

# Contents

Sl. No.	Particular	Page No
1	Summary of achievements during the reporting period	1
2	General Information	2-5
3	On Farm Testing	6-11
4	Achievements of Frontline Demonstrations	12-21
5	Documentation of the need assessment conducted by the KVK for the training programme	22
6	Training programmes	23-40
7	Extension Activities	41-43
8	Literature Developed/Published (with full title, author & reference)	44
9	Production and supply of Technological products	45
10	Activities of Soil and Water Testing Laboratory	46
11	Rainwater Harvesting	46
12	Utilization of Farmer Hostel facilities	46
13	Utilization of Staff Quarter facilities	47
14	Details of SAC Meeting	47
15	Status of Kisan Mobile Advisory	48
16.	Status of Convergence with agricultural schemes	48
17.	Status of Revolving Funds	48
18.	Awards & Recognition	48
19.	Case study and Success story	49-52
20.	Details of KVK Agro-technological Park	53
21.	Important visitors to KVK	53
22.	Status of KVK Website	54
23.	Status of E-connectivity	54
24.	Details of Technological Week Celebration	54
25.	Interventions on Drought Mitigation	55-57
26.	Status of KVK Website	57
27.	Action Photographs	58

## REPORTING PERIOD – April 2010 to March, 2011

### Summary of achievements during the reporting period

KVK Name	Activity	Target		Achievement		Total value of resource generated/Fund received from diff. sources (Rs.)
		Number of activity	No. of farmers/beneficiaries	Number of activity	No. of farmers/beneficiaries	
Kandhamal	OFTs	16	80	16	80	
Kandhamal	FLDs – Oilseeds (activity in ha)	5	18	5	18	
Kandhamal	FLDs – Pulses (activity in ha)	10	37	10	37	
Kandhamal	FLDs – Cotton (activity in ha)	-	-	-	-	
Kandhamal	FLDs – Other than Oilseed and pulse crops(activity in ha)	12.8	80	12.3	80	
Kandhamal	FLDs – Other than Crops (activity in no. of Unit/Enterprise)	6	50	6	50	
Kandhamal	Training-Farmers and farm women	54	1480	54	1480	
Kandhamal	Training-Rural youths	24	500	24	500	
Kandhamal	Training- Extension functionaries	12	180	12	180	
Kandhamal	Extension Activities	560	5584	560	5584	
Kandhamal	Seed Production (Number of activity as seeds in quintal)	67.85	157	67.85	157	371700
Kandhamal	Planting material ((Number of activity as quantity of planting material in quintal)					
Kandhamal	Seedling Production (Number of activity as number of seedlings in numbers)	35000	100	37000	65	7000
Kandhamal	Sapling Production (Number of activity as number of sapling in numbers)	700	130	700	130	2850
Kandhamal	Other Bio- products, Vermicompost in kg	435	42	435	42	2175
Kandhamal	Live stock products ,poultry chicks	200	20	200	20	6381
Kandhamal	SAC Meeting (Date & no. of core/official members (dt 4.3.11)	1	30	1	30	
Kandhamal	Newsletters (no.)	4	2000	4	2000	
Kandhamal	Publication (Research papers, popular article)	5	1700	5	1700	
Kandhamal	Convergence programmes / Sponsored programmes	4	305	4	305	
Kandhamal	KVK-ATMA Linkage programme (Number of activities)	4	125	4	125	
Kandhamal	Outreach of KVK in the District (No. of blocks, no. of villages)	6	2800	6	2800	
Kandhamal	Soil sample tested	1000	385	1002	385	4440
Kandhamal	Water sample tested	15	5	15	5	
Kandhamal	KMA (No. of messages & beneficiaries)	70	112	70	112	

# 1. GENERAL INFORMATION

## 1.1. Staff Position (01.04.2011)

Name of KVK.	Sanctioned post	Name of the incumbent	Discipline	Highest degree	Subject of Specialization	Pay Scale (Rs.)	Present basic (Rs.)	Date of joining	Permanent /Temporary	Category (SC/ST/OBC/ Others)
Kandhamal	Programme Coordinator	Shradhanjali Mohapatra	Home Sc.	M.Sc (Home Sc.)	Textile & clothing	15600-39100	24,320/-	09.12.2009	Permanent	Other
Kandhamal	Subject Matter Specialist1	Samir Ranjan Dash	Extension	M.Sc (Ag.)	Extension Education	15600-39100	24320	12.1.2006	Permanent	Other
Kandhamal	Subject Matter Specialist2	Sujit Kumar Mukhi	Soil science	M.Sc(Ag.)	Soil Fertility	15600-39100	22250	23.10.2009	Permanent	Other
Kandhamal	Subject Matter Specialist3	Jayanta Kumar Mahalik	Plant Protection	M.Sc(Ag.)	Nematology	15600-39100	22250	08.03.2011	Permanent	Other
Kandhamal	Subject Matter Specialist4	Gouri Sankar Singh	Agronomy	M.Sc(Ag.)	Crop production	15600-39100	21600	28.03.2011	Permanent	Other
Kandhamal	Subject Matter Specialist5	-	-	-	-	-	-	-	-	-
Kandhamal	Subject Matter Specialist6	-	-	-	-	-	-	-	-	-
Kandhamal	Programme Assistant	-	-	-	-	-	-	-	-	-
Kandhamal	Farm Manager	Manoj Kumar Pradhan	Seed Science	M.Sc (Ag.)	Seed Science	9300-34800	14760	04.10.2006	Permanent	Other
Kandhamal	Computer Programmer	Bishnu Ranjan Padhi	Computer Sc.	B.E	Computer Sc.	9300-34800	16750	22.08.2005	Permanent	Other
Kandhamal	Accountant / superintendent	Sahadev Dakua	--	H SC	--	9300-34800	13630	10.02.2011	Permanent	Other
Kandhamal	Stenographer	Bibhu Prasad Dash	--	B.A	Stenography	5200-20200	8320	22.01.2007	Temporary	Other
Kandhamal	Driver	Gobinda Gouda	--	8 <sup>th</sup> pass	-	3050-4590	3125	21.07.08	Temporary	Other
Kandhamal	Driver	Rajanikanta Pattnayak	--	10+2 pass	-	3050-4590	3125	28.07.08	Temporary	Other
Kandhamal	Supporting staff	Aparti Chhatoi	--	7 <sup>th</sup> pass	-	2550-3200	2605	28.07.08	Temporary	Other
Kandhamal	Supporting staff	Arjuni Ch. Swain	--	11 <sup>th</sup> pass	-	2550-3200	2605	02.08.08	Temporary	Other

## 1.2. DISTRICT PROFILE (detail of geographical area, cultivation, Land, resources, opportunities, irrigation, populations etc.)–

### A. GEOGRAPHICAL AREA OF KANDHAMAL

Total Area	:	802,000 ha
Longitude	:	83° 30' to 84° 35' E
Latitude	:	19° 34' to 20° 34' N

Land Area (000')ha									
Sl.No	Forest Area	Misc. tree & Groves	Permanent Pasture	Culturable waste	Non agricultural use	Barren & Un culturable land	Current fallow	Other fallow	Sown Area
1	571	34	10	14	9	30	13	06	115

### B. CENSUS (2001) OF KANDHAMAL

Population in 000' Nos.									
Sl. No	Male	Female	Total	S.C	S.T	Other	Population Density/Km <sup>2</sup>	Population Decadal Growth	Literacy rate(%)
1	323	325	648	110	337	201	81	18.66	52.68

### C. AREA , PRODUCTION AND PRODUCTIVITY OF MAJOR CROPS IN THE KANDHAMAL DISTRICT

Sl. No	Crop	A-Area in ('000ha)	P-Production in ('000 Mts)	Y-Yield rate in kg/ha
1	Paddy	54.51	73.89	2023
2	Maize	9.93	18.24	1837
3	Blackgram	4.45	1.66	372
4	Arhar	5.10	4.85	950
5	Field Pea	0.45	0.2	440
6	Groundnut	0.99	1.58	1600
7	Niger	11.75	3.29	280
8	Mustard	15.22	4.79	315
9	Turmeric	11.08	28.828	2599
10	Ginger	4.082	8.572	2099

### 1.3. DETAILS OF ADOPTED VILLAGE during the reporting period (Approved by competent Authority in meetings/workshops)

KVK Name	Village Name	Year of adoption	Block Name	Distance from KVK	Population	Number of farmers (having land in the village)
Kandhamal	Baibali	2007-08	Raikia	25	436	63
Kandhamal	Katadaganda	2007-08	G-Udayagiri	10	188	51
Kandhamal	Sapagonda	2007-08	Tikabali	22	360	27
Kandhamal	Bedasuga	2008-09	Tikabali	20	310	84
Kandhamal	Kambrikiya	2009-10	Chakapada	27	380	110

### 1.4. THRUST AREAS identified by KVK (Approved by competent Authority in meetings/workshop)

KVK Name	THRUST AREA
Kandhamal	Dry land farming
Kandhamal	Organic farming
Kandhamal	Backyard poultry and animal production
Kandhamal	Farm mechanization
Kandhamal	Bee-keeping improvement.
Kandhamal	Soil and water conservation
Kandhamal	Fruit and vegetable cultivation
Kandhamal	Low cost production technique
Kandhamal	Spice crop cultivation
Kandhamal	Agro forestry development
Kandhamal	Process & value addition
Kandhamal	Safe storage
Kandhamal	Pest and disease management
Kandhamal	Crop substitution & cropping system
Kandhamal	Marketing awareness

#### 1.4. PROBLEM IDENTIFIED by KVK (Approved by competent Authority in meetings/workshop)

<b>KVK Name</b>	<b>Problem identified</b>	<b>Methods of problem identification</b>
Kandhamal	Sloppy and uneven topography	Socio resource Map ,Transact work & secondary statistical data
Kandhamal	Soil degradation	Transact map & Secondary information.
Kandhamal	Acidic nature of soil	Soil sample analysis & secondary data
Kandhamal	Low Percentage of irrigation	Secondary source & village survey
Kandhamal	Mono cropping in hilly terrain	Village survey & Group meetings with villagers
Kandhamal	Small, Marginal and Landless Farmers	PRA survey & district statistical report
Kandhamal	Stray Cattle menace	Village survey & group discussion
Kandhamal	Pest and disease incidence in field crop and storage	Problem prioritization through PRA & Root cause analysis
Kandhamal	Poverty, Illiteracy and poor health of Farmers	Problem cause analysis & group discussion.
Kandhamal	Prevalence of diseases in Livestock animals	Feedback from farmers & Village survey
Kandhamal	Distress sale of farm produce (Perishable vegetables)	Market research & price of commodities in local market
Kandhamal	Lack of improved varieties of fruits and vegetables	Focused group discussion with vegetable growers
Kandhamal	Drudgery in farm operations	PRA & root cause analysis & time analysis of farm women
Kandhamal	Weed menace in up land crops	Problem cause analysis & PRA

## 2. On Farm Testing

### 2.1 Information about OFT

KVK name	Year/season	Problem diagnose	Category of technology (Assessment/Refinement)	Thematic Area	Crop/enterprise	Farming Situations	Title of OFT	No. of trials	Results (with parameter) (Yield q/ha)		Net Returns (Rs./ha)		Recommendations
									Farmer practice T1	Rec. Tech T2	T1	T2	
Kandhamal	Kharif-10	Low yield of existing cultivars Lalat(22 q/ha)	Assessment	Varietal evaluation	Paddy	Red and yellow soil, rainfed mid land	Assessment of HYV paddy Manaswini	5	34.2	46.0	18100	26280	HYV paddy Manaswini gave an yield of 46qt/ha, with 34% increase over Var Lalat
Kandhamal	Kharif-10	Low yield (60q/ha) due to local variety	Assessment	ICM	Turmeric	Red and yellow soil, rainfed , Upland	Assessment of Turmeric variety Lakdong	5	61.2	105.4	59960	121920	Turmeric variety Lakdong gave 72% more yield as compared to Phulbani local
Kandhamal	Kharif-10	Poor yield (48 q/ha) due to local variety	Assessment	ICM	Ginger	Red and yellow soil, rainfed , Upland	Assessment of HYV Ginger Suprava	5	49.8	81.2	51850	96650	Raised Bed 15 cm ht, Spacing 30x20 ,Seed treatment with Trichoderma 5gm/lit/30 minutes,Neem cake 250 kg/ha ,Mulching 10 ton/ha. Ginger Var Suprava gave an average yield of 81.2qtl/ha
Kandhamal	Kharif-10	Poor yield (125q/ha) due to heavy Spodoptera incidence.	Assessment	IPM	Cabbage	Red and yellow soil, rainfed ,mid land	Assessment of IPM for Spodoptera in Cabbage.	5	155	202	25300	36400	Intercropping with mustard (One row mustard with 10 rowscabbage),installation of Pheromonetraps 20 nos./ha , application of neemcake250kg/ha ,spraying of Bt @ 2 gm/ lit & Endosulphan@2ml/lit of water alternatively at 15 days interval. reduces spodoptera incidence significantly to 3 % and gave an average yield of 202qtl/ha
Kandhamal	Kharif-10	Poor yield due heavy wilting.	Assessment	IDM	Brinjal	Red and yellow soil, rainfed , Upland	Assessment of wilt management in Brinjal.	5	189.7	228.4	49640	63450	Soil treatment @2.5kg/ha & seed treatment @ 5gm/kg seed with T.viridae , drenching of plant base with T.viridae 5gm/lit of water. reduces wiltig upto5.8 % and gave an average yield of

