

INTRODUCTION

Krishi Vigyan Kendra, Sonapur was established on 1st July, 2005 under the administrative control of Orissa University of Agriculture & Technology, Bhubaneswar. It is located at Sonapur, the Head Quarters of the district Subarnapur, on the confluence of rivers Mahanadi and Tel. The district is a land of rivers; Mahanadi, Ong, Tel and Suktel flow through the district. The entire district lies in the watershed basin of river Mahanadi, which is the biggest river of the state flowing from Sambalpur, taking a semicircular path across Binka, Sonapur, Ullunda and Birmaharajpur Blocks. It comes under Western Central Table land Agro-climate zone of Orissa. The climate of the zone is extreme. Summer is hot and dry, rainy season with good rainfall high humidity and winter is severe. The annual rainfall of the district is 1443.5 mm. The soil type of the district is broadly classified as sandy, sandy loam and sandy clay.

During the period April 2006- March 2007, twelve training programmes for practicing farmers including farm women, six training programmes for rural youths and school dropouts and one training programmes for in-service personnel have been imparted on different aspects of agriculture and allied subjects like crop production, horticulture, plant protection, agricultural engineering, forestry & fishery. 10 FLDs have been successfully conducted with the active participation of farmers such as INM in Rice, INM in Sugarcane, IPM in Rice, Block Plantation of Teak, fast growing multipurpose Tree species in the backyard, Nutritional gardening, Package demonstration of Pumpkin & Bottle gourd, Introduction of high yielding Papaya cultivation, Oyster mushroom cultivation & Composite fish culture. Other than these FLD (Oilseeds & pulses) on Sesamum, Toria, Arhar & Green gram were conducted during Kharif and Rabi season which showed a enthusiasm among the farmers. For testing and refinement of technologies one OFT have been conducted on *Mangium*- Turmeric based alley cropping system.

MANDATES OF KVK, SONEPUR

1. To test different farm based technologies in farmers field for proper verification and refinement.
2. To conduct front line demonstrations on different proven technologies on agriculture and allied disciplines for wider acceptance.
3. To impart vocational and skill oriented training to farmers, farm women and rural youths on agriculture and allied disciplines.
4. To impart in-service training to Govt. extension functionaries and NGO workers for speedy transfer of farm technologies to the end users.

BACKGROUND INFORMATION OF SONEPUR DISTRICT

1.	Geographical area in ('000 ha)		234
2.	Location	Longitude	83 ⁰ 27' to 84 ⁰ 15' East
		Latitude	20 ⁰ 30' to 20 ⁰ 10' North
3.	Forest Area ('000 ha)		41
4.	Misc. Trees & groves ('000 ha)		15
5.	Permanent Pasture ('000 ha)		13
6.	Culturable Waste (' 000 ha)		8
7.	Land put no non-agril. use ('000 ha)		20
8.	Barren & unculturable aland ('000 ha)		22
9.	Current fallow ('000 ha)		2
10.	Other fallow ('000 ha)		4
11.	Cultivable area (ha)	High land	54,887
		Medium land	41,641
		Low land	38,887
		Total	13,5,415
12.	Kharif Paddy Area (ha)-2005	High land	27,254
		Medium land	41,497
		Low land	38,887
		Total	107,638
13	No. of Sub-division		2
14.	No. of Blocks		6
15.	No. of GPs/Local bodies		96/03
16.	No. of D.A.O. circle		2
17.	No. of A.D.A.O. circle		2
18.	No. of A.A.O./J.A.O. circle		11
19.	No. of PACS		11
20.	No. of pesticide dealer	Wholesaler	-
		Retailer	32
21.	No. of fertilizer dealer	Wholesaler	11
		Retailer	70
22.	No. of seeds sales center	Govt.	14
23.	Population as per 2001 census		5,40,659

ANNUAL REPORT PROFORM

01. K.V.K. Code : K.V.K., Sonapur

02. Name of the K.V.K. : Krishi Vigyan Kendra, Sonapur

03. Address of K.V.K. : Krishi Vigyan Kendra
At.- Badjhinki
Po.- Sonapur
Po Box- 01
Dist- Subarnapur
Pin- 767017

Telegraphic address : Krishi Vigyan Kendra, Sonapur

Telephone No. with STD : **STD 06654**
(Office & Residence) :

Fax No. :

E-mail : **kvk-snpr@ ori.nic.in**

04. Name of the host Institution : Orissa University of Agriculture & Technology, Bhubaneswar-751003

05. Address of the host institution : Vice-Chancellor, OUAT,
Bhubaneswar-751003

Telegraphic Address : GRAM-AGRITECH
Telephone No. with STD 0674-2407780
(Office & Residence)

Fax No. : 0674- 2407780

E-mail :

6. STAFF POSITION (AS On March, 2007)

Sl. No.	Designation	Name	Discipline	Highest Degree	Pay scale	Date of Joining	SC/ST/OBC/Gen.
1	Subject matter specialist	Dr. S.C. Mohapatra Remain in-charge- of Programme Co-ordinator w.e.f.9.08.06	Agronomy	Ph.D.	10000-325- 15200	06.02.06	General
2.	Subject matter specialist	Sri B.R. Samantray	Fishery	M.F.Sc.	8000-275- 13500	12.01.06	General
3.	Subject matter specialist	Mrs. D. Sahoo	Horticulture	M.Sc.(Ag)	8000-275- 13500	21.07.06	General
4.	Subject matter specialist	Mr. P.K. Panda	Entomology	M.Sc.(Ag)	8000-275- 13500	05.01.07	General
5.	Programme Assistant	Mr. B.S. Bishoyi	Agronomy	MSc.(Ag.)	5500-175-9000	07.07.05	General
6.	Farm Manager	Sri T.K. Das	Entomology	M.Sc. (Ag.)	5500-175-9000	12.08.05	OBC
7.	Programme Asst. (Computer)	Sri D.K. Swain	Computer Science	MCA	5500-175-9000	24.02.06	General
8.	Section Officer	Mr. L.D. Mishra	Arts Graduate	B.A.	5900-200-9700	01.09.06	General
9.	Steno cum Computer Operator	Mr. T.R. Barik	Science Graduate	PGDCA	4000-100-6000	09.10.06	General
10	Attendant	Sri M. A. Ali	-	10 th	2550-60-3200	23.08.2005	General

