Annual Report of 2010-11

(April, 2010 – March, 2011)

Submitted to

Zonal Project Directorate - Zone-II, ICAR
Kolkata – 700 097

Submitted by

RAMKRISHNA ASHRAM KRISHI VIGYAN KENDRA
P.O. NIMPITH ASHRAM-743338, SOUTH 24-PARGANAS
SUNDARBANS, WEST BENGAL
Phone : 03218- 226002, Fax: 03218-226636
e-mail : kvknimp@cal2.vsnl.net.in, nimpithkvk@rediffmail.com
Website: www.rakvknimpith

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Technical Information

KVK Faculties

Compiled and Edited

By

Dr. N. J. Maitra

&

P. Banik

Desktop Assistance

D. Maitra

&

S.C. Das

RAMKRISHNA ASHRAM KRISHI VIGYAN KENDRA

P.O. NIMPITH ASHRAM, SOUTH 24- PARGANAS

SUNDARBANS, WEST BENGAL

Phone : 03218- 226002, Fax: 03218-226636

e-mail : kvknimp@cal2.vsnl.net.in, nimpithkvk@rediffmail.com

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ANNUAL REPORT 2010-2011

(April, 2010 – March, 2011)

1. GENERAL INFORMATION ABOUT THE KVK

1.1. Name and address of KVK with phone, fax and e-mail

Ramkrishna Ashram Krishi Vigyan Kendra (Website: www.rakvknimpith.org)

Address	Telephone		E-mail
P.O.Nimpith Ashram South 24-Parganas, West Bengal, Pin-743338	Office 03218-226002	FAX 03218-226636	kvknimp@cal2.vsnl.net.in nimpithkvk@rediffmail.com

1.2 Name and address of host organization with phone, fax and e-mail

Address	Telephone		E-mail
	Office	FAX	
Sri Ramkrishna Ashram, Nimpith P.O. Nimpith Ashram, South 24-Parganas, West Bengal, Pin-743338	03218-226001	03218-226636	kvknimp@cal2.vsnl.net.in

1.3. Name of the Programme Coordinator with phone & mobile No

Name	Telephone / Contact		
	Residence	Mobile	E mail
Dr. Nilendu Jyoti Maitra	-	09434437053	njmaitra@rediffmail.com

1.4. Year of sanction : 1979

1.5. Staff Position (as on 1st April, 2011)

Sl. No.	Sanctioned post	Name of the incumbent	Designation	Discipline	Pay Scale with revised basic	Date of joining	Permanent /Temporary	Category (SC/ST/ OBC/ Others)
1	Programme Coordinator	Dr. Nilendu Jyoti Maitra	Programme Coordinator	Administra-tive & Animal Husbandry	15600- 39100 (GP- 8000) (31,140)	01.06.2010	Permanent	Others
2	Subject Matter Specialist (Agronomy)	Sri Swapan Kumar Samui	SMS (Agronomy)	Agronomy	15600- 39100 (GP-7000) (30,920)	01.04.1997	Permanent	Others
3	SMS (Fishery)	Sri Prasanta Chatterjee	SMS (Fishery)	Fishery	15600- 39100 (GP 7000) (30,920)	28.10.1997	Permanent	Others
4	SMS (Home Science)	Dr. Manasi Chakraborty	SMS (Home Science)	Home Science	15600- 39100 (GP 7000) (31,630)	08.12.2000	Permanent	Others
5	SMS (Horticulture)	Sri Chandan Kumar Mondal	SMS (Horticulture)	Horticulture	15600- 39100 (GP 6000) (25,050)	16.05.2005	Permanent	Others
6	SMS (Plant Protection)	Dr.Lakshman Chandra Patel	SMS (Plant Protection)	Plant Protection	15600- 39100 (GP 6000) (25,810)	01.09.2007	Permanent	Others
7	SMS (Animal Husbandry)	Dr. Subhasis Roy	SMS (Animal Husbandry)	Animal Husbandry	15600- 39100 (GP 6000) (25,050)	01.07.2010	Temporary	Others
8	Programme Assistant (Agronomy)	Dr. Dipak Kumar Roy	Programme Assistant (Agronomy)	Agronomy	9300- 34800 (GP 4200) (18280)	12.06.2001	Permanent	Others
9	Programme Assistant (Computer)	Sri Partha Banik	Programme Assistant (Computer)	Office	9300- 34800 (GP 4200) (17530)	09.06.2003	Permanent	Others
10	Farm Manager	Sri Arabinda Samanta	Farm Manager	Office	9300- 34800 (GP 4600) (23,690)	01.04.1997	Permanent	Others
11	Assistant	Sri Aditya Guchhait	Assistant	Office	9300- 34800 (GP 4200) (14,430)	01.06.2010	Temporary	Others
12	Stenographer Grade-III	Sri Debjyoti Maitra	Stenographer Grade-III	Office	5200- 20200 (GP 2400) (9,840)	04.01.2011	Temporary	Others
13	Driver –cum - Mechanic	Sri Madhab Chandra Kayet	Driver –cum-Mechanic	Office	5200- 20200 (GP 2400) (11,050)	01.06.1995	Permanent	Others
14	Driver – cum – Mechanic	Sri Birendra Nath Das	Driver –cum-Mechanic	Office	5200- 20200 (GP 2000) (9,790)	01.09.2003	Permanent	Others
15	Supporting staff	Sri Nemai Chand Mondal	Storekeeper-cum-Clerk	Office	5200- 20200 (GP 2800) (15,090)	01.02.1982	Permanent	SC
16	Supporting staff	Sri Sailen Das	Cook	Office	5200- 20200 (GP 4200) (16,960)	01.07.1979	Permanent	Others

1.6. Total land with KVK (in ha) : 21.110 ha

S. No.	Item	Area (ha)
1	Under buildings	0.898 ha
2.	Under demonstration units	1.813 ha
3.	Under crops	8.783 ha
4.	Orchard/agro-forestry	0.813 ha
5.	Others (crop demonstration plot)	8.803 ha

1.7. Infrastructure Development:

A) Buildings

S. No.	Name of building	Not yet started	Completed up to plinth level	Completed up to lintel level	Completed up to roof level	Totally completed	Plinth area (Sq.m)	Source of funding
1	Administrative Building	-	-	-	-	Totally completed	777.545	ICAR
2.A	Farmers Hostel	-	-	-	-	-do-	359.639	ICAR
2.B	Farmers Women Hostel	-	-	-	-	-do-	397.300	ICAR
3.	Staff Quarters (6)	-	-	-	-	-do-	411.680	ICAR
4.	Demonstration Units (2)	-	-	-	-	-do-	675.750	ICAR
5	Fencing	-	-	-	-	-do-	770.00 (mt.)	ICAR
6	Rain Water harvesting structure	-	-	-	-	-do-	17500	ICAR
7	Threshing floor	-	-	-	-	-do-	371.720	CAPART
8	Farm godown	-	-	-	-	-do-	378.790	SDB, GOWB
9.	Others	-	-	-	-	-do-	397.300	ICAR

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. run	Present status
Tata Sumo Victa	2008-09	6,00,000.00	54,320	Running condition

C) Equipments & AV aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
Computer (2 no.) with computer room decoration	1996-97	4,44,000.00	Working condition
Computer air conditioner	2001-02	27,650.00	Working condition
Camera TRV	2003-04	36,900.00	Working condition
RS 350	2003-04	4,000.00	Working condition
Computer (2 nos)	2003-04	76,899.00	Working condition
Copier HP 3330	2003-04	36,500.00	Working condition
Copier (MFP)	2006-07	75,000.00	Working condition
LCD projector	2006-07	1,00,000.00	Working condition
Digital Camera	2008-09	25,000.00	Working condition

C) Equipments & AV aids (Contd…)

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
Public address system	2010-11	30,481.00	Working condition
Fax Machine	2010-11	52,870.00	Working condition
Phtocopier	2010-11	1,25,208.00	Working condition
V-SAT with e-KVK linkage (5 Computer & printer with Server)	2009-10	-	Working condition
OPTOMA projector with 3M Digital annotation sensor with AverMedia digital document visualiser (AF 300)	2009-10	1,70,000.00	Working condition
Micro-metos MCR-300 automatic weather station with disease forecasting system (software GENEVA E2C)	2009-10	4,00,000.00	Working condition
Lenovo Laptop	2008-09	48,000.00	Working condition
Samsung Notebook	2009-10	22,000.00	Working condition
Perkin-elmer UV-Vis Spectrophotometer (Lamda 25)	2010-11	4,10,000.00	Working condition
Perkin-elmer Atomic Absorption Spectrophotometer (AA-200)	2010-11	9,99,272.00	
pH meter	2010-11	4,000.00	Working condition
Connductivity meter	2010-11	6,500.00	Working condition
Eutech pH-Conductivity meter	2009-10	13,500.00	
Rescholar Laminar Air-flow	2008-09	49,500.00	Working condition
Rescholar Semi-automatic Corcyra rearing system (10 units)	2008-09	1,53,000.00	Working condition
Rescholar Corcyra egg cleaning device	2008-09	18,000.00	Working condition
Rescholar Corcyra egg sterilization chamber	2008-09	22,500.00	Working condition
Rescholar Trinocular Zoom stereo microscope with eye-piece camera & software	2008-09	1,20,950.00	Working condition
Rescholar Binocular Research Microscope	2008-09	18,500.00	Working condition
Chrlorophyll meter (SPAD 502 plus)	2010-11	2,25,000.00	Working condition
Refrigerator (GFE 25/2010)	2010-11	19,560.00	Working condition
Rotary shaker	2010-11	32,500.00	Working condition
BOD incubator (Simeco)	2010-11	31,650.00	Working condition
Autoclave	20080-09	25,365.00	Working condition
Double distillation unit	2010-11	33,250.00	Working condition
Afcoset Electronic Balance(Model EK1200G)	2008-09		Working condition
Afcoset Electronic Balance(Model ER 200A)	2008-09	45,500.00	Working condition
REMI Centrifuge (Model R 8C)	2008-09	19,350.00	Working condition
REMI Centrifuge (Model R 24)	2008-09	35,950.00	Working condition
Honda electric lawn mower	2007-08	14,500.00	Working condition
Al-Ko Electric hedge cutter	2010-11	22,000.00	Working condition
Seed grader	2010-11	2,10,000.00	Working condition
Pumpsets	2003-04	50,000.00	Working condition
Tractor – Mahindra	2003-04	4,49,250.00	Working condition
Thresher & Rotavator	2010-11	2,00,000.00	Working condition
Disc Harrow	2009-10	70,000.00	Working condition
Power Tiller	2009-10	1,43,000.00	Working condition
Generator – 25 KVA	2010-11	3,56,852.00	Working condition

1.8. A). Details SAC meeting* conducted in the year

Sl. No.	Date	Number of Parti-cipants	Salient Recommendations	Action taken	If not conducted, state reason
1.	10.09.2010	35	In dhaincha cultivation for green manuring in pre-kharif season, the use of Rhyzobium should be undertaken as a seed inoculants	Action should be taken in kharif season.	
			The different salinity tolerant variety of sweet potato should be collected from CSSRI, Canning for study their performance in local areas/farmer's field	Two varieties have been collected from CSSRI, Canning and their performance trial is continuing. (Sribandhini / Kalmegh)	
			In case of tomato cultivation, if the soil test report shows Zn deficiency, the Zn should be supplied either in the form of foliar spray or in the form of soil application	State Government recommendation for Zn application as foliar spray is advocated in tomato cultivation.	
			In case of sunflower, the programme should be continued to evaluate the salt tolerant variety suitable for the coastal saline belts of West Bengal	Though AICRP Sunflower, these are being evaluated.	
			Value addition of sweet potato like dry sweet potato flour, chips, sweets etc. may be tried	It will be tried through SHGs.	
			Greengram seed of saline tolerant variety may be collected after taking information from IIPR, Kanpur	Letter has been sent to IIPR, Kanpur regarding the availability of salt tolerant variety but no response from their end till date.	
			Azola may be included in any programme for Boro paddy cultivation	Generally we do not advocate boro paddy for this region but where it is already cultivated, Azola will be included.	
			In FLD on groundnut, seed should be treated with Rhyzobium	FLD on groundnut has not been sanctioned this year.	
			Azotobactor & PSB may be included in cotton & sunflower programme	Done	
			More emphasis should be given on vermi compost unit establishment at village level	40 units of vermicompost pits will be constructed in two villages (Radhakantapur & Dongajora) under NWDPRA Programme. At present beneficiary selection has been completed. Besides, more than 50 units have been developed through NAIP.	
			Azolla should be included in paddy-cum-fish culture	Done through NWDPRA and NAIP programme.	
			Identification of salt tolerant variety of rice	It is identified through NICRA programme in collaboration with CSSRI, Canning and CRRI, Cuttack	

Sl. No.	Date	Number of Parti-cipants	Salient Recommendations	Action taken	If not conducted, state reason
			Bank may send loanee farmers list to KVK for their skill development training in related activities	-	
			Special programmes of KVK should be informed in advance to All India Radio so that it could be broadcasted	Many programmes with AIR have been broadcasted.	
			A resource inventory should be developed in KVK	Resource Inventory and District Profile have been developed	
			Marketing channel development through Farm Science Club in villages	Continuing	
			Parasitological map should be developed in collaboration with State Department of ARD	A parasitological map of Damkal village under Mathurapur-II block is prepared for different seasons for ruminants. The same for Dakshin Durgapur village is in process. The work is conducted through NAIP programme.	
			Quality control of ornamental fish production should be looked after in collaboration with CIFE	All the programmes have been discussed with CIFE scientists and will be taken up in near future.	
			Indigenous fish breeding may be tried in collaboration with CIFE, Kolkata		
			The programme should be undertaken to conserve our indigenous / deshi fish spp.		
			In dhaincha cultivation for green manuring in pre-kharif season, the use of Rhyzobium should be undertaken as a seed inoculants	Action should be taken in kharif season.	
			The different salinity tolerant variety of sweet potato should be collected from CSSRI, Canning for study their performance in local areas/farmer's field	Two varieties have been collected from CSSRI, Canning and their performance trial is continuing. (Sribandhini / Kalmegh)	
			In case of tomato cultivation, if the soil test report shows Zn deficiency, the Zn should be supplied either in the form of foliar spray or in the form of soil application	State Government recommendation for Zn application as foliar spray is advocated in tomato cultivation.	
			In case of sunflower, the programme should be continued to evaluate the salt tolerant variety suitable for the coastal saline belts of West Bengal	Though AICRP Sunflower, these are being evaluated.	
			Value addition of sweet potato like dry sweet potato flour, chips, sweets etc. may be tried	It will be tried through SHGs.	
			Greengram seed of saline tolerant variety may be collected after taking information from IIPR, Kanpur	Letter has been sent to IIPR, Kanpur regarding the availability of salt tolerant variety but no response from their end till date.	

Meeting No. 18 **Date: 10.09.2010**
Place : Nimpith **Time : 10.30 a.m.**

A meeting of the Scientific Advisory Committee of Ramkrishna Ashram Krishi Vigyan Kendra, Nimpith is held to-day, the 10th September, 2010 at 10.30 a.m. in the KVK premises with the following members :

Members Present:

1. Shri Pareshbhai Rajda, President, Sri Ramkrishna Ashram, Nimpith
2. Swami Sadananda, Chairman, KVK Nimpith
3. Ajay Kumar Dewanji, Field Officer, ZPD, Zone-II, Kolkata
4. S. B. Neogi
5. Dr. B.K.Bandopadhyay, Principal Scientist. CSSRI, Canning
6. Dr. Manimoy Chattopadhyay, VIB
7. Dr. Ajit Kumar Poddar, VIB
8. Sekhar Chakraborty, Doordarshan
9. Dr. Archana Sinha, Principal Scientist, CIFE
10. Bhesina Ranjan Biswas, Asst. Director, ARD, (SA), S-24 Parganas
11. Dr. Nilendu Jyoti Maitra, Programme Coordinator, KVK
12. Prasanta Chatterjee, SMS (Fish.), KVK
13. Arun Kumar Jana, SRP, NAIP
14. Lakshman Chandra Patel, SMS (P.P.)
15. Sudipta Das, Doordarshan, Kolkata
16. Dr. Avijit Roy, Jr. Agronomist, AICRP, KVK
17. Dr. Dipak Kumar Roy, Programme Asstt.(Ag), KVK
18. Chandan Kumar Mondal, SMS (Hort.), KVK
19. Smt. Manasi Chakraborty, SMS (Home Sc.), KVK
20. DR.Subhasis Roy SMS (A.H)
21. Utpal Maity, RA, NAIP
22. Bhaskar Mukherjee Technical Asst., KVK
23. Swapan Kumar Samui, SMS (Agro)
24. Arabinda Samanta (Farm manager), KVK
25. Aditya Guchhait (Assistant), KVK
26. Debasish Haldar (Technical Assistant), AICRP, KVK
27. Shyam Sundar Lakshman, Jr. Breeder, AICRP, KVK
28. Partha Banik, Programme Asstt. (Computer), KVK
29. Gobinda Naiya, Progressive Farmer
30. Brihaspati Naskar, Progressive Farmer
31. Kakali Pramanik , Progressive Farmer
32. Ram Ranjan Das Ray, AIR, Kolkata
33. Sumit Chakraborty, Programme Executive, AIR, Kolkata
34. Prabal Kumar Sarkar, Dy. Manager, State Bank of India, Nimpith
35. Subal Chandra Das, KVK

Resolutions:

1. The minutes of the last meeting are read and confirmed
2. The Programme Coordinator-Incharge of KVK presented the progress of work of KVK for the period from March, 2010 to September, 2010 before the members present in the meeting. Thereafter, all Sectional Incharges of different disciplines of KVK participated in detail discussion on their respective subjects and problems raised on different aspects of work with the present members. After a good deal of discussion, the following recommendations have come out for betterment of KVK activities.

a) In dhaincha cultivation for green manuring in pre-kharif season, the use of Rhyzobium should be undertaken as a seed inoculants
b) The different salinity tolerant variety of sweet potato should be collected from CSSRI, Canning for study their performance in local areas/farmer's field
c) In case of tomato cultivation, if the soil test report shows Zn deficiency, the Zn should be supplied either in the form of foliar spray or in the form of soil application
d) In case of sunflower, the programme should be continued to evaluate the salt tolerant variety suitable for the coastal saline belts of West Bengal
e) Value addition of sweet potato like dry sweet potato flour, chips, sweets etc. may be tried
f) Greengram seed of saline tolerant variety may be collected after taking information from IIPR, Kanpur
g) Azola may be included in any programme for Boro paddy cultivation
h) In FLD on groundnut, seed should be treated with Rhyzobium
i) Azotobactor & PSB may be included in cotton & sunflower programme
j) More emphasis should be given on vermi compost unit establishment at village level
k) Azolla should be included in paddy-cum-fish culture
l) Identification and measurement of EC for soil tolerant variety of rice
m) Bank may send loanee farmers list to KVK for their skill development training in related activities
n) Special programmes of KVK should be informed in advance to All India Radio so that it could be broadcasted
o) A resource inventory should be developed in KVK
p) Marketing channel development through Farm Science Club in villages
q) Parasitological map should be developed in collaboration with State Department of ARD
r) Quality control of ornamental fish production should be looked after in collaboration with CIFE
s) Indigenous fish breeding may be tried in collaboration with CIFE, Kolkata
t) Lactic acid pause measurement may be included in drudging reduction OFT

3. The performance of Front Line Demonstration on cotton, oilseeds and pulses during rabi-summer have been discussed in the meeting and the members present in the meeting satisfied with the progress of work on FLDs for the period under review.

4. The progress of work of the projects like, IRM, ATMA, NAIP, AICRP, NWDPRA, Chilli for the year 2010-11 have been discussed in the meeting and the Committee expresses its satisfaction for the work done during the period under review.

With a vote of thanks to and from the Chair the meeting dissolves.

Sd/- Swami Sadananda
Chairman. 10/09/2010

Sl. No.	Date	Number of Parti-cipants	Salient Recommendations	Action taken	If not conducted, state reason
2.	25.03.2011	40	Salt tolerant and short duration greengram and blackgram varieties may be introduced in Sundarban area for better performance, to collect these seeds, it may be approached to the Director General, AVRDC, Taiwan	Contact would be made with DG, AVRDC in due course.	
			Value addition of sweet potato may be taken into consideration	Acxtion is to be made shortly	
			Sunflower Crusher Machine may be introduced as a demonstration unit, it may be provided from Gujarat through Rajda Private Sales, Kolkata.	Contact to be made in next sunflower season	
			Soil map for the district South 24 Parganas may be collected from NBSS & LUP or IISS, Bhopal and should be kept at KVK.	KVK agronomist will visit NBSS & LUP on 21.05.2011 to discuss about the matter.	
			Caloric value of each ingredient of supplementary food made for mother & child may be mentioned clearly.	The required action has been taken up	
			Intercropping of sunflower with groundnut may be introduced	Action will be taken in due course	
			The varieties of groundnut that tolerate salinity of 4 to 5 dS/cm may be introduced in KVK farm collecting from CSSRI, Canning	Action will be taken in due course	
			TAG-24 and 590 varieties of groundnut may be introduced collecting from Maharastra	Tag 24 variety is already in practice.	
			District Profile should be included in KVK Website	Action is already taken up	
			Climate related agricultural activities may be taken into copnsideration	Project of National Initiative on climate resilient Agriculture has been started	
			Seed may be collected from seed village for grading in seed grader machine of KVK	Action to be taken after harvesting of kharif paddy, 2011	
			Locally available agricultural bi-products may be used as fish feed	Paddy husk, broken rice and sunflower cake are being used as fish feed	
			On farm Trial on Joynagar Moya with chemical preservative must be carried out without losing the natural taste and it should be identified that if there is any better organic preservative for the same	It will be tried in coming future	
			Cultivation of ber in Sundarban to be introduced in large scale	Programme on demonstration is already going on under NWDPRA village	
			In case of supplementary food formulated by KVK, the details study to be done to find out the status of vitamin, enzyme and also the logic of better result	Action is taken up	
			More demonstration of RIR bird in the backyard for the women folk.	Action taken.	

**** Attach a copy of SAC proceedings along with list of participants***

Meeting No. 19 **Date : 25.03.2011**
Place : Nimpith **Time : 10.30 a.m.**

A meeting of the Scientific Advisory Committee of Ramkrishna Ashram Krishi Vigyan Kendra, Nimpith is held to-day, the 25th March, 2011 at 10.30 a.m. in the KVK premises with the following members :

Members Present:

1. Swami Sadananda, Chairman, KVK Nimpith
2. Pareshbhai Rajda, President, Sri Ramkrishna Ashram, Nimpith
3. Arup Kr. Bandopadhyay, DEE, BCKV
4. Buddheswar Maji, Head, CSSRI, Canning
5. S. K. Roy, Sr. Scientist, ZPD, Zone-II, ICAR
6. M. S. Basu, Former Director of Groundnut Research, ICAR, Junagadh
7. M. Chattopadhyay, Vivekananda Institute of Biotechnology
8. A. K. Lahiri, Dy. Director of Agriculture (Admn.), South 24-Pgs.
9. Chandan Paul, Asst. Director of Agriculture(Ferrtiliser), South 24-Pgs.
10. Sekhar Chakraborty, (Sundarban Diary)
11. Sudipta Das, Kolkata Doordarshan
12. Sumit Chakraborty, All India Radio, Kolkata
13. Dr. Santanu Saha, V.O., BAHE, Jay-II
14. Tarapada Ghosh, R.D.Wing, SRAN
15. Tarak Nath Halder, Secretary, Radhakantapur W.P.
16. Lalita Halder, Member Radhakantapur Watershed Project
17. Gobinda Naiya, President, Dongajora Watershed Project
18. Gouranga Naskar, Secretary, Sundarban Kaikhali Srikrishna Smriti Sangha
19. Archana Sinha, CIFE, Kolkata Centre
20. Utpal Maity, RA, NAIP, RAKVK Nimpith
21. Dr. Nilendu Jyoti Maitra, Programme Coordinator, KVK
22. Prasanta Chatterjee, SMS (Fishery), KVK
23. Manasi Chakraborty, SMS (Home Sc.), KVK
24. Dripta Roy Choudhury, Project Asst., SDB Nutrition Project, KVK
25. Dr. Subhasis Roy SMS (A.H), KVK
26. Swapan Kumar Samui, SMS (Agronomy), KVK
27. Chandan Kumar Mondal, SMS (Hort.), KVK
28. Dipak Kumar Roy, Programme Asst.(Agronomy), KVK
29. Lakshman Chandra Patel, SMS (P.P.)
30. Debasish Haldar (Tech. Asst.), AICRP, KVK
31. Arun Kumar Jana, SRP, NAIP, KVK
32. Sahanur Rahaman, SRF-NAIP, KVK
33. Bhaskar Mukherjee Technical Assistant., KVK
34. Partha Banik, Programme Assistant (Computer), KVK
35. Kakali Pramanik, Shib Durga Milan Sangha SGSY
36. Brihaspati Naskar, Padmapukur Swami Vivekananda SGSY
37. Atit Maji, SRF, NICRA, KVK
38. Subal Chandra Das, Vol., KVK
39. Arabinda Samanta, Farm manager, KVK Nimpith
40. Aditya Guchhait, Assistant, KVK

Resolutions:

1. The minutes of the last meeting are read and confirmed
2. The Programme Coordinator of KVK presented the progress of work of KVK for the period from October, 2010 to March, 2011 before the members present in the meeting. Thereafter, all Sectional Incharges of different disciplines of KVK participated in detail discussion on their respective subjects and problems raised on different aspects of work with the present members. After a good deal of discussion, the following recommendations have come out for betterment of KVK activities.
    a. Salt tolerant and short duration of greengram and blackgram varieties may be introduced in Sundarban area for better performance, to collect these seeds, it may be approached to the Director General, AVRDC, Taiwan
    b. Sunflower Crusher Machine may be introduced as a demonstration unit, it may be provided from Gujarat through Rajda
    c. It may be taken help from NBSS & LUP or IISS, Bhopal for soil mapping
    d. Caloric value of each ingredient of supplementary food may be shown in table
    e. Short duration with high oil content oilseeds as intercrop with groundnut & sweet potato may be introduced
    f. Those varieties of groundnut tolerate 4 to 5 mmhos/cm^2 may be introduced in KVK collecting from CSSRI, Canning
    g. TAG-24 and 590 varieties of groundnut may be introduced collecting from Maharastra
    h. Bold seeded sunflower may be utilised as table food
    i. ETL crossing during the flowering stage of paddy may be introduced
    j. R.I. & District Profile should be included in KVK Website

3) The performance of Front Line Demonstration on cotton, oilseeds and pulses during rabi-summer have been discussed in the meeting and the members present in the meeting satisfied with the progress of work on FLDs for the period under review.