													228.4
Kandhamal	Kharif-10	Low yield & small rhizome size due to soil acidity, pH 5.1	Assessment	INM	Turmeric	Red and yellow soil, rainfed Upland	Assessment of soil liming in Turmeric.	5	73	107	79600	137020	Lime application @ 5q/ha at final ploughing with FYM – 5 t/ha , ,Soil test based fertilizer application in turmeric gave an average yield of 107Qtl/ha
Kandhamal	Kharif-10	Low productivity (2.00q/ha) due to minimum use of agro inputs & no use of secondary & micro nutrients.	Assessment	INM	Niger	Red and yellow soil, rainfed Upland	Assessment of foliar application of sulphur & Boron in Niger.	5	3.2	5.2	5400	10300	Soil test based fertilizer application at the time of sowing where as ,K,S,B nutrients were applied throughly through Pottasium sulphate (1%) & Boron (0.2%) as foliar spray at 40 DAS ,50 DAS & 60 DAS. gave an yield of 5.2 qtl/ha
Kandhamal	Kharif-10	Poor yield due to high cuscutta infestation	Assessment	Weed Management	Niger	Red and yellow soil, rainfed Upland	Assessment of cuscutta management in Niger	5	3.6	5.8	6400	11800	Pre emergence application of pendi methaline @ 1.5 kg a.i /ha with hand weeding at 30 DAS with soil test based fertilizer application reduces weed incidence upto 8% and gave an higher yield upto 5.8qtl/ha
Kandhamal	Kharif-10	Low efficiency & high drudgery of farm women during paddy weeding.	Assessment	Drudgery reduction	Enterprise	Red and yellow soil, rainfed ,low land	Assessment of Cono weeder for drudgery reduction of farm women during paddy weeding	5	33.0	48.2	12800	29300	Weeding in paddy using cono weeder is very effective & very economical with less drudgery.
Kandhamal	Rabi 10-11	Low fruit retention in mango (Fruit drop-50%).	Assessment	INM	Mango	Red and yellow soil, Irrigated	Assessment of control of fruit drop in Mango.	5	--	--	--	--	Spraying of Gibberellic acid (GA3) @ 50PPM at the pea stage of mango for 5-10 year old plant reduces fruit drop to 32 %
Kandhamal	Rabi 10-11	Poor yield due to YMV infestation.	Assessment	IPM	Okra	Red and yellow soil, Irrigated, Mid land	Assessment of Pest management against YMV in Okra.	5	88.8	113.4	54300	76600	Seed treatment with imidacloprid ,fixing up of yellow sticky trap , two spray of imidacloprid @ 1ml/5 ltr at 15 days interval controls YMV attack and gave an average yield of 113.4 qtl/ha
Kandhamal	Rabi 10-11	Poor yield due to Aphid infestation	Assessment	IPM	Mustard	Red and yellow soil, Irrigated, Upland	Assessment of control of Mustard Aphid	5	5.68	7.25	4595	6755	Spraying Imidachloprid thrice @3ml/10 litre of water at 15 days interval reduces aphid incidence by 63 % in mustard and gave an yield of 7.5 qtl/ha



Kandhamal	Rabi 10-11	Low yield in rainy season ,High cost of thatched house for paddy straw mushroom cultivation.	Assessment	Mushroom cultivation	Enterprise	Non land based	Assessment of low cost technique for paddy straw Mushroom cultivation.	5	.0075	.01	50	70	low cost poly house (12'x6') using bamboo & UV stabilized polythene(200Micron). is economically viable for mushroom production
Kandhamal	Rabi 10-11	Poor yield due to less number of pods/plant & low yield /unit are due to vine nature.	Assessment	Varietal evaluation	Cow Pea	Red and yellow soil, Irrigated, Mid land	Assessment of Cowpea-var-Utkal Manika	5	42.5	71.2	10050	20900	Cow pea var Utkal Manika ,spacing 30X15 cm ,fertilizer 20:40:20 kg NPK/ha. gave an average yield of 71.2 qtl/ha
Kandhamal	Rabi 10-11	Poor yield & storing quality, small tuber size.	Assessment	INM	Potato	Red and yellow soil, Irrigated, Mid land	Assessment of Bio fertilizer application in Potato	5	99.3	159.3	31280	61380	Bioinoculation of Azotobacter ,Azospirillum & PSB @ 1:1:1 (2+2+2=6 kg/ha) & incubated with 150 kg FYM for 7 days in 30 % moisture content. in potato gave an 60.4% higher yield
Kandhamal	Rabi 10-11	Low productivity due to imbalance use of fertilizer.	Assessment	INM	Brinjal	Red and yellow soil, Irrigated, Mid land	Assessment of soil test based fertilizer recommendation for Brinjal	5	127.8	213.7	34480	81520	Soil test based fertilizer recommendation for Brinjal gave 67 % higher yield

## 2.2 Economic Performance

KVK name	OFT Title	Parameters			Average Cost of cultivation (Rs/ha)			Average Gross Return (Rs/ha)			Average Net Return (Rs/ha)			Benefit-Cost Ratio (Gross Return / Gross Cost)		
		Name and unit of Parameter	Demo	Check	FP (T <sub>1</sub> )	RP (T <sub>2</sub> )	Refined Practice, if any (T <sub>3</sub> )	FP (T <sub>1</sub> )	RP (T <sub>2</sub> )	Refined Practice, if any (T <sub>3</sub> )	FP (T <sub>1</sub> )	RP (T <sub>2</sub> )	Refined Practice, if any (T <sub>3</sub> )	FP (T <sub>1</sub> )	RP (T <sub>2</sub> )	Refined Practice, if any (T <sub>3</sub> )
Kandhamal	Assessment of HYV paddy Manaswini	No. of Tiller/hill	17	11	16100	19720		34200	46000		18100	26280		2.1	2.3	
Kandhamal	Assessment of Turmeric variety Lakdong	Yield in Kg/M <sup>2</sup>	1.25	0.8	50200	67800		110160	189720		59960	121920		2.2	2.8	
Kandhamal	Assessment of HYV Ginger Suprava	Yield in Kg/M <sup>2</sup>	1.10	0.65	47750	65750		99600	162400		51850	96650		2.0	2.4	
Kandhamal	Assessment of IPM for Spodoptera in Cabbage.	No. of larva/10 cabbage plant ,No	3	13	21200	24900		46500	60600		25300	36400		2.1	2.4	
Kandhamal	Assessment of wilt management in Brinjal.	Wilting ,%	5.8	13.2	26240	27910		75880	91360		49640	63450		2.8	3.2	
Kandhamal	Assessment of soil liming in Turmeric.	Single Culm weight in Gm.	630	420	66400	76980		146000	214000		79600	137020		2.2	2.8	
Kandhamal	Assessment of foliar application of sulphur & Boron in Niger.	1000 seed weight in Gm.	5.95	3.12	5800	7900		11200	18200		5400	10300		1.9	2.3	
Kandhamal	Assessment of cuscutta management in Niger	% of cuscutta infestation (No of plants infested by weed/ m <sup>2</sup> at 60DAS)	8.2	13.8	6200	8500		12600	20300		6400	11800		2.0	2.4	

Kandhamal	Assessment of conoweeder for drudgery reduction of farm women during paddy weeding	Output M <sup>2</sup> /Hr	120	56	17200	18900		33000	48200		12800	29300		1.9	2.5	--
Kandhamal	Assessment of control of fruit drop in Mango.	Fruit drop (%)	32	60	20000	24500		-	-		-	-				
Kandhamal	Assessment of Pest management against YMV in Okra.	YMV infestation ,%	7.4	24.8	34500	36800		88800	113400		54300	76600		2.60	3.00	
Kandhamal	Assessment of Biological control of Mustard Aphid	No. of aphids/plant ,No	25	104	6765	7745		11360	14500		4595	6755		1.70	1.90	
Kandhamal	Assessment of low cost technique for paddy straw Mushroom cultivation.	Days to fruiting No.	25	30	--	--		75	100		50	70		3	3.3	
Kandhamal	Assessment of Cowpea- var- Utkal Manika	Days to first fruit picking .No	55	70	11200	14700		21250	35600		10050	20900		1.9	2.4	
Kandhamal	Assessment of Bio fertilizer application in Potato	Root length in cm	26.3	18.4	28300	34200		59580	95580		31280	61380		2.1	2.8	
Kandhamal	Assessment of soil test based fertilizer recommendation for Brinjal	No. of fruits/plant	49	32	38200	46700		76680	128220		34480	81520		2.0	2.7	

### 2.3 Feedback from KVK to Research System

Name of KVK	Feedback
Kandhamal	<p>Turmeric- Adoption of suitable agronomic practice for increasing Cucurmin content.</p> <p>Ginger – More research for control of Rhizome rot in Ginger.</p> <p>Cono Weeder- Farm women feel pain in shoulder during operating cono weeder</p> <p>Mustard – Early sowing in hilly areas reduces aphid incidence , so ideal sowing time of mustard in hilly areas of kandhamal district may be identified</p>

### 3. Achievements of Frontline Demonstrations

#### 3.1. List of technologies demonstrated and popularized during previous years and recommended for large scale adoption in the district

KVK Name	Crop/ Enterprise	Thematic Area	Technology demonstrated	Details of popularization methods suggested to the Extension system	Horizontal spread of technology		
					No. of villages	No. of farmers	Area in ha
Kandhamal	Paddy	IPM	Summer ploughing, Seed treatment, seedling treatment, Pheromone trap, Resistant variety ,Bio agents with need based management practices.	FLD, Training, Field days, group discussion, CD shows	80	280	202
Kandhamal	Paddy	Varietal evaluation	Var- Pratikshya ,Seed treatment with Bavistin 2gm/kg of seed ,Spacing 20X10 cm ,fertilizer 80:40:40 NPK kg/ha ,	FLD, Training, Field days, , CD shows	35	120	31
Kandhamal	Garden pea	Varietal evaluation	Var-Azad P-3,Summer ploughing ,FYM 15T./ha ,seed treatment with Rhizobium 20g/kg of Seed ,Fertilizer 50:70:50 ,Spacing 30x5cm.	FLD, Training, Field days, group discussion,	78	355	162
Kandhamal	Brinjal	IPM	Soil incorporation with Neem cake @250kg/ha, Ph trap, Bio pesticides application(BT) hand clipping of infected shoots and fruits and need based magt.practices.	FLD, Training, Field days, group discussion, CD shows	65	242	55
Kandhamal	Brinjal	INM	Seed treatment with Bavistin 2gm/kg of seed ,Spacing 75 x60 cm,FYM 15 ton/Ha ,fertilizer 120:80:60,50 % N ,100 % P ,100 % K at transplanting time ,25 % N at 25 DAT, Rest 25 % N at 40 DAT	FLD, Training, Field days, group discussion, CD shows	72	295	68
Kandhamal	Tomato	INM	Application of lime as PMS @5q/ha at final ploughing followed by use of incubated & inoculated FYM at planting time. (Bio-inoculation (BI)= Azotobacter +Azospirillum+PSB(1:1:1) , 2+2+2=6 kg/ha)	FLD, Training, Field days, group discussion, CD shows	92	322	116
Kandhamal	Tomato	IPM	Soil incorporation of neem cake @250 kgs/ha , seed and seedling treatment, ph trap, trap crop and need based application of pesticides	FLD, Training, Field days, group discussion, CD shows	145	422	127
Kandhamal	Vegetables	ICM	Planning, layout and management of nutritional garden	FLD, Training, Field days, group discussion, CD shows	35	138	12

Kandhamal	Niger	INM	Seed inoculation with Azotobacter and PSB @ 20gm /kg , pre emergence weedicide (pendimethalin) application @ 1.0kg a.i. /ha , hand weeding at 30 DAS, RDF @40:20:20 kg NPK/ha with need based application of plant protection chemicals	FLD, Training, Field days, group discussion, CD shows	12	112	46
Kandhamal	Toria	Varietal evaluation	HYV seeds(Annuradha), seed inoculation with Azotobacter @ 20 gm/kg, with soil test based fertilizer application and pest and disease control measures.	FLD, Training, Field days, group discussion, CD shows	66	413	135
Kandhamal	Blackgram	INM	Seed : 20kg/ha, Rhizobium inoculation @ 20g/kg seed,FYM 2.5t/ha during final land preparation, recommended fertilizer application @ 20:40:20kg N P K per ha	FLD, Training, Field days, group discussion, CD shows	72	438	142
Kandhamal	Field pea	INM	Lime application 5qt/ha ,Rhizobium inoculation @ 20gm /kg seed ,Integrated nutrient management, RDF @25:50:25 NPK/ha with need based crop protection measures.	FLD, Training, Field days, group discussion, CD shows	41	293	122
Kandhamal	Back yard poultry	Small Scale Income generating enterprises	Introduction of improved poultry breed Banaraj,	FLD, Training, CD shows	182	524	5905 Nos.
Kandhamal	Oyster mushroom	Mushroom cultivation	Cultivation of Oyster mushroom var-P.sajarcaju.	FLD, Training, Field days, group discussion, CD shows,	32	239	2854 Nos.
Kandhamal	Apiary	Small Scale Income generating enterprises	ISI Bee Box , <i>Apis cerena indica</i> & improved management practices.	FLD, Training, Field days, group discussion, CD shows	128	310	956 boxes
Kandhamal	Turmeric	Value addition	Improved turmeric boiling drum with perforated grill. Capacity – 40kg/grill	FLD, Training, Field days, group discussion, CD shows	86	438	--
Kandhamal	Cabbage	Drudgery reduction	Use of hand ridger for ridging	FLD, Training, Field days, group discussion, CD shows	15	36	39
Kandhamal	Maize	Drudgery reduction	Use of Miaze Sheller for shelling	FLD, Training, Field days, group discussion, CD shows	22	48	--

