weeder, Implements, Chaff cutter, MB plough, Sprinkler set, Implements, Wheat ,Barley, mustard , chickpea ,Green gram,maize and soybean , Hand wheel hoe, Seed- cum- fertilizer-drill, Rotavater, Post hole digger, Power sprayer, Reaper, Engine pump set. , To provide farm machinery on hire basis for timeline operation of agriculture. All 13 implements are actively work under CHC		
Fodder bank	Hybrid napier, Maize, Training on Commercial seed production Barseem, Short duration var.	476	Hybrid napier, Training organized for fodder production, seed production co. societies	Hybrid napier, JM 216, Barseem, Wheat Straw	71	115

Interventions	Details of activity			Critical input (Breed / Variety / Medicine doses,)	No. of farmers	Unit / No. / Area (ha)
	Name of crops / Commodity groups / Implements	Quantity / Number / Rent / Charges	Technology used in seed / fodder bank & function of groups			
1	2	3	4	5	6	7
	pigeonpea, Wheat		were registered and working for farming community, 1 group has developed			
Seed bank	Paddy(Konark), Rice/Durgeshwari, Rice (Samleshwari), Green gram (Pusa vishal), Soybean, Training on Commercial seed production in Pigenpea,Wheat, Green gram, Chickpea, Mustard	10981	Line sowing, IPM, High Yield short duration & drought resistant seed, Seed production technology, Training organized for seed production, Training organized for seed production, Short duration variety JS-95-60, One society had been developed a seed processing unit., 1 group has developed , Seed grading, safe storage, exchange of grains with seed	Line sowing, IPM, Khandagiri, Sahabhagi Dhan, Rice Durgeshwari foundation seed, Seed-Rice (Samleshwari) and fertilizer, Seed -Green gram (Pusa vishal), Seed JS-95-60, ICPL -88039 , Wheat (MP-RVW-4106), JS 93-05, 95-60, JG 6, JW 3173, Samrat, JG-11, Pusa Tarak, JW-17	311	306.71
Any other (Community irrigation, Agro advisory Services)	Training on Mushroom , beekeeping Production to Rural youth, One stop information center	10,001	25 rural youth has been involved in Mushroom, honey production, Irrigation through underground pipeline, All information on Agriculture and allied sector (Books, Literatures, Leaflets, Booklets on different programmes of line departments, OUAT and NGOs etc.)	Climate based agro advisory services , Market linkage, SHGs, Books, Literatures, Leaflets, Booklets	1039	103.2

Module: 5. Capacity Building (HRD)

Thematic area	Title of training	No. of Courses	No. of beneficiaries		Total
			Male	Female	
1	2	3	4	5	6
Animal Health Camp	Vaccination Camp , Animal Health Camp	4	126	20	**146**
Crop Diversification	Production technology of Rice (Indira barani dhan/Poornima/MTU-1010), Integrated Agriculture System	3	83	13	**96**
Crop Production	Improved production technology of Rice/Maize/Black gram/Field pea/minor millets	4	59	12	**71**
Exposure visit	Exposure Visit of farmers Block Level Pashu Mela at Bhatapara, Exposure visit of farmers National Krishi Vigyan Mela at IGKV Raipur, OUAT, CHES, CTCRI and CRRI, Cuttack visited , Techniques of Cultivation	5	115	25	**140**
Farm Mechanization	Custom hiring of Agricultural implements, Maintenance of Farm Implements, Importance of custom hiring centre of conservation techniques , Uses CHC implements in kharif season	23	431	56	**487**
Fish Production	Evaluation of fugacious suchi , Importance of Integrated Fish farming, Fish farming	4	76	1	**77**
Fodder & feed management	Improving milk production by green fodder, Fodder production in Kharif season	3	78	15	**93**
Group discussion	Farmers group discussion of ZPD Senior Scientist	1	36	0	**36**
Horticulture Cultivation	Preparation of nursery bed, Vegetables package & practices, Production of Ginger & banana, Preparation of Anola by Product, Training on orchard management (River bed Plantation), Nursery management of vegetables	9	98	76	**174**
ICM	Group Discussion on Rabi Crops, Importance of Kharif crops, SRI production technology of rice, Weed Management in rabi crops, Agro-advisory and frost prevention , Adverse impact of rainfall on rabi corps, Effect of adverse weather condition on rabi crops, Improved techniques in maize production, Production Technology of Okra, Chick Pea, Mustard, Nursery management in kharif crops, Crop management of Kharif crops, Integrated Crop management of Rabi crops, Crop management in Gram, Coriander, Wheat, Green Fodder, Crop diversification and cropping system to overcome the drought effects, Technique of protecting crops from frost and mitigating frost injury, Exposure visit on Techniques of paddy cultivation	22	418	66	**484**
IDM	Integrated insect pest & disease management in Kharif crops, Integrated	5	87	78	**165**