4) The progress of work of the projects like, IRM, ATMA, NAIP, AICRP, NWDPRA, Chilli for the year 2010-11 have been discussed in the meeting and the Committee expresses its satisfaction for the work done during the period under review.

With a vote of thanks to and from the Chair the meeting dissolves.

Sd/- Swami Sadananda
Chairman. 25/03/2011

2. DETAILS OF DISTRICT (2010-11)

2.1 Major farming systems/enterprises (based on the analysis made by the KVK)

Sl. No	Farming system/enterprise
1.	Agro based farming system – Paddy (monocropped)
2.	Agro based farming system – Paddy-Moong/ Cotton /Sunflower
3.	Agro based farming system – Paddy – Khesari (paira crop)
4.	Agro-horti based farming system- Paddy- Chilli/ Tomato/ okra
5.	Ail-bundh (land embankment) farming system – Okra/ Bitter Gourd- Tomato/ French bean
6.	Agri-horti-fishery – Paddy- Chilli/ Tomato/ Okra-IMC
7.	Agri-poultry (backyard)- Paddy- Moong/ Khesari/ Indigenous poultry

2.2 Description of Agro-climatic Zone & major agro ecological situations (based on soil and topography)

S. No	Agro-climatic Zone	Characteristics
1.	Coastal saline zone	Rainfall :1750-1850 mm Temp.: 10.24^0 – $36.4.2^0$ C Humidity : 35.00% - 94.28% Soil type : Clay, clay-loam Soil pH : 5.5 – 8.7, Soil EC : 0.2 – 4.6 mmhos/cm

Sl. No.	Agro ecological situation	Name of blocks	Characteristics
1.	Gangetic Alluvial	Bishnupur I & II, Budge Budge I & II, Falta, Diamond Harbour I & II, Kulpi	Below 20cm water stagnation during monsoon, pH 6.5 – 7.5 EC 0.2 –0.45 mmhos/cm
2.	Coastal Alluvial	Baruipur, Canning I & II, Gosaba	pH 5.6 – 8.2 EC 0.5 – 3.0 mmhos/cm
3.	Coastal Saline	Joynagar I & II, Mathurapur I & II, Kultali, Patharpratima, Namkhana, Sagar	pH 6.0 – 8.5 EC 0.28 – 5.4 mmhos/cm

2.3 Soil type/s

Sl. No	Soil type	Characteristics	Area in ha
1.	Clay, clay loam, sandy loam	Soil pH : 5.5 – 8.7 Soil EC : 0.2 – 4.6 mmhos/cm	3,94,553

2.4. Area, Production and Productivity of major crops cultivated in the district*

Sl. No	Crop	Area (ha)	Production (Qtl)	Productivity (Qtl /ha)
1.	Paddy (Aus)	4251	111070.0	26.128
2.	Paddy (Aman)	216824 (HYV) 131132 (Local)	5364094 (HYV) 2488511 (Local)	24.74 (HYV) 18.98 (Local)
3.	Paddy (Boro)	70777	2386570	33.71
4.	Khesari	20521	146115	7.12
5.	Greengram	34990	160489	4.58
6.	Sunflower	6968	68537	9.83
7.	Groundnut	156	1665	10.65
8.	Cotton	1190	21082	2.86 bales
9.	Green chilli	689	21745	31.56

*Annual action plan on Agriculture, South 24 Parganas, 2009-10, Govt. of West Bengal

2.5 Weather data

Month/ Week		Rainfall (mm)	Temperature ^{0} C		Relative humidity (%)	
			Maximum	Minimum	Max (at 06.30 hrs)	Min (at 13.30 hrs)
Apl.'10	1st week	-	36.8	26.5	92	47
	2nd week	-	39.5	26.2	92	39
	3rd week	-	37.6	27.0	94	48.5
	4th week	4	37.0	22.5	98	52.5
	5th week	-	37.0	23.6	78	34.
May'10	1st week	9.4	37.4	21.8	90	44
	2nd week	3	37.5	24.4	88	51
	3rd week	81.6	38	25.2	98	55
	4th week	6.4	34.2	24.4	94	62
	5th week	5.5	36.2	23.4	90	67
Jun'10	1st week	-	37.2	28	92	61
	2nd week	177.4	36.5	25.2	100	55
	3rd week	95.1	35	24.8	98	73
	4th week	-	34	26	95	81
	5th week	17	34.2	26	97.5	72
Jul'10	1st week	86.4	32.0	25.5	98	68
	2nd week	16.4	34.5	25.6	100	69
	3rd week	12.4	34.7	26.6	92	64
	4th week	86.0	32.2	26.0	98	81.5
	5th week	21.6	33.0	26.0	97.5	81
Aug'10	1st week	28.5	32.6	26.5	97.5	70
	2nd week	13.2	34.5	26.6	95	63
	3rd week	45.2	33	25.8	96	74
	4th week	3.6	33	25	94	73
	5th week	40.2	32.2	26.4	98	76.5
Sep'10	1st week	-	33.2	26.5	94	64
	2nd week	-	33.5	25.2	98	71
	3rd week	-	31.2	24	100	79
	4th week	-	33.2	24.6	97	71
	5th week	-	33.2	26.6	95	63
Oct'10	1st week	54.8	34.8	25	95	62
	2nd week	48.6	31.7	24	100	71
	3rd week	15.7	32.8	25	95	68
	4th week	-	33.8	25	97	44
	5th week	-	30.8	22	95	83
Nov'10	1st week	-	31.8	19.8	94	83
	2nd week	-	32.0	19	96	50
	3rd week	-	32.2	20.2	98	44
	4th week	-	30.4	19.0	98	44
	5th week	-	30.5	19.0	89	46
Dec'10	1st week	1.2	28.2	16	98	43
	2nd week	8.5	30.2	18.0	96	78
	3rd week	-	26.0	12.0	98	32.0
	4th week	-	28.2	11.0	98	30
	5th week	-	26.2	11.5	97	44
Jan'11	1st week	-	27.8	11.2	94	38.0
	2nd week	-	25.2	8.6	93.0	34.0
	3rd week	-	27.0	9.6	98.0	28.0
	4th week	-	28.5	11.0	94.0	37.0
	5th week	-	26.8	13.5	88.0	38.0
Feb'11	1st week	-	30.0	12.2	98	40
	2nd week	-	30.5	14.0	91	29
	3rd week	1.4	33.8	18.0	96	30
	4th week	1.2	30.2	14.5	85	31
Mar'11	1st week	-	35.5	13.4	100	31
	2nd week	7.6	35.5	18.6	94	23
	3rd week	-	34	21.0	95	27
	4th week	-	33.8	22.6	95	52
	5th week	23.2	32.8	21	95	55

2.6. Production and productivity of Livestock, Poultry, Fisheries etc. in the district

Category	Population	Production	Productivity
Cattle			
Crossbred	**32550**	2,65,8,750 lit	1800-2100 lit/lactation
Indigenous	**968986**	19,37,97,200 lit	400-500 lit/lactation
Buffalo	**15604**	56,71,300 lit	600-700 lit/lactation
Sheep			
Crossbred	**-**	-	-
Indigenous	**212589**	22,10,925 kg	10-12 kg/sheep/year
Goats	**696935**	78,05,672 kg	11-13 kg/sheep/year
Pigs			
Crossbred	**-**	-	-
Indigenous	**32584**	12,05,608 kg	35-40kg/pig/year
Rabbits	**-**	-	-
Poultry	2869243		
Hens (improved)	713137	12,47,98,975 eggs	170 – 180 eggs/yr/bird
Desi	**2156106**	19,83,61,752 eggs	90 – 110 eggs/year/bird
Improved	**-**	-	-
Ducks	**1058706**	7,67,56,185 eggs	140 – 160 eggs/yr/bird
Turkey and others	**75897**	6,22,355 kg	6 – 9 kg/year/bird

Livestock population (2006), Dept. of ARD, GOWB

Category	Area	*Production*	Productivity
Fish	-	-	-
Marine	i) 158 km coast line ii) 777 sq.km. inshore (upto 10 fathom) iii) 1813 sq.km offshore (upto 10-40 fathom) iv) 17049 sq.km. continental shelf (upto 100 fathom)	1.80 lakh MT	-
Inland	i)Pond/tank-2.76 lakh ha (under culture-2.2 lakh ha) ii)Beel/baor-0.41 lakh ha (under culture-0.21lakh ha) iii)Reservoirs-0.16lakh ha (under culture-0.03 lakh ha) iv)Rivers-1.72 lakh ha v)Canal-0.80 lakh ha vi)Sewage fed fishery-0.04 lakh ha (under culture-0.04 lakh ha) vii)Brackishwater fisheries-2.10 lakh ha (under culture-0.48 lakh ha) viii)Fish seed production-12200 million	10.90 lakh MT	3500-4000 kg/ha/year
Prawn(scampi/shrimp)	-	0.71 lakh MT	-
Export of fish & prawn	18605 MT worth Rs.525.30 crores		

Source: Annual report 2004-05, Dept. of Fisheries, Aquaculture, Aquatic resources and Fishing harbours, Govt. of West Bengal.

2.6.1 Details of Operational Area/ Village (2010-11)

Sl. No	Taluk	Name of the block	Name of the village	Major crops & enter-prises	Major problem identified	Identified thrust areas
1.	Baruipur Sub-division Diamond Harbour Sub-Division	Kultali Mathurapur -I Mathurapur -II Joynagar – II Pathar-protima Kakdwip	Dongajora, Shyamnagar, Madhabpur, Bongheri Chhoto Koipukur Radhakanta-pur Gilarchat, Bairagirchak, Dumkal, Bottala, Uttarpara, Gopalnagar, sahajadapur Achintanagar, Heramba-gopalpur, Kuyemuri, Kamarhat	Paddy, cotton, sunflo-wer, bitter gourd, okra, tomato, nursery raising of carp spawn, Orna-mental fish, poultry	**Biophysical :** **i) Yield platuening of major field and horticultural crops** * Inappropriate agronomic practices * Poor genetic stock * Inadequate irrigation facilities * Marginal soil **ii) High post harvest loss of horticultural crops** **iii) Lesser extent of crop diversification** **iv) Poor rate of farm mechanization** **v) Poor exploitation of aquatic resources** * Less availability of good quality carp seed * Poor feed management & improper stocking density *No pond preparation before stocking fish *Improper resource utilization for ornamental fish culture **vi) Poor performance of backyard system** * Poor productive performance of existing poultry bred * Untapped potentiality of nutrition garden **vii) Low profitability from broiler and dairy farming** * Poor genetic resources * High cost of commercial feed * High disease incidence **Socio economic :** **i) Very restricted livelihood options** **ii) Recurrence of glut at pick harvest season** **iii) Lack of awareness** **regarding proper management of nutritional garden** **iv) Lack of market support** **v) Lack of credit support**	* Assimilation of good agri-horticultural practices * Providing good quality crop & fish seed, breed and planting materials * Diversification of existing production system * Introduction of poly house concept for off season vegetable cultivation * Efficient utilization of water resources * Proper feed supplementation for fish & animal farming * Providing animal health care service * Soil health management * Popularization of small tools and implements for drudgery reduction * Improvement of backyard system performance * Widening of livelihood options and improvement of women led vocation through SHG * Post harvest management of crops * Development of marketing channel

2.7 Priority thrust areas

Sl. No	Thrust area
1.	Assimilation of good agri-horticultural practices
2.	Providing quality seed, breed, bio-agents and planting materials
3.	Diversification of existing production system
4.	Efficient utilization of water resources
5.	Soil health management
6.	Popularization of small tools and implements for drudgery reduction
7.	Improvement of backyard system performance
8.	Widening of livelihood options and improvement of women led vocation through SHG
9.	Post harvest management of crops
10.	Development of marketing channel
11.	Introduction of poly house concept for off season vegetable cultivation
12	Proper feed supplementation for fish & animal farming
13	Providing animal health care service
14.	Multidisciplinary technological intervention in the cyclone (*"Aila"*) affected areas

3. TECHNICAL ACHIEVEMENTS

3. A. Details of target and achievement of mandatory activities by KVK during 2010-11

Discipline	OFT				FLD			
	1				2			
	Number of OFTs		Number of farmers		Number of FLDs		Number of farmers	
	Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
Crop Production	2	2	15	12	4	5	380	335
Horticulture	2	2	19	15	1	1	8	6
Plant Protection	2	2	14	14	1	4	10	18
Animal Science	2	2	14	12	2	2	-	-
Fishery	2	2	14	14	1	1	5	5
Home Science	2	1	23	15	1	2	100	100
Total	**12**	**11**	**99**	**82**	**10**	**15**	**503**	**464**

Discipline	Training				Extension activities			
	3				4			
	Number of Courses		Number of Participants		Number of activities		Number of participants	
	Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
Crop Production	29	48	832	1252	177	182	821	895
Horticulture	25	25	650	763	155	163	623	650
Plant Protection	33	41	1125	1238	215	250	995	1023
Animal Science	15	14	760	422	512	560	1235	1256
Fishery	21	30	854	912	419	450	834	889
Home Science	38	23	1036	537	11	15	458	450
Total	**161**	**182**	**5257**	**5124**	**1489**	**1620**	**4966**	**5163**

Seed production (q)		Planting material (Nos.)	
5		6	
Target	Achievement	Target	Achievement
Paddy		Fruit plants seedling	
75 quintal	86.81 quintal	15000	22340
Green gram		Vegetable seed	
4 quintal	3.50 quintal	30 qn	38.93

3.1Achievements on technologies assessed and refined

OFT-1

Thematic area: Resource Conservation Technology

Technology assessed: Performance of SRI technology in *boro* paddy (17 days old single seedling is transplanted with a spacing of 25 cm x 25 cm, application of N: P: K @ 100:50:50 Kg/ha and two times weeding with Cono weeder)

Problem Diagnose: Scarcity of irrigation water during flowering to grain filling stage in *Boro* paddy

The farmers used to transplant rice with 4 to 5 seedlings/hill of 35 days old at a closer spacing of 15 cm x 15 cm followed by one or two manual weeding. The *boro* rice cultivation of the district is mostly dependant on pond water, as a result, the crop suffered moisture stress in past years during flowering to grain filling stage if one or two time rainfall is not received during the crop period. To overcome this problem, KVK conducted OFT on SRI technology. Results of the trial indicated that SRI technology reduced the no. of irrigation, influence in earliness of crop maturity, reduced cost of cultivation (Rs.32835/ha), increase in yield (17.95 %), net return (Rs. 23925/ha) and benefit: cost ratio (1.70).

Production system: Rice based production system

Details of technologies selected for assessment/refinement along with performance indicator

Table: Effect of *age of seedling & spacing on productivity of boro paddy*

Technology option	No. Of trials	Data related to problem addressed		Yield component		Yield (qt/ ha)	Cost of cultivation (Rs./ha)	Gross return (Rs./ha)	Net return (Rs./ha)	B:C Ratio
		Duration (days)	Water savings (%)	No. Of panicle / hill	Test wt. (gm)					
Farmers Practice: Transplanting of 35 days old seedlings (4 to 5 seedlings per hill) with spacing of 15cmX15cm, N:P:K @ 100:50:50 kg/ha and one to two times manual weeding	7	114	-	10.0	12.4	46.00	33,586.00	48,500.00	14,914.00	1.44
Technology option 1 (State recommendation) : Transplanting of 25 days old seedlings (4 to 5 seedlings per hill) with spacing of 20cmX15cm, N:P:K @ 100:50:50 kg/ha and one to two times manual weeding		114	-	13.0	14.8	48.25	33,275.00	50,750.00	17,475.00	1.50
Technology option 2 : **SRI technology** : Transplanting of single seedling of 17days old with a spacing of 25cmX25cm, N:P:K @ 100:50:50 kg/ha, additional organic manure of 5qn/ha, and two times weeding with cono-weeder		105	26.87	18.0	16.7	54.26	32,835.00	56,760.00	23,925.00	1.70
SEm±		0.26	-	0.71	0.33	0.48	-	-	-	-
CD(P=0.05)		N.S	-	2.20	1.03	1.49	-	-	-	-

Source of technology:

1. M.Sundarshan Reddy and P. Punna Rao : ANGRAU initiatives for SRI promotion in Hyderabad, Andhra Pradesh
2. B.C.Viraktamath, research on System of Rice Intensification (SRI) in India and priority for the future, Project Director, DRR, Rajendranagar, Hyderabad, Andhra Pradesh

Soil report of the OFT on Boro paddy

Technology option		Initial & Final soil report					
		pH	EC (mmhos/cm)	OC (%)	N (kg/ha)	P_2O_5 (kg/ha)	K_2O (kg/ha)
Farmers Practice	Before	6.87	0.32	0.36	164.8	34.7	586.3
	After	6.58	0.38	0.38	157.2	35.2	574.1
Technology option 1	Before	6.86	0.48	0.43	169.3	33.6	593.7
	After	6.54	0.46	0.41	156.9	34.8	587.2
Technology option 2	Before	6.82	0.41	0.39	170.8	33.9	586.5
	After	6.65	0.39	0.45	159.1	35.7	581.6

Final recommendation for micro level situation: It is yet to be standardized.

Constraints identified and feedback for research: At initial stage, cono-weeder operation is a problem (15-20DAT).

Process of farmers' participation and their reaction: Designed by Researcher and managed by farmers.

High amount of organic matter application in SRI plot is a problem to the framers. Also, transplanting of single seedling is not always accepted by the farmers. They prefer transplanting two seedlings per hill, for better crop survivality.

OFT-2

Thematic area: Weed Management

Technology assessed: Line sowing (30 cm x10 cm) with one time manual weeding at 21 DAS

Problem Diagnose: Low productivity of greengram due to weed infestation

The farmers generally cultivate greengram with broadcast method under residual moisture. As a result, the weed infestation during growth stage is more and the farmers do not practice any control measures. Thus, the yield as well as net return per unit area becomes low. In this situation, OFT has been conducted with different weed management practices. Results indicated that the application of Quizalofap–Ethyl 5%EC @ 450 ml in 180 lt. of water /acre at 21 DAS increased 12.78% grain yield (Tech. Opt. 1) than farmers practice. However, line sowing (30 cm x10 cm) with one time manual (Tech. Opt. 2) weeding at 21 DAS gave 14.35% more grain yield with a net return of Rs. 35995/ha and weed control efficiency of 82.53%.

Production system: Rice based production system

Details of technologies selected for assessment/refinement along with performance indicator

Table: Efficacy of *weedicide & method of sowing on productivity of greengram*

Technology option	No. Of trials	Data related to problem addressed	Yield component		Yield (qt/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs./ha)	Net return (Rs./ ha)	B:C Ratio
		Weed control efficiency* (%)	No. of pods /plant	Test wt. (gm)					
Farmers' Practice : Broadcast sowing with var. PDM-54 and fertilizer dose 20:40:0 kg $N:P_2O_5:K_2O$ / ha, no weed control measure	5	-	17.6	27.8	7.20	12,655.00	39,600.00	26945.00	3.12
Tech. Option-1 : Broadcast sowing with var PDM-54 and one time spray with weedicide i.e. Quizalofap – Ethyl 5%EC @ 450 ml in 180 lit. of water /acre at 21 DAS		60.40	20.4	28.3	8.15	14,186.00	44,825.00	30639.00	3.16
Tech. Option-2 : Line sowing (30cm X10cm) with var. PDM-54 and one time manual weeding at 21 DAS		82.53	23.0	29.2	9.32	15,265.00	51,260.00	35995.00	3.35
Tech. Option-3 : Line sowing (30cm X10cm) with var. PDM-54 and one time spray with weedicide i.e. Quizalofap – Ethyl 5%EC @ 450 ml in 180 lit. of water /acre at 21 DAS * Fertiliser dose remain same as F.P. for Tech. Options- 1,2 & 3		68.20	21.7	28.7	8.78	14,675.00	48,290.00	33615.00	3.29
SEm±		-	0.38	0.42	0.17	-	-	-	-
CD (P=0.05)		-	1.16	N.S	0.53	-	-	-	-

Source of technology:
Weed management in rainfed cowpea and greengram under North-Western Zone of Tamil Nadu. *Indian Journal of Agronomy*, **45**(4): 732-736. (2000)
* Some common weed flora in green gram field: Bathua (*Chenopodium album*), Mutha (*Cyperus rotundus*), Durba (*Cynodon dactylon*), Sanji (*Melilotus inbdica*), Amaranthus (*Amaranthus viridis*) and Punarnaba (*Boerhaaevia diffusa*)

Final recommendation for micro level situation: Line sowing with one time manual weeding is recommended for this zone for green gram cultivation.

Constraints identified and feedback for research: Line sowing is a labour intensive practice. Inclusion of seed drill in sowing operation may reduce this labour cost, but in heavy soils seed drill is not well operated.

Process of farmers' participation and their reaction: Designed jointly by researcher & farmer and managed by farmers.

Labour availability is a problem at sowing time, which forces the farmers to accept broadcasting method.

OFT-3

Thematic area: Quality Management of Fruit

Technology assessed: Assessment of different wrapping materials to improve guava fruit quality.

Problem Diagnose: Earlier, farmers wrap individual fruits by polythene bag to protect it from Fruit fly. Wrapping with poly-bag reduces the quality of fruits due to scorching of fruit skin by sunlight and heat. Attempts were made to improve the appearance of the fruits as well as its' market price along with controlling fruit fly attack by wrapping each individual fruit with combination of polythene bag & news paper piece and non-wooven poly-fabric of different colours. The work is going on in collaboration with Reliance Industries Limited (Polymer Business).

Production system: Orchard production system

Details of technologies selected for assessment/refinement along with performance indicator

***Table: Effect of** age of seedling & spacing on productivity of boro paddy*

Technology option	**No. Of trials**	**Data related to problem addressed**			**Yield component**	**Cost of cultivation (Rs./ha)**	**Gross return (Rs./ha)**	**Yield (qt/ ha / year)**	**B:C Ratio**
		Disease incidence (%)	Fruit colour*	Glossyness *	Size (g)				
Farmers' Practice: Use of transparent white polythene as wrapping material	8	12.84	2	2	69.34	193837	432257	221.67	2.23
Technology Assessment 1: Use of transparent white polythene as wrapping material and news paper piece within the polythene for partial cover of sunlight		5.09	5	5	72.95	223243	611685	271.86	2.74
Technology Assessment 2: Use of green colour Non-wooven poly-fabric as wrapping		4.31	4	4	73.08	210197	594858	270.39	2.83
Technology Assessment 3: Use of Non-wooven poly-fabric of white colour as wrapping material		4.87	2	1	70.21	210627	507612	241.72	2.41
SEm±		0.36	-	-	1.38	-	-	10.26	-
CD (p=0.05)		0.64	-	-	2.71	-	-	21.85	-

*5 point scale

Ref. – CISH, Lucknow & Reliance Industries Limited (Polymer division)

Final recommendation for micro level situation: It is yet to be standardized.

Constraints identified and feedback for research: Wrapping to individual fruit is very much labour intensive.

Process of farmers' participation and their reaction: Designed jointly by researcher & farmer and managed by farmers.

OFT-4

Thematic area: Intercropping in Orchard

Technology assessed: Assessment of performance of Zinger and Turmeric in the Sapota orchard for better profitability.

Problem Diagnose: Sapota is an important fruit crop of South 24 parganas district. In most of the Sapota orchards the land remain uncultivated which may profitably be used by spice cultivation which not only increase farm income, but the tillage operation would nourish Sapota plants.