### 3.2 Details of FLDs implemented

KVK Name	Thematic area	Name of Crop/ Enterprise	Season and year	Technology demonstrated	Crop-Area (ha) / Enterprise No.	Name of Variety/Technology/Enterprises	Results (q/ha)		% change	No. of farmers				
							Demons	Check		SC	ST	OBC	Others	Total
Kandhamal	Varietal evaluation	Rice	Kharif 2010	Mixing Nimin @ 10ml/kg of Urea before application and soil test based fertilizer application.	1.0	Application of Nimin coated urea to improve the efficiency of urea in medium land paddy	37.8	32.5	16.3		5			5
Kandhamal	INM	Groundnut	Kharif 2010	Lime application @ 5qtl/ha in furrows 7 days before sowing with FYM @5ton/ha, with soil test based fertilizer application.	1.0	Soil liming for groundnut	17.9	10.7	67.3	1	4			5
Kandhamal	Varietal evaluation	Sweet Potato	Kharif 2010	White flesh , Red skin ,Duration - 110-120 days, Tolerance to sweet potato weevil Ridge method of planting (at 45 days after planting), spacing at 60x20cm ,soil test based fertilizer application.	0.5	HYV Sweet potato var- Kisan	166.2	113.5	46		5			5
Kandhamal	IDM	Runner bean	Kharif 2010	Mixing of one kg cow dung in 10 lit of water(1:10) and spraying in 5 liters of water thrice at 10 days interval. 40 DAS,	1.0	BLB control in runner bean by ITK.	42.8	35.4	20.9		5			5
Kandhamal	IPM	Brinjal	Kharif 2010	Soil incorporation with Neem cake @250kg/ha, Pheromone trap 20 nos. /ha, Bio pesticides application(BT) @2gm/lit , hand clipping and destruction of infected shoots and fruits .	1.0	Bio control of brinjal fruit and shoot borer.	254.3	186.4	36.42	3	2			5
Kandhamal	IPM	Tomato	Kharif 2010	Soil incorporation of neem cake @250 kgs/ha , seed and seedling treatment with bavistin, pheromone trap 20nos. /ha , spraying of endosulphan @ 2 ml /lit and drenching with plantomycin @ 1 g and copper oxychloride 2.5 g/lit.	1.0	Integrated pest and Disease management in Tomato	145.5	109.2	33.24	2	3			5
Kandhamal	IPM	Cabbage	Kharif 2010	Neem cake @ 2.5q/ha and Pheromone trap 20 numbers /ha and intercropping with mustard @ 16:1	1.0	IPM for Tobacco Caterpillar in Cabbage.	189.2	152.5	24		5			5

Kandhamal	Nutrition management	Nutritional garden	Kharif 2010	Plot Size -10 cent , Developing crop schedule on rotation basis, lay out of nutritional garden with crop management.	0.4	Planning & layout of Nutritional garden	115	70	64	1	9			10
Kandhamal	Weed management	Turmeric	Kharif 2010	Mulching with mango & jack fruit leaves @ 10ton /ha twice , immediately after planting & 45 days after planting.	1.0	Mulching in Turmeric with locally available materials like jackfruit & mango leaves	63.8	44.7	42	-	5			5
Kandhamal	Weed management	Niger	Kharif 2010	Introduction of improved variety( Utkal Niger –ONS-150 ,pre -emergence application of Pendimethalin @ 1.0 kg a.i /ha and hand weeding at 30 DAS with fertilizer application @ 40:20:20 NPK/ha	5.0	<i>Weed management In Niger</i>	5.4	3.1	74	-	18			18
Kandhamal	Varietal evaluation	Black Gram	Kharif 2010	Introduction of HYv black gram Sekhar -2 Seed 20 kg/Ha, Rhizobium inoculation @ 20 gm /kg seed, application of fertilizer @ 20:40:20 NPK /ha ,lime application @ 5Q/ha , need based application of PP chemicals	5.0	HYV Black Gram var-Sekhar -2 with INM	6.2	3.7	64	1	14		1	16
Kandhamal	Disease management	Cattle	Kharif 2010	De-worming of cattle by Zycloz (Closantel 15% oral solutions) @ 1ml/10kg body weight,injection Belamyl @ 1ml/10kg body weight.	50	Disease management in cattle	1.6 ltr milk/animal	1.0 ltr milk/animal/day	60	5	5			10
Kandhamal	Small scale income generating activities	Backyard Poultry	Kharif 2010	Rearing of Backyard poultry breed Banaraja.	100	Backyard poultry rearing	3.8 kg/bird/year	0.8 kg/bird/year	375	-	10			10
Kandhamal	Production and Management	Garden Pea	Rabi 10-11	Summer ploughing, FYM 5qtl./ha ,seed treatment with Rhizobium 20g/kg of Seed ,Fertilizer 50:70:50 ,Spacing 30x10cm.	1.0	Introduction of improved Garden Pea variety Azad P-3	104.2	88.4	17.8	-	5			5
Kandhamal	Resource conservation technology	Mango	Rabi 10-11	Soil digging according to size of pot ,spreading small sheet of sand ,making small hole in earthen pots and placing in trench with open mouth ,filling with water ,mulching of mango plants.	1.0	Pitcher method of irrigation	--	--	--	-	5			5



Kandhamal	INM	Tomato	Rabi 10-11	Application of Lime (PMS)@5q/ha at final ploughing followed by use of inoculated & incubated FYM at planting time. (BI= Azatobactor + Azospirillum+PSB(1:1:1) , 2+2+2=6 kg/ha).	1.0	Application of lime & Bio fertilizer in Tomato	236.5	128.3	84	1	4			5
Kandhamal	Small Scale income generating enterprises	Nutritional garden	Rabi 10-11	Plot Size -10 cent, Developing crop schedule on rotation basis, lay out of nutritional garden with crop management.	0.4	Planning & layout of Nutritional garden	122	77	58					10
Kandhamal	INM	Sun flower	Rabi 10-11	Lime (PMS) @5 qntl. /ha and FYM @ 8 ton/ha are incorporated in furrows one week before sowing.The entire quantity of P ,K & S(30kgS/ha) & 50% of N are applied as basal dose & remaining as top dressing. Two Sprays of borax 3gm/lit of water to capitulum at 35 & 55 DAS.	1.0	Nutrient management in Sun flower.	14.9	8.7	71	1	4			5
Kandhamal	Varietal evaluation	Field Pea	Rabi 10-11	Introduction of improved variety Adarsh, seed treatment with <i>Trichoderma Viride</i> ,RDF @25:50:50 kg NPK/ha, sulphur dusting @ 2.5 kg/ha	5.0	HYV Field Pea var-Adarsha with INM	21.5	14.5	48		21			21
Kandhamal	Feed and Fodder	Goat	Rabi 10-11	Daily feed of local feed (Maize,Mahua Cake ,Rice bran ,6:1:3) @ 20gm/kid & 50gm/female.Feeding of feed mixture for 6 month before attaining market.	50 nos,	Feeding of local feeds to Desi goats	12 kg/animal/year	8.5 kg/animal/year	41		5			5
Kandhamal	Small Scale income generating enterprises	Bee keeping	Rabi 10-11	ISI box, rearing of <i>Apis Cerena Indica</i>	5	<i>Apis Cerena Indica</i>	8	3	160		5			5
Kandhamal	Drudgery reduction	Maize Sheller	Rabi 10-11	Low cost ,manually operated & no grain damage during shelling	10	<i>Use of Maize Sheller</i>				5	5			10
Kandhamal	Drudgery reduction	Naveen Sickle	Rabi 10-11	Low cost ,handy to use.	10	<i>Use of Naveen Sickle</i>				4	6			10

### 3.3 Economic Impact of FLD

KVK Name	Name of Crop/ Enterprise	Technology demonstrated	Parameters			Cost of cultivation (Rs/ha)		Gross Return (Rs/ha)		Average Net Return (Rs/ha)		Benefit-Cost Ratio (Gross Return / Gross Cost)	
			Name and unit of Parameter	Demo	Check	Demo	Check	Demo	Check	Demo	Check	Demo	Local Check
Kandhamal	Rice	Mixing Nimin @ 10ml/kg of Urea before application and soil test based fertilizer application.	No. of tillers/hill	12	7	17850	16400	37800	32500	19950	16100	2.1	1.9
Kandhamal	Groundnut	Lime application @ 5qtl/ha in furrows 7 days before sowing with FYM @ 5ton/ha, with soil test based fertilizer application.	100 kernel weight in Gm	39.0	23.3	14600	10450	41170	24610	26570	14160	2.8	2.3
Kandhamal	Sweet Potato	White flesh , Red skin ,Duration -110-120 days, Tolerance to sweet potato weevil Ridge method of planting (at 45 days after planting), spacing at 60x20cm ,soil test based fertilizer application.	Yield/M <sup>2</sup> in Kg	1.8	1.2	25700	19500	66480	45400	40780	25900	2.6	2.3
Kandhamal	Runner bean	Mixing of one kg cow dung in 10 lit of water(1:10) and spraying in 5 liters of water thrice at 10 days interval. 40 DAS,	BLB infestation ,%	10	22	21100	19200	42800	35400	21700	16200	2.0	1.8
Kandhamal	Brinjal	Soil incorporation with Neem cake @250kg/ha, Pheromone trap 20 nos. /ha, Bio pesticides application(BT) @2gm/lit , hand clipping and destruction of infected shoots and fruits .	Infestation ,%	10.8	63.4	34800	29380	101720	74560	66920	45180	2.9	2.5
Kandhamal	Tomato	Soil incorporation of neem cake @250 kgs/ha , seed and seedling treatment with bavistin, pheromone trap 20nos. /ha , spraying of endosulphan @ 2 ml /lit and drenching with plantomycin @ 1 g and copper oxychloride 2.5 g/lit.	Wilting ,% ; Fruit borer/5 plants,No	5 ; 3	12;10	25600	21700	65475	49140	39875	27440	2.5	2.2
Kandhamal	Cabbage	Neem cake @ 2.5q/ha and Pheromone trap 20 numbers /ha and intercropping with mustard @ 16:1	No. of larva/10 cabbage plant, No	6	14	24500	21300	56760	45750	32260	24450	2.3	2.1
Kandhamal	Nutritional garden	Plot Size -10 cent , Developing crop schedule on rotation basis, lay out of nutritional garden with crop management.				4800	3600	11500	7000	6700	3400	2.3	1.9
Kandhamal	Turmeric	Mulching with mango & jack fruit leaves @ 10ton /ha twice , immediately after planting & 45 days after planting.	Weed population /M <sup>2</sup> ,No	17	59	41200	39900	114840	80460	73640	40500	2.8	2.0

Kandhamal	Niger	Introduction of improved variety( Utkal Niger –ONS-150 ,pre - emergence application of Pendimethalin @ 1.0 kg a.i /ha and hand weeding at 30 DAS with fertilizer application @ 40: 20:20 NPK/ha	Weed population (60 DAS)/M <sup>2</sup> ,No	7	16	7800	5200	18900	10850	11100	5650	2.4	2.0
Kandhamal	Blackgram	Introduction of HYv black gram Sekhar -2 Seed 20 kg/Ha, Rhizobium inoculation @ 20 gm /kg seed, application of fertilizer @ 20:40:20 NPK /ha ,lime application @ 5Q/ha , need based application of PP chemicals	Test weight ,Gm	42.5	34	11500	9200	24800	14800	13300	5600	2.1	1.6
Kandhamal	Cattle	De-worming of cattle by Zycloz (Closantel 15% oral solutions) @ 1ml/10kg body weight, injection Belamyl @ 1ml/10kg body weight.				2100	1800	3600	2400	1500	600	1.7	1.3
Kandhamal	Backyard Poultry	Rearing of Backyard poultry breed Banaraja	Eggs/bird ,No	80	30	2500	1000	30400	7680	27900	6680	12	7.6
Kandhamal	Garden Pea	Summer ploughing ,FYM 5qtl./ha ,seed treatment with Rhizobium 20g/kg of Seed ,Fertilizer 50:70:50 ,Spacing 30x5cm.	Pods/plant ,No	17	12	40935	38200	114620	97240	73685	59040	2.8	2.5
Kandhamal	Mango	Soil digging according to size of pot ,spreading small sheet of sand ,making small hole in earthen pots and placing in trench with open mouth ,filling with water ,mulching of mango plants.	Mortality %	7	35	2150	1650	2790	1950	--	--	1.3	1.1
Kandhamal	Tomato	Application of Lime (PMS)@5q/ha at final ploughing followed by use of inoculated & incubated FYM at planting time. (BI= Azatobactor + Azospirillum+PSB(1:1:1) , 2+2+2=6 kg/ha).	Single fruit weight in Gm.	95.8	40.6	43790	29160	118250	64150	74460	34990	2.7	2.2
Kandhamal	Nutritional garden	Plot Size -10 cent , Developing crop schedule on rotation basis, lay out of nutritional garden with crop management.				5400	4100	12200	7700	6800	3600	2.2	1.8
Kandhamal	Sun flower	Lime (PMS) @5 qntl./ha and FYM @ 8 ton/ha are incorporated in furrows one week before sowing.The entire quantity of P ,K & S(30kgS/ha) & 50% of N are applied as basal dose & remaining as top dressing. Two Sprays of borax 3gm/lit of water to capitulum at 35 & 55 DAS.	No. of seeds /Capitulum	133.5	78.6	13470	9290	35015	20445	21545	11155	2.6	2.2

Kandhamal	Field Pea	Introduction of improved variety Adarsh, seed treatment with <i>Trichoderma Viride</i> , RDF @25:50:50 kg NPK/ha, sulphur dusting @ 2.5 kg/ha	No. of grains/pod ,No.	5	3	24500	20400	64500	43500	40000	23100	2.6	2.1
Kandhamal	Goat	Daily feed of local feed (Maize,Mahua Cake ,Rice bran ,6:1:3) @ 20gm/kid & 50gm/female.Feeding of feed mixture for 6 month before attaining market.				400	300	2400	1700	2000	1400	6	5.6
Kandhamal	Bee keeping	ISI box, rearing of <i>Apis Cerena Indica</i>				800/-per box	400/- per box	1600/- per box	600/- per box	800/- per box	200/- per box	2.0	1.5
Kandhamal	Drudgery reduction	<i>Use of Maize Sheller</i>	Output/hour ,kg	18	6								
Kandhamal	Drudgery reduction	<i>Use of Naveen Sickle</i>	Output/Hour ,M <sup>2</sup>	100	70								