7. **Total land with K.V.K. (ha.)** : **15.45**
 8. **Infrastructural facilities: Construction to be taken up:** Nil

9. **Details of K.V.K. Bank Accounts**

	Particulars	Name of Bank	Location	Account No.
1.	With the host institute	S.B.I., O.U.A.T.	Bhubaneswar	Comptroller, O.U.A.T
2.	With the KVK	S.B.I., Sonapur	Sonapur	01000015242

10. **Description of Agro-Climatic zones and farming situations of the district**

Krishi Vigyan Kendra, Sonapur Situated in the Western Central Table Land zone of Orissa . The Zone consist of some hill ranges, some plains and valleys laying between the hill ranges. Soil of the zone are under sandy , sandy loam to sandy clay loam and medium in soil fertility. Summer is hot and dry, rainy season is good rain fall high humidity and winter is severe. The mean summer maximum temperature is 43⁰ C and mean minimum temperature is 10⁰ C. Mean annual rain fall is 1443.5mm . Out of total geographical area of 2.34 lakh ha., of Sonapur District to cultivable area is 1,35,415 ha. Major crop sown in this area are paddy, maize, pulses, fruit crops like mango, banana & citrus are also cultivated. There is a scope to develop sheepery, goatery and plantation on the waste lands in the district.

11. **Thrust Identified through PRA, Survey or any other Methods.**

The economy of the district solely depends on agriculture as so far there is no industrial and mining developmental work had been done in this district. The following thrust areas are identified looking into the local agro ecological situation of the district on which emphasis should be given

1. Improvement of paddy, the first crop of the district (Rain fed Kharif and Irrigated Rabi) by introducing Hybrid, Aromatic paddy, super fast varieties of paddy and balanced nutrition.
2. improvement of production and productivities of cereals (maize), millets (Ragi), pulses and Oil seeds by introducing newly released improved and HYV seeds and balance nutrition.
3. Improvement of production and productivities of cash crops like sugarcane, cotton, onion etc.

4. Improvement of production and productivities of seasonal vegetables like Brinjal, Tomato, Cole crops, cucurbits, okra and Radish.
5. Improvement of production and productivities of spices and condiments specially Turmeric, Ginger, Mango Ginger, Coriander and Chilly..
6. Improvement of production and productivities of fruit crops like Mango, Banana, Citrus and Guava.
7. Popularization of home stead/ Kitchen garden concept for family nutritional security through introduction of papaya, Drum steak and lemon with all the seasonal vegetables.
8. Introduction of Agro forestry and farm forestry concept by introducing Teak, Eucalyptus, Acacia, Sisso, Jatropha and Bamboo.
9. Empowering farm women through income generating activities like Mushroom cultivation, Broom making & Leaf plate making Other value added farm product making and Post harvest grain cleaning and storage operations.
10. Improvement of community and individual farm pond by introducing of inland fresh water fish and prawn culture with their proper feeding and management.
11. Improvement of production and productivities of domestic animals and birds by introducing right breed, Proper feeding and good management.
12. Popularization of farm mechanization technique by introducing zero till machine, Rotavator, seeddrill, Reaper, Solar drier, power Operated winnower cum thresher etc.

13. TRAINING ACHIEVEMENTS - ON CAMPUS

(A) TRAINING OF FARMERS / FARM WOMEN

Sl. No	Title of training	Duration (in days)	No. of participants											
			SC			ST			Others			Total		
			M	F	T	M	F	T	M	F	T	M	F	T
A. Crop Production														
1	Crop diversification in up land	3	4	-	4	2	-	2	14	-	14	20	-	20
2	Advance crop production practices for Rabi pulses	3	1	2	3	1	10	11	5	1	6	7	13	20
	Total	6	5	2	7	3	10	13	19	1	20	27	13	40
B. Plant protection														
1	IPM in Kharif paddy	3	1	-	1	2	-	2	17	-	17	20	-	20
2	IPM in kharif pulses	3	4	-	4	2	-	2	14	-	14	20	-	20
3	Cultivation of Paddy straw of oyster mushroom	3	1	11	12	-	-	-	2	6	8	3	17	20
	Total	9	6	11	17	4	-	4	33	6	39	43	17	60
C. Forestry														
1	Commercial Plantation of <i>Acacia mangium</i>	3	2	-	2	-	-	-	18	-	18	20	-	20
	Total	3	2	-	2	-	-	-	18	-	18	20	-	20
D. Horticulture														
1	Nursery raising in vegetable crops like Brinjal, Chilli, Cabbage, cauliflower and Tomato	3	-	-	-	-	-	-	20	-	20	20	-	20
2	Production packages of rhizome spices	3	-	11	11	-	-	-	1	3	4	1	14	15
	Total	6	-	11	11	-	-	-	21	3	24	21	14	35

SUMMARY OF TRAINING FOR FARMERS/FARM WOMEN (APRIL-06 TO MARCH - 07)

Subject	No. of programme	Duration in days	No. of participant											
			SC			ST			Others			Total		
			M	F	T	M	F	T	M	F	T	M	F	T
Crop Production	2	6	5	2	7	3	10	13	19	1	20	27	13	40
Plant Protection	3	9	6	11	17	4	-	4	33	6	39	43	17	60
Forestry	1	3	2	-	2	-	-	-	18	-	18	20	-	20
Horticulture	2	6	-	11	11	-	-	-	21	3	24	21	14	35
TOTAL	8	24	13	24	37	7	10	17	91	10	101	111	44	155