Production system: Orchard production system

Details of technologies selected for assessment/refinement along with performance indicator

Table: Effect of *age of seedling & spacing on productivity of boro paddy*

Technology option	**No. Of trials**	**Data related to problem addressed**			**Yield (qt/ ha)**	**Cost of cultivation (Rs./ha)**	**Gross return (Rs./ha)**	**Net return (Rs./ha)**	**B:C Ratio**
		Sapota fruit size (g)	**yield of ginger**	**yield of turmeric**					
Farmers' practice: No management / cultivation underneath the Sapota orchard	7	This experiment started in Feb., 2011. Result would be available by the end of November, 2011							
Technology option 1: Cultivation of turmeric (Var. Suroma, Spacing 30 cm X 45 cm) underneath the Sapota orchard									
Technology option 2: Cultivation of Ginger (Var. Garubathan, Spacing 30 cm X 45 cm) underneath the Sapota orchard									

Source of technology: Dept. of Spices & Plantation crops, BCKV

Final recommendation for micro level situation: It is yet to be standardized.

Constraints identified and feedback for research: Nil

Process of farmers' participation and their reaction: Designed jointly by researcher & farmer and managed by farmers.

OFT – 5

Thematic area: Integrated Pest Management

Technology assessed: Profitability of summer chilli by effective control measures against leaf curl in low land situation of coastal saline belt of South 24- PGS.

Problem definition: Low profitability of chilli due to leaf curl

The farmers made indiscriminate use of conventional, ecologically harmful pesticides for management of thrips and yellow mites which are responsible for chilli leaf curl in low land situation of coastal saline belt of South 24- Parganas. Due to this reason, cost of cultivation of summer chilli is high and net return is less. KVK, Nimpith conducted OFT on chilli leaf curl to find out effective control measures against chilli thrips and mites. Results of the trial indicated that a**p**plication of diafenthiuron 5% WG @ 1 g/lt. at 15 days interval from seedling stage to early fruiting stage proved the best with respect to leaf curl problem caused by thrips and mites, yield (135.00 q/ha) & benefit cost ratio (3.76). Moreover, the population of natural enemies such as lady bird beetles and spiders were also relatively more than other practices.

Production system: Rice based production system

Details of technologies selected for assessment/refinement along with performance indicator

Table: Efficacy of *new-generation pesticides & bio-agents on chilli thrips & mites*

Technology option	No. of trials	Data related to problem addressed				Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs./ha)	Net return (Rs/ha)	BC ratio
		Avg. no. of thrips /leaf	Avg. no. of mites /leaf	Avg. no. of lady bird beetles /plant	Avg. no. of spiders /plant					
Farmers' practice: Spraying of conventional chemical insecticide Profenophos 50 % EC at 15 days interval	7	1.40	4.19	0.16	0.31	123.75	41021	148496	107475	3.62
Technology option 1: Alternate spray of garlic extract (100 gm roasted garlic mixed with 50 ml kerosene for overnight and next day it is added with 500 ml water) @ 20 ml/lt of water, rectified spirit @ 20 ml/lt of water at 15 days interval from seedling stage to early fruiting stage		1.87	5.08	0.53	0.77	108.00	38681	129581	90900	3.35
Technology option 2: Application of Diafenthiuron 5% WG @ 15 days interval from seedling stage to early fruiting stage		0.46	1.98	1.15	1.10	135.00	43098	162048	118950	3.76
Technology option 3: Release of *Chrysoperla carnea* grubs @ 2/plant at 15 days interval from seedling stage to early fruiting stage		1.54	4.48	1.02	1.04	115.2	43214	138284	95070	3.20
SEm±		0.06	0.08	0.05	0.03	3.49				
CD (p=0.05)		0.17	0.24	0.14	0.08	10.33				

Source of technology:

Kanojia AK *et al, 2005. Explored ITK in pest management,* NCIPM, IARI, New Delhi

Gundannar K.P. *et al.,* 2007, Development of Integrated pest management modules for chilli pests, *Karnataka J. of Agril. Science*, 20**(4),** 757-760

Wadkar et al., 2004, Evaluation of *Chrysoperla carnea* releases along with insecticides against chilli thrips, *J. of soils and crops* and Pena J.E. and Osborne L., 1996

Final recommendation for micro level situation:
Application of Diafenthiuron 5% WG @ 15 days interval from seedling stage to early fruiting stage of chilli may be recommended to reduce the leaf curl problem as well as to get more profit from chilli cultivation along with preservation of more numbers of natural friend insects.

Constraints identified and feedback for research:

Chilli is grown under the stresses such as imbalanced fertilizer application, soil salinity, irrigated saline water. All these stresses increase the leaf curl problem.

So, the salinity and leaf curl tolerant chilli variety along with application balanced fertilizer may be incorporated into future research work.

Process of farmers' participation and their reaction:

i)Village meeting with the farmers and Identification of the problem

ii) Technology managed by the farmers

iii) Field visit with the farmers

iv) Field day

OFT - 6

Thematic area: Integrated Pest Management

Technology assessed: **Assessment** of profitability of kharif paddy under medium land situation of coastal saline belt of South 24- Parganas by effective control measures against brown plant hopper

Problem definition: Factor productivity declining from high yielding kharif paddy due to high infestation of brown plant hopper

Production system: Large production system & Integrated Pest management

Details of technologies selected for assessment/refinement along with performance indicator

***Table: Efficacy of** new-generation pesticides & bio-pesticides on brown plant hopper*

Technology option	No. of trials	Data related to problem addressed						Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs./ha)	Net return (Rs/ha)	BC ratio
		No. of BPH / hill		No. of beneficial insects/hill								
		After 1st spray	After 2nd spray	Lady beetles		Spiders						
				After 1st spray	After 2nd spray	After 1st spray	After 2nd spray					
Farmers' practice: Conventional chemical insecticides – endosulfan, Fertilizer: 60:30:30 Kg NPK/ha, Spacing: 20 cmx20 cm, Variety: MTU 7029	7	13.50	14.25	0.05	-	0.10	0.05	35.25	30000	38775	8775	1.29
Control measures -1: Skip row transplanting (Transplanted rows:Skip row = 8:1), Fertilizer: 60:30:30 Kg NPK/ha, Spacing: 20 cmx20 cm, Variety: MTU 7029		14.25	20.35	0.20	0.35	0.40	0.60	34.35	29751	37785	8034	1.27
Control measures -2: Skip row transplanting (Transplanted rows:Skip row = 8:1) + Prophylactic spray of clothianidine 50% WDG @ 1 gm/10 lit of water at booting stage + Spray buprofezin 25 SC @ 1.5 ml/lit of water after infestation reach ETL + Fertilizer: 60:30:30 Kg NPK/ha, Spacing: 20 cmx20 cm, Variety: MTU 7029		5.50	7.10	0.15	0.25	0.40	0.55	37.55	30150	41305	11155	1.37
Control measures -3: Skip row transplanting (Transplanted rows:Skip row = 8:1) + 2 times spraying of *Beauveria bassiana* @ 5 gm/lit of water starting at booting stage @ 15 days interval + Fertilizer: 60:30:30 Kg NPK/ha, Spacing: 20 cmx20 cm, Variety: MTU 7029		13.60	15.30	0.25	0.30	0.50	0.65	35.20	30250	38720	8470	1.28
SEm±		0.83	0.87	0.02	0.01	0.03	0.03	1.31				
CD (p=0.05)		2.47	2.58	0.06	0.04	0.1	0.09	3.9				

Source of technology: Management of rice plant hoppers: N V Krishnaiah,
Jhansi Lakshmi, I C Pasalu and G Katti; Directorate of rice research, Rajendranagar, Hyderabad, Andhra Pradesh, 2007

Final recommendation for micro level situation:
Control measures -2 with skip row transplanting (Transplanted rows:Skip row = 8:1), prophylactic spray of clothianidine 50% WDG @ 1 gm/10 lit of water at booting stage and spraying of buprofezin 25 SC @ 1.5 ml/lit of water after infestation reach ETL (i.e 10 nymphs or adults of BPH/hill) may be adopted for successful management of BPH in kharif paddy of the district South 24 Parganas

Constraints identified and feedback for research:
Reluctancy of the farmers to maintain skips rows at the ratio of 8:1. From transplanting point of view it would be easy for transplanting at the ratio of 12:1

Process of farmers' participation and their reaction:
i) Identification & prioritization of the problem by farmers
ii) Open ended questions & semi-structured interviews
iii) Technology designed by KVK expert and managed by farmers

OFT – 6

Thematic area: Value Addition in Fishery

Technology assessed: Profitability of carp ponds (0.065 ha) by introducing giant freshwater prawn & ornamental fish

Problem definition: Low profitability of carp pond

Farmers normally grow carps in freshwater ponds for their food and income generation. Giant freshwater prawns provide a good return if grown in freshwater conditions. Additionally, ornamental fish can also be grown in carp ponds in separate net enclosure. The present study aims at finding out the most suitable value addition in carp ponds. At the same stocking density of 11500nos./ha, yield of fish (54 kg) was lowest with prawns (Technological option-I) which may be due to the increased biomass stocked resulting in decreased availability of space, food and oxygen for fish. As a result the net return from this option was Rs. 3545/- from an unit cost of Rs. 2912/-. Though prawns fetch higher price in comparison to the ornamental fish, being bottom dwellers they are more susceptible to environmental stress which resulted in their lower survivality (38%) and hence a low yield of 8.55 kg. Therefore, value addition by growing ornamental fish in carp ponds seems to be more profitable as is evident from higher survivality percentage of carp fish (44%) and ornamental fish (84%) giving the maximum return of Rs.5887.50/- and a high BC ratio of 3.12 (Technological option II).

Production system: Fish based production system

Details of technologies selected for assessment/refinement along with performance indicator

Table: Effect of *species replacement on productivity from fresh-water ponds*

Technology option	No. of trials	Data related to problem addressed Survivality(%)			Yield			Cost of cultiva-tion (Rs./ha)	Gross return (Rs./ha)	Net return (Rs.)	BC ratio
		Fish	Pra-wn	Orna-mental fish	Fish (kg)	Pra-wn (kg)	Orna-mental fish (no.)				
Farmers' practice: Culture of different carp species in fresh water ponds (0.065 ha) @ 11500nos/ha	7	42	-	-	63.0	-	-	2362.5	5040.00	2677.5	2.13
Technological option –I: Farmers' practice + giant freshwater prawn @ 3750/ha (prawn juveniles of 2 months age measuring 1.5 to 2.0 inches size)		40	38	-	54.0	8.55	-	2912.5	6457.5	3545.0	2.22
Technological option –II: Farmers' practice + culture of ornamental fish in net enclosures (3 net enclosures of 6 ft. X 3 ft. X 3 ft. with stocking density of 275 nos. each of Koi Carp, Gold Fish and Barbs in three separate nets)		44	-	84	69.3	-	693	2775.0	8662.5	5887.5	3.12
SEm±		0.58	-	-	2.43	-	-	-	-	-	-
CD (p=0.05)		NS	-	-	7.50	-	-	-	-	-	-

Source of Technology: CIFA, Bhubaneswar

Final recommendation for micro level situation: Technology option II may be recommended for replication in farmer's field after repeating the trial for another year.

Constraints identified and feedback for research: The net enclosures are often damaged by pond crabs and constant niggling by existing fish.

Process of farmers' participation and their reaction: Designed jointly by researcher & farmer and managed by farmer.

OFT – 7

Thematic area: Diversified Fish Farming

Technology refined: Refinement of the stocking density of goldfish reared in net enclosures

Problem definition: Low productivity of ornamental fish from net enclosures

Ornamental fish culture in freshwater ponds has been growing in popularity in the locality over the past few years. Farmers grow this fish either directly in the pond or in net enclosures erected in the pond. However, the stocking density of ornamental fish grown in net enclosures varies from farmer to farmer. Tech. option 1 has shown the maximum survivality although farmers practice gave more production in terms of number of fish obtained. Size of fish being small in case of farmers practice, the market demand is less hence profit is also minimum. Tech. option 2 gave more number of fish than option 1. The price of fish in Tech. option 1 is maximum but as the no. of fish in Tech. option 2 is more than 1, the profit margin has been found to be maximum from Tech. option 2. It is to be noted that cost of a gold fish seed of 10mm size in each options was Rs.300.00 per thousand i.e. Rs.0.30/pc. and the cost of gold fish in farmers practice was Rs.2.00, in Tech. option1 was Rs.4.00 and in Tech. option2 was Rs.3.50.

Production system: Fish based production system

Details of technologies selected for assessment/refinement along with performance indicator

Table: Effect of *age of stocking density of gold-fish on its production from net-enclosure*

Technology option	No. of trials	Data related to problem addressed			Yield component		Yield (no.)	Cost of cultiva-tion (Rs./ unit)	Gross return (Rs.)	Net return (Rs.)	BC ratio
		Survi-vality (%)	Disease inci-dence	Colour of fish	Length of fish (cm)	Girth of fish (cm)					
Farmer's practice: Rearing of goldfish fry (10mm) in net enclosures of varying size without any fixed stocking density viz.2500 nos.	7	42	Malnu-trition, dropsy	Pale	3.5	1.8	1050	900	2100	1200	2.33
Technological option –I :Rearing of goldfish fry (10mm) in net enclosures of 6'X3'X3' at stocking density of 1 cm fish/ 20 cm^2 viz.810 nos.		73	Nil	Bright	6.2	3.4	590	320	2360	2040	7.38
Technological option –II: Rearing of goldfish fry (10mm) in net enclosures of 6'X3'X3' at stocking density of 1 cm fish /15 cm^2 viz.1080 nos.		69	Nil	Bright	5.0	2.3	745	400	2607.5	2207.5	6.52
SEm±		2.83	-	-	0.39	0.26	14.8	-	-	-	-
CD (p=0.05)		8.71	-	-	1.20	0.82	45.6	-	-	-	-

Source of Technology: CIFA, Bhubaneswar

Final recommendation for micro level situation: Technology option II may be recommended for replication in farmer's field after repeating the trial for another year.

Constraints identified and feedback for research: The net enclosures are often damaged by pond crabs and constant niggling by existing fish.

Process of farmers participation and their reaction: Designed jointly by researcher & farmer and managed by farmer.

OFT – 8

Thematic area: Drudgery Reduction for Women

Technology assessed: Comparative efficacy of different seed separator techniques for sunflower

Problem definition: Drudgery of women during seed separation of Sunflower

Farm women of Sundarbans normally use stick (Length – 3 ft, diameter- 3cm, weight-650g-750g) for beating the sunflower to separate the seeds from heads. It is a strenuous job for them as it increases their heart rate rapidly and they feel pain in biceps and triceps muscle in arms. RAKVK, Nimpith has conducted OFT to assess the comparative efficacy of different seed separators and to identify which one is helpful for drudgery reduction. The result shows that iron mesh (Rhombus shape – Each side2.5cm and shortest diagonal length is 2 cm) is suitable as it reduces drudgery (11.21% reduction in peak heart rate, 27.8% reduction in energy expenditure, 64.3% reduction in physiological cost of work) of women and at the same time it separates seeds intact which in-turn increases the amount of oil extracted from seed.

Production system: Rice based production system

Details of technologies selected for assessment/refinement along with performance indicator

Table: *Comparative efficacy of different seed separator techniques for sunflower*

Technology options	No of trials	Data related to problem addressed				Man-days /4500 flower head	Constraints identified and feedback for research
		Ergonomic parameter					
		Heart rate		Energy Expendi-ture (Kj/min)	Physio-logical cost of work (beat/ min.)		
		Peak	Avg				
Farmer's practice: Seed separation of sunflower head by beating with stick (Length – 3 ft diameter- 3cm, weight-650g-750g)	15	128	112	9.088	46	9	6% seeds are not separated from the head of the flower and seeds are destroyed when flower is used as fuel. Pain in biceps and triceps muscle of arms.
Technology option 1 : Seed separation of sunflower head by spherical bamboo basket (diameter- 65cm)		112	103	7.657	34	8	Seed coating are destroyed
Technology option 2 : Seed separation of sunflower by iron mesh (Rhombus shape – Each side2.5cm and shortest diagonal length is 2 cm)		107	100	7.18	28	7	Intact seeds are separated but it needs to be standing. Mesh size may be narrower for better seed separation.

Source of Technology: Directorate of oilseed research, Hyderabad

Final recommendation for micro level situation: Yet to be standardized for final recommendation for the farmers.

Process of farmers participation and their reaction: Designed jointly by researcher & farmer and managed by farm-women.

Women farmer demanded a standing option for the technology option

Pictures of OFT on Comparative efficacy of different seed separator techniques for sunflower

Farmer's practice

Technology option-1

Technology option-1I

OFT – 9

Thematic area: Drudgery Reduction for Women

Technology assessed: Comparative efficacy of different seed separator techniques for sunflower

Problem definition: Drudgery of women during seed separation of Sunflower

KVK Nimpith has conducted OFT to assess the comparative efficacy of different seed separators and to identify which one is helpful for drudgery reduction. The result shows that iron mesh (Rhombus shape – Each side2.5cm and shortest diagonal length is 2 cm) is suitable as it reduces drudgery (11.21% reduction in peak heart rate, 27.8% reduction in energy expenditure, 64.3% reduction in physiological cost of work) of women and at the same time it separates seeds intact which in-turn increases the amount of oil extracted from seed. Although Technology option II proved better, but farm-women asked for a standing option of this method of separation. Scientists of AICRP sunflower recommended narrow meshed iron net for better separation. Keeping these in mind, the previous OFT has set for further refinement.

Production system: Rice based production system

Details of technologies selected for assessment/refinement along with performance indicator

Table: *Comparative efficacy of different seed separator techniques for sunflower*

Technology options	No of trials	Data related to problem addressed				Man-days /4500 flower head	Constraints identified and feedback for research
		Ergonomic parameter					
		Heart rate		Energy Expenditure (Kj/ min)	Physio-logical cost of work (beat/ minute)		
		Peak	Avg				
Farmers Practice : Seed separation of sunflower head by beating with stick (Length – 3 ft , diameter- 3cm, weight-650g-750g)	15	Result is waiting					
Technology option 1 : Seed separation of sunflower head by spherical bamboo basket (diameter- 65cm)							
Technology option 2 : Seed separation of sunflower by iron mesh (Rhombus shape – Each side2.5cm and shortest diagonal length is 2 cm)							
Technology option 3 : Seed separation of sunflower by iron mesh (Square shape – Each side1.5cm) (Height of the separator 3.5 ft)							

Final recommendation for micro level situation: Yet to be standardized for final recommendation for the farmers.

Process of farmers participation and their reaction: Designed by researcher and managed by farm-women.

Source of Technology: AICRP, Sunflower, Nimpith Center, Directorate of oilseed research, Hyderabad

OFT – 8

Thematic area: Poultry Management

Technology assessed: Production performance of broiler birds using MBC (Marine Bioactive Compound)-a non conventional growth promoter of marine origin

Problem definition: Poor growth in broiler birds

The poultry farmers are generally facing with the common problem that they are providing the recommended amount of feed and other standard conditions inspite of which the birds are not getting the optimum saleable and profitable body weight at the recommended end point for marketing of the birds. As a result, net return is less. KVK, Nimpith conducted OFT on the induced weight gain in broiler birds. Trial is going on and result of the investigations is awaited.

Table: *Efficacy of MBC as growth promoter in broiler*

Technology option	No. of trials	Data related to problem addressed			Yield component	Cost of cultiva-tion	Gross return (Rs.)	Net return	BC ratio
		FCR	Qualitative analysis of meat	Toxicological effects of MBC	Body wt. (gm) at 6th wk				
Farmer's practice: = Feeding of broiler birds with commercial feed	5	1.89	Yet to be done	No toxicological effect was documented both hemato-serologically and at the tissue level.	1950	Result awaited			
Technological option I: Farmers' practice + feeding MBC @ 1 mg/Kg body weight on 3rd, 4th and 5th week , one day/week		1.81			1995				
Technological option II: Farmers' practice + feeding MBC @ 2 mg/Kg body weight on 3rd, 4th and 5th week single dose ,one day/week		-			Continuing				
Technological option III: Farmers' practice + feeding MBC @ 5 mg/Kg body weight on 3rd, 4th and 5th week single dose, one day/week									

Final recommendation for micro level situation: Yet to be completed for final recommendation to the farmers.

Process of farmers' participation and their reaction: Designed by researcher and is being managed by farmers.

Source of technology: Bioactive compounds from marine gastropod mollusc (*Telescopium telescopium*) as potential anti-cancer / anti-proliferative agents, Roy *et.al.*: Official Journal of the patent office, Govt. Of India, Issue No. 09/2009

OFT – 9

Thematic area: Animal Health Management

Technology assessed: Assessment of a non conventional immune-stimulant of marine origin (MBC) in goats for prevention of infectious diseases

Problem definition: Lowered immunity and high incidence of diseases in goats of South 24 Parganas district

Goats of south 24 Parganas district are mostly suffer from immunodeficiency state and for which occurrence of infective and/or opportunistic disease are high, causing high mortality and morbidity leading to great economical loss to the marginal landless farmers. This immune deficiency state is contributory to many factors and needs to be considered individually for each and every case. But, if the immune status can anyhow be boost-up to a level of protection, then the loss from this husbandry practice can be minimized with great success. KVK, Nimpith conducted OFT on the induced immune-stimulation in goats. Trial is going on and preliminary result of the investigations has obtained. **The work has already been applied for patent.** The detailed results of the trails will be published very soon.

Table: *Efficacy of MBC as immune-stimulant in goats for prevention of diseases*

Technology option	No. of trials	Data related to problem addressed		Macro, micro-nutrient status of treated goats	Body wt. (gain %) of the goats	Cost of cultivation	Gross return (Rs.)	Net return	BC ratio
		Incidences of infective diseases including pox	Hematological study						
Farmer's practice: = Deworming – under dose and without repetition of the dose for complete removal of worms, no deworming on every 3 months interval and/or before and after monsoon vaccination – vaccinate without any deworming or vaccinate the undernourished or sick and diseased animals.	7	To be continued for 1 year post injection	compound (MBC) increase the total Leukocyte count without altering the differential leukocyte count along with total enhanced bone marrow cell count	Nutrient status of the treated animal is significantly differ with the untreated group	3.25	Final conclusion will be drawn after 1 year			
Technological option I: deworming (albendazole @ 7mg/kg body weight, repeated after 21 days, then every three months interval) + MBC @ 3 mg/Kg b. wt					8.12				
Technological option II: deworming (albendazole @ 7mg/kg body weight, repeated after 21 days, then every three months interval) + Goat pox vaccination after 10days of 2nd deworming					5.36				
Technological option III: deworming (albendazole @ 7mg/kg body weight, repeated after 21 days, then every three months interval) + MBC @ 3 mg/Kg b. wt -IM , single dose 10 days after 2nd dose of deworming.+ Goat pox vaccination (after 3 wks of MBC injection)					8.22				

Source of technology: Dutta, U., Hembram, M., Roy, S., Mukherjee, P. (2009) Natural bio-molecules from marine snails (*Telescopium telescopium*) and structure of its sperm: A phylogenetic study, *Nature precedings*

Final recommendation for micro level situation: Technology Option I and III may be advised to the farmers only after investigating the disease incidence over a period of 1 year.

Process of farmers' participation and their reaction: Designed by researcher and is being managed by farmers.

3.2 Achievements of Frontline Demonstrations

A. Details of FLDs implemented during 2009-10 (Information is to be furnished in the following **three tables** for **each category** i.e. **cereals, horticultural crops, oilseeds, pulses, cotton and commercial crops**.)