### 3.4 Feedback of the Farmers

Name of KVK	Feedback
Kandhamal	Rice :-Mixing Nimin with urea increases yield by 16.3 % over farmers practice & accepted b y the farmers.
Kandhamal	Groundnut:- Application of lime gave an yield of 17.9 q/ha against farmers practice 10.7 q/ha & the pH increases to 6.1 .The demonstration is appreciated by the farmers.
Kandhamal	Sweet Potato:-Variety Kisan gave an yield of 166.2 q/ha with an increase of 46 % over farmers variety. Less market demand due to white in color.
Kandhamal	Runner bean:- Yield increases by 20.9 % over farmer practice & BLB infestation reduced by 12 % also it is a low cost technology & this demonstration is accepted by the farmers.
Kandhamal	Brinjal :- Yield increases by 36.42 % over farmer practice & fruit & shoot borer infestation reduced by 52.6 % & this demonstration is accepted by the farmers.
Kandhamal	Tomato :- Yield increases by 33.24 % over farmer practice & wilting reduced by 7% also fruit borer reduced by 7 nos /5 plant than local check.This demonstration is accepted by the farmers.
Kandhamal	Cabbage :- Yield increases by 24% over farmer practice & caterpillar infestation reduced by 8 per/10 cabbage plant . This demonstration is accepted by the farmers.
Kandhamal	Nutritional garden:-Use of home stead land & leisure time & availability of fresh vegetable round the year.
Kandhamal	Turmeric:-Mulching in Turmeric with locally available mulch material reduce weed intensity by 71 % .
Kandhamal	Niger :-Pre emergence application of weedicide reduces weed incidence,Var-Utkal Niger is accepted by the farmers due to more number of heads per plant.
Kandhamal	Blackgram:- Var-Sekhar 2 gave an yield of 6.2 q/ha & bold grains & aveage no. of pods /plant was 13 & is accepted by the farmers.
Kandhamal	Cattle:-Less disease incidence & more milk yield in milch animals.
Kandhamal	Backyard Poultry:-More income with less investment ,low mortality rate & accepted by the farmers.
Kandhamal	Garden Pea:-Variety – Azad P-3 yielded 104.2 q/ha against local variety 88.4q/ha with an increase of 17.8 %
Kandhamal	Mango:-Reduce mortality percentage by 28 % & is accepted by the farmers.
Kandhamal	Tomato:- Yield increases by 84 % with an average yield of 236.5 q/ha against farmers practice 128.3 q/ha & is accepted by the farmers.
Kandhamal	Nutritional Garden :- Use of home stead land & leisure time & availability of fresh vegetable round the year.
Kandhamal	Sun flower:- Yield increases by 71 % with an average yield of 14.9 q/ha & is accepted by the farmers.
Kandhamal	Field Pea:-Var- Adarsh is resistant to powdery mildew disease & average plant height is 98 cm with an average yield of 21.5 q/ha.
Kandhamal	Goat:- More body weight gives more income.

Kandhamal	Bee keeping- provides additional source of income to the farmers
Kandhamal	<i>Maize Sheller- working efficiency has increased and easy to operate</i>
Kandhamal	<i>Naveen Sickle- working efficiency has increased</i>

### 3.5 Training and Extension activities under FLD

KVK Name	Crop	Activity	No. of activities organized	Number of participants	Remarks
Kandhamal	Rice	Field days			
Kandhamal		Farmers Training	1	30	
Kandhamal		Media coverage			
Kandhamal		Training for extension functionaries			
Kandhamal	Groundnut	Field days	1	20	
Kandhamal		Farmers Training	1	30	
Kandhamal		Media coverage			
Kandhamal		Training for extension functionaries	1	15	
Kandhamal	Sweet Potato	Field days	1	10	
Kandhamal		Farmers Training	1	30	
Kandhamal		Media coverage			
Kandhamal		Training for extension functionaries			
Kandhamal	Runner bean	Field days			
Kandhamal		Farmers Training	2	60	
Kandhamal		Media coverage			
Kandhamal		Training for extension functionaries			
Kandhamal	Brinjal	Field days			
Kandhamal		Farmers Training	3	90	
Kandhamal		Media coverage			
Kandhamal		Training for extension functionaries			
Kandhamal	Tomato	Field days	1	15	
Kandhamal		Farmers Training	1	30	
Kandhamal		Media coverage			
Kandhamal		Training for extension functionaries			
Kandhamal	Cabbage	Field days	1	15	
Kandhamal		Farmers Training	1	30	
Kandhamal		Media coverage			
Kandhamal		Training for extension functionaries			
Kandhamal	Nutritional garden	Field days			
Kandhamal		Farmers Training	1	30	

Kandhamal		Media coverage			
Kandhamal		Training for extension functionaries			
Kandhamal	Turmeric	Field days			
Kandhamal		Farmers Training	1	30	
Kandhamal		Media coverage			
Kandhamal		Training for extension functionaries			
Kandhamal	Niger	Field days	1	25	
Kandhamal		Farmers Training	1	40	
Kandhamal		Media coverage			
Kandhamal		Training for extension functionaries			
Kandhamal	Blackgram	Field days	1	30	
Kandhamal		Farmers Training	1	20	
Kandhamal		Media coverage			
Kandhamal		Training for extension functionaries			
Kandhamal	Garden Pea	Field days			
Kandhamal		Farmers Training	1	30	
Kandhamal		Media coverage			
Kandhamal		Training for extension functionaries			
Kandhamal	Mango	Field days		--	
Kandhamal		Farmers Training	1	30	
Kandhamal		Media coverage			
Kandhamal		Training for extension functionaries			
Kandhamal	Tomato	Field days	1	20	
Kandhamal		Farmers Training	2	45	
Kandhamal		Media coverage			
Kandhamal		Training for extension functionaries			
Kandhamal	Nutritional garden	Field days			
Kandhamal		Farmers Training			
Kandhamal		Media coverage			
Kandhamal		Training for extension functionaries			
Kandhamal	Sun Flower	Field days	1	20	
Kandhamal		Farmers Training	1	30	
Kandhamal		Media coverage			
Kandhamal		Training for extension functionaries			
Kandhamal	Field Pea	Field days	1	25	
Kandhamal		Farmers Training	1	30	
Kandhamal		Media coverage			
Kandhamal		Training for extension functionaries			

#### 4. Documentation of the need assessment conducted by the KVK for the training programme

Name of KVK	Category of the training	Methods of need assessment	Date and place	No. Of participants involved
Kandhamal	Practicing farmers & farm women	Focused group discussion ,Interaction & diagnostic visit	27.05.10 , DRDA Trg. Hall ,Phulbani	35
Kandhamal	Farm women	Interaction with farm women ,Diagnostic visit & PRA.	3.09.10 & 04.09.10 ,Kambriki & Damiguda	120
Kandhamal	Rural Youth	Personnel interview, PRA & group discussion	09.07.10 ,27.07.10 , Gasaguda ,Baibali & Penala	85
Kandhamal	Extension functionaries	Group discussion & secondary information.	06.05.2010 ,KVK ,Kandhamal	40

#### Abbreviation Used

FW	(A) Farmers & Farm Women
RY	(B) Rural Youths
IS	(C) Extension Personnel
ONC	On Campus Training Programme
OFC	Off Campus Training Programme
M	Male
F	Female
T	Total
<b>Thematic Areas for Training</b>	
CRP	Crop Production
HOV	Horticulture – Vegetable Crops
HOF	Horticulture-Fruits
HOO	Horticulture- Ornamental Plants
HOP	Horticulture- Plantation crops
HOT	Horticulture- Tuber crops
HOS	Horticulture- Spices
HOM	Horticulture- Medicinal and Aromatic Plants
SFM	Soil Health and Fertility Management
LPM	Livestock Production and Management
WOE	Home Science/Women empowerment
AEG	Agril. Engineering
PLP	Plant Protection
FIS	Fisheries
PIS	Production of Inputs at site
CBD	Capacity Building and Group Dynamics
AGF	Agro-forestry
OTH	Others

## 5. TRAINING PROGRAMMES

1. Training programmes should be strictly covered under above mentioned thematic areas only,
2. For category, training type and thematic area, mention code/abbreviations only.

**Table 5.1.** Details of Training programmes conducted by the KVKs

Name of KVK	Category	Training Type	Thematic area	Training Title	No. of Courses	Duration (Days)	Participants							
							General		SC		ST		Others	
							M	F	M	F	M	F	M	F
1	2	3	4	5	7	8	9	10	11	12	13	14		
Kandhamal	FW	OFC	PLP	Seed & Seedling treatment for cole crops.	1	1					23	7		
Kandhamal	FW	OFC	PLP	Control of Brinjal fruit & shoot borer	2	2	1				42	17		
Kandhamal	FW	OFC	PLP	Control of BLB in Runner Bean by ITK	1	1			7		19	4		
Kandhamal	FW	OFC	PLP	Control of Stem borer in Paddy	2	2	2		1	3	46	8		
Kandhamal	FW	OFC	PLP	Safe and judicious use of pesticide, preparation of spray solution and spraying method.	1	1			9		21	-		
Kandhamal	FW	OFC	PLP	Use of bio-Control agents for control of Brinjal fruit and shoot borer.	1	1			1		18	11		
Kandhamal	FW	OFC	PLP	Bio- Control of insect pest disease in Runner Bean.	1	1			1	1	15	13		
Kandhamal	FW	OFC	PLP	Bio-Control of DBM in Cauliflower.	2	2			4	4	39	13		
Kandhamal	FW	OFC	PLP	Bio- Control of insect pest disease in Solanaceous Crop.	1	1			7	3	19	1		
Kandhamal	FW	OFC	PLP	Control of Stored grain pest in Pulses.	1	1					25	5		
Kandhamal	FW	OFC	PLP	Control of Stored grain pest in Pulses by ITK.	1	1			9	2	9	10		
Kandhamal	RY	ONC	PLP	Use of Herbal pesticide.	1	1			2		18			
Kandhamal	RY	ONC	PLP	Bee Keeping	1	1			2		18			
Kandhamal	IS	ONC	PLP	IPM in Cole crops.	1	1	5		-		8		2	
Kandhamal	IS	ONC	PLP	Bee Keeping	1	1	6		5		4			
Kandhamal	IS	ONC	PLP	IPM in Pulse crop	1	1	4		4		7			
Kandhamal	FW	OFC	SFM	Nimin coated urea application in Paddy.	1	1	1		-		23	6		



Name of KVK	Category	Training Type	Thematic area	Training Title	No. of Courses	Duration (Days)	Participants							
							General		SC		ST		Others	
							M	F	M	F	M	F	M	F
1	2	3	4	5	7	8	9	10	11	12	13	14		
Kandhamal	FW	OFC	SFM	Lime application in Turmeric	1	1					24	6		
Kandhamal	FW	OFC	SFM	Problem of acid soil & its management	3	3			10	-	65	13	2	
Kandhamal	FW	OFC	SFM	Techniques of soil sample collection.	1	1			5	5	14	6	-	
Kandhamal	FW	OFC	SFM	Needs of soil testing & soil test based fertilizer recommendation.	1	1			1	-	8	5	1	
Kandhamal	FW	OFC	SFM	Importance of soil testing & techniques of soil sample collection.	1	1			2	-	7	5	1	
Kandhamal	FW	OFC	CRP	Agro techniques for sowing of Maize.	1	1				-	19	11	-	
Kandhamal	FW	OFC	CRP	Agro techniques for transplanted rice under low land condition.	1	1	1			3	1	19	6	
Kandhamal	FW	ONC	SFM	Micronutrient application in cole crops.	1	1			1		10	3		1
Kandhamal	RY	OFC	SFM	Iron toxicity & its management in soil.	1	1			4	3	18	5		
Kandhamal	RY	OFC	SFM	Lime & bio fertilizer application in Vegetable.	1	1			7	1	19	3		
Kandhamal	RY	OFC	SFM	Bio fertilizer application in vegetables	1	1			2		13			
Kandhamal	RY	ONC	SFM	Vermicomposting	1	1			-		15			
Kandhamal	RY	ONC	SFM	Nutrient management in oilseed crops.	1	1			3		12			
Kandhamal	IS	ONC	SFM	Micro & secondary nutrient deficiency & their management	1	1			2		13			
Kandhamal	IS	ONC	SFM	Problem of acid soil & its management	1	2	7		2		3		3	
Kandhamal	IS	ONC	SFM	Vermicomposting	1	1	7		3				5	-
Kandhamal	FW	OFC	WOE	Management & layout of nutritional garden	2	2				6		53		1
Kandhamal	FW	OFC	WOE	Use & maintenance of boiling drum	2	2				6	11	43		
Kandhamal	FW	ONC	WOE	Paddy straw mushroom	1	2				4	-	11		

Name of KVK	Category	Training Type	Thematic area	Training Title	No. of Courses	Duration (Days)	Participants							
							General		SC		ST		Others	
							M	F	M	F	M	F	M	F
1	2	3	4	5	7	8	9	10	11	12	13	14		
				cultivation										
Kandhamal	FW	ONC	WOE	Use of hand ridger in cole crops	2	2				11		27		2
Kandhamal	FW	ONC	WOE	Oyster Mushroom cultivation	1	2		1		-		9		5
Kandhamal	RY	OFC	WOE	Control of pulse beetle in Arhar by ITK	1	1				1		28		1
Kandhamal	RY	OFC	WOE	Preparation of leaf plates by stitching machine.	1	1				10		20		-
Kandhamal	RY	OFC	WOE	Improved technology for storing of Turmeric seed.	1	1				5		23		2
Kandhamal	RY	ONC	WOE	Processing ,preservation & value addition of forest products & fruits & vegetables	1	1				2		13		15
Kandhamal	RY	ONC	WOE	Knowledge on use of Paddy thresher & winnower	1	1				-	3	15	1	1
Kandhamal	RY	ONC	WOE	Oyster Mushroom cultivation	2	4				10		19		1
Kandhamal	RY	ONC	WOE	Processing ,preservation & value addition of minor fruit crops & vegetables	1	3				4		10		1
Kandhamal	RY	ONC	WOE	Oyster mushroom cultivation in Niger stalk	1	3				2		11		2
Kandhamal	FW	OFC	CBD	Formation and management of farm science club	3	3	0	0	19	10	50	11	0	0
Kandhamal	FW	OFC	CBD	Formation and management of Self Help Groups	2	2			14	7	18	16	4	1
Kandhamal	FW	OFC	SFM	Management of problematic soils	1	1			7	23				
Kandhamal	FW	OFC	AEG	Use and maintenance of ground nut decorticator	1	1			2	1	15	12		
Kandhamal	FW	OFC	AEG	Intercultural implements for vegetable crops	1	1	1		3		7	9		
Kandhamal	FW	ONC	CBD	Communication skill and leadership development	2	4	1		3		34		2	