(B) TRAINING OF RURAL YOUTHS

Sl. No	Title of training	Duration (in days)	No. of participants											
			SC			ST			Others			Total		
			M	F	T	M	F	T	M	F	T	M	F	T
A. Crop Production														
1	Vermicomposting from farm waste	3	3	1	4	2	1	3	12	6	18	17	8	25
	Total	3	3	1	4	2	1	3	12	6	18	17	8	25
B. Horticulture														
1	Seed production & seed extraction techniques of Tomato	5	-	1	1	-	-	-	1	13	14	1	14	15
2	Seed production & post harvest techniques of spices (Turmeric, Ginger, Mango ginger etc.	5	-	3	3	-	-	-	-	12	12	-	15	15
	Total	10	-	4	4	-	-	-	1	25	26	1	29	30

C. Fishery														
1	Fish seed production for Rohu, Catla,	3	3	2	5	2	-	2	12	1	13	17	3	20
	Total	3	3	2	5	2	-	2	12	1	13	17	3	20

SUMMARY OF TRAINING OF RURAL YOUTH (APRIL-06 TO MARCH - 07)

Subject	No. of programme	Duration in days	No. of participant											
			SC			ST			Others			Total		
			M	F	T	M	F	T	M	F	T	M	F	T
Crop Production	1	3	3	1	4	2	1	3	12	6	18	17	8	25
Horticulture	2	10	-	4	4	-	-	-	1	25	26	1	29	30
Fishery	1	3	3	2	5	2	0	2	12	1	13	17	3	20
TOTAL	4	16	6	7	13	4	1	5	25	32	57	35	40	75

(C) TRAINING OF IN-SERVICE PERSONNEL

Sl. No	Title of training	Duration (in days)	No. of participants											
			SC			ST			Others			Total		
			M	F	T	M	F	T	M	F	T	M	F	T
A. Plant Protection														
1	Validation of different ITKs regarding pest & diseases of major cereals & pulses	2	2	0	2	-	-	-	8	0	8	10	0	10
	Total	2	2	0	2	-	-	-	8	0	8	10	0	10

B. TRAINING ACHIEVEMENTS – OFF CAMPUS

(A) TRAINING OF FARMERS / FARM WOMEN

Sl. No	Title of training	Duration (in days)	No. of participants											
			SC			ST			Others			Total		
A. Plant protection														
1	IPM in Sugarcane	3	2	-	2	2	-	2	16	-	16	20	-	20
	Total	3	2	-	2	2	-	2	16	-	16	20	-	20
B. Forestry														
1	Management of Bamboo clumps and propagation of bamboo through culm cutting method.	3	1	-	1	-	-	-	19	-	19	20	-	20
	Total	3	1	-	1	-	-	-	19	-	19	20	-	20
C. Fishery														
1	Integrated fish farming	3	2	1	3	5	-	5	11	1	12	18	2	20
	Total	3	2	1	3	5	-	5	11	1	12	18	2	20
D. Agricultural Engineering														
1	Use and repair of low lift pumps	3	8	5	13	-	-	-	4	3	7	12	8	20
	Total	3	8	5	13	-	-	-	4	3	7	12	8	20

SUMMARY OF TRAINING FOR FARMERS/FARM WOMEN (April-06 to March-07)

Subject	No. of programme	Duration in days	No. of participant											
			SC			ST			Others			Total		
			M	F	T	M	F	T	M	F	T	M	F	T
Plant protection	1	3	2	0	2	2	0	2	16	0	16	20	0	20
Forestry	1	3	1	0	1	-	-	-	19	0	19	20	0	20
Fishery	1	3	2	1	3	5	0	5	11	1	12	18	2	20
Agricultural Engineering	1	3	8	5	13	-	-	-	4	3	7	12	8	20
Total	4	12	13	6	19	7	0	7	50	4	54	70	10	80

B. TRAINING FOR RURAL YOUTH

Sl. No	Title of training	Duration (in days)	No. of participants											
			SC			ST			Others			Total		
			M	F	T	M	F	T	M	F	T	M	F	T
A. Plant Protection														
1	Rearing of Italian Honey Bee	5	10	0	10	-	-	-	5	0	5	15	0	15
	Total	5	10	0	10	-	-	-	5	0	5	15	0	15
B. Fishery														
1	Ornamental Fish Farming	3	4	5	9	2	2	4	7	5	12	12	13	25
	Total	3	4	5	9	2	2	4	7	5	12	12	13	25

SUMMARY OF TRAINING FOR RURAL YOUTH (APRIL-06 TO MARCH - 07)

Subject	No. of programme	Duration in days	No. of participant											
			SC			ST			Others			Total		
			M	F	T	M	F	T	M	F	T	M	F	T
Plant protection	1	5	10	0	10	-	-	-	5	0	5	15	0	15
Fishery	1	3	4	5	9	2	2	4	7	5	12	12	13	25
Total	2	8	14	5	19	2	2	4	12	5	17	27	13	40

C. TRAINING FOR IN-SERVICE PERSONNEL – NIL

SUMMARY OF TRAINING PROGRAMME (APRIL -06 TO MARCH-07)

Subject	No. of Programme	Duration in days	No. of participant											
			SC			ST			Others			Total		
			M	F	T	M	F	T	M	F	T	M	F	T
A- On Campus														
1. Practicing farmers & farm Women	8	24	13	24	37	7	10	17	91	10	101	111	44	155
2. Training for Rural Youth	4	16	6	7	13	4	1	5	25	32	57	35	40	75
3. In-service personnel	1	2	2	0	2	-	-	-	8	0	8	10	0	10
Sub Total	13	42	21	31	52	11	11	22	124	42	166	156	84	240

B- Off Campus														
1. Practicing farmers & farm Women	4	12	13	6	19	7	0	7	50	4	54	70	10	80
2. Training for Rural Youth	2	8	14	5	19	2	2	4	12	5	17	27	13	40
Sub Total	6	20	27	11	38	9	2	11	62	9	71	97	23	120
TOTAL	19	62	48	42	90	20	13	33	186	51	237	253	10	360