Sl. No.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
					Proposed	Actual	SC/ST	Others	Total	
1	Sunflower	Integrated crop management	Component demonstration-Variety PAC-3776 with 80:40:40 kg NPK/ha and one time boron spray at flowering	Summer-2010	25	10	43	24	67	10ha were sanctioned
2	Groundnut	Integrated crop management	Component demonstration-Variety TAG-37A with 20:60:40 kg NPK/ha	Summer-2010	10	5	20	11	31	5 ha were sanctioned
3	Sesamum	Integrated crop management	Component demonstration-Variety Savitri with 50:25:25 kg NPK/ha	Summer-2010	3	3	9	10	19	-
4	Greengram	Integrated crop management	Component demonstration-Variety PDM-84-139 with 20:40:0 kg NPK/ha and seed inoculation with Rhizobium @ 1.5 kg/ha	Summer-2010	15	10	62	6	68	10 ha were sanctioned
5	Cotton	Integrated crop management	Full package demonstration with variety Surabhi, seed treatment with Carbandazime , 80: 40: 30 kg/ha and spraying of Neemarin, HaNPV and use of pheromone trap	Summer-2010	60	60	57	93	150	-
6	Tomato	Biological control of pest & disease	Soil treatment & spraying the crop with *Pseudomonas fluorescens* and seed treatment with hot water of 52^0C for 20 mins.	Rabi	1.0	1.0	6	5	11	-
7	Brinjal	IPM	IPM package to control shoot & fruit borer (Collection & destruction of infested shoot & fruits, Pheromone trap @ 2 /bigha, Neem oil 1500 ppm @ 4ml/lit of water, release of *Trichogramma chilonis* @ 50,000/ha for 6 times at 10 days interval starting from 20 days after planting, alternate spraying of insect Growth Regulators like spinosad 45% SC @ 0.3 ml/lit and flubendiamide 5%WP @ 0.3 gm/lit of water on the basis of ETL level	Rabi-summer	1.0	1.0	10	5	15	-
8	Guava	IPM	**lure and bait based IPM module for Guava fruit fly management:** **MAT***: Ordinary plywood of 12 mm thickness is cut into 50 mm x 50 mm pieces. A mixture of ethanol, methyl eugenol and malathion (6:4:1 V/V) is prepared. Plywoods are soaked in it for 48 hrs and they are hung on guava tree @ 10/ha by putting it in a plastic trap at about 1-1.5 mt above the ground level below the branches, 45 days before fruit maturity. **BAT*:** A liquid mixture of 2 gm carbaryl and 100 gm jaggary in 1 lit water is prepared for spot application in guava orchard as poison bait @ 200 spots/ha. This will be applied 6 times @ 40 ml/spot at weekly interval starting 40 days before the maturity.	Year round	5.0	5.0	9	7	16	-

* MAT: Male annihilation technique, * BAT: Bait application technique

Details of farming situation

Crop	Season	Farming situation (RF/Irrigated)	Soil type	Status of soil			Previous crop	Sowing date	Harvest date	Seasonal rainfall (mm)	No. of rainy days
				N	P	K					
Sunflower	Summer	Rainfed	Clay-loam	182.3 to 242.7	22.9 to 45.2	387.5 to 779.6	Paddy	2nd week of Jan., 2010	In the month of April	Nil	-
Groundnut	Summer	Rainfed	Clay-loam	176.4 to 233.8	27.7 to 52.1	392.6 to 745.0	Paddy	2nd week of Jan., 2010	In the month of May	4.0	1
Sesamum	Summer	Rainfed	Clay-loam	176.2 to 275.7	29.5 to 46.3	355.8 to 692.4	Paddy	1st week of March, 2010	In the month of May	172.6	7
Greengram	Summer	Rainfed	Clay-loam	225.5 to 267.6	31.5 to 57.8	398.2 to 590.3	Paddy	2nd week of Jan., 2010	1st week of April, 2010	Nil	Nil
Cotton	Summer	Rainfed	Clay-loam	130.3 – 243.2	26.4 – 53.6	470.0-625.0	Paddy	1st – 2nd wk. of Jan.,2010	2nd wk of May- 2nd wk. of June,2010	274.9	9
Tomato	Rabi	Irrigated ail cultivation (Land embankment)	Clay loam	135.6 – 178.7	21.5 – 29.3	448.5 – 576.8	Bitter gourd	21.09.08 – 15.10.08	11.12.08 – 21.02.09	Nil	-
Brinjal	Summer	Irrigated	Clay loam	140.4 – 235.6	24.3 – 58.6	467.0 – 595.6	Paddy	Mid wk. of Jan to 1st wk of Feb., 2009	Last wk. of March to mid wk. of August, 2009	962.85 mm	44
Guava	Year round	Irrigated	Clay loam	180.5 – 256.8	32.2 – 65.5	450.6 – 580.3	-	-	-	-	-

1. Front Line Demonstration, Kharif, 2010 and Summer2010 (Oilseed, Pulse and other crops)

Crop	Thematic area	Name of the tech. demonstrated	No. of far-mers	Area (ha)	Yield (qt/ha)		% increased	Other parameters			Economics of the demons.(Rs./ha)				Economics of the check(Rs./ha)			
					Demo.	Check		Parameters	Demo	Check	Gross cost	Gross return	Net return	B:C ratio	Gross cost	Gross return	Net return	B:C ratio
Sun-flower	Integrated crop management	Component demonstration with Variety (PAC-3776), recommended fertilizer (80:40:40 Kg/ha) and one time boron application	67	10.0	13.46	10.49 (PAC-36)	28.31	Head dia (cm) Filled grain/head (No) Unfilled grain/head Oil content (%)	17.51 110.0 155.2 45.2	15.40 938.6 222.0 42.5	16720	24228	7508	1.44	15162	18882	3720	1.24
Sesame	Integrated crop management	Component demonstration with Variety (Savitri), recommended fertilizer (50:25:25 Kg/ha)	19	3.0	10.27	9.08 (B-67)	13.10	Capsule/plant Seeds / capsule Test wt (g) Oil content (%)	94.5 52.0 3.0 46.0	75.6 43.0 3.0 44.7	15600	20540	4940	1.31	14591	18160	3569	1.24
Groundnut	Integrated crop management	Component demonstration with Variety (TAG 37A), recommended fertilizer (20:60:40 Kg/ha)	31	5.0	12.52	10.80 (AK-12-24)	15.92	Mature pod/plant Seeds / pod Test wt (g) Oil content (%)	14.8 2.0 462 45.2	12.6 2.0 370 42.5	20240	26292	6052	1.29	16702	20520	3818	1.22
Green gram	Integrated crop management	Component demonstration with Variety (PDM-84-139), recommended fertilizer (80:40:40 Kg/ha) and seed inoculation with *Rhizobium* @1.5 kg/ha	68	10.0	8.60	7.46 (Chaiti)	15.28	Pods/plant Seeds / pod Test wt (g) Size of seed	22.5 9.8 32 bold	15.8 8.0 27 small	12070	51600	39530	4.27	10520	43268	32748	4.11
Cotton	Integrated crop management	Full package demonstration with Var. Surabhi, seed treated with carbendazime,fertilizer 80:40:30 kg/ha (N:P2O5:K2O) & spraying of Neemarin,HaNPV and use of pheromone traps	150	60.0	10.25	9.29 (LRA-5166)	10.33	Days to first flowering Harvested Boll / plant Seed cotton wt (g)/boll	75 16 2.2	85 15 2.0	21250	32625	11375	1.53	20670	29745	9075	1.44
Sweet Potato	Crop intensification	Full package demonstration with Var. Sree Vardhini in low lying saline non-irrigated situation for income generation as well as reduction of soil salinity	6	1.0	219.70	Fallow	-	Soil salinity (during May) (dS/m) OC Net profit (Rs./ha)	1.57 0.41 28720	3.21 0.37 -	32860	61580	28720	1.87	-	-	-	-
	Integrated pest management	**lure and bait based IPM module for Guava fruit fly management:** **MAT***: Ordinary plywood of 12 mm thickness is cut into 50 mm x 50 mm pieces. A mixture of ethanol, methyl eugenol and malathion (6:4:1 V/V) is prepared. Plywoods are soaked in it for 48 hrs and they are hung on guava tree @ 10/ha by putting it in a plastic trap at about 1-1.5 mt above the ground level below the branches, 45 days before fruit maturity. **BAT*:** A liquid mixture of 2 gm carbaryl and 100 gm jaggary in 1 lit water is prepared for spot application in guava orchard as poison bait @ 200 spots/ha. This will be applied 6 times @ 40 ml/spot at weekly interval starting 40 days before the maturity.	7	2.0	110.25	89.50	23.18	Infested Fruit (%) Insecticide used (ml)	4.99 144	20.94 1600	**1510**	25200	23690	15.69	**3330**	21600	18270	5.49
Pointed Gourd**	Organic farming	Full package of Organic farming of Pointed gourd, Var: Raidighi Local'	2	0.2	205.5	216.3	(-) 4.99	Downey mildew infestation (%), Fruit fly infestation (%), Root rot infestation (%)	12.67 7.33 3.67	17.33 9.67 6.33	75300	123300	48000	1.64	51780	129780	78000	2.51
Brinjal**	Organic farming	Full package of Organic farming of brinjal, Var: Pairatuni	2	0.13	149.6	198.3	(-) 24.56	Fungal and bacterial wilt (%) Fruit borer infestation (%)	2.67 15.33	8.33 20.33	50800	74800	24000	1.47	37650	99150	61500	2.63

Crop	Thematic area	Name of the tech. demonstrated	No. Of farmers	Area (ha)	Yield (qt/ha)		% increased	Parameters	Other parameters		Economics of the demons.(Rs./ha)				Economics of the check(Rs./ha)			
					Demo.	Check			Demo	Check	Gross cost	Gross return	Net return	B:C ratio	Gross cost	Gross return	Net return	B:C ratio
Boro Paddy	Integrated pest management	IPM on boro paddy (Var. WGL 20471) Area : Dongajora-1.0 ha , Radhakantapur-1.0 ha Variety : No. of farmers: Dongajora – 4, Radhakantapur – 3 Key interventions : a) Skip row transplanting b) Application of carbofuran @ 1 Kg/katha at seed bed at 5 days before transplanting c) Installation of pheromone trap for stem borer d) Alternate spray of neem oil and NSKE at 15 days interval when insect pests infestation remain at low level e) Spray of ecosafe chemical flubendiamide if needed. Spray of fresh cowdung @ 1 kg and cow urine @ 300 ml/ 10 lit of water for pest and disease management f) Collection and destruction of egg masses of stem borer g) Installation of bird perches	7	2	52.5	45.0	16.67	Stem borer (%) Brown plant hopper, No. of rice bug/sq. m	2.67 % Less than ETL 0.20	6.33 %, Less than ETL, 0.60	**29925**	52500	22575	1.75	**30690**	45000	14310	1.67

*average cost of cultivation includes only treatment cost, particularly employed for fruit fly management and similarly average gross return has been calculated from quantity of protected fruits

**In case of organic farming of pointed gourd and brinjal, % increase in yield shows negative in demonstration with respect to local check is due to the first year of intervention on total substitution of chemical fertilizer by organic fertilizer

2.Front Line Demonstration on Live stock, implements and enterprise

A. Home Science

Women empowerment

Category	Name of technology	No. of KVK	No. of demonstrations	Name of observations	Demonstration (Wt. in Kg)	Traditional Practice (Wt. in Kg)	**Standard** (According to ICMR) (Wt. in Kg)
Women							
Pregnant women	Low cost supplementary food for pregnant mother	-	50	Body weight in 3rd months in kg	1.6	0.9	1.3-1.8
				Body weight in 6th months in kg	4.8	3.7	5.5 - 6.5
				Body weight in 9th months in kg	3.8	2.3	3.5 – 4.5
				Birth weight of newborn baby	2.5	1.9	2.5
Adolescent Girl							
Other women							
Children							
Neonats							
Infants	Weaning food for 6 months onward baby		50	Body weight in 9 months	6.7	6.1	7.2
				Body weight in 12 months	7.4	7	8
				Body weight in 14 months	8	7.2	8.3
Children							

B. Fishery

Category	Thematic area	Name of the technology demonstrated	No. of Farmer	No.of units	Parameters	Variety	Major parameters		% change in major parameter	Other parameter		*Economics of demonstration (Rs.)				*Economics of check (Rs.)			
							Demonstration	Check		Demonstration	Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Common carps																			
Mussels																			
Ornamental fishes	Ornamental fisheries	Culture of ornamental fish (barbs and mollies) in small domestic ponds (0.02 ha) for additional income generation	5	5	Length of fish (cm)	Barb (*Puntius* spp)	5.4	Ornamental fish culture non existent 18 Kg (small carps, *Puntius, Chela, Colisa, Chanda, Channa* etc.)	-	-	-	4659.5	9900	5240.5	2.12	1200	1800	600	1.5
						Molly (*Poecilia* spp.)	4.2												
					Girth of fish (cm)	Barb	2.8												
						Molly	1.8												
					Survivality (%)	Barb	62												
						Molly	64												
					Colouration	Barb	Bright												
						Molly	Bright												
					Yield (nos)	Barb	1395												
						Molly	1440		-										

NB. Duration of culture is 6 months, Stocking density of fish is 30,000/0.13 ha, Cost of seed @ Rs.300.00/1000 pcs , input cost for feed and management for a period of 6 months is Rs. 3275.00, cost of *Puntius* spp @ Rs. 4.00/pc and cost of *Poecilia* spp @ Rs. 3.00/pc

C. Live Stock

Category	Thematic area	Name of the technology demonstrated	No. of Farmer	No.of units	Major parameters	Demo	Check	% change in major parameter	Other parameter		*Economics of demonstration (Rs.)				*Economics of check (Rs.)			
									Demonstration	Check	Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net Return	BCR
Dairy																		
Cow																		
Buffalo																		
Poultry	Layer management	Introduction of hitckari breed (naked neck) for back yard poultry farming in South 24 Parganas district	12	12	Age at which laying started (month)	4.5	6.5	30.76	-	-	Result awaited							
					Egg production (no./bird/year)	Result awaited		-										
					Disease occurrence (%)	Result awaited		-										
Rabbitry																		
Pigerry																		
Sheep and goat																		
Duckery																		
Others (pl.specify)	Layer management	Azolla feeding of Layer birds of South 24 Parganas district	**8**	**8**	**Continuing**													
Total			**20**	**20**														

* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.
** BCR= GROSS RETURN/GROSS COST

Analytical Review of component demonstrations (details of each component for rainfed / irrigated situations to be given separately for each season).

Crop	Season	Component	Farming situation	Average yield (q/ha)	Local check (q/ha)	Percentage increase in productivity over local check
Sunflower	Summer	Combination of components- Seed of variety-3776, N,P,K @ 80:40:40 kg/ha and one time boron spray at flowering	Rainfed	13.46	10.49	28.31
Groundnut	Summer	Combination of components- Seed of variety-TG-37A with N,P,K @ 20:60:40 kg/ha	Rainfed	12.52	10.80	15.92
Sesame	Summer	Combination of components- Seed of variety-Savitri with N,P,K @ 50:25:25 kg/ha	Rainfed	10.27	9.08	13.10
Greengram	Summer	Combination of components- Seed of variety-PDM-84-139 with N,P,K @ 20:40:0 kg/ha and seed inoculation with rhizobium @ 1.5 kg/ha	Rainfed	8.60	7.46	15.28
Cotton	Rabi-Summer	Combination of components- Seed of variety-Surabhi, seed treated with carbandazime, N,P,K @ 80:40:30 kg/ha and spraying of Neemarin, HaNPV and use of pheromone trap	Rainfed	10.25	9.29	10.33

Technical Feedback on the demonstrated technologies

Sl. No	Feed Back
1	Variety PAC-3776 is taller & better growth than PAC-36
2	In groundnut both the varieties TG-37A & AK-12-24 (check) disease incidence is less
3	Use of carbadazime as seed treating chemical reduced infestation of root rot disease
4	Organic & inorganic fertilizer gave better growth than local practice
5	Cost of cultivation is less by reducing no. of sprays as because the infestation of both sucking and boll worm pests were less than local check

Farmers' reactions on specific technologies

Sl. No	Feed Back
1	The size of head & no. of filled grains / head were higher in PAC-3776 than PAC-36
2	No. of reproductive branches & boll/ plant was higher than local practice
3	Root rot damage was less & no need for second time sowing
4	Infestation of insect population were less & leaf damage by jassids & boll damaged by boll worm were very less than local check

Extension and Training activities under FLD

Sl.No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	2	20.05.10 25.05.10	23 31	
2	Farmers Training	2	17.04.10 06.05.10	32 29	
3	Media coverage				
4	Training for extension functionaries				

3.3 Achievements on Training (Including the sponsored and FLD training programmes):

A) ON Campus

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			**SC**			**ST**					
		M	F	T	M	F	T	M	F	T	M	F	T
(A) Farmers & Farm Women													
I Crop Production													
Weed Management													
Resource Conservation Technologies													
Cropping Systems	1	10	-	10	13	-	13	-	-	-	23	-	23
Crop Diversification	3	38	2	40	40	2	42	-	-	-	78	4	82
Integrated Farming	5	108	4	112	41	3	44	4	-	4	153	7	160
Water management													
Seed production	1	13	-	13	12	-	12	-	-	-	25	-	25
Nursery management													
Integrated Crop Management	5	54	13	67	70	12	82	-	-	-	124	25	149
Fodder production													
Production of organic inputs	1	11	-	11	14	-	14	-	-	-	25	-	25
Others, (cultivation of crops)													
II Horticulture													
a) Vegetable Crops													
Production of low volume and high value crops													
Off-season vegetables	1	18	2	20	15	-	15	4	-	4	37	2	39
Nursery raising	2	28	3	31	18	5	23	2	-	2	48	8	56
Exotic vegetables like Broccoli													
Export potential vegetables													
Grading and standardization													
Protective cultivation (Green Houses, Shade Net etc.)													
Others, if any (Cultivation of Vegetable)													
Training and Pruning													
b) Fruits													
Layout and Management of Orchards													
Cultivation of Fruit	1	7	23	30	-	7	7	-	-	-	7	30	37
Management of young plants/orchards													
Rejuvenation of old orchards													
Export potential fruits													
Micro irrigation systems of orchards													
Plant propagation techniques													
Others, if any													

c) Ornamental Plants													
Nursery Management													
Management of potted plants													
Export potential of ornamental plants													
Propagation techniques of Ornamental Plants													
Others, if any													
d) Plantation crops													
Production and Management technology													
Processing and value addition													
Others, if any													
e) Tuber crops													
Production and Management technology													
Processing and value addition													
Others, if any													
f) Spices													
Production and Management technology	3	43	18	61	48	5	53	6	-	6	97	23	120
Processing and value addition													
Others, if any													
g) Medicinal and Aromatic Plants													
Nursery management													
Production and management technology													
Post harvest technology and value addition													
Others, if any													
III Soil Health and Fertility Management													
Soil fertility management													
Soil and Water Conservation													
Integrated Nutrient Management	1	15	5	20	9	2	11	-	-	-	24	7	31
Production and use of organic inputs													
Management of Problematic soils	1	12	4	16	10	4	14	-	-	-	22	8	30
Micro nutrient deficiency in crops													
Nutrient Use Efficiency													
Soil and Water Testing													
Others, if any													
IV Livestock Production and Management													
Dairy Management													
Poultry Management													
Piggery Management													
Rabbit Management													
Disease Management													
Feed management													
Production of quality animal products													
Others, if any Goat farming													

V Home Science/Women empowerment													
Household food security by kitchen gardening and nutrition gardening													
Design and development of low/minimum cost diet													
Designing and development for high nutrient efficiency diet													
Minimization of nutrient loss in processing													
Gender mainstreaming through SHGs	2	-	21	21	3	18	21	-	-	-	3	39	42
Storage loss minimization techniques													
Value addition													
Income generation activities for empowerment of rural Women	1	-	11	11	-	-	-	-	-	-	-	11	11
Location specific drudgery reduction technologies													
Rural Crafts													
Women and child care													
Others, if any													
Women led vocation through SHG	4	-	78	78	-	40	40	-	-	-	-	118	118
Nutritional security	1	-	10	10	-	8	8	-	-	-	-	18	18
VI Agril. Engineering													
Installation and maintenance of micro irrigation systems	1	-	7	7	-	12	12	-	5	5	-	24	24
Use of Plastics in farming practices													
Production of small tools and implements													
Repair and maintenance of farm machinery and implements													
Small scale processing and value addition													
Post Harvest Technology													
Others, if any													
VII Plant Protection													
Integrated Pest Management	1	7	23	30	-	7	7	-	-	-	7	30	37
Integrated Disease Management													
Bio-control of pests and diseases	1	12	-	12	1	-	1	-	-	-	13	-	13
Production of bio control agents and bio pesticides	1	17	9	26	12	1	13	1	2	3	30	12	42
Others, if any													

VIII Fisheries													
Integrated fish farming	2	18	8	26	37	9	46	5	1	6	60	18	78
Carp breeding and hatchery management													
Carp fry and fingerling rearing	1	4	-	4	6	2	8	-	-	-	8	4	12
Composite fish culture	3	88	5	93	60	24	84	10	2	12	158	31	189
Hatchery management and culture of freshwater prawn													
Breeding and culture of ornamental fishes	2	12	4	16	37	8	45	6	3	9	55	15	70
Portable plastic carp hatchery													
Pen culture of fish and prawn													
Shrimp farming													
Edible oyster farming													
Pearl culture													
Fish processing and value addition													
Others, if any													
Carp seed production	1	9	6	15	14	8	22	2	1	3	25	15	40
IX Production of Inputs at site													
Seed Production													
Planting material production													
Bio-agents production													
Bio-pesticides production													
Bio-fertilizer production													
Vermi-compost production	1	-	5	5	-	6	6	-	-	-	-	11	11
Organic manures production													
Production of fry and fingerlings													
Production of Bee-colonies and wax sheets													
Small tools and implements													
Production of livestock feed and fodder													
Production of Fish feed													
Others, if any													
X Capacity Building and Group Dynamics													
Leadership development													
Group dynamics													
Formation and Management of SHGs													
Mobilization of social capital													
Entrepreneurial development of farmers/youths													
WTO and IPR issues													
Others, if any													
XI Agro-forestry													
Production technologies													
Nursery management													
Integrated Farming Systems													

XII Others (Pl. Specify)													
TOTAL	**47**	**524**	**261**	**785**	**460**	**183**	**643**	**40**	**14**	**54**	**1022**	**460**	**1482**
(B) RURAL YOUTH													
Mushroom Production													
Bee-keeping													
Integrated farming	1	11	6	17	16	1	17	-	1	1	27	8	35
Seed production													
Production of organic inputs													
Integrated Farming													
Planting material production													
Vermi-culture													
Sericulture													
Protected cultivation of vegetable crops													
Commercial fruit production													
Repair and maintenance of farm machinery and implements													
Nursery Management of Horticulture crops	2	23	-	23	10	-	10	-	-	-	33	-	33
Training and pruning of orchards													
Value addition													
Production of quality animal products													
Dairying	1	30	-	30	18	2	20	2	-	2	50	2	52
Sheep and goat rearing	2	8	16	24	14	12	26	1	1	2	23	29	52
Quail farming													
Piggery													
Rabbit farming													
Poultry production	2	13	1	14	28	5	33	-	-	-	41	6	47
Ornamental fisheries	3	65	30	95	24	8	32	2	2	4	91	40	131
Para vets													
Para extension workers													
Composite fish culture	8	104	59	163	17	5	22	3	1	4	124	65	189
Freshwater prawn culture													
Shrimp farming													
Pearl culture													
Cold water fisheries													
Fish harvest and processing technology													
Fry and fingerling rearing													
Small scale processing													
Post Harvest Technology													
Tailoring and Stitching													
Rural Crafts													

Others, if any													
Exotic vegetables cultivation	1	11	1	12	3	-	3	-	-	-	14	1	15
Planning & management in fishery	1	3	-	3	-	-	-	1	1	2	4	1	5
Induced breeding	1	6	-	6	1	-	1	-	-	-	7	-	7
Integrated Pest & Disease Management	1	6	-	6	20	2	22	2	-	2	28	2	30
IPM through ICT	1	13	2	15	9	1	10	-	-	-	22	3	25
Scientific Animal Husbandry	1	10	-	10	-	-	-	-	-	-	10	-	10
Bio-control	2	30	2	32	35	3	38	2	1	3	67	6	73
TOTAL	**27**	**333**	**117**	**450**	**195**	**39**	**234**	**13**	**7**	**20**	**541**	**163**	**704**
I Extension Personnel													
Productivity enhancement in field crops	1	3	2	5	8	7	15	-	-	-	11	9	20
Integrated Pest Management	2	22	-	22	8	-	8	-	-	-	30	-	30
Integrated Nutrient management													
Rejuvenation of old orchards													
Protected cultivation technology													
Formation and Management of SHGs													
Group Dynamics and farmers organization	3	70	-	70	-	-	-	-	-	-	70	-	70
Information networking among farmers													
Capacity building for ICT application													
Care and maintenance of farm machinery and implements													
WTO and IPR issues													
Management in farm animals													
Livestock feed and fodder production													
Household food security													
Women and Child care													
Low cost and nutrient efficient diet designing													
Production and use of organic inputs													
Gender mainstreaming through SHGs	1	-	9	9	-	11	11	-	-	-	-	20	20
Any other (Pl. Specify)													
Integrated farming	1	22	2	24	19	1	20	5	-	5	46	3	49
Indigenous fish breeding	1	3	-	3	-	-	-	2	1	3	5	1	6
Biological control	1	-	13	13	12	-	12	-	-	-	12	13	25
Field exposure training of ARS	1	3	1	4	1	1	2	-	-	-	4	2	6
Total	11	123	27	150	48	20	68	7	1	8	178	48	226
TOTAL (PF+RY+EP)	**85**	**980**	**405**	**1385**	**703**	**242**	**945**	**60**	**22**	**82**	**1741**	**671**	**2412**