Name of KVK	Category	Training Type	Thematic area	Training Title	No. of Courses	Duration (Days)	Participants							
							General		SC		ST		Others	
							M	F	M	F	M	F	M	F
1	2	3	4	5	7	8	9	10	11	12	13	14		
Kandhamal	FW	ONC	CBD	Entrepreneurship development programmes for farmers	1	2			4		11			
Kandhamal	RY	OFC	CBD	Capacity building for para extension workers	2	2	6	1	41	12				
Kandhamal	RY	ONC	CBD	Capacity building for technology transfer for Krushak sathi	1	4			3		15	2		
Kandhamal	IS	ONC	CBD	Formation of farm science club & group dynamics	1	1	9	0	5		1			
Kandhamal	IS	ONC	CBD	Leadership development & organization management	1	1	9				6			
Kandhamal	IS	ONC	CBD	WTO & IPR issues	1	2	13	1	1					
Kandhamal	IS	ONC	CBD	Gender main streaming in Agriculture	1	2	9	2					4	
Kandhamal	FW	OFC	HOS	Raised seed bed technique for turmeric and ginger planting	2	2			1	1	50	7	1	
Kandhamal	FW	OFC	HOT	Improved technique for sweet potato planting	1	1			5		16	9		
Kandhamal	FW	OFC	HOF	Rejuvenation of old orchard	1	1					29	-	1	
Kandhamal	FW	OFC	HOV	Nursery raising technique of fruit crops	1	1			1	4	3	16	2	4
Kandhamal	FW	OFC	HOF	Soil and water conservation measures in orchard	1	1			16	10	2	2		
Kandhamal	FW	OFC	HOV	Nursery raising technique of Cole Crops	1	1			8	12	4	6		
Kandhamal	FW	OFC	HOV	Nursery raising technique of Onion	1	1			8		22			
Kandhamal	FW	OFC	HOV	Sowing & nutrient	1	1			4		25	-	1	-

Name of KVK	Category	Training Type	Thematic area	Training Title	No. of Courses	Duration (Days)	Participants							
							General		SC		ST		Others	
							M	F	M	F	M	F	M	F
1	2	3	4	5	7	8	9	10	11	12	13	14		
				management in gardedn pea										
Kandhamal	FW	OFC	HOV	Nursery raising of off season vegetables for higher income	1	1					22	8		
Kandhamal	RY	OFC	HOF	Improved method of mango cultivation	1	1			2	3	6	17		2
Kandhamal	RY	ONC	HOF	Technique of propagation of fruit crops	1	1					15			
Kandhamal	RY	ONC	HOV	Seed production in cow pea	1	2					2	13		
Kandhamal	RY	ONC	HOV	Seed extraction in tomato	1	1					13	1		1
Kandhamal	RY	ONC	HOF	Techniques of propagation of fruit crops .	1	4			2		9	4		
Kandhamal	IS	ONC	HOV	Physiological disorders & its control measures in cole crops.	1	1	8				7			
Kandhamal	IS	ONC	HOF	Rejuvenation of old mango orchard	1	1	9				5			1

**Table 5.2. Details of Vocational training programmes for Rural Youth conducted by the KVKs**

Name of KVK	Training title	Crop / Enterprise	Identified Thrust Area	Duration of training (days)	Number of Beneficiaries					
					SC		ST		Others	
					M	F	M	F	M	F
Kandhamal	Processing ,preservation & value addition of forest products & fruits & vegetables	Enterprise	Value addition	3		2		13		
Kandhamal	Processing ,preservation & value addition of minor fruit crops & vegetables	Enterprise	Value addition	3		4		10		1
Kandhamal	Oyster mushroom cultivation in Niger stalk	Enterprise	Income generating activities	3		2		11		2
Kandhamal	Use of Herbal pesticides	Organic input	Production of organic input	4	2		18			
Kandhamal	Techniques of propagation of fruit crops .	Mango & Litchi	Planting material production	4	2		9	4		
Kandhamal	Capacity building for technology transfer for Krushak sathi	CBD	Capacity Building and Group Dynamics	4	3		15	2		

**Table 5.3. Details of training programme conducted for livelihood security in rural areas by the KVKs**

Name of KVK	Training title	Self employed after training			Number of persons employed else where
		Type of units	Number of units	Number of persons employed	
Kandhamal	Techniques of propagation of fruit crops .	Planting material production unit	2	6	
Kandhamal	Oyster mushroom cultivation	Mushroom	3	3	

**Table 5.4. Sponsored Training Programmes**

Name of KVK	Title	Thematic area (as given in abbreviation table)	Sub-theme (as per column no 5 of Table T1)	Client (FW/RV/IS)	Duration (days)	No. of courses	No. of Participants						Sponsoring Agency	Fund received for training (Rs.)
							Others		SC		ST			
							M	F	M	F	M	F		
Kandhamal	Soil fertility management	INM	Management of problematic soil	FW	01	01	20	6	34	60	30	05	IPI	
Kandhamal	Water management for increasing crop productivity	Water management	Water management	FW	07	01	08	03	9	4	18	8	AICRP on Water management (ICAR)	
Kandhamal	Button Mushroom Production	Women empowerment	Income generating activities	FW	02	01	5	8	06	11	6	14	CTMRT ,OUAT ,Bhubaneswar	
Kandhamal	Training cum workshop on Gender mainstreaming in Agriculture.	Women empowerment	Gender mainstreaming in agriculture	FW	1	1	6	8	4	18	4	10	OGRC ,OUAT ,Bhubaneswar	

**Table 5.5 Training Programmes for Panchayatiraj Institutions Office-bearers & members**

Name of KVK	Title	Thematic area (as given in abbreviation table)	Sub-theme (as per column no 5 of Table T1)	Client (FW/RV/IS)	Duration (days)	No. of courses	No. of Participants						Sponsoring Agency	Fund received for training (Rs.)
							Others		SC		ST			
							M	F	M	F	M	F		
Kandhamal														

**Table 5.6 Evaluation/Follow up & Impact of the training programmes conducted by the KVK (all types of trainings)**

Name of KVK	Title of the training	No. of trainees	Change in knowledge (Score)		Change in Production (q/ha)		Change in Income (Rs)		Impact on 1. Area expanded (ha) 2. No. of farmers adopted (no.) 3. % change in knowledge, production & Income
			Before	After	Before	After	Before	After	
Kandhamal	Seed & Seedling treatment for cole crops.	30	31	52	155	198	28480	35200	1. 18 ha 2. Out of 30 trainees, 20 farmers interested for seed and seed treatment 3. (i) Knowledge: $67 \cdot (\text{After}-\text{Before})/\text{Before} \cdot 100$ (ii) Production: 27 (ii) Income: 23
Kandhamal	Control of Brinjal fruit & shoot borer	60	33	55	245	320	42100	56200	1. 32 ha 2. Out of 60 trainees, 46 farmers accepted the IPM method for Controlling of Brinjal fruit & shoot borer (i) Knowledge: $66 \cdot (\text{After}-\text{Before})/\text{Before} \cdot 100$ (ii) Production: 30 (ii) Income: 33
Kandhamal	Control of BLB in Runner Bean by ITK.	30	24	46	23	29	39400	49100	1. 67 ha 2. Out of 30 trainees, 23 farmers accepted the technology 3. (i) Knowledge: $91 \cdot (\text{After}-\text{Before})/\text{Before} \cdot 100$ (ii) Production: 26 (ii) Income: 24
Kandhamal	Control of Stem borer in Paddy	60	28	44	33	40	13900	16800	1. 106 ha 2. Out of 60 trainees, 40 farmers accepted the method of controlling stem borer in paddy 3. (i) Knowledge: $57 \cdot (\text{After}-\text{Before})/\text{Before} \cdot 100$ (ii) Production: 21% (ii) Income: 20%
Kandhamal	Safe and judicious use of pesticide, preparation of spray solution and spraying method.	30	31	56					1. Out of 30 trainees, 25 farmers interested for safe and judicious use of pesticide. 2. (i) Knowledge: $80 \cdot (\text{After}-\text{Before})/\text{Before} \cdot 100$ (ii) Production: (ii) Income:

Kandhamal	Use of bio-Control agents for control of Brinjal fruit and shoot borer.	30	18	35	242	288	41150	48800	<ol style="list-style-type: none"> <li>1. 35 ha</li> <li>2. Out of 30 trainees, 17 farmers interested to use bioagent</li> <li>3. (i) Knowledge: 94 (After-Before)/Before *100 (ii) Production: 19 % 3. (ii) Income: 18%</li> </ol>
Kandhamal	Bio- Control of insect pest disease in Runner Bean.	30	20	38	22	28	34400	45350	<ol style="list-style-type: none"> <li>1. 65 ha</li> <li>2. Out of 30 trainees, 22 farmers accepted the technology</li> <li>3. (i) Knowledge: 90 (After-Before)/Before *100 (ii) Production: 27 % 4. (ii) Income: 31 %</li> </ol>
Kandhamal	Bio-Control of DBM in Cauliflower.	30	22	40	280	322	130000	161000	<ol style="list-style-type: none"> <li>1. 72 ha</li> <li>2. Out of 30 trainees, 18 farmers accepted the technology</li> <li>3. (i) Knowledge: 82 (After-Before)/Before *100 (ii) Production: 13 % (ii) Income: 24 %</li> </ol>
Kandhamal	Bio- Control of insect pest disease in Solanaceous Crop(Brinjal).	30	26	43	260	310	45500	59400	<ol style="list-style-type: none"> <li>1. 80 ha</li> <li>2. Out of 30 trainees, 21 farmers accepted the technology</li> <li>3. (i) Knowledge: 65 (After-Before)/Before *100 (ii) Production: 23 % (ii) Income: 31 %</li> </ol>
Kandhamal	Control of Stored grain pest in Pulses.	30	28	52					<ol style="list-style-type: none"> <li>1. No. of villages -5</li> <li>2. Out of 30 trainees, 25 farmers accepted the technology</li> <li>3. (i) Knowledge: 86 (After-Before)/Before *100 (ii) Production: (ii) Income:</li> </ol>
Kandhamal	Control of Stored grain pest in Pulses by ITK.	30	25	41					<ol style="list-style-type: none"> <li>1. No. of villages 5</li> <li>2. Out of 30 trainees, 22 farmers accepted the technology</li> <li>3. (i) Knowledge: 64 (After-Before)/Before *100 (ii) Production: (ii) Income:</li> </ol>



Kandhamal	Use of Herbal pesticide.	20	36	63					<ol style="list-style-type: none"> <li>1. Out of 20 trainees, 15 farmers interested to use herbal pesticide</li> <li>2. (i) Knowledge: 75 (After-Before)/Before *100 (ii) Production: (ii) Income:</li> </ol>
Kandhamal	Bee Keeping	20	42	73	4.5kg/box	6kg/box	675/box	1000/box	<ol style="list-style-type: none"> <li>1. No. of villages 12</li> <li>2. Out of 20 trainees, 16 farmers accepted the technology</li> <li>3. (i) Knowledge: 74 (After-Before)/Before *100 (ii) Production: 33 % (ii) Income: 48 %</li> </ol>
Kandhamal	IPM in Cole crops.	15	52	88	130	180	30000	45000	<ol style="list-style-type: none"> <li>1. Out of 15 trainees, 13 trainees accepted the technology</li> <li>2. (i) Knowledge: 69 (After-Before)/Before *100 (ii) Production:38 (ii) Income: 50</li> </ol>
Kandhamal	IPM in Pulse crop	15	58	85	3.0	5.5	8000	12500	<ol style="list-style-type: none"> <li>1. Area- 110 ha</li> <li>2. Out of 15 trainees, 14 trainees accepted the technology</li> <li>3. (i) Knowledge: 47 (After-Before)/Before *100 (ii) Production:83 (ii) Income:56</li> </ol>
Kandhamal	Nimin coated urea application in Paddy.	30	33	59	22.5	29.0	22500	31600	<ol style="list-style-type: none"> <li>1. 135 ha</li> <li>2. Out of 30 trainees, 23 farmers accepted the technology</li> <li>3. (i) Knowledge: 79 (After-Before)/Before *100 (ii) Production: 29% (ii) Income: 38%</li> </ol>
Kandhamal	Lime application in Turmeric	30	42	78	22.8	31.7	136800	198200	<ol style="list-style-type: none"> <li>1. 102 ha</li> <li>2. Out of 30 trainees, 24 farmers accepted the technology</li> <li>3. (i) Knowledge: 86 (After-Before)/Before *100 (ii) Production: 39 % (ii) Income: 45%</li> </ol>

Kandhamal	Problem of acid soil & its management	105	27	49	10.7	17.9	14160	26570	<ol style="list-style-type: none"> <li>1. 735 ha</li> <li>2. Out of 105 trainees, 85 farmers accepted the technology</li> <li>3. (i) Knowledge: 81 (After-Before)/Before *100 (ii) Production: 67 % (ii) Income: %</li> </ol>
Kandhamal	Techniques of soil sample collection.	30	39	69					<ol style="list-style-type: none"> <li>1. 10 villages</li> <li>2. Out of 30 trainees, 24 farmers accepted the technology</li> <li>3. (i) Knowledge: 77 (After-Before)/Before *100 (ii) Production: (ii) Income:</li> </ol>
Kandhamal	Needs of soil testing & soil test based fertilizer recommendation.	15	38	70	22	35	10000	18500	<ol style="list-style-type: none"> <li>1. 80 ha paddy</li> <li>2. Out of 15 trainees, 12 farmers accepted the technology</li> <li>3. (i) Knowledge: 84 (After-Before)/Before *100 (ii) Production:59 % (ii) Income:85 %</li> </ol>
Kandhamal	Importance of soil testing & techniques of soil sample collection.	15	35	67					<ol style="list-style-type: none"> <li>1. 4 villages</li> <li>2. Out of 15 trainees, 11 farmers accepted the technology</li> <li>3. (i) Knowledge: 91 (After-Before)/Before *100 (ii) Production: (iii) Income:</li> </ol>
Kandhamal	Agro techniques for sowing of Maize.	30	42	76	16.6	26.8	13944	26512	<ol style="list-style-type: none"> <li>1. 67 ha</li> <li>2 Out of 30 farmers, 26 have adopted this techniques</li> <li>3 (i) Knowledge: 81 (After-Before)/Before *100 (ii) Production: 61.4% (ii) Income:90.0%</li> </ol>
Kandhamal	Agro techniques for transplanted rice under low land condition.	30	38	61	20.2	28.9	20200	32890	<ol style="list-style-type: none"> <li>1 132 ha</li> <li>2 Out of 30 farmers, 23 have adopted this techniques</li> <li>3 (i) Knowledge: 60.5 (After-Before)/Before *100 (ii) Production: 43.0% (ii) Income:63.0 %</li> </ol>