D. SPONSORED TRAINING PROGRAMME

Sl. No	Title of training	Duration (in days)	No. of participants											
			SC			ST			Others			Total		
			M	F	T	M	F	T	M	F	T	M	F	T
1	Gramin Bhandaran Yojana	3	6	5	11	2	2	4	19	8	27	27	15	42
2	Acid soil management	2	8	3	11	6	1	7	128	54	182	142	58	200
	Total	5	14	8	22	8	3	11	147	62	209	169	73	242

14. Result of Front Line Demonstration other than oilseed and pulse crops

F.L.D.-1 : Integrated Nutrient Management in Rice

Year : 2006-07

Crop	Season	Area (ha)	Area (ha)		No. of farmers/ Demo			Remarks
			Proposed	Actual	SC/ST	Other	Total	
Rice	Kharif 2006	02 (0.2 ha each demonstration)	02	02	2	8	10	Vill- Panisiali, Block- Sonapur

Farming situation and results of demonstration on other than oilseed & pulse crops

Crop	Season	Sowing date	Harvesting date	Situation	Soil type	Agro-climatic zone	Previous crop pattern	Status of NPK (kg/ha)		Rainfall distribution (mm)
Rice	Kharif 2006	28.06.06 to 04.07.06	21.11.06 to 30.11.06	Rain fed low land	Sandy clay	Western central table land	Paddy-fallow	0.464 L	(O.C)%	June to Nov.- 2006 (1725 mm in 47 rainy days.)
								6.37 L	(P ₂ O ₅)	
								872 H	(K ₂ O ₅)	
								6.6	P _H	

Crop	Variety	No. of farmers	Area (ha)	Yield of Demonstration (q/ha)				Increase in yield (%)	Cost of additional cash (Rs./ha)	
				Highest	Lowest	Avg.	Local check		Demo.	Local Check
Rice	Swarna	10	2 (0.2 ha each farmer)	55	21	38	23	65	1700	800

Interpretation and critical analysis of the results obtained :

Balance does of fertilizer (N: P:K::60 : 30: 30 Kg/ ha.) with FYM(5 ton/ ha.) and soil application of Biofertilizer(Azospirillum and PSB@ 5Kg each / ha.) have immense effect in the grain yield, it might be due to increase in nutrient use efficiency. However the availability of biofertilizers is limited in the local market.

F.L.D.-2 : Integrated Nutrient Management in Sugarcane.

Year : 2006-07

Crop	Season	Area (ha)	Area (ha)		No. of farmers/ Demo			Remarks
			Proposed	Actual	SC/ST	Other	Total	
Sugarcane	Summer- 2006- 07 (March planting)	02(0.2 ha each demonstration)	02	02	0	10	10	Vill-Chasagotha, Block- Sonapur

Farming situation and results of demonstration on other than oilseed & pulse crops

Crop	Season	Sowing date	Harvesting date	Situation	Soil type	Agro-climatic zone	Previous crop pattern	Status of NPK (kg/ha)		Rainfall distribution (mm)
Sugarcane	Summer-2006-07 (March planting)	20.03.2006 to 27.03.2006	December -2006	Partially Irrigated Medium Land	Sandy clay	Western central table land	Paddy-Toria	0.462 L 12.74 M 275 M 7.11	(O.C%) (P ₂ O ₅) (K ₂ O ₅) P _H	June -2006 to Nov- 2006 (1725 mm in 47 rainydays)

Crop	Variety	No. of farmers	Area (ha)	Yield of Demonstration (ton/ha)				Increase in yield (%)	Cost of additional cash (Rs./ha)	
				Highest	Lowest	Avg.	Local check		Demo.	Local Check
Sugarcane	Nayana (Co-86032)	10	2 (0.2 ha each farmer)	107	56	82	53	54.72	6500	3000

Interpretation and critical analysis of the results obtained :

Balance dose of fertilizer (N:P:K::250:100:125Kg/ha) with FYM (10ton /ha) and soil application of biofertilizer(Azospirillum and PSB@ 5 Kg/ha. each) in sugarcane boostup the cane yield, because of higher nutrient use efficiency. However the availability of biofertilizer and Potash is limited in the local market.

F.L.D.-3 : Nutritional Gardening

Year : 2006-07

Crop	Season	Area (ha)	Area (ha)		No. of farmers/ Demo			Remarks
			Proposed	Actual	SC/ST	Other	Total	
Vegetables (Tomato, Brinjal, Chilli, Drumstick, papaya, Cauliflower, Cabbage, Palak, Radish, Carrot, Beans, Cowpea)	Rabi-06	2	2	2	0	10	10	Vill-Badajhinki & Panisiali

Farming situation and results of demonstration on other than oilseed & pulse crops

Crop	Season	Sowing date	Harvesting date	Situation	Soil type	Agro-climatic zone	Previous crop pattern	Status of NPK (kg/ha)	Rainfall distribution (mm)
Vegetables (As above)	Rabi -2006	22.09.06 to 30.09.06	04.11.06 to 08.01.07.	Medium land	Sandy Loam	Western central table land	Fallow	L:M:M	June-Nov.2006 1725.mm in 47 rainy days

Crop	Variety	No. of farmers	Area (ha)	Yield of Demonstration (q/ha)				Increase in yield (%)	Cost of additional cash (Rs./ha)	
				Highest	Lowest	Avg.	Local check		Demo.	Local Check
Vegetables	B.T -10, Utkal Madhuri, Utkal Ragini, P.K.M-1, Coorg honey dew, Super snowball, Pride of India, All green, Pusa chetki, Pusa keshar, Contender, pusa barsati.	10	2	150	90	110	50	45	2,000	800

Interpretation and critical analysis of the results obtained :

Women farmers can able to feed their family with sufficient nutritional diet by using the produces of their garden through out the Rabi season with a limited investment.