B) OFF Campus

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
(A) Farmers & Farm Women													
I Crop Production													
Weed Management	5	82	3	85	51	4	55	-	-	-	123	7	130
Resource Conservation Technologies	2	19	-	19	8	-	8	-	-	-	27	-	27
Cropping Systems	2	37	-	37	13	6	19	-	-	-	50	6	56
Crop Diversification	5	54	6	60	26	4	30	-	-	-	80	10	90
Integrated Farming													
Water management													
Seed production	2	11	-	11	48	-	48	-	-	-	59	-	59
Nursery management	2	29	3	32	13	-	13	-	-	-	42	3	45
Integrated Crop Management	4	41	5	46	25	-	25	3	-	3	69	5	74
Fodder production													
Production of organic inputs													
Others, (cultivation of crops)													
Value addition	2	16	12	28	20	13	33	-	-	-	36	25	61
II Horticulture													
a) Vegetable Crops													
Production of low volume and high value crops													
Off-season vegetables													
Nursery raising													
Exotic vegetables like Broccoli													
Export potential vegetables													
Grading and standardization													
Protective cultivation (Green Houses, Shade Net etc.)	1	22	2	24	11	-	11	-	-	-	33	2	35
Others, if any													
ICM of vegetable crops	1	11	3	14	5	2	7	2	-	2	18	5	23
Cultivation of Vegetable	1	13	6	19	9	2	11	1	-	1	23	8	31
b) Fruits													
Layout and Management of Orchards	2	26	2	28	3	-	3	-	-	-	29	2	31
Cultivation of Fruit	2	24	11	35	6	19	25	-	3	3	30	33	63
Management of young plants/orchards													
Rejuvenation of old orchards													
Export potential fruits													
Micro irrigation systems of orchards													
Plant propagation techniques													
Others, if any													

c) Ornamental Plants													
Nursery Management													
Management of potted plants													
Export potential of ornamental plants													
Propagation techniques of Ornamental Plants													
Others, if any													
d) Plantation crops													
Production and Management technology													
Processing and value addition													
Others, if any													
e) Tuber crops													
Production and Management technology													
Processing and value addition													
Others, if any													
f) Spices													
Production and Management technology													
Processing and value addition													
Others, if any													
g) Medicinal and Aromatic Plants													
Nursery management													
Production and management technology													
Post harvest technology and value addition													
Others, if any													
III Soil Health and Fertility Management													
Soil fertility management	2	36	8	44	53	8	61	-	-	-	89	16	105
Soil and Water Conservation													
Integrated Nutrient Management													
Production and use of organic inputs	1	8	1	9	12	2	14	-	-	-	20	3	23
Management of Problematic soils	1	18	2	20	11	3	14	-	-	-	29	5	34
Micro nutrient deficiency in crops													
Nutrient Use Efficiency	1	16	-	16	14	-	14	-	-	-	30	-	30
Soil and Water Testing													
Others, if any													
IV Livestock Production and Management													
Dairy Management													
Poultry Management													
Piggery Management													
Rabbit Management													
Disease Management													
Feed management													
Production of quality animal products													
Others, if any Goat farming													

V Home Science/Women empowerment													
Household food security by kitchen gardening and nutrition gardening	2	-	36	36	-	18	18	-	2	2	-	56	56
Design and development of low/minimum cost diet													
Designing and development for high nutrient efficiency diet													
Minimization of nutrient loss in processing													
Gender mainstreaming through SHGs	5	-	58	58	-	59	59	-	5	5	-	122	122
Storage loss minimization techniques													
Value addition													
Income generation activities for empowerment of rural Women													
Location specific drudgery reduction technologies													
Rural Crafts													
Women and child care													
Others, if any													
VI Agril. Engineering													
Installation and maintenance of micro irrigation systems													
Use of Plastics in farming practices													
Production of small tools and implements													
Repair and maintenance of farm machinery and implements													
Small scale processing and value addition													
Post Harvest Technology	1	37	5	36	23	4	27	-	-	-	60	9	69
Others, if any													
VII Plant Protection													
Integrated Pest Management	10	133	18	151	100	14	114	17	9	26	240	41	281
Integrated Disease Management	6	106	23	129	81	24	105	4	3	7	191	50	241
Bio-control of pests and diseases	7	90	14	104	120	25	145	2	1	3	212	40	252
Production of bio control agents and bio pesticides													
Others, if any													
Vermicompost in plant health	1	5	2	7	10	2	12	-	-	-	15	4	19
Bio-village	4	15	4	19	72	10	82	-	-	-	87	14	101
Integrated crop management	1	2	2	4	17	3	20	-	-	-	19	5	24

VIII Fisheries													
Integrated fish farming													
Carp breeding and hatchery management													
Carp fry and fingerling rearing													
Composite fish culture	2	18	-	18	29	-	29	-	-	-	47	-	47
Hatchery management and culture of freshwater prawn													
Breeding and culture of ornamental fishes													
Portable plastic carp hatchery													
Pen culture of fish and prawn													
Shrimp farming													
Edible oyster farming													
Pearl culture													
Fish processing and value addition													
Others, if any													
IX Production of Inputs at site													
Seed Production													
Planting material production													
Bio-agents production													
Bio-pesticides production													
Bio-fertilizer production													
Vermi-compost production													
Organic manures production													
Production of fry and fingerlings													
Production of Bee-colonies and wax sheets													
Small tools and implements													
Production of livestock feed and fodder													
Production of Fish feed													
Others, if any													
X Capacity Building and Group Dynamics													
Leadership development													
Group dynamics													
Formation and Management of SHGs													
Mobilization of social capital													
Entrepreneurial development of farmers/youths													
WTO and IPR issues													
Others, if any													
XI Agro-forestry													
Production technologies													
Nursery management													
Integrated Farming Systems													
XII Others (Pl. Specify)													
TOTAL	**75**	**869**	**226**	**1089**	**780**	**222**	**1002**	**29**	**23**	**52**	**1658**	**471**	**2129**

(B) RURAL YOUTH													
Mushroom Production													
Bee-keeping													
Integrated farming													
Seed production													
Production of organic inputs													
Integrated Farming													
Planting material production													
Vermi-culture													
Sericulture													
Protected cultivation of vegetable crops													
Commercial fruit production													
Repair and maintenance of farm machinery and implements													
Nursery Management of Horticulture crops	1	23	-	23	6	-	6	-	-	-	29	-	29
Training and pruning of orchards													
Value addition													
Production of quality animal products													
Dairying													
Sheep and goat rearing	3	29	35	64	15	9	24	-	-	-	44	44	88
Quail farming													
Piggery													
Rabbit farming													
Poultry production	1	-	2	2	-	18	18	-	9	9	-	29	29
Ornamental fisheries	3	15	4	19	29	6	35	-	-	-	44	10	54
Para vets													
Para extension workers													
Composite fish culture													
Freshwater prawn culture													
Shrimp farming													
Pearl culture													
Cold water fisheries													
Fish harvest and processing technology													
Fry and fingerling rearing													
Small scale processing													
Post Harvest Technology													
Tailoring and Stitching													
Rural Crafts													

(B) RURAL YOUTH													
Others, if any													
Non-conventional vegetable	1	18	4	22	1	11	12	-	-	-	29	4	33
Animal health management	2	23	30	53	11	7	18	1	2	3	35	39	74
Ornamental bird	1	-	-	-	-	-	-	-	35	35	-	35	35
Improved husbandry practice	1	11	6	17	15	2	17	-	1	1	26	9	35
Bio control	1	17	4	21	11	2	13	-	-	-	28	6	34
Women & child care	2	-	26	26	-	39	39	-	13	13	-	43	43
Reproductive health and nutritional status	1	-	11	11	-	12	12	-	3	3	-	25	25
TOTAL	**17**	**136**	**122**	**258**	**88**	**106**	**194**	**1**	**63**	**64**	**235**	**244**	**479**
I Extension Personnel													
Productivity enhancement in field crops													
Integrated Pest Management													
Integrated Nutrient management	2	43	-	43	22	-	22	-	-	-	65	-	65
Rejuvenation of old orchards													
Protected cultivation technology													
Formation and Management of SHGs													
Group Dynamics and farmers organization													
Information networking among farmers													
Capacity building for ICT application													
Care and maintenance of farm machinery and implements													
WTO and IPR issues													
Management in farm animals													
Livestock feed and fodder production													
Household food security													
Women and Child care	1	-	7	7	-	5	5	-	-	-	-	12	12
Low cost and nutrient efficient diet designing													
Production and use of organic inputs	1	4	5	9	8	10	18	-	-	-	12	15	27
Gender mainstreaming through SHGs													
Any other (Pl. Specify)													
Total	**4**	**47**	**12**	**59**	**30**	**15**	**45**	**-**	**-**	**-**	**77**	**27**	**104**
TOTAL (PF+RY+EF)	**96**	**1052**	**360**	**1412**	**898**	**343**	**1241**	**30**	**86**	**116**	**1970**	**742**	**2712**

C) Consolidated table (ON and OFF Campus)

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			**SC**			**ST**					
		M	F	T	M	F	T	M	F	T	M	F	T
(A) Farmers & Farm Women													
I Crop Production													
Weed Management	5	82	3	85	51	4	55				123	7	130
Resource Conservation Technologies	2	19		19	8		8				27		27
Cropping Systems	3	47		47	26	6	32				73	6	79
Crop Diversification	8	92	8	100	66	6	72				158	14	172
Integrated Farming	5	108	4	112	41	3	44	4		4	153	7	160
Water management													
Seed production	3	24		24	60		60				84		84
Nursery management	2	29	3	32	13		13				42	3	45
Integrated Crop Management	9	95	18	113	95	12	107	3		3	193	30	223
Fodder production													
Production of organic inputs	1	11		11	14		14				25		25
Others,(cultivation of crops)													
Value addition	2	16	12	28	20	13	33				36	25	61
II Horticulture													
a) Vegetable Crops													
Production of low volume and high value crops													
Off-season vegetables	1	18	2	20	15	-	15	4	-	4	37	2	39
Nursery raising	2	28	3	31	18	5	23	2	-	2	48	8	56
Exotic vegetables like Broccoli													
Export potential vegetables													
Grading and standardization													
Protective cultivation (Green Houses, Shade Net etc.)	1	22	2	24	11	-	11	-	-	-	33	2	35
Others, if any (Cultivation of Vegetable)													
Training and Pruning													
ICM of vegetable crops	1	11	3	14	5	2	7	2	-	2	18	5	23
Cultivation of Vegetable	1	13	6	19	9	2	11	1	-	1	23	8	31
b) Fruits													
Layout and Management of Orchards	2	26	2	28	3	-	3	-	-	-	29	2	31
Cultivation of Fruit	3	31	34	65	6	26	32	-	3	3	37	63	100
Management of young plants/orchards													
Rejuvenation of old orchards													
Export potential fruits													
Micro irrigation systems of orchards													
Plant propagation techniques													
Others, if any													

c) Ornamental Plants													
Nursery Management													
Management of potted plants													
Export potential of ornamental plants													
Propagation techniques of Ornamental Plants													
Others, if any													
d) Plantation crops													
Production and Management technology													
Processing and value addition													
Others, if any													
e) Tuber crops													
Production and Management technology													
Processing and value addition													
Others, if any													
f) Spices													
Production and Management technology	3	43	18	61	48	5	53	6	-	6	97	23	120
Processing and value addition													
Others, if any													
g) Medicinal and Aromatic Plants													
Nursery management													
Production and management technology													
Post harvest technology and value addition													
Others, if any													
III Soil Health and Fertility Management													
Soil fertility management	2	36	8	44	53	8	61	-	-	-	89	16	105
Soil and Water Conservation													
Integrated Nutrient Management	1	15	5	20	9	2	11	-	-	-	24	7	31
Production and use of organic inputs	1	8	1	9	12	2	14	-	-	-	20	3	23
Management of Problematic soils	2	30	6	36	21	7	28	-	-	-	51	13	64
Micro nutrient deficiency in crops													
Nutrient Use Efficiency	1	16	0	16	14	0	14	-	-	-	30	0	30
Soil and Water Testing													
Others, if any													
IV Livestock Production and Management													
Dairy Management													
Poultry Management													
Piggery Management													

IV Livestock Production and Management													
Rabbit Management													
Disease Management													
Feed management													
Production of quality animal products													
Others, if any Goat farming													
V Home Science/Women empowerment													
Household food security by kitchen gardening and nutrition gardening	2	-	36	36	-	18	18	-	2	2	-	56	56
Design and development of low/minimum cost diet													
Designing and development for high nutrient efficiency diet													
Minimization of nutrient loss in processing													
Gender mainstreaming through SHGs	7	-	79	79	3	77	80	-	5	5	3	161	164
Storage loss minimization techniques													
Value addition													
Income generation activities for empowerment of rural Women	1	-	11	11	-	-	-	-	-	-	-	11	11
Location specific drudgery reduction technologies													
Rural Crafts													
Women and child care													
Others, if any													
Women led vocation through SHG	4	-	78	78	-	40	40	-	-	-	-	118	118
Nutritional security	1	-	10	10	-	8	8	-	-	-	-	18	18
VI Agril. Engineering													
Installation and maintenance of micro irrigation systems	1	-	7	7	-	12	12	-	5	5	-	24	24
Use of Plastics in farming practices													
Production of small tools and implements													
Repair and maintenance of farm machinery and implements													
Small scale processing and value addition													
Post Harvest Technology	1	37	5	36	23	4	27	-	-	-	60	9	69
Others, if any													

VII Plant Protection													
Integrated Pest Management	11	140	41	181	100	21	121	17	9	26	247	71	318
Integrated Disease Management	6	106	23	129	81	24	105	4	3	7	191	50	241
Bio-control of pests and diseases	8	102	14	116	121	25	146	2	1	3	225	40	265
Production of bio control agents and bio pesticides	1	17	9	26	12	1	13	1	2	3	30	12	42
Others, if any													
Vermicompost in plant health	1	5	2	7	10	2	12	-	-	-	15	4	19
Bio-village	4	15	4	19	72	10	82	-	-	-	87	14	101
Integrated crop management	1	2	2	4	17	3	20	-	-	-	19	5	24
VIII Fisheries													
Integrated fish farming	2	18	8	26	37	9	46	5	1	6	60	18	78
Carp breeding and hatchery management													
Carp fry and fingerling rearing	1	4	-	4	6	2	8	-	-	-	8	4	12
Composite fish culture	5	106	5	111	89	24	113	10	2	12	205	31	236
Hatchery management and culture of freshwater prawn													
Breeding and culture of ornamental fishes	2	12	4	16	37	8	45	6	3	9	55	15	70
Portable plastic carp hatchery													
Pen culture of fish and prawn													
Shrimp farming													
Edible oyster farming													
Pearl culture													
Fish processing and value addition													
Others, if any													
Carp seed production	1	9	6	15	14	8	22	2	1	3	25	15	40
IX Production of Inputs at site													
Seed Production													
Planting material production													
Bio-agents production													
Bio-pesticides production													
Bio-fertilizer production													
Vermi-compost production	1	-	5	5	-	6	6	-	-	-	-	11	11
Organic manures production													
Production of fry and fingerlings													
Production of Bee-colonies and wax sheets													
Small tools and implements													
Production of livestock feed and fodder													
Production of Fish feed													
Others, if any													

X Capacity Building and Group Dynamics													
Leadership development													
Group dynamics													
Formation and Management of SHGs													
Mobilization of social capital													
Entrepreneurial development of farmers/youths													
WTO and IPR issues													
Others, if any													
XI Agro-forestry													
Production technologies													
Nursery management													
Integrated Farming Systems													
XII Others (Pl. Specify)													
TOTAL	**122**	**1393**	**487**	**1874**	**1240**	**405**	**1645**	**69**	**37**	**106**	**2680**	**931**	**3611**
(B) RURAL YOUTH													
Mushroom Production													
Bee-keeping													
Integrated farming	1	11	6	17	16	1	17	-	1	1	27	8	35
Seed production													
Production of organic inputs													
Integrated Farming													
Planting material production													
Vermi-culture													
Sericulture													
Protected cultivation of vegetable crops													
Commercial fruit production													
Repair and maintenance of farm machinery and implements													
Nursery Management of Horticulture crops	3	46	-	46	16	-	16	-	-	-	62	0	62
Training and pruning of orchards													
Value addition													
Production of quality animal products													
Dairying	1	30	-	30	18	2	20	2	-	2	50	2	52
Sheep and goat rearing	5	37	51	88	29	21	50	1	1	2	67	73	140
Quail farming													
Piggery													
Rabbit farming													
Poultry production	3	13	3	16	28	23	51	-	9	9	41	35	76

(B) RURAL YOUTH													
Ornamental fisheries	6	80	34	114	53	14	67	2	2	4	135	50	185
Para vets													
Para extension workers													
Composite fish culture	8	104	59	163	17	5	22	3	1	4	124	65	189
Freshwater prawn culture													
Shrimp farming													
Pearl culture													
Cold water fisheries													
Fish harvest and processing technology													
Fry and fingerling rearing													
Small scale processing													
Post Harvest Technology													
Tailoring and Stitching													
Rural Crafts													
Others, if any													
Exotic vegetables cultivation	2	29	5	34	4	11	15	-	-	-	43	5	48
Planning & management in fishery	1	3	-	3	-	-	-	1	1	2	4	1	5
Induced breeding	1	6	-	6	1	-	1	-	-	-	7	-	7
Integrated Pest & Disease Management	1	6	-	6	20	2	22	2	-	2	28	2	30
IPM through ICT	1	13	2	15	9	1	10	-	-	-	22	3	25
Scientific Animal Husbandry	1	10	-	10	-	-	-	-	-	-	10	-	10
Bio-control	3	47	6	53	46	5	51	2	1	3	95	12	107
Animal health management	2	23	30	53	11	7	18	1	2	3	35	39	74
Ornamental bird	1	-	-	-	-	-	-	-	35	35	-	35	35
Improved husbandry practice	1	11	6	17	15	2	17	-	1	1	26	9	35
Women & child care	2	-	26	26	-	39	39	-	13	13	-	43	43
Reproductive health and nutritional status	1		11	11		12	12		3	3		25	25
TOTAL	**44**	**469**	**239**	**708**	**283**	**145**	**428**	**14**	**70**	**84**	**776**	**407**	**1183**
© Extension Personnel													
Productivity enhancement in field crops	1	3	2	5	8	7	15	-	-	-	11	9	20
Integrated Pest Management	2	22	-	22	8	-	8	-	-	-	30	-	30
Integrated Nutrient management	2	43	-	43	22	-	22	-	-	-	65	-	65
Rejuvenation of old orchards													
Protected cultivation technology													
Formation and Management of SHGs													
Group Dynamics and farmers organization	3	70	-	70	-	-	-	-	-	-	70	-	70
Information networking among farmers													
Capacity building for ICT application													
Care and maintenance of farm machinery and implements													

Extension Personnel													
WTO and IPR issues													
Management in farm animals													
Livestock feed and fodder production													
Household food security													
Women and Child care	1	-	7	7	-	5	5	-	-	-	-	12	12
Low cost and nutrient efficient diet designing													
Production and use of organic inputs	1	4	5	9	8	10	18	-	-	-	12	15	27
Gender mainstreaming through SHGs	1	-	9	9	-	11	11	-	-	-	-	20	20
Any other (Pl. Specify)													
Integrated farming	1	22	2	24	19	1	20	5		5	46	3	49
Indigenous fish breeding	1	3		3				2	1	3	5	1	6
Biological control	1		13	13	12		12				12	13	25
Field exposure training of ARS	1	3	1	4	1	1	2				4	2	6
TOTAL	**15**	**170**	**39**	**209**	**78**	**35**	**113**	**7**	**1**	**8**	**255**	**75**	**330**

- Details of training programmes **as Annexure in the proforma** given below

Date	**Clientele**	**Title of the training programme**	**Dura-tion in days**	**Venue (Off / On Campus)**	**Number of participants**			**Number of SC/ST**		
					M	**F**	**T**	**M**	**F**	**T**
22.04.10-24.04.10	PF &FW	Ecofriendly pest of field and vegetable crops	3	On	7	30	37	-	7	7
16.04.10	PF &FW	Use of biopesticides in IPM	1	off	43	8	51	18	5	23
20.04.10	PF &FW	Role of plant based biopesticide in insect pest control	1	off	28	6	34	11	2	13
23.04.10	PF &FW	Integrated disease management of vegetables	1	off	24	15	39	15	12	27
08.04.10	PF &FW	Ecofriendly chemical pesticides in agriculture	1	on	10	10	20	3	-	3
17.04.10	PF &FW	Preparation and management of nutrition garden during Kharip	1	off	-	33	33	-	13	13
19.04.10	PF &FW	Motivation for formation of SHG	1	off	-	31	31	-	13	13
12.04.10	PF &FW	Ornamental Fish culture in carp culture ponds	1	on	30	5	35	25	3	28
19.04.10-21.04.10	PF &FW	Improved cultivation technique of some important fruit crops	3	on	7	30	37	-	7	7
30.04.10	PF &FW	Improved cultivation technique of some important fruit crops	1	off	8	32	40	2	22	24
17.04.10	PF &FW	Quality management of cotton	1	off	14	18	32	8	8	16
29.04.10	PF &FW	Crop planning for kharip season in land shaping plot	1	off	28	-	28	-	-	-

- Details of training programmes **as Annexure in the proforma** given below (Contd…)

Date	Clientele	Title of the training programme	Dura-tion in days	Venue (Off / On Campus)	Number of participants			Number of SC/ST		
					M	F	T	M	F	T
22.04.10	PF &FW	Crop planning for kharip season in land shaping plot	1	off	22	6	28	13	6	19
21.05.10	PF &FW	Use of vermicompost in IPM	1	off	20	3	23	12	2	14
17.05.10-19.05.10	PF &FW	Self employment generation through multipurpose Horticultural nursery	3	on	24	8	32	9	5	14
06.05.10	PF &FW	Quality management of cotton	1	off	22	7	29	12	5	17
08.06.10	PF &FW	Selection of Rice varieties as per land situation,seed treatment & nursery management n	1	off	14	1	15	3	-	3
09.06.10	PF &FW	Selection of Rice varieties as per land situation,,seed treatment & nursery management	1	off	28	2	30	10	-	10
10.06.10-11.06.10	PF &FW	Management of Aila affected soil 7 selection of salt tolerant kharif Paddy varieties	2	on	22	8	30	10	4	14
25.06.10-26.06.10	PF &FW	Possibilities of multiple cropping on Landshaping plot	2	on	23	-	23	13	-	13
28.06.10-30.06.10	PF &FW	Technique of Kharif paddy seed production	3	on	25	-	25	12	-	12
24.06.10-25.06.10	PF &FW	Raising of carp spawn & fry in fresh water pond	2	on	8	4	12	6	2	8
25.06.10	PF &FW	Integrated pest management of kharif vegetables	1	off	25	4	29	20	3	23
31.06.10	PF &FW	Biointensive pest and disease management of vegetables	1	off	20	4	24	14	3	17
07.06.10-08.06.10	PF &FW	Maintenance of accounts and other documents for strengthening of SHG	2	on	-	20	20	-	5	5
09.06.10-10.06.10	PF &FW	Maintenance of accounts and other documents for strengthening of SHG	2	on	-	30	30	-	21	21

Date	Clientele	Title of the training programme	Duration in days	Venue (Off / On Campus)	Number of participants			Number of SC/ST		
					M	F	T	M	F	T
09.09.10 – 10.09.10	PF &FW	Strengthening and functioning of SGSY group	2	on	3	20	23	3	9	12
07.09.10	PF &FW	Mushroom cultivation and vermicomposting for income generating activities of SHG	1	off	2	22	24	-	-	-
14.09.10	PF &FW	Identification of different nutritional deficiencies of vegetables and their management	1	off	58	8	66	41	5	46
15.09.10	PF &FW	Weed management practices in medium and low land paddy	1	off	31	-	31	15	-	15
18.09.10	PF &FW	Use of conoweeder and fertilizer management in SRI plot	1	off	23	-	23	10	-	10
14.09.10	PF &FW	Integrated disease management in kharif paddy and vegetables	1	off	28	8	36	17	2	19
24.09.10	PF &FW	Biological control of pests and diseases of	1	off	23	4	27	12	2	14
25.09.10	PF &FW	Integrated pest and disease management of winter vegetables	1	off	33	4	37	16	3	19
21.09.10 – 22.09.10	PF &FW	Vermicomposting and its use in IPM and IDM	2		-	11	11	-	6	6
11.10. 10-12.10.10	PF &FW	Suitable cropping pattern for Rabi and Summer season in land shaping plots	2	on	30	-	30	16	-	16
19.10.10- 20.10.10	PF &FW	Production technology of vermicompost	2	on	25	-	25	14	-	14
6.10.10	PF &FW	Proper fertilization of Tomato in ail bandh for better yield along with soil health management	1	off	31	8	39	12	3	15
27.10.10	PF &FW	Management of soil of green house for better healthy growth of crops	1	off	33	2	35	11	-	11
29.10.10	PF &FW	Wrapping of guava for better appearance as well as protection against pest	1	off	16	2	18	3	0-	3

Date	Clientele	Title of the training programme	Duration in days	Venue (Off / On Campus)	Number of participants			Number of SC/ST		
					M	F	T	M	F	T
3.10.10-4.10.10	PF &FW	Mixed fish and prawn culture	2	on	34	1	35	10	1	11
7.10.10-9.10.10	PF &FW	Strengthening and functioning of SHGs	3	On	-	19	19	-	9	9
5.10.10	PF &FW	Cultivation of mushroom for household nutritional security	1	Off	-	15	15	-	4	4
9.10.10	PF &FW	Integrated pest management of BPH of kharif HYV paddy	1	Off	20	-	20	11	-	11
26.10.10	PF &FW	Integrated disease management of betle-vine	1	Off	56	8	64	24	4	28
10.11.10	PF &FW	Weed management and roughing methods in kharif paddy seed production crops	1	Off	24	-	24	13	-	13
22.11.10-23.11.10	PF &FW	Boro paddy cultivation through SRI	2	On	22	-	22	10	-	10
3.11.10	PF &FW	Wrapping technique in guava for production of better quality food	1	Off	22	1	23	4	-	4
16.11.10	PF &FW	Mixed fish and prawn farming	1	Off	22	-	22	19	-	19
19.11.10	PF &FW	Mixed fish and prawn farming	1	Off	25	-	25	10	-	10
14.11.10	PF &FW	Cottage level food processing for entrepreneurship development	1	Off	60	9	69	23	4	27
10.11.10	PF &FW	Integrated pest management of winter vegetables	1	Off	20	3	23	11	2	13
24.11.10	PF &FW	Role of vermicomposting in integrated disease management	1	Off	6	4	10	5	2	7
26.11.10	PF &FW	Awareness meeting on bio village programme	1	Off	27	4	31	16	3	19