Kandhamal	Micronutrient application in cole crops.	15	17	48	142.3	198.7	42690	64610	<ol style="list-style-type: none"> <li>1. 85 ha</li> <li>2. Out of 15 farmers, 12 have realized the importance of micronutrients in cole crops.</li> <li>3. (i) Knowledge: 182 (After-Before)/Before *100 (ii) Production: 40% (ii) Income: 51.3%</li> </ol>
Kandhamal	Iron toxicity & its management in soil.	30	15	55	21.3	28.7	21300	29720	<ol style="list-style-type: none"> <li>1. 95 ha</li> <li>2. Out of 30 trainees, 22 rural youths interested for management of iron toxicity.</li> <li>3. (i) Knowledge: 267(After-Before)/Before *100 (ii) Production: 35 % (ii) Income: 39.5 %</li> </ol>
Kandhamal	Lime & bio fertilizer application in Vegetable.	30	44	77	150.6	220.4	30120	49750	<ol style="list-style-type: none"> <li>1. 57 ha</li> <li>2. Out of 30 Rural youth, 24 Rural youth adopted the lime and bio fertilizer application in vegetable.</li> <li>3. (i) Knowledge: 75 (After-Before)/Before *100 (ii) Production: 43.4% (ii) Income: 65%</li> </ol>
Kandhamal	Bio fertilizer application in vegetables	15	21	38	128.3	236.5	34990	74460	<ol style="list-style-type: none"> <li>1. 90 ha</li> <li>2. Out of 15 trainees, 11 farmers accepted the technology</li> <li>3. (i) Knowledge: 81 (After-Before)/Before *100 (ii) Production: 84 % (ii) Income: 113%</li> </ol>
Kandhamal	Vermicomposting	15	41	80	35.7	55.8	17850	36480	<ol style="list-style-type: none"> <li>1. 70 villages</li> <li>2. Out of 15 rural youths , 14 have adopted this improved method of vermicomposting</li> <li>3. (i) Knowledge: 95 (After-Before)/Before *100 (ii) Production: 56.3% (ii) Income: 104.3%</li> </ol>
Kandhamal	Nutrient management in oilseed crops.	15	34	60	8.7	14.9	11155	21554	<ol style="list-style-type: none"> <li>1. 97 ha</li> <li>2. Out of 15 trainees, 13 farmers accepted the technology</li> <li>3. (i) Knowledge: 76 (After-Before)/Before *100 (ii) Production: 71 % (ii) Income: 93%</li> </ol>

Kandhamal	Micro & secondary nutrient deficiency & their management	15	20	56	62.4	70.6	24960	32240	<ol style="list-style-type: none"> <li>1. 105 ha</li> <li>2. Out of 15 Extension functionaries, 14 have understood the importance of Micro and secondary nutrient deficiency and their management</li> <li>3. (i) Knowledge: 180 (After-Before)/Before *100 (ii) Production: 13% (ii) Income: 29%</li> </ol>
Kandhamal	Problem of acid soil & its management	15	30	59	10.7	17.8	22800	39600	<ol style="list-style-type: none"> <li>1. 121 ha</li> <li>2. Out of 15 Extension functionaries, 12 have realized the importance of lime application for acid soil management. crops.</li> <li>3. (i) Knowledge: 97 (After-Before)/Before *100 (ii) Production: 66.3% (ii) Income:74%</li> </ol>
Kandhamal	Management & layout of nutritional garden	60	28	45	65	106	3100	6000	<ol style="list-style-type: none"> <li>1. No of Villages 212</li> <li>2. Out of 60 trainees 48 have knowledge of nutritional garden</li> <li>3. (i) Knowledge: 60 (ii) Production: 63 (ii) Income:93</li> </ol>
Kandhamal	Use & maintenance of boiling drum	60	30	60					<ol style="list-style-type: none"> <li>1. 60 villages</li> <li>2. Out of 60 trainees 54 trainees have adopted this technology for turmeric boiling.</li> <li>3. (i) Knowledge: 100 (ii) Production: (ii) Income:</li> </ol>
Kandhamal	Paddy straw mushroom cultivation	15	40	76	750gm	1 kg	30	40	<ol style="list-style-type: none"> <li>1.No. of Villages 45</li> <li>2.Out of 15 trainees 9 have good knowledge about cultivation of paddy straw Mushroom</li> <li>1. (i) Knowledge: 90 (ii) Production: 33 (iii) Income:33</li> </ol>
Kandhamal	Use of hand ridger in cole crops	20	10	30					<ol style="list-style-type: none"> <li>1. No of villages 7</li> <li>2. Out of 20 trainees 14 have knowledge on use of hand ridger.</li> <li>3. (i) Knowledge: 50 (ii) Production: 4.(ii) Income:</li> </ol>
Kandhamal	Oyster Mushroom cultivation	60	40	75	1 kg	1.25 kg	60	75	<ol style="list-style-type: none"> <li>1.No. of Villages 40</li> <li>1. Out of 60 trainees 50 have good knowledge about cultivation of Oyster Mushroom</li> <li>2. (i) Knowledge: 38 (ii) Production: 25 (ii) Income:25</li> </ol>

Kandhamal	Control of pulse beetle in Arhar by ITK	30	40	50	-	-	-	-	<ol style="list-style-type: none"> <li>No of villages 60</li> <li>Out of 30 trainees 22 have knowledge on leaf plate preparation using stitching machine.</li> <li>(i) Knowledge: 120 (ii) Production: (ii) Income:50</li> </ol>
Kandhamal	Preparation of leaf plates by stitching machine.	30	25	55	-	-	1200	1800	<ol style="list-style-type: none"> <li>No of SHG 10</li> <li>Out of 30 trainees 18 have knowledge on leaf plate preparation using stitching machine.</li> <li>(i) Knowledge: 120 (ii) Production: (ii) Income:50</li> </ol>
Kandhamal	Improved technology for storing of Turmeric seed.	30	30	50	-	-	-	-	<ol style="list-style-type: none"> <li>35 villages</li> <li>Out of 30 trainees 25 have good knowledge on improved method of storing Turmeric seed.</li> <li>(i) Knowledge: 66 (ii) Production: (ii) Income:</li> </ol>
Kandhamal	Processing ,preservation & value addition of forest products & fruits & vegetables	15	20	60	--	--	1800	4200	<ol style="list-style-type: none"> <li>No of villages 20</li> <li>Out of 15 trainees 12 have knowledge on preservation of Tomato &amp; Tamarind.</li> <li>(i) Knowledge: 200 (ii) Production: (ii) Income:120</li> </ol>
Kandhamal	Knowledge on use of Paddy thresher & winnower	40	18	30	--	--	1800	3500	<ol style="list-style-type: none"> <li>No of SHG 8</li> <li>Out of 40 trainees 31 have knowledge on post harvest implements.</li> <li>(i) Knowledge: 66 (ii) Production: (ii) Income:94</li> </ol>
Kandhamal	Processing ,preservation & value addition of minor fruit crops & vegetables	15	22	35	-	-	1000	1500	<ol style="list-style-type: none"> <li>18 Villages</li> <li>Out of 15 trainees 12 have understood the technology for value addition of fruit &amp; vegetable</li> <li>(i) Knowledge: 51 (ii) Production: (ii) Income:50</li> </ol>
Kandhamal	Oyster mushroom cultivation in Niger stalk	60	20	55	--	--	200	750	<ol style="list-style-type: none"> <li>No. of SHGs -75</li> <li>Out of 60 trainees 45 trainees have good knowledge on Mushroom cultivation.</li> <li>(i) Knowledge: 170 (ii) Production: (ii) Income:275</li> </ol>

Kandhamal	Formation and management of farm science club	90	35	45	-	-	3200	6800	<ol style="list-style-type: none"> <li>No of FSC -9</li> <li>Out of 90 trainees, 62 members have good knowledge on book keeping &amp; role of farm science club</li> <li>(i) Knowledge: 28 (ii) Production: (iii) Income:112 %</li> </ol>
Kandhamal	Formation and management of Self Help Groups	60	30	55	-	-	1200	2600	<ol style="list-style-type: none"> <li>No. of SHG 15</li> <li>Out of 60 trainees 35 have understood the SHG concept &amp; book keeping.</li> <li>(i) Knowledge: 80 (ii) Production: (iii) Income:116 %</li> </ol>
Kandhamal	Management of problematic soils	30	15	35	8	12	16000	24000	<ol style="list-style-type: none"> <li>40 ha</li> <li>Out of 30 trainees, 15 farmers have good knowledge on application of PMS.</li> <li>(i) Knowledge: 130 (ii) Production: 50 (iii) Income:50</li> </ol>
Kandhamal	Use and maintenance of ground nut decorticator	30	20	45	--	--	--	--	<ol style="list-style-type: none"> <li>No. of villages -08</li> <li>Out of 30 trainees 18 have understood the use &amp; maintenance of the implement.</li> <li>(i) Knowledge: 125 % (ii) Production: (iii) Income:</li> </ol>
Kandhamal	Intercultural implements for vegetable crops	20	18	46	120	185	48000	74000	<ol style="list-style-type: none"> <li>Area -85 ha</li> <li>Out of 20 trainees 15 have understood the use &amp; maintenance of the implement. and it saves time and reduces drudgery .</li> <li>(i) Knowledge: 255 % (ii) Production: 54 (iii) Income:54</li> </ol>
Kandhamal	Communication skill and leadership development	40	25	55	--	--	2500	4000	<ol style="list-style-type: none"> <li>No. of SHG -15</li> <li>Out of 40 trainees 25 have understood the importance of SHG and book keeping</li> <li>(i) Knowledge: 120% (ii) Production: (iii) Income:60%</li> </ol>
Kandhamal	Entrepreneurship development programmes for farmers	15	40	65	-	-	5000	24000	<ol style="list-style-type: none"> <li>Out of 15 trainees 3 have started entrepreneurship</li> <li>i) Knowledge: 62% (ii) Production: (iii) Income 380%</li> </ol>

Kandhamal	Capacity building for technology transfer for Krushak sathi	50	35	62	--	--	--	--	1 Out of 50 trainees 32 have adequate knowledge on different agricultural technologies and developmental programmes 2 i) Knowledge: 77% (ii) Production: (ii) Income
Kandhamal	Leadership development & organization management	55	25	35	-	-	-	-	1. Out of 55 trainees 30 have knowledge on organisation management. 2 i) Knowledge: 80 (ii) Production: (ii) Income:
Kandhamal	WTO & IPR issues	15	10	35	--	--	--	--	. Out of 15 trainees 8 have knowledge on organisation management. 2 i) Knowledge: 250 (ii) Production: (ii) Income:
Kandhamal	Gender main streaming in Agriculture	15	12	42	--	--	--	--	Out of 15 trainees 10 have knowledge on organisation management. 2 i) Knowledge: 250 (ii) Production: (ii) Income:
Kandhamal	Raised seed bed technique for turmeric and ginger planting	60	23	31	43.2	58.5	34,400	47,500	1. 32 ha 2. Out of 60 trainees, 18 farmers adopted the recommended technology 3. i) Knowledge: 34 % (ii) Production: 35 % (ii) Income-38 %
Kandhamal	Improved technique for sweet potato planting	30	32	43	91.2	125.8	19,900	26,300	1. 25 ha 2. Out of 30 trainees, 11 farmers adopted the recommended technology 3. i) Knowledge: 35 (ii) Production: 38 % (ii) Income 32 %
Kandhamal	Rejuvenation of old orchard	30	29	38	54	67	37,400	45,800	1. 22 ha 2. Out of 30 trainees, 12 farmers adopted the recommended technology 3. i) Knowledge: 31% (ii) Production: 24 % (ii) Income-22% 3. 31%, 24%, 22%
Kandhamal	Nursery raising technique of fruit crops	30	36	51	-	-	-	-	1. Out of 30 trainees, 14 farmers adopted the recommended technology 2. Change in Knowledge 42%

Kandhamal	Soil and water conservation measures in orchard	30	34	47	87.1	118.5	40,830	53,900	1.28 ha 2. Out of 30 trainees, 13 farmers adopted the recommended technology 3. i) Knowledge: 38 % (ii) Production: 36 % (ii) Income: 32 %
Kandhamal	Nursery raising technique of Cole Crops	30	32	49	162.8	213.7	46500	62200	1. 22 ha 2. Out of 30 Trainees , 22 farmers adopted the recommended technology. 3. (i) Knowledge: 53 (After-Before)/Before *100 (ii) Production: 31% (ii) Income: 33%
Kandhamal	Nursery raising technique of Onion	30	27	44	112.8	157.2	42680	60320	1. 9 ha 2. Out of 30 Trainees , 18 farmers adopted the technology. 3. (i) Knowledge: 63 (After-Before)/Before *100 (ii) Production: 39% (ii) Income: 41%
Kandhamal	Sowing & nutrient management in garden pea	30	33	51	89.2	106.8	59020	76330	1. 12 ha 2. Out of 30 Trainees , 23 farmers adopted the recommended technology. 3. (i) Knowledge: 54 (After-Before)/Before *100 (ii) Production: 20% (ii) Income: 29%
Kandhamal	Nursery raising of off season vegetables for higher income	30	31	48	162.8	213.7	46500	62200	1. 09 ha 2. Out of 30 Trainees , 23 farmers adopted the recommended technology. 3. (i) Knowledge: 55 (After-Before)/Before *100 (ii) Production: 31% (ii) Income: 33%
Kandhamal	Improved method of mango cultivation	30	22	31	83	112.9	40,000	52,800	1.32 ha 2. Out of 30 trainees, 16 farmers adopted the recommended technology 3.41%,36%,32%
Kandhamal	Technique of propagation of fruit crops	30	26	36					1. 2. Out of 30 trainees, 8 farmers practising propagation 3.36%