F.L.D.-4 : Introduction of high yielding Papaya cultivation

Year : 2006-07

Crop	Season	Area (ha)	Area (ha)		No. of farmers/ Demo			Remarks
			Proposed	Actual	SC/ST	Other	Total	
Papaya	Rabi- 06-07	0.4	0.4	0.4	11	09	20	Vill- Badajhinki & Sanjhinki

Farming situation and results of demonstration on other than oilseed & pulse crops

Crop	Season	Sowing date	Harvesting date	Situation	Soil type	Agro-climatic zone	Previous crop pattern	Status of NPK (kg/ha)	Rainfall distribution (mm)
Papaya	Rabi-06-07	14.01.07	Aug- 07 (Expected)	Homestead	Sandy Loam	Western central table land	Local varieties with improper management	L:M:M	June-Nov.2006 1725.mm in 47 rainy days

Crop	Variety	No. of farmers	Area (ha)	Yield of Demonstration (q/ha)				Increase in yield (%)	Cost of additional cash (Rs./ha)	
				Highest	Lowest	Avg.	Local check		Demo.	Local Check
Papaya	Pusa majesty, Madhubala, Pusa Nanha, CO-3, Ranchi Dwarf	20	0.4	Result awaiting						

Interpretation and critical analysis of the results obtained :

The crop is in powering and fruiting stage.

F.L.D.-5 : Package demonstration of pumpkin and bottle gourd cultivation.

Year : 2006-07

Crop	Season	Area (ha)	Area (ha)		No. of farmers/ Demo			Remarks
			Proposed	Actual	SC/ST	Other	Total	
Pumpkin and Bottle gourd	Summer	2	2	2	4	6	10	Vill- Singhari

Farming situation and results of demonstration on other than oilseed & pulse crops

Crop	Season	Sowing date	Harvesting date	Situation	Soil type	Agro-climatic zone	Previous crop pattern	Status of NPK (kg/ha)	Rainfall distribution (mm)
Pumpkin and Bottle gourd	Summer	27.01.07 to 31.01.07	16.04.07 to 19.04.07	Homestead	Sandy Loam	Western central table land	Rice local variety	L:M:M	June-Nov.2006 1725.mm in 47 rainy days

Crop	Variety	No. of farmers	Area (ha)	Yield of Demonstration (q/ha)				Increase in yield (%)	Cost of additional cash (Rs./ha)	
				Highest	Lowest	Avg.	Local check		Demo.	Local Check
Pumpkin	P. Vishwas	10	1	300	240	270	170	38	50000	25000
Bottle gourd	P. Naveen	10	1	280	200	250	130	48	30000	15000

Interpretation and critical analysis of the results obtained :

The yield increase in pumpkin over the previous pattern is 38% and the yield increase in bottle gourd over the previous pattern is 48%.

F.L.D.-6 : I.P.M in Rice.

Year : 2006-07

Crop	Season	Area (ha)	Area (ha)		No. of farmers/ Demo			Remarks
			Proposed	Actual	SC/ST	Other	Total	
Paddy	Kharif	1	1	1	2	3	5	Vill-Badajhinki

Farming situation and results of demonstration on other than oilseed & pulse crops

Crop	Season	Sowing date	Harvesting date	Situation	Soil type	Agro-climatic zone	Previous crop pattern	Status of NPK (kg/ha)	Rainfall distribution (mm)
Paddy (Swarna)	Kharif (2006)	Last week of June to 1 st week of July	2 nd to 3 rd week of Nov.	Medium land	Sandy Loam	Western central table land	Paddy	L:M:M	June-Nov.2006 1725.mm in 47 rainy days

Crop	Variety	No. of farmers	Area (ha)	Yield of Demonstration (q/ha)				Increase in yield (%)	Cost of additional cash (Rs./ha)	
				Highest	Lowest	Avg.	Local check		Demo.	Local Check
Paddy	Swarna	5	1 (0.2 ha each)	40.0	38.0	39.0	29.0	34	1700	600

Interpretation and critical analysis of the results obtained :

- The inputs under I.P.M like neem based pesticide (Multineem), detergent (Wetmagic) and chemical insecticide have been applied.
- By assuming the sale price of paddy Rs. 600/q. there is a net gain of Rs. 6000 per hectare.
- The availability of botanicals is limited in the local market and home preparation of botanicals is a tedious process.

F.L.D.- 7 : Oyster Mushroom Cultivation

Year : 2006-07

Crop	Season	Area (ha)	Area (ha)		No. of farmers/ Demo			Remarks
			Proposed	Actual	SC/ST	Other	Total	
Oyster Mushroom	Rabi	--	100 beds	100 beds	15	10	25	Vill- Lakarma, Sanjhinki, Badajhinki

Farming situation and results of demonstration on other than oilseed & pulse crops

Crop	Season	Sowing date	Harvesting date	Situation	Soil type	Agro-climatic zone	Previous crop pattern	Status of NPK (kg/ha)	Rainfall distribution (mm)
Oyster Mushroom	Rabi	25.01.07 to 30.01.07	20.02.07 to 26.02.07	Backyard		Western central table land	--	--	--

Crop	Variety	No. of farmers	Area (ha)	Yield of Demonstration (kg/bed)				Increase in yield (%)	Cost of additional cash (Rs./ha)	
				Highest	Lowest	Avg.	Local check		Demo.	Local Check
Oyster Mushroom	<i>Pleurotorus sajaricajus</i>	25	--	1.6	1.2	1.4	--	--	25	--

Interpretation and critical analysis of the results obtained :

Oyster Mushroom cultivation was first demonstrated in Lakarma, Sanjhinki and Badajhinki villages of Sonepur. Farmers did it for first time and got average yield of about 1.4 kg/bed. It is a very good off time business for lady farmers. On an average they invest Rs.25/- per bed, however get Rs.84/- within 25 days. The demand in local market is very high in comparison to supply quantity.

F.L.D.-8 : Composite fish culture**Year : 2006-07**

Crop/ culture	Season	Area (ha)	No. of farmers/ Demo			Remarks
			SC/ST	Other	Total	
Composite fish culture	Kharif	0.4 x 5= 2.0	01	04	05	Distribution of fingerlings of catla, Rohu, Mrigala, Grasscrap, Silver crap & common crap on proper stocking density with stocking ration.