Date	Clientele	Title of the training programme	Duration in days	Venue (Off / On Campus)	Number of participants			Number of SC/ST		
	PF &FW				M	F	T	M	F	T
10.12.10	PF &FW	Skill training on modern technology of sunflower cultivation	1	off	10	-	10	3	-	3
13.12.10	PF &FW	Skill training on modern technology of green gram cultivation	1	off	10	-	10	4	-	4
13.12.10 – 18.12.10	PF &FW	Advanced technology on 2nd crop cultivation	6	on	-	25	25	-	12	12
20.12.10	PF &FW	Scientific method of sunflower cultivation	1	off	13	-	13	-	-	-
21.12.10	PF &FW	Water saving and low cost technology for boro rice cultivation	1	off	13	-	13	-	-	-
22.12.10 – 24.12.10	PF &FW	Scientific method of boro paddy cultivation	3	on	23	-	23	10	-	10
2.12.10	PF &FW	Integrated crop management practices to combat chilli leaf curl complex	14	off	18	5	23	5	2	2
13.12.10 – 18.12.10	PF &FW	Fresh water fish and prawn culture	6	on	21	27	48	15	22	37
03.01.11	PF &FW	Scientific method of Sunflower cultivation	1	off	19	-	19	7	-	7
04.01.11	PF &FW	Summer green gram cultivation under residual moisture	1	off	11	-	11	8	-	8
06.01.11 – 07.01.11	PF &FW	Cotton cultivation under residual moisture	2	on	28	-	28	12	-	12
11.01.11 – 12.01.11	PF &FW	Summer green gram cultivation under residual moisture	2	on	25	-	25	10	-	10
17.01.11	PF &FW	Cotton cultivation under residual moisture	1	off	20	10	30	8	4	12
24.01.11	PF &FW	Scientific method of Sunflower cultivation	1	off	18	-	18	8	-	8
14.01.11 – 15.01.11	PF &FW	Integrated crop management practices to combat chilli leaf curl complex	2	on	23	3	26	5	-	5
18.01.11 – 20.01.11	PF &FW	Methods of different micro-irrigation system in fruit and vegetable cultivation	3	on	-	24	24	-	12	12
21.01.11 – 22.01.11	PF &FW	Integrated crop management practices to combat chilli leaf curl complex	2	on	25	2	27	11	-	11
03.01.11	PF &FW	Mangement of saline soil through sweet potato cultivation	1	off	29	5	34	11	3	14

Date	Clientele	Title of the training programme	Duration in days	Venue (Off / On Campus)	Number of participants			Number of SC/ST		
					M	F	T	M	F	T
11.01.11 – 13.01.11	PF &FW	Integrated fish farming	3	on	23	8	31	16	6	22
04.01.11 – 07.01.11	PF &FW	Integrated fish farming	4	on	37	10	47	26	4	30
11.01.11 – 13.01.11	PF &FW	Sustainable agriculture through integrated farming	3	on	33	7	40	12	3	15
13.01.11	PF &FW	Role of vermicompost in plant health management	1	off	15	4	19	10	2	12
18.01.11	PF &FW	Integrated insect and mite pest management of chilli	1	off	15	-	15	7	-	7
28.01.11	PF &FW	IDM of summer chilli	1	off	15	-	15	6	-	6
15.01.11	PF &FW	Different types of bio-inputs for use in a bio-village	1	off	38	3	41	28	2	30
05.02.11	PF &FW	SRI technology for boro paddy cultivation	1	off	14	-	14	8	-	8
15.02.11	PF &FW	Weed and nutrient management in boro paddy	1	off	29	5	34	13	4	17
26.02.11	PF &FW	Weed and nutrient management on boro paddy	1	off	26	2	28	-	-	-
17.02.11	PF &FW	Guava wrapping technology for pest control as well as better quality	1	off	13	-	13	-	-	-
17.02.11 – 18.02.11	PF &FW	Ornamental fish culture in ponds	2	on	25	10	35	18	8	26
23.02.11 – 24.02.11	PF &FW	Mixed fish and prawn farming in fresh water ponds	2	on	39	3	52	32	3	35
03.02.11	PF &FW	Role of *Trichoderma viridi* in plant disease management	1	off	18	2	20	15	2	17
14.02.11	PF &FW	Role of *Pseudomonas fluorescence* in plant disease management	1	off	16	6	22	14	4	18
18.02.11	PF &FW	Integrated crop management practices in chilli	1	off	19	5	24	17	3	20

Date	Clientele	Title of the training programme	Duration in days	Venue (Off / On Campus)	Number of participants			Number of SC/ST		
					M	F	T	M	F	T
24.02.11	PF &FW	Role of pheromone trap in pest management	1	off	15	3	18	15	2	17
01.03.11 - 05.03.11	PF &FW	Improved management practices for chilli cultivation in the rice fallow situation of sundarban	5	On	30	9	39	16	2	18
07.03.11 – 11.03.11	PF &FW	Improved management practices for chilli cultivation in the rice fallow situation of sundarban	5	On	32	7	39	18	1	19
14.03.11 – 18.03.11	PF &FW	Improved management practices for chilli cultivation in the rice fallow situation of sundarban	5	On	35	7	42	20	2	22
02.03.11	PF &FW	Technique of kharif paddy seed production	1	Off	26	-	26	15	-	15
03.03.11	PF &FW	Technique of kharif paddy seed production	1	Off	33	-	33	33	-	33
16.03.11 – 17.03.11	PF &FW	Techniques of pond preparation and stocking for spawn culture in nursery ponds	2	on	25	15	40	16	9	25
17.03.11 – 18.03.11	PF &FW	Promotion of nutrition and economical status of SHG members	2	On	-	33	33	-	13	13
29.03.11 - 30.03.11	PF &FW	Promotion of nutrition and economical status of SHG members	2	On	-	28	28	-	10	10
10.03.11 – 11.03.11	PF &FW	Promotion of nutrition and economical status of SHG members	2	On	-	31	31	-	7	7
23.03.11 – 24.03.11	PF &FW	Promotion of nutrition and economical status of SHG members	2	On	-	26	26	-	10	10
23.06.10- 24.06.10	PF &FW	Maintenance of accounts and other documents for strengthening of SHG	2	on	-	26	26	-	21	21
12.07.10	PF &FW	Mushroom cultivation by the women at homestead level for protein supplementation in resource poor family	1	on	-	18	18	-	8	8

Date	Clientele	Title of the training programme	Duration in days	Venue (Off / On Campus)	Number of participants			Number of SC/ST		
					M	F	T	M	F	T
23.07.10-24.07.10	PF &FW	Bio intensive integrated crop management in Brittle vine	2	on	13	-	13	1	-	1
29.07.10	PF &FW	Bait and Lure based IPM module for fruit fly management	1	off	10	-	10	2	-	2
26.07.10	PF &FW	Innovative technique of vegetable production in the low lying areas	1	off	23	8	31	10	2	12
21.07.10	PF &FW	Fertilizer application and disease pest management for Kharif paddy	1	on	24	7	31	9	2	11
26.07.10 – 28.07.10	PF &FW	Land shaping technique for multiple cropping options for the low lying situations of Sundarbans	1	on	20	4	24	12	2	14
03.08.10	PF &FW	Bio intensive pest management of kharif rice and okra	1	off	48	7	55	17	6	23
03.08.10	PF &FW	Bio intensive disease management of bitter gourd and okra during rainy season	1	off	62	15	77	18	7	25
21.08.10	PF &FW	Integrated pest and disease management of kharif paddy	1	off	30	15	45	19	8	27
06.08.10	PF &FW	Bio intensive integrated pest and disease management of winter tomato, chilli and French bean	1	off	30	7	37	13	3	16
26.08.10 – 27.08.10	PF &FW	Improved method of early winter vegetable cultivation	2	on	37	2	39	19	-	19
25.08.10 – 27.08.10	PF &FW	Methods of fertilizer application in low land rice and scientific methods of high land paddy cultivation	3	on	27	-	27	15	-	15

Date	Clientele	Title of the training programme	Duration in days	Venue (Off / On Campus)	Number of participants			Number of SC/ST		
					M	F	T	M	F	T
01.07.10 – 03.07.10	RY	Small scale ornamental fish culture for additional income generation	3	on	22	17	39	2	-	2
13.07.10 – 16.07.10	RY	Induced breeding of craps and catfish	4	on	7	-	7	1	-	1
29.07.10	RY	Improved method of disease free tomato seedling raising	1	off	29	-	29	6	-	6
16.08.10 – 18.08.10	RY	Use of ICT in Agriculture with special reference to crop pest management and agricultural marketing	3	on	22	3	25	9	1	10
06.09.10-8.9.10	RY	Scientific Goat farming	3	On	23	7	30	15	6	21
15.09.10	RY	Health management of goats	1	Off	13	19	31	1	-	1
27.09.10-18.10.10	RY	Scientific animal husbandry management and practices	21	On	10	-	10	-	-	-
27.09.10-28.09.10	RY	Refresher training on scientific goat farming	2	Off	-	20	20	-	13	13
30.09.10	RY	Disease management of goats	1	Off	7	26	33	3	9	12
15.09.10 – 16.09.10	RY	Self employment generation through development of vegetable nursery	2	On	24	-	24	11	-	11
15.09.10 – 16.09.10	RY	Biological control of pests and diseases of field and vegetable crops	2	On	35	-	35	14	-	14
27.09.10 – 29.09.10	RY	Bio-intensive integrated pest management of vegetables and field crops	3	on	32	6	38	23	4	27
22.04.10	RY	Awareness on management of Reproductive health and nutritional status of adolescent girls	1	off	-	35	35	-	24	24
16.04.10	RY	Setting of Angel breeding in cement cisterns and glass aquaria	1	off	15	-	15	9	-	9
28.05.10-30.05.10	RY	Reproductive heath and nutritional upliftment for adolescent girls	3	on	-	25	25	-	15	15
03.05.10-07.05.10	RY	Integrated pest & disease management of crops	5	on	28	2	30	22	2	24
9.11.10-11.11.10	RY	Self employment generation in agriculture through integrated approach	3	On	30	-	30	12	-	12
15.11.10-17.11.10	RY	Self employment generation in agriculture through integrated approach	3	On	38	-	38	7	-	7

Date	Clientele	Title of the training programme	Duration in days	Venue (Off / On Campus)	Number of participants			Number of SC/ST		
					M	F	T	M	F	T
2.11.10-4.11.10	RY	Self employment generation in agriculture through integrated approach	3	On	30	-	30	6	-	6
23.11.10-25.11.10	RY	Self employment generation in agriculture through integrated approach	3	On	22	-	22	4	-	4
26.10.10	RY	Ornamental fish culture in domestic pond-method of stocking, manuring, liming and feeding	1	Off	14	7	21	10	4	14
23.10.10	RY	Ornamental fish culture in domestic pond- pond preparation procedure	1	Off	15	3	18	10	2	12
3.10.10-5.10.10	RY	Poultry and duck farming	3	on	38	3	41	26	3	29
25.10.10	RY	Ornamental bird rearing	1	Off	-	35	35	-	-	-
23.11.10-25.11.10	RY	Sweet water pisiculture with special emphasis on mixed fish and prawn farming in fresh water ponds	3	On	22	-	22	5	-	5
13.11.10	RY	Dairy farming-scientific approach	1	Off	10	22	32	1	3	4
18.11.10-20.11.10	RY	Dairy farming- a profitable enterprise	3	On	50	2	52	18	2	20
23.11.10	RY	Treatise in animal husbandry	1	Off	25	17	42	10	4	14
14.12.10	RY	Self employment generation through cultivation of non-conventional vegetables	1	off	29	4	33	11	-	11
22.12.10 – 24.12.10	RY	Mixed fish and prawn farming	3	on	12	3	15	7	1	8
03.12.10	RY	Awareness – cum – training on bio-village concept	1	off	33	5	38	22	4	26
14.12.10	RY	-do-	1	off	38	5	43	28	3	31
12.01.11 – 13.01.11	RY	Self employment generation through cultivation of non-conventional vegetables	2	on	14	1	15	3	-	3
22.01.11 - 24.01.11	RY	Development, planning and management in fisheries	3	on	4	1	5	1	1	2
24.12.10	RY	Mixed fish and prawn farming	1	on	3	8	11	-	-	-
07.01.11	RY	Mixed fish and prawn farming	1	on	21	-	21	1	-	1
17.01.11 – 20.1.11	RY	Fresh water fish and prawn farming	4	on	16	13	29	1	-	1
21.01.11 – 22.01.11	RY	Fresh water fish and prawn farming	2	on	15	3	18	2	-	2

Date	Clientele	Title of the training programme	Duration in days	Venue (Off / On Campus)	Number of participants			Number of SC/ST		
					M	F	T	M	F	T
05.01.11	RY	Improved husbandry practices for better profitability	1	off	26	9	35	15	3	18
27.01.11 – 29.01.11	RY	Scientific gaot farming	3	on	-	22	22	-	7	7
12.01.11	RY	Disease and management in poultry	1	off	-	29	29	-	27	27
04.01.11 – 07.01.11	RY	Integrated farm management approach	4	on	27	8	35	16	2	18
01.02.11 – 02.02.11	RY	Multipurpose horticultural nursery management for entrepreneurship development	2	on	15	-	15	3	-	3
24.02.11 – 25.02.11	RY	Multipurpose horticultural nursery management for entrepreneurship development	2	on	18	-	18	7	-	7
23.02.11	RY	Mixed fish and prawn farming in fresh water pond	1	on	11	7	18	4	2	6
28.02.11	RY	Mixed fish and prawn farming in fresh water pond	1	on	20	15	35	3	2	5
24.02.11 – 26.02.11	RY	Technological option for fresh water fish and prawn farming	3	on	26	16	42	2	1	3
09.03.11 – 10.03.11	RY	Production of gold fish and koi carp seeds in net enclosures	2	On	32	17	49	12	8	20
01.03.11 – 03.03.11	RY	Onhand training on management of layer birds	3	on	3	3	6	2	2	4

Date	Clientele	Title of the training programme	Duration in days	Venue (Off / On Campus)	Number of participants			Number of SC/ST		
					M	F	T	M	F	T
19.04.10	EP	Role of bio-pesticides in IPM	1	off	28	6	34	11	2	13
24.05.10-27.05.10		Skill training on improvement of health and nutritional status of pregnant & lactating mother to attain safe delivery and healthy baby	3	on	-	12	12	-	5	5
13.05.10-15.05.10	EP	Role & use of biological control agent in IPM	3	on	12	13	25	12	-	12
10.05.10-12.05.10	EP	Production technology of vermicompost	3	on	12	15	27	8	10	18
29.06.10	EP	Integrated nutrient management with special reference to organic manures	1	off	35	-	35	12	-	12
30.06.10	EP	Integrated nutrient management with special reference to organic manures	1	off	30	-	30	10	-	10
21.07.10-22.07.10	EP	Some emerging pest & disease problem and their management in agriculture with respect to climate change	2	on	20	-	20	-	5	5
16.07.10 – 20.07.10	EP	Practical training on magur breeding	5	on	5	1	6	2	1	3
16.08.10	EP	Mixed fish and prawn farming in fresh water ponds	1	on	29	-	29	5	-	5
28.07.10 – 19.08.10	EP	Field experience training of ARS under 91st FOCARS	23	on	4	2	6	1	1	2
14.09.10 – 16.09.10	EP	Self employment generation in agriculture and allied agriculture through integrated approach for head master of farm school under ATMA	3	on	20	-	20	-	-	-
21.09.10 – 23.09.10	EP	Self employment generation in agriculture and allied agriculture through integrated approach for head master of farm school under ATMA	3	on	20	-	20	-	-	-
28.09.10 – 30.09.10	EP	Self employment generation in agriculture and allied agriculture through integrated approach for head master of farm school under ATMA	3	on	30	-	30	-	-	-
20.09.10	EP	IPM concept and its use in Agriculture	1	off	9	1	10	-	-	-

Date	Clientele	Title of the training programme	Duration in days	Venue (Off / On Campus)	Number of participants			Number of SC/ST		
					M	F	T	M	F	T
15.09.10	EP	Mixed fish and prawn farming in fresh water ponds	1	on	32	-	32	3	-	3
27.12.10 – 29.12.10	EP	Modern technologies of 2nd crop cultivation among the water shed committee members	3	on	11	9	20	8	7	15
21.02.11 – 25.02.11	EP	Sustainable agriculture practices for coastal saline zone	5	on	46	3	49	24	1	25
19.03.11 – 21.03.11	EP	Strengthening of SHG	3	on	-	20	20	-	11	11

D) Vocational training programmes for Rural Youth

Crop / Enterprise	Identified Thrust Area	Training title*	Duration (days)	No. of Participants			Self employed after training			Number of persons employed else where
				Male	Female	Total	Type of units	Number of units	Number of persons employed	
Health &nutrition	Attaining health security by use of locally available foods	Awareness on management of Reproductive health and nutritional status of adolescent girls	1	-	35	35	-	-	-	-
Health &nutrition	Attaining health security by use of locally available foods	Awareness on management of Reproductive health and nutritional status of adolescent girls	1	-	43	43	-	-	-	-
Ornamental fish		Setting of Angel breeding in cement cisterns and glass aquaria	1	15	-	15	Small	6	13	
Health & nutrition	Attaining health security by use of locally available foods	Reproductive heath and nutritional upliftment for adolescent girls	3	-	25	25	-	-	-	-
Field & Horticultural	Dissemination of intregrated pest &diseas management	Integrated pest & disease management	5	28	2	30	-	-	-	-

(**training title should specify the major technology /skill transferred*

(E) Sponsored Training Programmes

Sl.No	Title	Thematic area	Month	Duration (days)	Client PF/RY/EF	No. of courses	No. of Participants										Sponsoring Agency
							Male			Female			Total				
							Others	SC	ST	Others	SC	ST	Others	SC	ST	Total	
1	Fresh water fish and prawn culture	Composite fish culture	Dec	6	PF	1	6	15	-	5	20	2	11	35	2	38	DRDC, North 24 Parganas
2	Integrated fish farming	Integrated farming	Jan	3	PF	1	7	11	5	2	6	-	9	17	5	31	IFFCO
3	Integrated fish farming	Integrated farming	Jan	4	PF	1	11	26	-	6	3	1	17	29	1	47	LWSI
4	Ornamental fish culture in ponds	Ornamental fish culture	Feb	2	PF	1	7	12	6	2	5	3	9	17	9	35	ATMA, North 24 Parganas
5	Mixed fish and prawn farming in fresh water ponds	Composite fish culture	Feb	2	PF	1	17	27	5	-	3	-	17	30	5	52	ATMA , South 24 Parganas
6	Use of ICT in Agriculture with special reference to crop pest management and agricultural marketing	ICT in agriculture	Aug	3	RY	1	13	9	-	2	1	-	15	10	-	25	Narendra pur
7	Biological control of pests and diseases of field and vegetable crops	Biological control	Sep	2	RY	1	21	14	-	-	-	-	21	14	-	35	ATMA, South 24 Parganas

(E) Sponsored Training Programmes (Contd…)

8	Bio-intensive integrated pest management of vegetables and field crops	Biointensive pest management	Sep	3	RY	1	9	21	2	2	3	1	11	24	3	38	NAIP, KVK
9	Self employment generation in agriculture through integrated approach	Integrated farming	Nov	3	RY	4	87	29	4	-	-	-	87	29	4	120	ATMA (North 24 Parganas, South 24 Parganas and Hooghly)
10	Mixed fish and prawn farming	Composite fish culture	Dec	3	RY	1	5	4	3	2	-	1	7	4	4	15	CIFE
11	Mixed fish and prawn farming	Composite fish culture	Jan	1	RY	1	20	1	-	-	-	-	20	1	-	21	CIFE
12	Fresh water fish and prawn farming	Composite fish culture	Jan	4	RY	1	15	1	-	13	-	-	28	1	-	29	Asutosh college, Kolkata
13	Development, planning and management in fisheries	Fisheries extension	Jan	3	RY	1	3	-	1	-	-	1	3	-	2	5	CIFE

(E) Sponsored Training Programmes (Contd…)

14	Mixed fish and prawn farming in fresh water pond	Composite fish culture	Feb	1	RY	1	24	7	-	18	4	-	42	11	-	53	Netaji Narayan Day College and Surendra nath College
15	Practical training on magur breeding	Indigenous fish culture	July	5	EP	1	3	-	2	-	-	1	3	-	3	6	CIFE, Kolkata
16	Mixed fish and prawn farming in fresh water ponds	Composite fish culture	Aug	1	EP	1	24	5	-	-	-	-	24	5	-	29	CIFE, Kolkata
17	Field experience training of ARS under 91st FOCARS	Field exposure training of ARS	July-Aug	23	EP	1	3	1	-	1	1	-	4	2	-	6	NARM, Hyderabad
14.09.10 – 16.09.10	Self employment generation in agriculture and allied agriculture through integrated approach for head master of farm school under ATMA	Integrated farming	Sep	3	EP	3	70	-	-	-	-	-	70	-	-	70	ATMA, Hooghly
15.09.10	Mixed fish and prawn farming in fresh water ponds	Composite fish culture	Sep	1	EP	1	29	3	-	-	-	-	29	3	-	32	CIFE, Kolkata

3.4. Extension Activities (including activities of FLD programmes)

Nature of Extension Activity	No. of activities	Farmers			Extension Officials			Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Field Day	11	199	63	262	18	14	32	217	77	**294**
Kisan Mela	4	7120	1656	8776	449	428	977	7569	2084	**9653**
Kisan Ghosthi										
Exhibition	1	11102	3995	15097	461	222	683	11563	4217	**15780**
Film Show	45	556	515	1071	39	70	109	595	585	**1180**
Method Demonstrations	-	-	-	-	-					
Farmers Seminar	-	-	-	-	-	-	-	-	-	**-**
Workshop	-	-	-	-	-	-	-	-	-	**-**
Group meetings	-	-	-	-	-	-	-	-	-	**-**
Lectures delivered as resource persons	-	-	-	-	-	-	-	-	-	**-**
Newspaper coverage	-	-	-	-	-	-	-	-	-	**-**
Radio talks	1	-	-	-	-	-	-	-	-	**-**
TV talks	19	-	-	-	-	-	-	-	-	**-**
Popular articles	5	-	-	-	-	-	-	-	-	**-**
Extension Literature distributed	786	395	302	697	55	34	89	450	336	**786**
Extension Literature published	1									
Advisory Services	1098	762	216	978	50	70	120	812	286	**1098**
Scientific visit to farmers field	156	1653	523	2176	32	23	55	1685	546	**2231**
Farmers visit to KVK	301	996	697	1693	0	0	0	996	697	**1693**
Diagnostic visits	108	478	106	584	11	7	18	489	113	**602**
Exposure visits	26	463	234	697	63	52	115	526	286	**812**
Ex-trainees Sammelan	1	215	37	252	81	12	93	296	49	**345**
Soil health Camp	-	-	-	-	-	-	-	-	-	**-**
Animal Health Camp	20	423	468	891	67	53	120	490	521	**1011**
Agri mobile clinic	5	43	9	52	5	2	7	48	11	**59**
Soil test campaigns	-	-	-	-	-	-	-	-	-	**-**
Farm Science Club Conveners meet	5	46	10	56	15	5	20	61	15	**76**
Self Help Group Conveners meetings	26	235	197	432	0	0	0	235	197	**432**
Mahila Mandals Conveners meetings	2	0	16	16	0	7	7	0	23	**23**
Celebration of important days (specify) (Fish farmerts" day)	6	79	23	102	30	14	44	109	37	**146**
Any Other (Specify)										
PRA	5	219	165	384	31	27	58	250	192	**442**
Evaluation and monitoring	2	52	31	83	14	6	20	66	37	**103**
FFS on cotton	11	176	142	318	23	10	33	199	152	**351**
Total										

3.5 Production and supply of Technological products

Village seed

Crop	variety	Quantity of seed (q)	Value (Rs)	Number of farmers provided
Cereals	IET-5656	55.40	83,100	152
Oilseeds				
Pulses				
Commercial crops				
Vegetables				
Flower crops				
Spices				
Fodder crop seeds				
Fiber crops				
Forest Species				
Others				
Total				

KVK farm

Crop	variety	Quantity of seed (q)	Value (Rs)	Number of farmers provided
Cereals	IET-5656	Foundation-11.71 Certified- 26.45	29,275.00 52,900.00	48 142
	MTU-7029	Foundation-1.00 Certified- 3.67	2,500.00 7,340.00	2 20
	NC-492	Foundation-5.24 Certified- 7.64	13,100.00 15,280.00	16 37
	Jarava	Certified- 15.50	31,000.00	75
	WGL-20471	Certified- 8.60	18,920.00	49
Pulses	PDM-84-139 IPM-99-125	TL- 5.10 TL-1.60	17,500.00 4,800.00	80 22
Oilseeds				
Commercial crops				
Vegetables				
French bean	Shyama	0.83	16,600	52
	Saraswati	1.52		
	Parvati (bush)	0.68		
Raddish	Lalima	1.24	4,900	
Okra	Nimpith Selection 1	0.11	2,500	
	Nimpith Selection 2	0.27		
Palak	Allgreen	0.78	1,400	
Elephant foot yam	Gajendra	19.0	26,800	6
	Bidhan Kusum	14.5		
Flower crops				
Spices				
Fodder crop seeds				
Fiber crops				
Forest Species and others				
Total				