Kandhamal	Seed production in cow pea	15	34	53	42.5	71.2	12050	20900	<ol style="list-style-type: none"> <li>1. 2 ha</li> <li>2. Out of 15 Trainees , 08 farmers adopted the recommended technology.</li> <li>3. (i) Knowledge: 55 (After-Before)/Before *100 (ii) Production: 67% (ii) Income: 73%</li> </ol>
Kandhamal	Seed extraction in tomato	15	36	54	0.45	0.70	45000	75000	<ol style="list-style-type: none"> <li>1. 1 ha</li> <li>2. Out of 15 Trainees , 6 farmers adopted the recommended technology.</li> <li>3. (i) Knowledge: 47 (After-Before)/Before *100 (ii) Production: 55% (ii) Income: 62%</li> </ol>
Kandhamal	Techniques of propagation of fruit crops .	30	30	60			2000	4200	<ol style="list-style-type: none"> <li>1. 22 ha</li> <li>2. Out of 30 Trainees , 22 farmers adopted the recommended technology.</li> <li>3. (i) Knowledge: 100 (After-Before)/Before *100 (ii) Production: % (ii) Income: 110%</li> </ol>
Kandhamal	Physiological disorders & its control measures in cole crops.	15	25	41	160.5	211.8	45800	61100	<ol style="list-style-type: none"> <li>1. 03 ha</li> <li>2. Out of 15 Trainees , 08 farmers adopted the recommended technology.</li> <li>3. (i) Knowledge: 64 (After-Before)/Before *100 (ii) Production: 32% (ii) Income: 33%</li> </ol>
Kandhamal	Rejuvenation of old mango orchard	30	22	45	40	75	40000	66000	<ol style="list-style-type: none"> <li>1. 22 ha</li> <li>2. Out of 30 Trainees , 20 farmers adopted the recommended technology.</li> <li>3. (i) Knowledge: 104 (After-Before)/Before *100 (ii) Production: 87 (ii) Income:65</li> </ol>

## 6. EXTENSION ACTIVITIES

Name of the KVK	Activity	No. of activities (Targeted)	No. of activities (Achieved)	Detail of Participants						Remarks		
				Farmers (Others)		SC/ST (Farmers)		Extension Officials		Purpose	Topic s	Crop Stages
				M	F	M	F	M	F			
Kandhamal	Field Day	11	11	25	12	102	66	16	--	Technology dissemination	1.Blackgram 2. Groundnut 3. Niger 4.Sweet Potato 5.Field Pea 6. Sun flower 7.Tomato 8. Cabbage 9. Turmeric 10.Garden Pea 11.Runner Bean	1 Harvest stage
Kandhamal	Kisan Mela	3	3	42	19	176	63	13	--	1.Awareness programme and technology dissemination to the farmers	1.To aware the farmers about various govt. scheme like RKVY ,NFSM & NHM.	--
Kandhamal	Kisan Ghosthi	9	9	17	08	109	36	22	--	Group dynamics & social resource mobilization,credit linkage with NABARD	Formation of farm science club & CIG.	
Kandhamal	Exhibition	4	4	104	48	522	126	30	05	Technology dissemination & Awareness programme	1. Exhibition at OUAT ,BBSR 2.	
Kandhamal	Film Show	40	40	63	42	523	232	28	--	Technology dissemination	Agricultural technologies & allied.	
Kandhamal	Method Demonstrations	12	12	45	12	236	85	4	--	Technology dissemination	IPM INM	Flowering stage
Kandhamal	Farmers Seminar	1	1	15	4	18	8	6	--		SRI method Organic spice cultivation	
Kandhamal	Workshop	1	1	6	8	8	28	4	2			
Kandhamal	Group meetings	16	16	47	16	114	56	10	--		Plant protection measures	

Name of the KVK	Activity	No. of activities (Targeted)	No. of activities (Achieved)	Detail of Participants						Remarks		
				Farmers (Others)		SC/ST (Farmers)		Extension Officials		Purpose	Topic s	Crop Stages
				M	F	M	F	M	F			
Kandhamal	Lectures delivered as resource persons	24	24	120	38	452	94	24		Technology dissemination	1.Vermicomposting. 2.Mushroom Cultivation 3.Acid Soil management 4.Agro forestry	--
Kandhamal	Newspaper coverage	9	9	Mass						Technology dissemination	1.Parthenium Awareness week 2.Soil health campign	Technology dissemination
Kandhamal	Radio talks	1	1	Mass							1. Turmeric cultivation	Pre sowing stage
Kandhamal	TV talks	--	--	--						--	--	--
Kandhamal	Popular articles	2	2	Mass						--	--	--
Kandhamal	Extension Literature	5	5	Mass						Technology dissemination	1. Organic Turmeric cultivation.	-
Kandhamal	Farm advisory Services	32	32	38	21	82	38	4		Identifies disease ,pest & its management	1. Spodoptera in Cabbage 2. Fruit & shoot borer in Brinjal	--
Kandhamal	Scientific visit to farmers field	82	82	39	18	213	72	18		To give time based technical advice	Diagnostic visit	
Kandhamal	Farmers visit to KVK	198	198	37	8	112	41	15	8	To get advice on various agricultural aspects.	Disease & pest incidence Fertilizer application.	
Kandhamal	Diagnostic visits	16	16	43	15	132	52	15		Identifies disease ,pest & its management	Stem borer in Paddy Wilting in Brinjal Aphid in Mustard	crop growth stage
Kandhamal	Exposure visits	2	2			12	14	2		To Enrich Knowledge	Integrated farming system	
Kandhamal	Ex-trainees Sammelana	2	2	12	07	15	6	2		Collect feedback and suggestion		Collect feedback

Name of the KVK	Activity	No. of activities (Targeted)	No. of activities (Achieved)	Detail of Participants						Remarks		
				Farmers (Others)		SC/ST (Farmers)		Extension Officials		Purpose	Topic s	Crop Stages
				M	F	M	F	M	F			
Kandhamal	Soil health Camp	2	2	10		114	48	5		Soil fertility status	Soil health campign	-
Kandhamal	Animal Health Camp	1	1	7	1	20	12	2		--	--	--
Kandhamal	Agri mobile clinic	1	1	15	04	32	16	3		To give time based advice on disease & pest management	1. IPM in Paddy 2. IPDM in Tomato 3. Fruit & shoot borer in Brinjal	
Kandhamal	Soil test campaigns	2	2	12	09	185	38	4		To create awreness on soil fertility management.	--	Pre sowing
Kandhamal	Farm Science Club conveners meet	2	2	08	12	28	12	02		--	--	--
Kandhamal	Self Help Group conveners meetings	1	1	09	17	06	18	1		--	To know about different government schemems	
Kandhamal	Mahila Mandals conveners meetings	1	1		08		18	2		Women Empowerment		
Kandhamal	Celebration of important days	7	7	13	09	98	48	12	4	Awareness programme	1.Banostav 2.Earth Day 3.Parthenium awareness week 4. University Foundation Day 5. Akshya Trutiya 6.World food day 7. Womens Day in Agriculture	-

## 7. Literature Developed/Published (with full title, author & reference)

### 7.1 KVK Newsletters

KVK Name	Date of start	Periodicity	Number of copies printed	Number of copies distributed
Kandhamal	June 2010	Quarter	500	500
Kandhamal	September 2010	Quarter	500	500
Kandhamal	December 2010	Quarter	500	500
Kandhamal	March 2011	Quarter	500	500

### 7.2 Literature developed/published

KVK Name	Type	Title	Author's name	Number of copies
Kandhamal	Booklet	1. Organic Turmeric cultivation	S. Mohapatra S.R Dash S.K Mukhi	500
Kandhamal	Research Paper	1. Comparative study on care of children on rural & urban areas of Ganjam district. 2. Social & economic empowerment of Rural women through SHG with agro equipments in Kandhamal districts 3. Hand Ridger –A safe implement for drudgery reduction 4. Changing socio economic status of weavers of Orissa in the context of modernization	S. Mohapatra  S. Mohapatra , S.R Dash  S. Mohapatra  S. Mohapatra	
Kandhamal	Leaflet	1. Package & practices of Toria Cultivation in Kandhamal	Sri P.K Prusty Mrs. S.Mohapatra	200

### 7.3 Details of Electronic Media Produced

KVK Name	Type of media (CD / VCD / DVD / Audio-Cassette)	Title of the programme	Number
Kandhamal			

## 8. Production and supply of Technological products

### 8.1 SEED production

KVK Name	Major group/class	Crop	Variety	Type of produce (for Seed produced type hear SD; For Planting Material type here PM)	Quantity	Unit for quantity of produces (qtl for SD and Nos for PM)	Value (Rs.)	Provided to No. of Farmers
Kandhamal	Pulses	Blackgram	PU-19	SD	1.52	Qtl	9880	25
Kandhamal	Oilseed	Niger	Niger –ONS 150	SD	1.35	Qtl	4320	32
Kandhamal	Spices	Turmeric	Roma	SD	65	Qtl	357500	100

### 8.2 Planting Material production

KVK Name	Major group/class	Name of the crop	Date of sowing	Date of harvest	Area (ha)	Details of production			Amount (Rs.)		Remarks
						Variety	Type of Produce	Qty.	Cost of inputs	Gross income	
Kandhamal	Fruits	Papaya	May 2 <sup>nd</sup> week	--	--	Coorg Honey Dew	Sapling	490	400	1980	Distributed to farmers
Kandhamal		Drumstick	May 2 <sup>nd</sup> week	--	--	PKM-1	Sapling	210	300	870	
Kandhamal	Vegetable	Tomato	June 1 <sup>st</sup> Week	--	--	BT-10	Seedling	7000	400	1400	
Kandhamal	--	Brinjal	June 2 <sup>nd</sup> Week	--	--	PPC	Seedling	6000	450	800	
Kandhamal	--	Chilli	May last week	--	--	Suryamukhi	Seedling	3000	270	600	
Kandhamal	--	Cabbage	September last week	--	--	Disha	Seedling	11500		2300	
Kandhamal	--	Cauliflower	September last week	--	--	Himlata	Seedling	9500		1900	

### 8.3 Production Units (bio-agents / bio pesticides/ bio fertilizers etc.,)

KVK Name	Name of the Product	Qty	Amount (Rs.)		Remarks
			Cost of inputs	Gross income	
Kandhamal	BIOAGENTS	18	720		Tricho Card
Kandhamal	BIOFERTILIZERS	4.35q		2175	Vermicompost
Kandhamal	BIO PESTICIDES	1.5 kg	1845		Halt
Kandhamal		5.3	530		T Viridae

#### 8.4 Livestock and fisheries production

KVK Name	Name of the animal / bird / aquatics	Details of production			Amount (Rs.)		Remarks
		Breed	Type of Produce	Qty.	Cost of inputs	Gross income	
Kandhamal	Cattle						
Kandhamal	Buffalo						
Kandhamal	Sheep and Goat						
Kandhamal	Poultry	Banaraja	Chicks	200	4925	6381	
Kandhamal	Fisheries						
Kandhamal	Others (Specify) Vermin	E-foetida	Vermin	1000 No	-	500	

#### 9. Activities of Soil and Water Testing Laboratory

Status of establishment of Lab : YES/NO, If yes, then

Year of establishment : -2004-05

##### 9.1 Details of soil & water samples analyzed so far :

KVK Name	Details	No. of Samples	No. of Farmers	No. of Villages	Amount realized
Kandhamal	Soil Sample	1002	385	18	4440
Kandhamal	Water Sample	15	15	5	--

#### 10. Rainwater Harvesting

##### Training programmes conducted by using Rainwater Harvesting Demonstration Unit

Name of KVK	Date	Title of the training course	Client (PF/RV/EF)	No. of Courses	No. of Participants including SC/ST			No. of SC/ST Participants		
					Male	Female	Total	Male	Female	Total
Kandhamal	29.09.10	Water management for increasing crop productivity	PF & RV	1	12	08	20	12	08	20

#### 11. Utilization of Farmers Hostel facilities

Accommodation available (No. of beds) :

KVK Name	Months	Year	Title of the training course	Duration of training	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
Kandhamal	--	--	--	--	--	--	--

## 12. Utilization of Staff Quarters facilities

KVK Name	Year of construction	Year of allotment	No. of quarters occupied	No. of quarters vacant	Reasons for vacant quarters, if any
Kandhamal	1995	1997	Nil	2	Both quarters are damaged completely

## 13. Details of SAC Meeting

KVK Name	Date of SAC meeting	No. of SAC members attended	Major recommendations
Kandhamal	04.03.2011	30	<ol style="list-style-type: none"> <li>1 Convergence and linkage of KVK with different line departments, NGOs for upliftment of the farming communities</li> <li>2. More number of ICT materials, booklets , leaflets should be developed by KVK</li> <li>3. Emphasis on INM and soil test based fertilizer application to enhance crop productivity.</li> <li>4. Interventions should be taken for year round mushroom production</li> <li>5. Assessment of Hybrid paddy variety in Kandhamal District By KVK should be taken up</li> <li>6. Emphasis should be on organic spices cultivation, vermicomposting, in Kandhamal</li> <li>7. Bee keeping , Apis Milifera should be introduced in this district for higher honey production</li> <li>8. Documentation of Success stories &amp; innovative farmers</li> <li>9. Popularisation of gender friendly agro equipments &amp; accessing drudgery reduction parameter.</li> <li>10. Development of integrated farming system model in farmers field.</li> </ol>