Farming situation and results of demonstration on other than oilseed & pulse crops

Crop/ culture	Season	Date of Stocking	Harvesting date	Situation	Soil type	Agro-climatic zone	Previous Crop Pattern	Status of NPK (kg/ha)	Rainfall distribution (mm)
Composite fish culture	Kharif	02.09.06	3 rd wk of June 2007	Farm pond	Clay loam	Western central table land	-	-	June-Nov.2006 1725.mm in 47 rainy days

Crop	Variety	No. of farmers	Area (ha)	Yield of Demonstration (q/ha)				Increase in yield wt (%)	Cost of additional cash (Rs./ha)	
				Highest	Lowest	Avg.	Local check		Demo.	Local Check
Fish culture	Composite fish culture	5	2 (0.4 ha each)	-	-	-	-	-	3,000	15,000

Result waiting upto the month of June-2007.

Interpretation and critical analysis of the results obtained :

- Growth performance is better than their previous culture
- Proper utilization of feed
- Farmers are interested to carry out composite fish culture in future.

F.L.D.-9 : Block Plantation of Teak.

Year : 2006-07

Crop	Season	Area (ha)	Area (ha)		No. of farmers/ Demo			Remarks
			Proposed	Actual	SC/ST	Other	Total	
Teak	Kharif	1.0 (0.2 ha each)	1.0	1.0	3	2	5	Teak stumps of 1 st year old were used as planting materials

Farming situation and results of demonstration on other than oilseed & pulse crops

Crop	Season	Sowing date	Harvesting date	Situation	Soil type	Agro-climatic zone	Previous crop pattern	Status of NPK (kg/ha)	Rainfall distribution (mm)
Teak	Kharif	26.08.06	7 th year onwards upto 30 years	Rainfed upland	sandy loam	Western central table land	Degraded land	L:M:H	June-Nov.2006 1725.mm in 47 rainy days

Crop	Variety	No. of farmers	Area (ha)	Yield of Demonstration (q/ha) •				Increase in yield wt (%)	Cost of additional cash (Rs./ha)	
				Highest	Lowest	Avg.	Local check		Demo.	Local Check
Teak	One year old stump	5	0.2 (each farmer)	59 cm	39 cm	51 cm	35 cm	41%	800	200

- Yield from the plantation can be calculated from 7th year onwards to 30th year of plantation. Data on height of the plantation is record every year and D.B.H. will be calculated after 3rd year of plantation. Height of the Plant up to Nov-2006 was given in cm in the above table.

Interpretation and critical analysis of the results obtained :

Locally plantations are usually done with seedlings. One year old stump plantation gives faster growth than the local check and also more survivability.

F.L.D.-10 : Introduction of fast growing multipurpose tree species in backyard.

Year : 2006-07

Crop	Season	Area (ha)	Area (ha)		No. of farmers/ Demo			Remarks
			Proposed	Actual	SC/ST	Other	Total	
<i>A mangium</i> , <i>A auriculiformis</i> , <i>Tectona grandis</i>	Kharif	3 (1 ha each trees species)	3	3	20	10	30	Vill-Panisiali

Farming situation and results of demonstration on other than oilseed & pulse crops

Crop	Season	Sowing date	Harvesting date	Situation	Soil type	Agro-climatic zone	Previous crop pattern	Status of NPK (kg/ha)	Rainfall distribution (mm)
<i>A mangium</i> , <i>A auriculiformis</i> , <i>Tectona grandis</i>	Kharif	26.08.06	After 3 year-10 year	Rain fed upland	Sandy clay	Western central table land	Less imp. tree sp.	L:M:H	June-Nov.2006 1725.mm in 47 rainy days

Crop	Variety	No. of farmers	Area (ha)	Yield of Demonstration (q/ha) ●				Increase in yield (%)	Cost of additional cash (Rs./ha)	
				Highest	Lowest	Avg.	Local check		Demo.	Local Check
<i>Acacia mangium</i>	-	30	1	62	39	56	Other sps. are available	-	600	150
<i>Acacia auriculiformis</i>	-	30	1	67	42	58	Other sps. are available	-	500	100
<i>Tectona grandis</i> (Teak)	-	30	1	58	38	50	35	42.8	600	150

- Yield from the plantation will be calculated from 3rd years onwards for fuel wood and fodder. *A mangium* and *A auriculiformis* will be harvested for timber at the age of ten years. Teak will be harvested for timber at the age of 30 years Height of tree species was given in cm. in the above table (up to Nov- 2006)

Interpretation and critical analysis of the results obtained :

Acacia mangium and *Acacia auriculiformis* shows a promising growth in the first year of plantation while Teak also shown faster growth.

15. ON FARM TESTING

OFT-1

a.	Title of Experiment	:	Mangium –Turmeric based Alley Cropping System
b.	Problem	:	Low return from sole crop and have chances of crop failure from sole cropping system due to <i>erratic</i> monsoon.
c.	Hypothesis	:	Assured return from the intercropping system under rainfed condition.
d.	Experiment year	:	1 st year
e.	Treatment	:	T ₁ - Farmers practices (sole crop of turmeric) T ₂ Intercrop turmeric in 8m x 3m spacing of mangium T ₃ Intercrop turmeric in 6m x 3m spacing of mangium
f.	Critical inputs required	:	Seedlings, Rhizomes, Fertilizer and pesticides
g.	Plot size	:	100 m ²
h.	No. of replication	:	7
i.	Cost of critical inputs	:	Rs.1000/-
j.	Observation to be recorded	:	(a) Yield of Turmeric (b) Height and girth of mangium.