Production of planting materials by the KVKs

Crop	variety	Quantity of seedlings	Value (Rs)	Number of farmers provided
Commercial				
Vegetable seedlings				
Tomato	Abinash 2, Dev, CCS 448	5600	8400	35
Chilli	Tejashini	16300	11250	53
Fruits				
Papaya seedlings	Honey dew, Ranchi	18100	54300	423
Sapota	Cricket ball	870	17400	93
Mango	Amrapali, Mallika, Himsagar	2580	5160	165
Guava	Baruipur, L 49	790	7900	153
Ornamental plants				
Marigold	Inca	2000	6000	95
Dahlia	-	8900	13450	165
Chrysanthemum	Pompon & Giant	6700	13400	188
Medicinal and Aromatic				
Plantation				
Coconut	Kerala semitall, COD	950	28500	231
Arecanut	Local	2250	9750	182
Spices				
Tuber				
Sweet potato	Sree Nandini, Sree Vardhini	18200	9100	11
Fodder crop saplings				
Forest Species				
Others				
Total				

Production of Bio-Products

Bio Products	Name of the bio-product	Quantity	Value (Rs.)	No. of Farmers	No. of KVKs
Bio-pesticide	Sl NPV	9.5 lit	4750.00	23	
Bio-fungicide	*Trichoderma viride*	409 Kg	24540.00	210	
Bio Agents	*Trichogramma chilonis*	1800 trichocards with 180 lakh wasp	18000.00	356	
	Chrysoperla carnea	15500 grubs	1550.00	10	
Total			**48840.00**	**589**	

Production of livestock materials

Particulars of Live stock	Name of the breed	Number	Value (Rs.)	No. of Farmers	No. of KVKs
Dairy animals	Cross breed	48	960000.00		
Cows	Cross breed	21	5250000.00		
Buffaloes	Nil	-	-		
Calves	Cross breed	19	38000.00		
Others (Pl. specify) Milk Cow dung	-	 82080 lit 1800 qnt	 1641600.00 90000.00	 120 13	
Poultry					
Broilers	Different variety	4800	595000.00		
Layers	RIR	22	5500.00		
Duals (broiler and layer)	Upkari, Nirbheek, Hitkari	578	144450.00	23	
Japanese Quail	Nil				
Turkey	Nil				
Emu	Nil				
Ducks	Khaki Campbell	22	3430.00		
Others (Pl. specify) Egg Chicks	 - -	 4280 8356	 10700.00 100272.00	 49	

Production of livestock materials

Particulars of Live stock	Name of the breed	Number	Value (Rs.)	No. of Farmers	No. of KVKs
Piggery					
Piglet					
Rabbitary	New Zealand White	45	6750.00		
Ornamental bird	Love birds, budgerigars, java	52	7850.00		
Guinea pig	-	4	1000.00		
Goatary	Black Bengal	89	178000.00		
Fisheries					
Carp spawn	IMC and Exotic carps	4 million	10000.00	5	
Carp fry & fingerling	IMC and Exotic carps	2015 kg	177400.00	37	
Catfish fry & fingerling	Asian Catfish	6785 nos.	33925.00	52	
Ornamental fish	Live bearers (molly, guppy, platy, sword tail)				
	Egg bearers (goldfish, angel, barb, tetra, gourami, zebra, cichlid)				
Total					

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

(A) KVK News Letter ((Date of start, Periodicity, number of copies distributed etc.)

i)Name of the News letter: KVK Barta in Bengali
ii) Date of start: October, 2010
ii)Periodicity: Quarterly
iii)Copies distributed: 196

(B) Literature developed/published

Item	Title	Authors name	Number
Research papers	Mealy bug, *Phaenacoccus solenopsis* Tinsley - An emerging threat to cotton based agro-ecosystem in coastal region of West Bengal in the *International Symposium on Crop and Weed Science*	L. C. Patel, C. K. Mondal and A. Pramanik	7
	Effect of bait and lure based fruit fly management in cucumber in the Journal *Pestology*	L. C. Patel, C. K. Mondal	
	Effect of some common pesticides on the survivability of Spot Fin Swamp Barb (*Puntius sophore*) in the book *Diversification of Aquaculture*	L. C. Patel, C. K. Mondal, P. Chatterjee and D. K. Roy	
	Importance of some indigenous fish species with respect to nutritional and economic empowerment of rural farmer families of South 24 Parganas in DALAF, 2010, CIFE-Kolkata	P. Chatterjee, L. C. Patel, C. K. Mondal and D. K. Roy	
	Assesment of productivity of green gram by effective weed management practices under rainfed condition in medium and low land situation of coastal saline belt of Sundarban in National Seminar on oil seed & pulses at BCKV, Nadia	L. C. Patel, D. K. Roy, S.K Samui and S.S.Lakshman	
	Effect of salinity on growth, yield and yield attributes of summer groundnut in coastal saline belt of Sundarbans in National Seminar on oil seed & pulses at BCKV, Nadia	S.S.Lakshman, L. C. Patel, D. K. Roy, and S.K Samui	
	Impact of package of practices on yield of summer moong under rainfed coastal saline belt of Sundarbans in in National Seminar on oil seed & pulses at BCKV, Nadia	D. K. Roy, S.S.Lakshman, L. C. Patel, and S.K Samui	

B) Literature developed/published (Contd…)

Technical reports	1) All monthly reports – Year round	12	37
	2) All quarterly reports – Year round	4	
	3) One Annual Reports – April, 10 to March, 11	1	
	7) Physical and Financial achievement report, 2010-11 of Radhakantapur and Dongajora Watershed under NWDPRA for 11th plan	2	
	8) All monthly reports of Insecticide Resistance Management (IRM) project	12	
	9) Quarterly report on progress of AICRP on Sunflower – Year round	1	
	10) Monthly progress report of the research project on chilli leaf curl complex	3	
	11) Status report of NAIP on livelihood security, 2009-10	1	
	12) Detailed report on celebration of technology week on Ornamental fish farming	1	
News letters	New emerging insect and mite pest problems of kharif paddy in South 24 Parganas due to climate change in Sabuj Sona, November 16-30, 2010.	L. C. Patel	2
	Launching of NICRA project in Bengali in Alipore Barta on 5.3.11	P. Chatterjee	
Technical bulletins	Problems of mealybugs in different crops and its management in Bengali	L. C. Patel	3
	Insecticide Resistance management of cotton pests in the district South 24 Parganas, West Bengal in English	L. C. Patel	
	Farm Women Empowerment : An experience	Manasi Chakraborty Nilendu Joti Maitra	

B) Literature developed/published (Contd…)

Popular articles	Indigenous trapping gears used by the farmers of Sundarbans in the Fishery chimes	P. Chatterjee	2
	Integrated fish farming in Annadata, February, 2011	P. Chatterjee	
Extension literature			
Others (Pl. specify)			
	Insecticide Resistance Management on cotton pests in the district South 24 Parganas of West Bengal (IRM Project Technical Booklet)		1
TOTAL			49

N.B. Please enclose a copy of each. In case of literature prepared in local language please indicate the title in English

c) Details of Electronic Media Produced

S. No.	Type of media (CD / VCD / DVD / Audio-Cassette)	Title of the programme	Number
1.	VCD	Industrial gloves making – a employment generating enterprise by womenfolk	1
2.	VCD	Ex-trainee conference	2
3.	VCD	Ornamental fish	1
4.	VCD	Ornamental fish and culture	1
5.	VCD	Nimpith KVK at a glance	1

(D) Details of HRD programmes undergone:

S. No.	Name of programme	Date and Duration	Organized by
1	SHG review committee meeting	13.4.10 (1 day)	Society for self employment of unemployed youth
2	Hybrid rice seed production	29.4.10 (1 day)	ATC, Narendrapur
3	Outreach-2010	12.06.10 (1 day)	Bengal chambers of commerce, Kolkata
4	NGO Ideas	29.06.10-02.07.10 (4 days)	KKID, Coimbatore
5	Nematode awareness day	07.07.10	BCKV, Kalyani

(D) Details of HRD programmes undergone (Contd…)

6	Fish Farmers day	10.07.10	CIFE, Kolkata
7	Golden Jubelee National Seminar on Diversification of aquaculture through locally available fish species	27.08.10-28.08.10	CIFE, Kolkata
8	Implementation of modified Extension reform skheme	20.08.10	SAMETI, Narendrapur
9	Review meeting cum workshop of KVKs	21.08.10	BCKV, Kalyani
10	State level workshop of NWDPRA	10.08.10-12.08.10	RAKVK, Nimpith
11	NGO Ideas	30.09.10-01.10.10	KKID, Coimbatore
12	Biovillage programme	5.10.10	DDA, Alipore, South 24 Parganas
13	Optimum utilization of agricultural resource for sustainable development in Sundarbans	29.11.10	SDB, Kakdwip
14	National Seminar on Emerging challenges and steps for mitigation of productivity constraints in food legumes	20.11.10	BCKV, Kalyani
15	International Conference on food and nutritional security	1.12.10-2.12.10	Phomphen
16	Awareness and sensitization programme on TDUP	20.12.10	DSIR and PGBS (ARD)
17	Microbial control of insect pest and diseases	01.03.11-8.03.11	DOR, Hyderabad
18	International Regional Workshop on practicing NGO –IDEAs Tool Box for project monitoring and evaluation.	22nd - 25th February, 2011	KKID, Coimbatore
19	Workshop on NICRA	21.02.11-22.02.11	CIFE, Kolkata
20	National Workshop of KVK	22.12.10 - 24.12.10	Agricultural University, Udaipur, Rajsthan
21	State Level KVK Workshop	09.03.2011 - 10.03.2011	BCKV, Kalyani,

3.7. Success stories/Case studies:

Ornamental bird rearing – The alternative sustainable livelihood option for women in *Aila* affected areas of Sundarbans

- **Background**

The agro-ecological situation of South 24 Pargana district is characterized by critical diverse risk prone area resulting low production in monocropped agricultural land. The frequency of natural calamity in this area is 3.3 per year. The last major devastating natural calamity "*Aila*" in 2008 affected the Sundarban as a whole and island villages in particular destroying their all resources even their home. Almost all the livestock population was either died or suffered from diseases or faced forced selling and the land also become infertile due to ingression of saline water. In this situation the male have to migrate to the city for searching alternative livelihood where womenfolk have to depend on the natural resources to struggle with situation. So the womenfolk had to go either for prawn seed catching or maidservant which did not meet up their requirement of serving the family along with additional drudgery. Besides, the women also suffered from overburdening as they have to shoulder productive and reproductive role alone. Thus, they were not in position to ahead for any venture of husbandry practices. Considering the geographical situation as well as the untapped human resources KVK entered into a new venture of promoting Ornamental bird rearing at reverine blocks of Sundarban in particular and district as a whole in general.

- **The technology**

RAKVK introduced ornamental bird rearing technology initially with low cost inputs primarily with 10 pairs of birds and feed for 3 months. The farm women themselves managed to construct a house with net and some wooden structure so as to give them a shelter and prevent from predators (Figure 1). After that, they were trained and motivated for construction of scientific house of 20 pairs capacity with their own profit from the prevailing bird unit with minimum input support from this KVK. The womenfolk were encouraged from the earning they had from newly introduced ornamental bird unit and step forward to construct the same (Figure 2). The standard numbers of earthen pots for laying eggs and water pots and feeder were provided (Figure 3) by the farm women after training. Knowledge and measures regarding exposure to extremes of water were also demonstrated to them along with health care management. KVK is also providing diagnostic help and advisory services to the farm women as and when they are in need besides regular monitoring of the rearing units.

Figure 1. Low cost house

Figure 2. Scientific House

Figure 3. Earthen pots and waterer.

- **Effects of this technology on Production and Economic gain**

Before *Aila*:

Per family income was more or less Rs. 4500 including agriculture, fishery and animal husbandry sectors.

After *Aila*-2009:

After *Aila* all other livelihood options were destroyed and men were migrated. In this point KVK intervene with introduction of ornamental birds rearing.

Unit size	Cost of cultivation (Rs.) Per month	Gross return (Rs) Per month	Net return (Rs) Per month
10 pairs of birds	1200.00	1900.00	700.00
After 4 months			
20 pairs of birds	2100.00	3800.00	1700.00
Effect of the technology per family after *Aila*-2009			

After *Aila*-2011:

Unit size	Cost of cultivation (Rs.) Per month	Gross return (Rs) Per month	Net return (Rs) Per month
10 pairs of birds	900.00	2100.00	1200.00
After 4 months			
20 pairs of birds	1700.00	4200.00	2500.00
Effect of the technology per family after *Aila*-2011			

- **Suitability with existing farming system (comparative study)**

Category	**Prawn seed catching (Previous livelihood)**	**Ornamental bird rearing (Present livelihood)**
Duration of work (hrs/day)	6.5	1.5
Place of work	River, estuaries with crocodile population	Homestead
Risk of work (%)	80	0
Occupational health hazards (skin diseases, extremes of climate, communicable diseases)(%)	75	25
Drudgery	Angle of deviation 45º for 5 hrs	Angle of deviation of 45º for 0.5 hrs
	Peak heart beat 120/minute	Peak heart beat 85/minute
Biodiversity	Destroys 52 nos of fish species due to small net size and decanting of water out the river after separation of prawn seed.	Biodervisty is not destroyed.
Monthly income (Rs)	300	1200-2500
Additional time involvement for the work	7 hrs out side home. Childs are neglected and some time they are in risk due to nuclear family.	Not moving out side the home for which they can take care of their children
Marketing	Unstable	Stable

- **Farmers' view with respect to acceptance of this technology**

At the initial stage training was imparted to rural youth along with some farm women. Some of the rural youth took up the technology and started the enterprise and used to sell the product at distant market at main land. After, *Aila* KVK conducted a off campus training cum awareness camp especially for the farm women to develop such enterprise as alternative livelihood options. In spite of that the farm women were in hesitate position due to lack of local marketing facilities. KVK then developed a marketing channel collaborating with the practicing rural youth and motivated the farm women towards this enterprise. Now a large number of womenfolk are involved with this enterprise and earning a remunerative amount to support their family.

Tapasi Mistry

"Now I am out of risk of crocodile and I am earning Rs 2500 per month managing my all household activity."

Figure 4

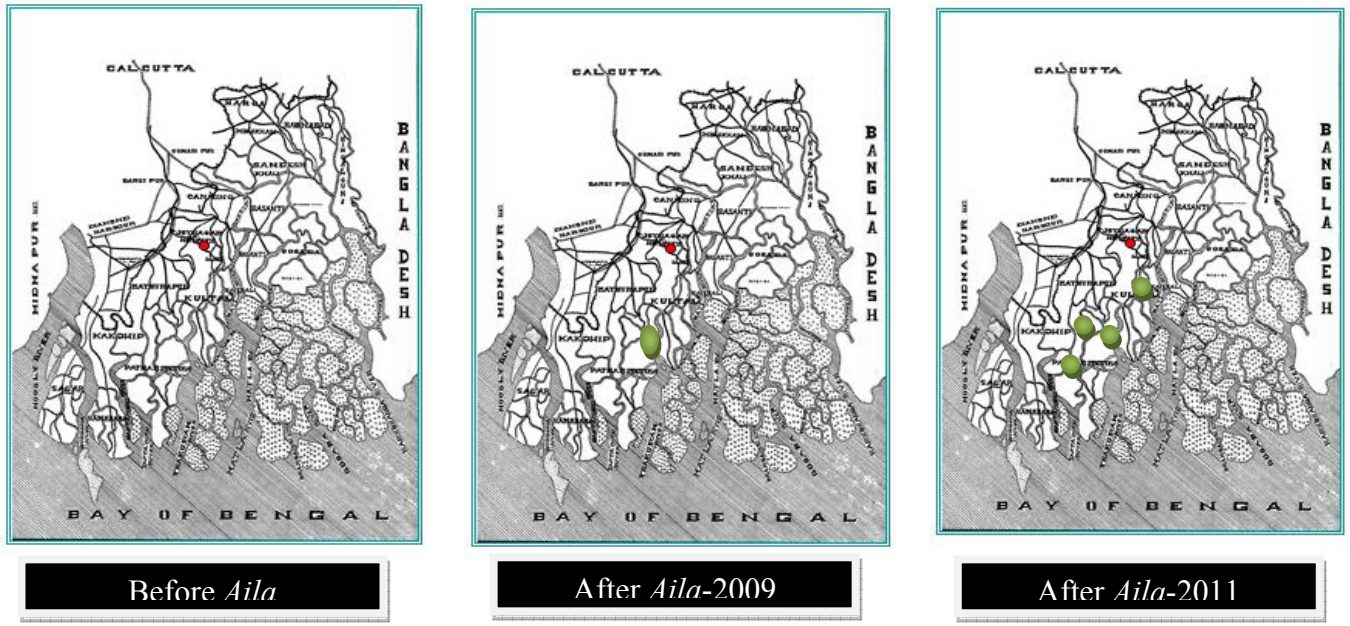
Figure 5

Shyamali Sardar

"After Aila, I used to stay alone as my husband was migrated to city and I used to collect prawn seed and get Rs 300 per month, now I am earning Rs 1800 per month which well provides the need of rice and Potato for my family"

- **Horizontal Spread of the Technology :**

The technology was initially introduced among the island women in small area of Damkal village. After the successful conduction, the technology was disseminated through National Agriculture Innovation Project to large area of Damkal Village which is now named as an **Ornamental Bird Villages** by the local community, where nearly 50 numbers of farm women are rearing ornamental birds and fetching an amount to sustain their livelihood. These farm women are now acting as inspiration to not only the other women folk of the same island but also motivate the other farm women of the distant island like Banashyam Nagar, Lakshipur, Kaikhali as well as in main land (Figure 6).



Horizontal spread of the technology

- **Substitution**

The previous practice was either prawn seed catching or maid servant for the women folk. They used to face the days with every step life risk along with unsafe daily life in terms of economy and social scenario. Now, this technology of ornamental bird rearing has changed their life both economically and morally with greater sustainability and assurance. They now don't go for prawn seed catching or any other exploitable alternative options. This technology has substituted the traditional practice vis-a-via uplifted the poorer section faced with devastating natural calamities.

- **Social Impact of the Technology**

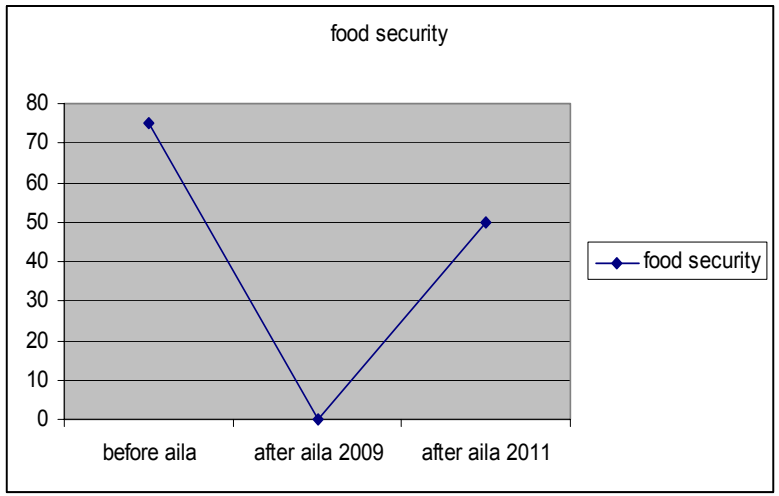
Introduction of this technology by RAKVK, Nimpith have contributed to the rural economy in general and *Aila* affected families in particular. This technology is providing the farm women a steady cash flow to sustain their livelihood. Ornamental bird rearing proves to be an alternative livelihood options for *Aila* affected zone of Sundarbans. This technology not only incorporate the womenfolk alone but also empower them by providing them a source of income with which they are able to meet up the basic need of their family in absence of their husbands due to migration. The womenfolk of *Aila* affected Sundarban were based mainly on prawn seed catching which not only was life risky but also did not provide enough support to sustain their regular needs. Thus this technology provides the farm women with a sustainable income vis-à-vis food security to their families. Besides, as the women were used to go outside their home keeping their children alone in home, sometimes the children were at risk where as this technological option provides the farm women to invest their time at their own home taking proper cares of their children. Even the life risk of the women folk of getting attacked by crocodile during prawn seed catching is also minimized along with retaining biodiversity. Now this technology is percolated to the remote island of Sundarban where this option is acting as intensification of livestock farming at homestead land so that any crop failure is being balanced by this additional enterprise. The effect of this technological option on women folk of the Sundarban Island is reflected through Table 2.

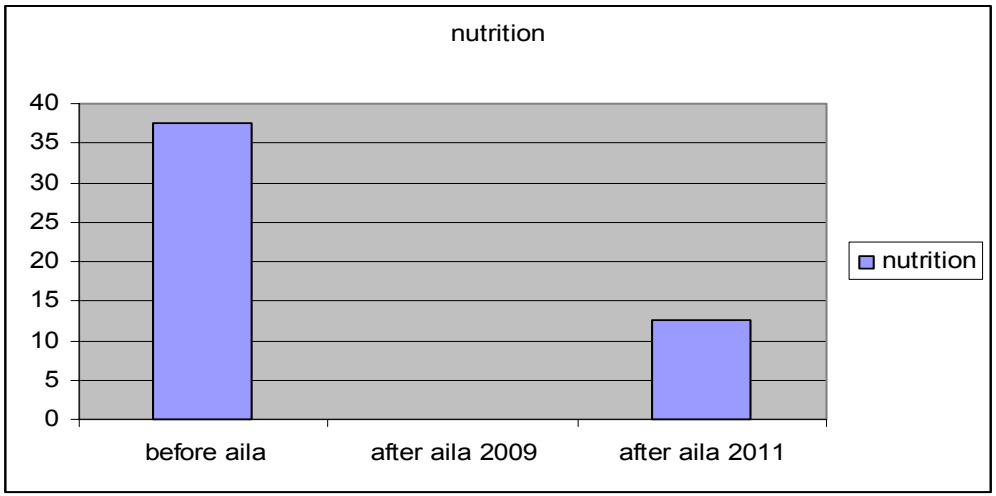
Category	Before *Aila*									After *Aila*									Year 2011							
Food security	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8
Nutrition																										
Burrowing from glossary shop																										
Migration																										

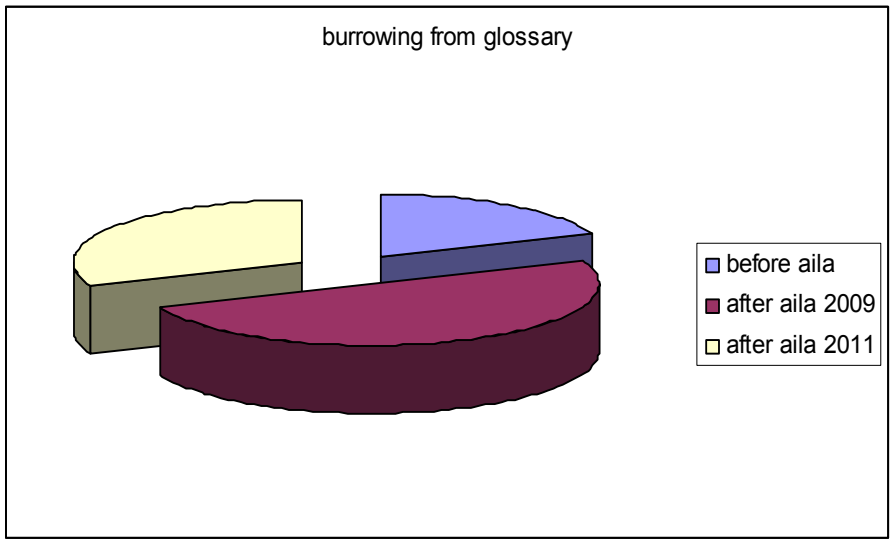
	Indicates ‘achieved’
	Indicates ‘not achieved’
	Indicates ‘magnitude of burrowing’
	Indicates ‘percent migration’

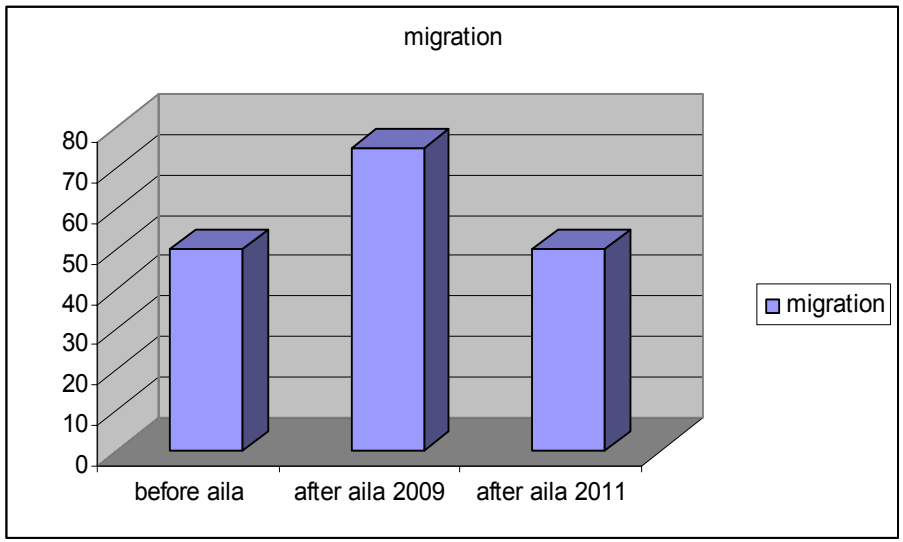
Table 2. Effect of Technological option on women folk (8 point scale)

Graphical representation of Effect of Technological option on women folk (8 point scale)









- **Marketing**

Initially, the island producers were used to sell their product at local market at main land. The price of the product was some time fixed by the middleman alone. Moreover, the rural women were to come to the distant mainland for marketing or had to depend upon some other persons which were the main difficulties for adopting this technology. Thus, RAKVK after intervention also developed a doorstep marketing channel (Figure 7) by which the women can sell their product form their home itself. Now this doorstep marketing is being provided to the farm women by involving the rural youth and educating them regarding the scientific transport and proper care during carrying. The rural youth in return getting remuneration for transporting this product, thus it is also providing a few rural youth a job opportunity.