#### 14. Status of Kisan Mobile Advisory (KVK-KMA)

KVK Name	No. of messages sent	No. of beneficiary		Major recommendations
		Farmers	Ext. Pers.	
Kandhamal	70	112	25	<ol style="list-style-type: none"> <li>1. Integrated Pest management in Vegetable</li> <li>2. Nutrient management and cultural packages in field crops</li> <li>3. Soil fertility management &amp; market information</li> <li>4. Value addition &amp; post harvest technologies</li> <li>5. Small scale income generating activities.</li> <li>6. Weather based cultural practices.</li> <li>7. Recommendation of suitable varieties of different crops.</li> <li>8. Organic spice cultivation.</li> <li>9. Mushroom cultivation</li> <li>10. Use of low cost Agri . equipments.</li> </ol>

#### 15. Status of Convergence with various agricultural schemes (Central & State sponsored)

KVK Name	Name of scheme	Name of Agency (Central/state)	Funds received (Rs.)	Activities organized	Operational Area	Remarks
Kandhamal	ATMA					
Kandhamal	MNREGA					
Kandhamal	NHM					
Kandhamal	RKVY	Central	7,20,000	Demonstrations & infrastructure development	FLD on Oilseed.	Construction of Poultry unit ,Spawn production unit & Agro shed unit
Kandhamal	DRDA					
Kandhamal	Zila Panchyat					
Kandhamal	Seed village					
Kandhamal	NAIP					
Kandhamal	Climate Change					
Kandhamal	Others (Plz. Specify)					

#### 16. Status of Revolving Funds (Rs.) for the Year 2010-11

KVK Name	Account No.	Opening balance (Rs.)	Closing balance (Rs.)	Current status (Rs.)
Kandhamal	11754367222	98914	135969	--

#### 17. Awards & Recognitions

KVK Name	Name of award /awardee	Type of award (Ind./Group/Inst./Farmer)	Awarding Organizations	Amount received
Kandhamal	Farm innovation award	Ind	ICAR	--
Kandhamal	State level progressive farmer award	Farmer	OUAT	--

## 18. Case study and Success Story – Two best only in the following format

### Case Study -1

**Name of the KVK :- Kandhamal**

**Title:- Seed production in Raikia Bean (Local)**

**Introduction :-** Raikia bean is a local cultivar of Runner type of bean grown in Raikia ,G.Udayagiri & Tikabali blocks of Kandhamal district. The Raikia Bean is cultivated in 4200 ha in Kandhamal district with an average productivity of 30 q/ha. It is cultivated both in Kharif & Rabi season & used as a vegetable. The cultivar is native to Raikia block, it is runner type of bean. Due to fleshy, less fiber content & sweet to eat, it has wide market demand.

Sri Dauda Mallick , of village Bearpanga of G.Udayagiri block is a traditional cultivator of Raikia bean. Initially he cultivated one acre of Raikia bean with traditional practices. He got an yield of 10q from his one acre of land & selling it in the local market @ Rs.1500/q with a net profit of Rs.8,000/- .He was not well aware about scientific method of cultivation which debarred him from adopting new technologies as well as rain fed farming situation al so contributed to lower yield.

**KVK Intervention :-** K.V.K, Kandhamal has trained the farmers on the benefit of seed treatment, line sowing with application of FYM. Front Line Demonstrations were conducted on Plant protection measures to control bacterial leaf blight & use of bio fertilizers, bio pesticides & INM.

**Output:-** By adopting the improved package and practices of Raikia bean cultivation with need based plant protection measures he got an yield of 16 q/acre under the technical guidance of KVK. The increase in yield was 60 % higher over his traditional practice with a net profit of Rs.15,000/- per acre.

**Outcome:-** Due to heavy demand of Raikia bean seeds among the farmers, KVK has advised him to go for seed production & provide him technical guidance. In the year 2009-10 he has cultivated Raikia Bean in his one acre of land for seed production purpose. He got a seed yield of 350 kg/acre & selling it @ Rs.200/kg, with a gross income of Rs.70,000/- & a net profit of Rs.55,000/-. Seed production in Raikia beans (local) is remunerative enterprises for the resource poor farmers ,Seed treatment , line sowing, use of staking materials, use of bio fertiliser and INM , IPM practices resulted in production of good quality seeds, with seed yield of 3.5qtl / acre Seed production in raikia beans gave a net profit Rs.55,000/ acre with Benefit –cost ratio of 4.6.

**Impact:-**The intervention of the K.V.K on the cultivation of Raikia bean and its seed production is widely accepted by the resource poor families and efforts have been concentrated for horizontal expansion of the enterprise. Support services like availability of staking materials, seed treatment chemicals, availability of vermi compost and bio fertilisers s have been strengthened. Sri Dauda Mallick is now a successful seed producer in the G Udaygiri block, and he is supplying the seeds to the neighboring farmers as well as farmers and traders from different blocks like Tikabali, Raikia, Daringbadi are purchasing the seeds from him. This year he has planned to take seed production programme in his two acre of land. Sri Mallick is now a successful seed producer with secured future and also becomes an inspiration for many farmers.



# Success Story -1

**Name of the KVK :- Kandhamal**

**Title:- Soil liming in Groundnut**

**Introduction :-** Kandhamal district is one of the undeveloped district of Orissa and the farm families of the district are mostly marginal and small farmers with low socio economical status . Due to undulated, hilly and sloppy topography, of the district majority of the cultivable land comes under acid soil . About 74% soils of the Kandhamal district is acidic in nature. The productivity of major crops grown in the district is significantly low as compared to district average due to soil acidity. The application of lime to the soil neutralises soil acidity and creates favourable environment for microbial activity, nutrient release and their availability to plants.

**KVK Intervention :-** Krishi Vigyan Kendra , Kandhamal has initiated various activities among the farming community to the address the problem of soil acidity & low productivity of major crops. Intervention programmes like soil health campaign ,training programmes on acid soil management, distribution soil health card basing on soil sample testing from farmers field & demonstration on application of PMS were under taken.

**Output :-**The KVK ,Kandhamal conducted demonstration on application of lime in Groundnut in three adopted villages in Kharif 2009.In this demonstration programme Groundnut HYV var-TAG 24 was taken. Application of lime @5 q/ha in furrows 7 days before sowing with FYM @ 5ton/ha along with soil test based fertilizer application and need based plant protection measures.

In the demonstration programme the average productivity of Groundnut was recorded 17.9 q/ha with an increase of 67 % over conventional practice with a net profit of Rs.26,570/-/ha. The pH of soil after harvest was recorded 6.4 as against 5.5 before

application of PMS. Field days were organised at farmers field to popularize this technology & has created awareness among the farmers about application of lime to ameliorate soil acidity & increase soil fertility

**Outcome :-** By adopting this technology the yield has increased 67 % over farmers practice with a net profit of Rs.26,570/ha with Benefit –Cost ratio of 2.8.

**Impact :-** The out come of the technology has motivated the farmers to apply soil amendments like lime application in form of PMS, soil test based fertilizer application to enhance the productivity of crops & last year 2552 MT of PMS were supplied to the farmers for soil amendments Due to application of PMS the productivity has been increased significantly



## 19. Details of KVK Agro-technological Park

Name of KVK	Name of Component of Park	Detail Information (If established)
Kandhamal	Crop Cafeteria	
Kandhamal	Technology Desk	
Kandhamal	Visitors Gallery	
Kandhamal	Technology Exhibition	
Kandhamal	Technology Gate-Valve	

## 20. Important visitors to KVK

Name of KVK	Name of Visitor	Date of Visit	Remarks
Kandhamal	T. Balagzoti ,Co-ordinator ,East India ,International Potash Institute	13.09.10	Appreciated the KVK activities on technology transfer & visited Demonstration units .
Kandhamal	Prof. G.H Santara,Dept. of Soil Sc. OUAT	13.09.10	Soil testing laboratory is well equipped & farmers are benefitted from it.
Kandhamal	Mr. P.K Sahoo ,DFO ,G.Udayagiri	28.07.10	KVK is working as a knowledge centre for dissemination of technology among the farming community.
Kandhamal	Mr. K. Nayar ,OAS (S) ,Project Administrator ,ITDA ,Baliguda	25.02.11	Demonstration units are well maintained ,KVK is working for the interest of the common farmer
Kandhamal	Dr. S.S Nanda ,DEE ,OUAT ,Bhubaneswar	03.03.2011	KVK has done a very good job to promote organic spice cultivation especially post harvest & value addition aspects organic Tuemic. Visited Schools under Gynalok project monitored by KVK & interacted with school children.
Kandhamal	Dr. K.B Mohapatra ,Assoc. Professor ,CTMRT,OUAT ,Bhubaneswar	16.03.2011	KVK has made excellent strides in the upliftment of local poor through dissemination of agricultural technologies.



**21. Status of KVK Website: Available**

**22. E-CONNECTIVITY**

Name of KVK	Number and Date of Lecture delivered from KVK Hub				No of lectors organized by KVK	Brief achievements	Remarks
	Date	No of Staff attended	No of call received from Hub	No of Call mate to Hub by KVK			
Kandhamal	11.03.11	4		1		Interaction of SMS with ICAR & SAU resource person	
Kandhamal	08.03.11	4		2			
Kandhamal	25.02.11	4		1			
Kandhamal	22.02.11	3					
Kandhamal	27.01.11	3					

**23. DETAILS OF TECHNOLOGY WEEK CELEBRATIONS**

Name of KVK	Types of Activities	No. of Activities	Number of Participants	Related crop/livestock technology
Kandhamal	Gosthies	2	36	Vegetables and Turmeric, Honeybee
Kandhamal	Lectures organized	4	90	Agro-forestry, vermicomposting, Mushroom, Plant propagation
Kandhamal	Exhibition	1	114	Aagri equipments, bio fertilises , live exhibits
Kandhamal	Film show	6	492	Off-season vegetable cultivation, Backyard poultry, Honeybee,
Kandhamal	Fair	1	140	-
Kandhamal	Farm Visit	5	60	Spice crops, vegetables, oilseed and pulse
Kandhamal	Diagnostic Practical's	2	25	Maize cultivation, IPM in crops
Kandhamal	Distribution of Literature (No.)	2	400	Organic turmeric cultivation, Raikia bean
Kandhamal	Distribution of Planting materials (No.)	6000	20	Vegetables and fruit crops
Kandhamal	Total number of farmers visited the technology week	6	170	

## 24. INTERVENTIONS ON DROUGHT MITIGATION

### Introduction of alternate crops/varieties

Name of KVK	Crops/cultivars	Area (ha)	Number of beneficiaries
Kandhamal	Upland paddy Var-Vandana ,Khandagiri	600	
Kandhamal	Blackgram var PU-19 ,TU94-2, Sekhar 2	380	
Kandhamal	<b>Niger Var- ONS 150,GA-10</b>	<b>750</b>	
Kandhamal	<b>Toria var- Parvati ,PT-303</b>	<b>1200</b>	

### Major area coverage under alternate crops/varieties

Mane of KVK	Crops	Area (ha)	Number of beneficiaries
Kandhamal	Oilseeds	240	1200
Kandhamal	Pulses	170	650
Kandhamal	Cereals	400	1680
Kandhamal	Vegetable crops	60	250
Kandhamal	Tuber crops	2000	8500
Kandhamal	Fruits	240	1200
Kandhamal	Spices	820	700
Kandhamal	<b>Total</b>	<b>3930</b>	<b>14,180</b>

### Farmers-scientists interaction on livestock management

Name of KVK	Livestock components	Number of interactions	No.of participants
Kandhamal	Dairy Management	4	80
Kandhamal	Disease management	2	70
Kandhamal	Feed and fodder technology	2	40
Kandhamal	Poultry management	6	120

### Animal health camps organised

Name of KVK	Number of camps	No.of animals	No.of farmers
Kandhamal	4	1800	320



### Seed distribution in drought hit states

Name of KVK	Crops	Quantity (qtl)	Coverage of area (ha)	Number of farmers
Kandhamal	Toria	1.0	10.0	50
Kandhamal	Niger	0.5	5.0	18
Kandhamal	Blackgram	0.92	5.0	16
Kandhamal	Groundnut	1.0	1.0	10
Kandhamal	Cowpea	0.50	1.0	10

### Seedlings and Saplings distributed

Name of KVK	Crops	Quantity (No.s)	Coverage of area (ha)	Number of farmers
Kandhamal	Seedlings			
Kandhamal				

### Bio-control Agents

Name of KVK	Bio-control Agents	Quantity (q)	Coverage of Area (ha)	No. of farmers

### (e) Bio-Fertilizer

Name of KVK	Bio-Fertilizer	Quantity (kg)	Coverage of Area (ha)	No. of farmers

### (f) Verms Produced

Name of KVK	Verms Produced	Quantity (q)	Coverage of Area (ha)	No. of Farmers
Kandhamal	E-foetida	0.02	--	5

### (g) Large scale adoption of resource conservation technologies

Name of KVK	Crops/cultivars and gist of resource conservation technologies introduced	Area (ha)	Number of farmers
Kandhamal	Cultivation of fruits	110	200
Kandhamal	Drought tolerant crop and sort duration variety	310	1850
Kandhamal	Integrated Crop Management		
Kandhamal	Irrigation Scheduling		
Kandhamal	Mechanization	230	70
Kandhamal	Mulching	8000	10000
Kandhamal	SRI	500	1250
Kandhamal	Water Management	5000	15000
Kandhamal	Weed management	500	1200
Kandhamal	Direct seeding and weed management in Rice	-	-
Kandhamal	Early & drought tolerance varieties of Maize	400	950
Kandhamal	Drought tolerant crop and sort duration variety	310	1850

**(h) Awareness campaign**

Name of KVK	Meetings		Gosthies		Field days		Farmers fair		Exhibition		Film show	
	No.	No. of farmers	No.	No. of farmers	No.	No. of farmers	No.	No. of farmers	No.	No. of farmers	No.	No. of farmers
Kandhamal	9	110	6	92	4	82	3	290	2	174	24	510

25. **Status of KVK Website:** Under construction

If available, please provide the address of website: [www.kvkkandhamalzpdvii.org](http://www.kvkkandhamalzpdvii.org).

**PROGRAMME CO-ORDINATOR  
KVK, KANDHAMAL**