Results

Plant height (ft)

Treatments	Replications							Mean	Addition return (%) B:C
	R-I	R-II	R-III	R-IV	R-V	R-VI	R-VII		
T ₁	-	-	-	-	-	-	-	-	-
T ₂	5.1	4.7	4.1	5.5	3.8	5.6	4.8	4.8	-
T ₃	4.5	4.2	3.9	5.1	4.1	5.5	4.9	4.7	-

Plant girth (cm)

Treatments	Replications							Mean	Addition return (%) B:C
	R-I	R-II	R-III	R-IV	R-V	R-VI	R-VII		
T ₁	-	-	-	-	-	-	-	-	-
T ₂	9.6	10.1	8.9	10.5	9.8	9.3	10.4	9.8	-
T ₃	9.8	9.5	9.2	8.8	9.6	9.3	10.3	9.5	-

Yield of turmeric in (q/ ha.)

Treatments	Replications							Mean	Yield Avg. over control(%)
	R-I	R-II	R-III	R-IV	R-V	R-VI	R-VII		
T ₁	103	99.8	101.5	102.3	101.9	102.9	103.3	102.1	-
T ₂	115	114.5	113	114.2	112.9	114.9	115.6	114.3	11.9
T ₃	118.2	117.9	116.2	117.5	115.6	117.4	119.7	117.5	15.0

Interruption and critical analysis of results obtained :

Rhizome yield of turmeric in alley cropped with mangium (T₂ and T₃) was more than the sole crop of turmeric (T₁). It might be due to canopy coverage of mangium plant which reduced the detrimental effect of torrential rain. Close spacing of 6m x 3m mangium (T₃) gave the highest rhizome yield due to dense planting gave more favorable micro climate (shade) for the turmeric crop.

16. LITERATURE DEVELOPED/PUBLISHED (GIVE DETAILS)

a. Research paper

1. On farm evaluation of different weed management practices in Kharif ground nut –*Jr. of Res.(OUAT): Dec-06*
2. Adoption of recommended ginger cultivation practices.-*Jr. of Spices and Aromatic crops : Dec.06*
3. Effect of sources of Nitrogen on growth, yield & economics of forage maize and soil health.- *Jr. of Res. (OUAT): Dec-06*

b. Technical Reports

1. Progress Report 2005-06
2. Annual Report- 2005-06
3. EFC Report of XIth Plan-2007-11
4. Progress Report 2006-07
5. Annual Action Plan 2006-07
6. Annual Action Plan 2007-08

c. Technical bulletins/ Extension Literature: (8 nos.)

1. Improved Sesamum cultivation- *Dr. S.C. Mohapatra & Sri B.S. Bishoyi*
2. Profitable Groundnut cultivation- *Sri B.S. Bishoyi & Dr. S.C. Mohapatra*
3. Do mustard cultivation for profit- *Sri B.S. Bishoyi & Dr. S.C. Mohapatra*
4. Aftercare of sugarcane crop- *Sri T.K. Das & Mrs. P.Behera*
5. Integrated pest management in Kharif paddy- *Mrs. P.Behera & Sri T.K. Das*
6. Teak plantation: A profitable Business- *Sri. S. Nayak*
7. Profitable fresh water prawn farming- *Sri B.R. Samataray*
8. Improved Cultivation practices of Hybrid Tomato, Brinjal & Chilli- *Mrs. D. Sahu.*

d. Popular articles

1. Improved package of Practices for summer ground nut-*Chasira Sansara(OUAT): Aug.-06*
2. Package of practices for sugarcane cultivation- *Chasira Sansara(OUAT): Sept.-06*

17. Success story/Case study (if any):

1. Nimin in rice
2. Propagation of Bamboo
3. Composite fish culture

18. Constraints :

a. Administrative

- 1 Insufficient staff like Programme Co-ordinator, scientists and vehicle drivers

b. Technical

- 1 Lack of civil construction for the new establishment (Building, compound wall, Bore well & Hostel)
2. Lack of A.V. aids, Demo unit, computers & digital camera.

c. Financial

1. Insufficient working contingency as per the approved action plan & late release of fund from OUAT headquarter.
2. No farm development fund except revolving fund for seed production.

19. Functional linkage with different organizations

Sl. No.	Name of Organisation	Name of linkage
1	State Deptt. (Agriculture/Horticulture/Soil Conservation/Forestry/Pisciculture)	- Sponsored training programmes - Training of Extension Functionaries - Farmer scientists interaction - Input procurement
2	Regional Plant Resource Centre, Bhubaneswar	- Input Procurement
3	CIFA, Bhubaneswar	- HRD - Input Procurement
4	CRRI, Cuttack	- Paddy Seeds Procurement - Collection of Information's
5	DRDA, Sonepur	- Information source - Member (SAC)
6	AIR, Bolangir	- Broadcasting Programme - Member (SAC)
7	NABARD	- Collaborative awareness
8	Local NGOs	- HRD for NGO functionaries - Input supply
9	News paper media	- Publication work
10	Asst. Seed certification office	- Certification of seed
11	D.D. K, Bhawanipatana	- Telecasting of Programme
12	A.T.M.A., Bolangir	- Collaborative awareness

20. Performance of demonstration units : Nil

Sl. No.	Demonstration Unit	Total production	Cost of inputs (Rs.)	Gross income (Rs.)	Net income (Rs.)