Thematic area	Title of training	No. of Courses	No. of beneficiaries		Total
			Male	Female	
1	2	3	4	5	6
	management of yellow mosaic in black gram, Integrated management of leaf curl in chilii, Integrated disease management in paddy, Pointed gourd				
IFS	Farmers Scientist interaction on Integrated Farming System in Rainfed Areas	1	31	19	**50**
Income Generation	Training on Mushroom Production , Malnutrition and value addition, Value addition, Lac cultivation, Production technology of mushroom in village areas, Production technology of Oyster mushroom, Rearing of Backyard poultry (Banaraja), Training on Paddy Straw Mushroom Cultivation,	18	114	270	**384**
INM	Soil based Nutrient Application , Balanced application of fertilizer, Soil test based reccomandation of fertilizer, Nutrient management in Kharif crops, Soil testing and soil sampling, Integrated nutrient management in rabi crops, Wheat, Training on Integrated nutrient management in Sugarcane	10	201	42	**243**
IPM	Benefits of seed Treatment , Pest and Disease Management in rabi crops, Disease/Pest management in Kharif crop, IPM in rabi crops, Integrated management of girdle beetle, Integrated insect-pest management in fruit and shoot borer, Integrated management of mustard aphid, Insect pest management in kharif crops, Management practices IPM,IWM in rabi crops, Integrated Pest management in Rabi crops, Integrated pest management in Cole crops, Training management of inter node borer in Sugarcane, Pest and disease management in Paddy	21	358	161	**519**
IWM	Control of weeds and their control, Control of weeds by Conoweeder, Integrated Weed management in Kharif crops, Weed management in rabi crops, kharif crops	8	151	31	**182**
LPM	Group Discussion on Breed up gradation , Animal Health Camp (Nutrition Management) , Vaccination & health management in Piggery, Poultry, Duckry, Cow, Goatry , Importance of vaccination in cattle, Importance of pro-biotrics, Prevention of mastitis, Balance feed preparation for milk cattle, Live stock production management during winter season, Goat farming, Disease and health management in Milch animals, Surveillance of aquatic Animals, Management of Poultry Bird, Live stock management, Animal Nutrition Camp	22	354	223	**577**
NRM	Irrigation water management through stop dam & open well in crops , Water management through ponds, Drainage Management, Rain water conservation for rabi crop, Methods of Rain water Harvesting Technique, Natural Resource	13	290	67	**357**

Thematic area	Title of training	No. of Courses	No. of beneficiaries		Total
			Male	Female	
1	2	3	4	5	6
	management				
Nursery management	Importance of seedlings	1	10	0	**10**
RCT	Summer ploughing, Soil Conservation, Soil Conservation Technology, Importance of Summer Deep Ploughing, Resource conservation technology day , Importance of raised Bed planter sowing in Kharif crops, Importance of custom hiring system, Resource conservation technique for rain fed area, Sowing technique for rain fed area & rabi crops	12	246	11	**257**
Storage	Importance of storage	1	10	3	**13**
Other	Training on Alternate Energy (Biogas unit), Vermicompost, Production techniques & use of Nadep compost , Production techniques & use of vermicompost , Environment protection(International environment day), Food grain Storage management , Storage of food grains, Compost Production Technology, Vermi Compost Production Technology, VCRMC Members Training,Importance & work of VCRMC, Deep summer ploughing, Production technology of vermin compost, Management of stored grain pest in pulse crop, Training on vermi-composting technique , Farmers' Convention, Ex – trainee meet	27	649	117	**766**

Module: 6. Extension Activity

Thematic area	Title of Field Day	No. of Courses	No. of beneficiaries	
			Male	Female
1	2	3	4	5
Climatic change	Awareness programme on VCRMC , Climate change & sustainable crop production, Integrated nutrient management in Sugarcane, Integrated weed management in paddy, Climate resilient technology, SRI Paddy, application micronutrients, management practices of crops, use of Pheromone trap , use of bio-agent, Seed treatment, Biofertiliser application, Wilt management in vegetables , Weather based Agro-advisory twice a week, Scientist -farmers interaction regarding meeting of VCRMC, Scientist -farmers interaction-selection of farmers	43	436	132
Diagnostic field visit	pointed gourd cultivation, hormone application, management practices of crops, use of Pheromone trap, management practices of vegetables, use of bio-agent, Seed treatment, Bifertiliser inoculation, SRI Paddy, management practices of crops, management practices of vegetables, Micro nutrient application, Lime application in maize, Intercropping	26	279	133
Exposure visits	Seminar/Visit of Farmer's from Seondha Block, Farmers visit to RVSKVV GWALIOR, ZARS MORENA,KVK AGRA, CIAE BHOPAL, Exposure visit to Central/State Government farms/research institutes and private entrepreneurs on judicious use of water and income generation activities for farm women , Exposure visit to Integrated farming system model in village Gopalpur, Block Nimapada	5	68	24
Field Day	Field Day on Utera wheat technology, Krishak Diwas, Field day on demonstration of short duration paddy variety Konark, Field day on utilization of Vermicompost for vegetable cultivation, Field day on cultivation of azolla for animal and poultry feed, Improved Cultivation method of drought resistant Paddy Var.Sahabhagi dhan & Khandagiri Cultivation of Maize in waste up-lands, Field day on paddy var. Sahabhagi, Pratikshya, Field Day on Backyard Poultry, Field Day on buck Rearing, Field day on Oyster mushroom, Paddy Day , Pigeon pea Day, Chick pea Day, Field day , Rabi field day, Kishan Mela, Environment Day, Short duration, heat tolerant variety JS 95-60 of Soybean, BBF planting method in Soybean, Ridge Furrow planting in Soybean, Heat tolerance short duration variety of Gram JG 6, Heat tolerance short duration variety suitable for limited irrigated Wheat JW 3173, Multicut Green Fodder high yielding Berseem variety JB-5, Field day Parthenium awareness Week, Field Day in Green gram, Field Day in Sesame, Field Day in mustard	35	1251	664
Group discussion	Farmer's Visit ATMA Interface, Moisure conservation for optimization of soybean production, group meeting	5	102	3

Thematic area	Title of Field Day	No. of Courses	No. of beneficiaries	
			Male	Female
1	2	3	4	5
ICM	Scientist -farmers interaction- Corrective measures in standing crop of rabi season, Soybean production technology, Interaction made with farmer group on cultivation practices vegetables, Possible suggestion given to farmers regarding demonstration trails	41	209	145
IPM	Discuss about IPM for stem borer in paddy, management of inter node borer in Sugarcane, Paddy Straw Mushroom Cultivation, Foliar application of micronutrient in Paddy and pulses, Short duration Paddy variety	31	137	72
LPM	Deworming Camp, Animal health camps and Vaccination	9	274	195
Nursery Management	Nursery making	1	0	35
RCT	Scientist -farmers interaction on deep ploughing, institutional activities, Draining out of water	5	103	5
Other	Soil testing companion, Deep summer ploughing, Summer Deep Ploughing, Soil health camp, Scientist -farmers interaction-Crop diversification through establishment of nutritional kitchen garden, Beekeeping programme , Mushroom cultivation, Kisan mobile Sandesh , Soil sample collection, SRI Paddy, Power Sprayer, Pheromontrap installation, Seed treatment, Biofertiliser inculcation, Application paper mill sludge, Application of Tricho card	19	409	244