21. Performance of instructional farm (crops) including seed production :

Sl. No	Crop	Area covered (ha)	Variety	Date of sowing	Dates of harvesting	Total production (qt.)	Cost of inputs (Rs)	Gross income (Rs) (E)
1	Paddy	0.4	Pratikhya	07.07.06	12.11.06	15	14,000	15,900
		1.8	Swarna	08.07.06	20.11.06	52	54,560	55,120
		0.04	Pusa Sugandha-2	11.07.06	06.11.06	01	1800	2000
		0.04	Pusa Basumati	11.07.06	07.11.06	01	1800	2000
2	Turmeric	0.12	Surama	13.06.06	10.03.07	RS	--	--
3	Mango giner	0.04	Amba	13.07.06	15.03.07	RS	--	--
4	Niger	0.12	Deomali	17.08.06	27.09.06	RS	--	--
5	Sugarcane	0.24	Nayana (Co-86032)	12.10.06	10.10.07	100 (E)	8500	9000
6	Toria	0.05	Parvati	15.10.06	05.01.07	0.23	780	782
7	Sesamum	0.03	Uma	16.10.06	10.01.07	0.06	150	200
8	Green gram	0.03	Nayagarh selection-1	13.11.06	15.02.07	0.15	590	595
9	Ragi	0.02	Bhairabi	10.08.06	25.11.06	0.29	350	353
10	Potato	0.05	K.Jyoti	03.11.06	28.01.07	4.25	2210	2300
11	Onion	0.01	Nasik Red	14.11.06	02.04.07	RS	--	--
12	Sweet Potato	0.05	Sourin	08.11.06	25.01.07	1.5	550	600
13	Acacia	--	Selection	25.05.06	18.08.06	260 nos.	1000	1300
14	Teak	--	Selection	26.05.06	17.08.06	880 nos.	4000	4400
15	Magur	--	Asian catfish	10.07.06	27.02.07	0.88	5100	5540
16	Papaya & Drumstick	--	Ranchi dwarf, PKM-1	20.06.06	28.07.06	560 nos.	1620	1780
17	Ornamental Seedling	--	--	22.06.06	23.08.06	610 nos.	2830	3050
18	Pea	0.005	Azad - P-1	10.11.06	05.03.07	0.15	160	180

- RS – Reused as seed
- E= Expected

- 22. Utilization of Hostel facilities :** Not constructed
- 23. Indicate any innovative technology or any innovative methodology of Transfer of Technology developed during the year.**
1. Application of biofertilizer & biopesticides.
- 24. Indicate any indigenous technology practiced by the farmers in the KVK operational area which can be considered for technology development (in detail with suitable photograph).**
1. Use of cow urine in vegetable nursery bed before sowing seed to protect fungal and bacterial diseases.
- 25. Indicate the specific training need tools/methodology followed for**
- Identification of courses for farmers/farm women - On the basis of PRA
 - Rural youth - On the basis of PRA
 - In-service Personnel -Training Need assessment
- 26. Any other special programme undertaken by the KVK which has been financed by state Govt./Other Agencies :** Nil
- 27. Seed/Seedling/Sapling: Production under Revolving fund (ICAR) (Achievement)**

Crop	Variety	Seed (qt) /seedling (nos.) /sapling (nos.) production during 2006-07
Paddy	Pratikhya	15
	Swarna	52
	Pusa Sugandha-2	01
	Pusa Basumati	01
Sugarcane	Nayana (Co-86032)	100
Toria	Parvati	0.23
Sesamum	Uma	0.06
Green gram	Nayagarh selection-1	0.15
Ragi	Bhairabi	0.29
Potato	K.Jyoti	4.25
Sweet Potato	P.Sweti	1.5
Acacia Seedling	Improved selection	260
Teak Seedling	Improved selection	880
Magura	Asian Catfish	0.88
Papaya & Drumstick Seedling	Ranchi dwarf & PKM-1	560
Ornamental Seedling	--	610
Pea	Azad- P-1	0.15

28. Scientific Advisory Meeting (s) (SAC) : 1st SAC held on 06.12.06

29. Impact of training programmes carried out during last three years in the KVK adopted villages :

2nd year of KVK establishment

Sl. No.	Name of the specific technical skill transferred	No. of trainees	% of adoption	Change in income (in Rs.)	
				Before	After

30. Field activities

- i. Number of villages adopted : 5
- ii. Number of farm families selected : 552
- iii. Number of survey/PRA conducted : 5

31. Other Extension Activities :

Activities	No. of beneficiaries (Farmers/Rural youth)			No. of Extension Functionaries		
	Male	Female	Total	Male	Female	Total
Field Days (03 nos.)	90	30	120	13	11	24
Kisan Mela (05 nos)	215	57	272	18	21	39
Film show (01)	33	12	45	07	-	07
Radio Talk (17 nos) *	20,000	3,000	23,000	23	15	48
TV Show (1nos.) *	1000	500	1,500	47	10	57
News paper coverage (10 nos) *	20,000	1,000	21,000	50	25	75
Any Other (farmers visited to KUK instructional farm)	230	80	310	20	9	29

* Collected from the media source.

32. Utilization of KVK funds during the year (April-06 to Dec-06)

Item	Sanctioned (ICAR)	Released (OUAT)	Expenditure
Pay & allowances	15,00,000	15,38,581	15,38,581
TA	50,000	50,000	49,932
Contingencies	50,000	40,000	40,000
Training, FLD, OFT	1,50,000	1,50,000	1,50,000
Non recurring	-	-	
Works	-	-	
1. Threshing floor	1,70,000	1,70,000	Work done by DPP, OUAT
2. Fencing	7,00,000	7,00,000	Placed to CPWD
3. Tube Well	4,00,000	4,00,000	
4. Administrative Building	10,00,000	10,00,000	
Vehicle	-	-	
Computer, LCD & Accessories	1,00,000	1,00,000	
Furnitures	50,000	50,000	50,000
Library	10,000	10,000	10,000
Revolving fund	1,00,000	1,00,000	1,00,000
Total	42,80,000	43,08,581	43,08,513

33. Utilization of funds under FLD on Oilseed/Pulse :

Sl. No.	Item	Sanctioned by ZC		Released by Institute		Expenditure up to Dec-06		Unspent balance
		Kharif	Rabi	Kharif	Rabi	Kharif	Rabi	
1	Oil seeds	11250	11250	10900	10550	10990	10550	Nil
2	Pulses	12470	12470	12120	--	12120	12120*	Nil

* Used from the KVK available funds

34. Status of Revolving Fund (in lakhs) for 1 years :

Year	Total sanctioned	Opening balance	Expected Income		Net balance in hand as on 1 st April of each year
			Fixed Deposit	Farm income	
2006-07	1,00,000	1,00,000	-	1,05,100	1,00,000

(Signature of Programme Co-ordinator)