Figure 7. Doorstep marketing of ornamental birds

- **Places & Addresses of Concerned contact person/farmer**

Sl. No.	Name of the farmer	Village	Block	Net income/ unit area (Rs)
1	Tapasi Mistry	Damkal	Mathurapur II	2500
2	Shyamali Sardar	Damkal	Mathurapur II	1800
3	Renuka Pramanik	Kaikhali	Kultali	1400
4	Basanti Mistry	Damkal	Mathurapur II	1400
5	Ganga Naskar	Damkal	Mathurapur II	1600
6	Kusum Naskar	Damkal	Mathurapur II	1800
7	Chandana Mistri	Damkal	Mathurapur II	2100
8	Sabitri Pramanik	Damkal	Mathurapur II	1400
9	Padma Mistry	Damkal	Mathurapur II	1600
10	Panchami sardar	Damkal	Mathurapur II	1800

3.8. Give details of innovative methodology or innovative technology of Transfer of Technology developed and used during the year

1) **Farmers Field School** – Eleven numbers of FFS have been organized for better adoption of Technology related to cotton cultivation in IPM and IRM modules

2) **Pest and Disease forecasting** by KVK website

3) Mobile **SMS alert** for Agri and allied Agri information

4) Culture of ornamental fish in net enclosures in village carp ponds & its **marketing** through KVK

5) **NGO-IDEAS tool box** for monitoring and impact assessment of nutrition security project.

3.9 Give details of indigenous technology practiced by the farmers in the KVK operational area which can be considered for technology development (in detail with suitable photographs)

S. No.	Crop / Enterprise	ITK Practiced	Purpose of ITK
1..	Ornamental fish rearing in open pond	Plastic crates (Two crates are tied together side by side) are used as a boat for nurturing the ornamental fishes daily when they are cultivated in the net enclosures within a open pond condition.	i) To supply the specific food to the ornamental fishes daily ii) To capture the ornamental fish from net enclosure iii) To move easily through on the water surface
2.	Horticultural crops	Spraying of fresh cow milk on high value vegetables and betle vine	To increase the reproductive growth as well as pest and disease mangeemnt of the crop
3.	Vegetables and paddy	Application of sugar in the soil as basal dose	To get better crop stand in saline soil
4.	Guava and water apple	Wrapping of fruits at immature stage by locally available polyethylene bag	i)To protect the fruit from the attack of fruitfly and birds ii)To improve the quality of the fruits
5.	Vegetables	Use of mustard oil with fertilizer-manure mixture as basal	To enhance the efficiency of plant nutrients and better crop growth

3.10 Indicate the specific training need analysis tools/methodology followed for

- Identification of courses for farmers/farm women
- Rural Youth
- In-service personnel

Applications are invited from the interested people through the farm science club or may be collected directly from the KVK. On receiving the application, structure questionnaires are given to the prospective trainees to fill up and submit the same to KVK. The applications are scrutinize by the respective disciplines and called for to appear in a semi-structure interview for final selection.

Participants are also selected by conducting PRA in villages where basing on their needs and problems, the interventions are made which quiet often points to training. Subsequently schedules of training programme are set according to seasonality and included in the KVK action plan for the particular year.

3.11 Field activities

i. Number of villages adopted : 13
ii. No. of farm families selected : 172
iii. No. of survey/PRA conducted: 5

3.12. Activities of Soil and Water Testing Laboratory

Status of establishment of Lab : Established

Year of establishment : 2004- 05

List of equipments purchased with amount : As follows -

Sl. No	Name of the Equipment	Qty.	Cost
1	Systronics Spectrophotometer (Model 167)	1	50518.00
2	Systronics pH meter (Model 335)	1	7458.00
3	Systronics Conductivity Bridge (Model 304)	1	9382.00
4	Flame Photometer (Model 128)	1	42339.00
5	Afcoset Electronic Balance(Model EK1200G)	1	16450.00
6	Afcoset Electronic Balance(Model ER 200A)	1	57000.00
7	REMI Centrifuge (Model R 23)	1	32950.00
8	Head of the REMI Centrifuge(Cat.R236)	1	16200.00
9	REMI Magnetic Stirrer (Model 1)	1	4200.00
10	REMI Magnetic Stirrer (Model 2)	1	4450.00
11	REMI Stirrer (Model RQ 121D)	1	4600.00
12	Refrigerator LG Brand - 20 lits	1	18000.00
13	Suction Pump PRECIVAC (Model DC 101)	1	19000.00
14	Silica Crucible 100 ml.	6	7500.00
15	Scientific Calculator FX	2	1700.00
16	Rubber Cork Borer	1	125.00
17	Thermometer 360^{o}C	4	360.00
18	Moisture Box	6	120.00
19	Stop Watch	1	1250.00
20	Mortar and Pestle (Wooden)	1	1700.00
21	Mortar and Pestle (Porcelain)	6	330.00
22	Filter Paper (Whatmann)	10	15000.00
23	Sieve	6	2100.00
24	Hand Vacuum Pump (Tarson)	1	4368.00
25	Almirah	1	27000.00
26	Double Glass Distillation Apparatus- 5 lits	3	18875.00
27	Barnstead Type Distillation – Table model	1	12000.00
28	Stokes Type Wall Hanging Distillation	1	4500.00
29	Micro Kjeldhal Digestion Apparatus	1	6000.00
30	Micro Digestion Apparatus (Mantle Heaters)	1	9500.00
31	Micro Distillation Unit – Improved-Wagner	1	7000.00
32	Micro Distillation Set (with S.S. Tank)	1	12000.00
33	Kjeldhal Flask of BOROSIL	18	8100.00
34	Kjeldhal Flask Head	6	1500.00
35	Blower for Kjeldhal Flask of BOROSIL	2	6000.00
36	Mechanical Shaker	1	17000.00
37	Oven (Digital controller)	1	15600.00
38	Raymond Mill	1	19000.00
39	Muffle Furnace (Upto 1200^{o}C)	1	19000.00
40	High Precision Water Bath-12”X10”X8”	1	12000.00
41	Hot Plate 12”X10”	1	2000.00
42	C.V.T. Input – 2 KVA	1	4650.00
43	C.V.T. – 5 KVA	1	7200.00
44	Filtering Flask – 250 ml Borosil	6	1494.00
45	Filtering Flask – 500 ml Borosil	6	1872.00
46	Burette - 50 ml Borosil	6	2742.00
47	Burette – 10 ml Borosil	2	828.00
48	Rubber Cork	100	300.00
49	Weight Box – 1 set	1 set	750.00
50	Platinum Crucible - 20—25 ml	1	68146.00
	Total	-	**6,02,157.00**

3.12 Details of samples analyzed so far:

Year	Details	No. of Samples	No. of Farmers	No. of Villages	Amount realized (Rs.)
2004-05	Soil Samples	1175	872	74	23500.00
	Water Sample	240	213	41	2400.00
	Total	1415	1085	115	25900.00

Year	Details	No. of Samples	No. of Farmers	No. of Villages	Amount realized (Rs.)
2005-06	Soil Samples	678	512	42	20340.00
	Water Sample	61	53	27	610.00
	Total	739	565	69	20950.00

Year	Details	No. of Samples	No. of Farmers	No. of Villages	Amount realized (Rs.)
2006-07	Soil Samples	2270	1984	114	113500.00
	Water Sample	115	89	48	1150.00
	Total	2385	2073	162	114650.00

Year	Details	No. of Samples	No. of Farmers	No. of Villages	Amount realized (Rs.)
2007-08	Soil Samples	1297	1158	67	64850.00
	Water Sample	148	141	54	1480.00
	Total	1445	1299	121	66330.00

Year	Details	No. of Samples	No. of Farmers	No. of Villages	Amount realized (Rs.)
2008-09	Soil Samples	828	723	59	41400.00
	Water Sample	171	151	47	1710.00
	Total	999	874	106	43110.00

Year	Details	No. of Samples	No. of Farmers	No. of Villages	Amount realized (Rs.)
2009-10	Soil Samples	562	450	200	28100.00
	Water Sample	125	120	67	1250.00
	Total	687	570	267	29350.00

Year	Details	No. of Samples	No. of Farmers	No. of Villages	Amount realized (Rs.)
2010-11	Soil Samples	795	512	153	47700
	Water Sample	638	465	102	9570
	Total	1433	987	255	57270

N.B. Soil sample analysis rate - Rs.60/- per sample
Water sample analysis rate – Rs.15/- per sample

3.13 Activities of rain water harvesting structure and micro irrigation system

No of training programme	No of demonstrations	No of plant material produced	Visit by the farmers	Visit by the officials
4	124	15130	1693	6

3.14 Technology week celebration

Type of activities	No of activities	Number of participants	Related crop/livestock technology
Ornamental fish farming – a promising avenue for entrepreneurship development.	1	1450	Ornamental fish breeding, cultivation and marketting

3.15 RAWE programme is KVK involved? Yes

No of student/ARS trained	No of days stayed
6 ARS for Field Experience Training.	23

3.16 NICRA Project

Programme implemented	No of village covered	No of beneficiary covered	Amount of fund received	Amount of fund utilized
1	1	115	Rs. 30.25 lakh	Rs.6.536 lakh

3.17 List of visitors including the officials of ZPD and DEE

Date	Name of the person	Purpose of visit
12.06.10-14.06.10	**Dr. A. Barik, Director, DOCD, Mumbai**	**NALMOT, TOF**
12.01.11	**Mr. Joykrishna Halder, MLA, Kultali**	**Discussion for organizing a rural krishi mela**
19.06.10	Dr.M.C.Diwakar, Director, Directorate of Rice Development, Patna	To assess and evaluate the possibilities of submerged and salinity tolerant varieties of rice in the sundarban situation.
29.12.2010	Dr. A. K. Singh, DDG(NRM), ICAR, New Delhi	Assessment of NAIP activities
	Dr. A. K. Singh, ZPD, Zone-II, ICAR, Kolkata	Assessment of NAIP activities
	Dr. A. K. Bandopadhyay, Eminent Scientist and Chairperson, Consortium Advisory Committee, NAIP	Assessment of NAIP activities
10.09.10	Dr. B.K.Bandopadhyay, Principal Scientist. CSSRI, Canning	**SAC**
	Dr. Archana Sinha, Principal Scientist, CIFE	
	Ajay Kumar Dewanji, Field Officer, ZPD, Zone-II, Kolkata	
	Bhesina Ranjan Biswas, Asst. Director, ARD, (SA), S-24 Parganas	
	Prabal Kumar Sarkar, Dy. Manager, State Bank of India, Nimpith	
13.02.11	**Dr.** Archana Sinha, CIFE, Kolkata Centre	**Project assessment**
25.03.2011	**Dr.** Arup Kr. Bandopadhyay, DEE, BCKV	**SAC**
	Dr. S. K. Roy, Sr. Scientist, ZPD, Zone-II, ICAR	
	Dr. M. S. Basu, Former Director of Groundnut Research, ICAR, Junagadh	
	Mr. A. K. Lahiri, Dy. Director of Agriculture (Admn.), South 24-Pgs	
	Mr. Chandan Paul, Asst. Director of Agriculture(Fertilizer), South 24-Pgs	
	Dr. Santanu Saha, V.O., BAHE, Jay-II	

4.0 IMPACT

4.1. Impact of KVK activities (Not to be restricted for reporting period).

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in Income	
			Before (Rs./ unit)	After (Rs. / unit)
Establishment, maintenance and management of nursery (0.007 ha)	23	42	Not practiced	4780
Entrepreneurship development among womenfolk : 1. Preparation of preserved food from locally available vegetables	50	33.33	Not practiced	1200/ month
Formation and strengthening of S.H.G. : 1. Leadership development among the womenfolk of Sundarbans	21	85.71	-	-
2. Psychological empowerment of members of S.H.G.	50	50.00	-	-
Formation and strengthening of S.H.G. : 1. Formation of S.H.G.	135	92.59	-	-
2. Methodology of Formation and strengthening of S.H.G.	65	53.85	-	-
Plant protection measures against major insect pest and diseases of some vegetable crops by giving more emphasis on integrated approach (0.13 ha)	375	40	4300	6700
Self employment generation in agriculture by Farm Advisory Service regarding plant protection of field crops (0.13 ha)	245	53.06	Not practiced	1500
Use of bio-pesticides in agriculture (0.13 ha)	110	50.00	Not practiced	1150
Ornamental fish rearing	150	40	Not practiced	1500/Month
Ornamental bird rearing	90	30	Not practiced	2000/Month
Paddy cultivation through SRI method	60	30	Not practiced	1250/bigha
Insecticide Resistance Management of cotton pests	160	70	112	1025/ha

NB: Should be based on actual study, questionnaire/group discussion etc. with ex-participants.

4.2. Cases of large scale adoption
(Please furnish detailed information for each case)

i) Sunflower cultivation as a programme of crop diversification:

In early 90's the sunflower cultivation was started in few patches of Sundarbans not for commercial purpose but only for homestead consumtion. KVK as a part of crop diversification programme, conducted on farm trial to find out suitable variety as well as the location specific crop management practices. It can be observed that due to nonavailability of appropriate technology and variety for this region, the sunflower cultivation got no popularity in that time. During the course of study with sunflower, a number of varities with its package of practices are developed by KVK and also demonstrated in FLD programme. As sunflower withstand little bit of salinity it opens the door to be a important second crop in rice fallos of Sundarbans. Observing the production potential of this crop, KVK approached to Sundarban Development Board, GOWB with the full basket of technology of sunflower cultivation to be demonstrated in rice fallows as a large scale basis. Now-adays, it gains a good popularity and more than 10,000 ha has come under sunflower cultivation. For further observation in regards to area specific technology and varietal development, KVK has been running AICRP on sunflower with the active participation and guiadance from DOR, Hyderabad.

ii) Low cost poly house:

In sundarban regions, most of the rainfall receives within the span of 3-4 months during rainy season which ultimately causes a huge trouble for the vegetable growers to obtain quality seedlings in proper time and space. The farmers are to depend on other seedling growers to cultivate vegetable crops in their field. Again, there is no big green house like structures in Sundarbans due to frequent cyclonic storm which, in tern, aggravates the problem of obtaining the planting materials. In this situation, KVK demonstrated the low cost poly house structures in the farmers' homestead land where the farmers can grow their seedlings in time avoiding the loss of seedlings by huge rainfall. More than 100 units of such poly houses have ben demonstrated in different blocks of Sundarbans receiving the find from department of FPI & H, Govt. of West Bengal. At present the community approach has been taken by SHGs to develop medium cost poly green house for production of quality seedlings in one hand and high value vegetable crops in other hand

iii) Ornamental fish cultivation in pond ecosystem:

Ornamental fish farming is as an avenue for economic empowerment of the rural folk of South 24-Parganas district. In South 24-Parganas, there is a huge scope in aquaculture. The maximum farmers have one or more than one fresh water pond. In this pond, they used to practice common carp culture without following scientific method. As a result, the productivity of the carp pond is less. In this situation to increase the profitability from the pond, there is a scope by introducing ornamental fish culture.

Previously, there was a taboo for ornamental fish cultivation that it will only be possible in the glass aquarium because it requires special attention. But Ramkrishna Ashram Krishi Vigyan Kendra (RAKVK) has proved that it can be done easily in the same carp culture pond without hampering the existing carp culture practice. Nevertheless, it can be practiced in monoculture & ornamental fish in net enclosure with carp in pond system by using natural food as available in the locality. After 2-3 months of rearing it is ready for market. At present, more than 600 nos. of households are practicing ornamental fish cultivation in their homestead ponds.

However, the main constrain for popularization of ornamental fish is marketing, but RAKVK has made an innovative approach by bringing together the growers and the buyers where an agreement was reached that the buyer will put up a price for the sample and if the grower agree to the price they will bring their produce in large quantities and stock in the tanks of KVK and thus buyer take up the seeds by oxygen packing. In this way, the middleman is avoided so that, the farmers will get a lucrative price for their produce.

The buyers who have so far participated in this network are CRM Services, Kolkata; NEO International, North 24-Parganas etc. These buyers send the fish to different cities of other states, like Pune, Chennai, Bangalore etc. The further strengthening of this network is under process.

iv) Ail cultivation and aerial cultivation:

The KVK refined technology i.e. cultivation on land embankment (**Ail**) and on pond water by spreading the net on the pond has now been established as a boon for vegetable and vine crop cultivation in the South 24-Parganas district. Here the land embankment is raised upto 3 feet with a width of 3 feet which will be considered for the place of vegetable cultivation during kharif season where the surrounding land becomes submerged for heavy down pour. Again, during rabi season, by providing can irrigation one can opt for cole crops or early vegetable cultivation where the optimum moisture condition comes earlier than the surrounding fields, helping the farmers to fetch high market price of their produce. **This type of cultivation is going on more than 600 running ha in this district**. The spread of the technology has come of within the span of 5 to 10 years.

v) Rain water harvesting through land shaping programme:

68% of the agricultural land of South 24-Pargasnas district is low lying where only deep water traditional variety of paddy is grown during kharif season and makes the land mono-cropped in nature. KVK developed **3 models of land shaping** technology considering the small land holding capacity of the farmers. This technology was first demonstrated in two villages of Joynagar-II Block in the early 80's but the technology has been accepted by the farmers in such a manner which has been percolated in the adopted and non adopted villages of **more than 13 blocks of South 24-Parganas and 6 blocks of North 24-Parganas. The Sundarban Development Board has sanctioned Rs. 20 crore** which has been distributed among the different NGOs of the two districts for disseminating the technology at remotest village level. All the training programmes regarding the crop pattern, effective water utilization and other package of practices including the engineering procedures to be followed during excavation of pond has been imparted by the KVK scientists.

vi) **Nursery raising under the poly tunnel:**

As the district receives high rainfall (more than 1500 mm) during the span of 2 to 3 months in kharif season, it seems to be very difficult to raise seedlings of vegetables and other crops under the open sky. KVK demonstrated the technology i.e**. nursery raising** under the poly tunnel in the adopted villages, which has not only been well percolated by the farmers of the different non adopted villages but also by the rural youths to become an entrepreneur. In this year, the **National Horticultural Mission** has sanctioned a project to the KVK for disseminating this technology in the remote island villages not only for raising the seedlings but also for cultivation of **high value crops** with the provision of good marketing opportunity.

vii) Broiler farming:

The rural youth and farm women are very much interested in this enterprise. Accordingly our KVK scientists imparted long term training programme (24 days) to the RY and FW where the adoption rate is more than 60%. From the impact analysis, it has been observed that the **one unit started with only 100 birds, now has been increased to 1000 or more birds which provide a flexible financial support to the family and makes the women as an economic partner of the family**.

viii) Fish farming:

The KVK developed technology on **"Nursery culture of carp spawn" and "Mixed culture of fish and prawn"** have been well adopted by the fish growers of South 24-Parganas and North 24-Parganas districts. The group members of **SHGs a**nd **SGSY** have undergone long term training programme in this respect in the KVK campus and are practicing the technology not only in his/her own ponds but also in the leased ponds and tanks. From sustainable point of view and entrepreneurship development, these two technologies are very much important in this coastal agro-climatic zone.

ix) Homestead nutrition garden and food habit:

Raising of homestead nutrition garden is an age old practice in South 24-Parganas district. But the **crop pattern developed** by KVK scientists in Sundarbans perspective with a view to addressing the problem on "Nutritional security" has been well adopted by the farm women. The **nutrient rich leafy vegetables and vegetables** have been incorporated in the nutrition garden along with inculcation of the **knowledge in cooking** process for minimizing the loss of nutrients from the cooked food. Besides, the nutrient **rich food for lactating and pregnant mother and low cost protein rich weaning food for children has been formulated by the KVK scientists with the local ingredients available which has been demonstrated by the Mother and Child Care Programme.**

x) Cotton cultivation:

KVK since inception tried to **increase the cropping intensity** of the South 24-Parganas district by utilizing the rice-fallows during rabi-summer season. Scarcity of irrigation water accentuated with soil salinity makes the agriculture ill developed and no agriculture during this season. KVK tried to incorporate such a crop which requires less irrigation or no irrigation and can withstand little bit saline problem. Lot of trials and experiments on cotton crop has shown a light of hope which can tolerate and well acquainted with the situation in this district. It was started in the late eighteen centuries and several experiments on "**Selecting suitable variety, proper INM and IPM practices**, and the crop proves itself to be a one of the important second cash crop of Sundarbans during rabi-summer season. **It provides the poor farmers to earn money during severe agricultural slack season which not only helps to maintain the livelihood but also lowers the migration rate from 30% to 8% in the KVK adopted villages**. From the last few years with the financial assistance from the Sundarbans Development Board and Department of Agriculture, Govt. of West Bengal through TMC on the Mini Mission-II on cotton, the large scale demonstration covering the area 12,500 ha is being continuing.

To mitigate the marketing problem of the produce, **KVK has established a good marketing channel with the provision of godown & state of the art ginning machine** in collaboration with CCI, Kolkata for **door step marketing facilities** without any interference of middlemen. From this year, **KVK- Agrocel Cotton Grower Association** has been established covering 1,000 cotton farmers to incorporate in **the Fair Trade cotton procurement system. Organic cotton** cultivation and the production of end product have been taken serious consideration by the KVK scientists associating with Roots and Yards Company, Kolkata-700 090.

Not only in the district of South 24-Parganas but also the red lateritic zone covering 5 districts of West Bengal, the Agriculture Department, Govt., of West Bengal has given thrust on cotton cultivation during kharif season for which the technical expertise are given to the ADO and KPS of the respective districts by the KVK scientists. For this purpose, State Govt. is pleased to **conduct Training of Facilitator (TOF) for 150 days** in the KVK premises with the help of SRF and other technical staff. So in a nutshell the technology so far developed and generated by KVK Nimpith has been well accepted

4.3 Details of impact analysis of KVK activities carried out during the reporting period

CHANGES IN QUALITY OF LIFE IN ADOPTED VILLAGES AS EVOLVED DURING IMPACT ASSESSMENT

Indicator	15 years before	Present situation	Reason for changes
1. Agricultural development	Lack of suitable Agril. Tech. Use of country plough and inferior quality of seed etc. was common.	Increased use of modern Agril. Technology - multiple cropping approach, ail cultivation, aerial cultivation, introduction of second crop, use of IPM favourable chemical pesticides in vegetables.	Agricultural training, Demonstration and availability of improved seed and adoption of modern Agril. Technology.
2. Drudgery reduction	De-husking of paddy by indigenous method and preparation of spices for cooking purpose along with assistance in agricultural activities.	De-husking of paddy by using machine, availability of agricultural implements and use of spices making machine has reduced drudgery among women.	Agricultural implements like husking & spice dusting machine etc. installed in the village. Awareness and demonstration of drudgery reducing agricultural equipments.
3. Incurred expenditure according to own choice of women	Approach to their guardian for money in order to fulfill their requirement.	Able to incur expenditure to meet their own requirement.	Earning of money from selling the produce by rearing domestic animals, and other agricultural produces and handicrafts.
4. Proper care during pregnancy	Unaware about nutrition during pregnancy and delivery with the help of untrained 'Dai'(traditional birth attendant)	Sufficient intake of nutritional food and delivery with the help of registered. Doctor and trained Dai.	Proper consultation with doctor which is made available in Ashram sponsored health camp and Govt. health sub-centre. Change of motives both in mother and family members. Preparation of nutrition garden.
5. Cooking facility	Lack of sufficient fuel	Sufficient fuel being available	Plantation of fuel wood in homestead land & dry stick of cotton
6. Changes in food habit	Unable to have square meal for two times a day. Uptake of broken rice and less vegetables when available.	Able to arrange square meal along with some nutritious food including good quality rice and nutrient rich vegetables, egg, fish.	Improved economic condition due to improved agriculture – like double and multiple cropping, improved cropping pattern of nutritional garden and rearing of domestic animal, fish etc.
7.Entertain-ment	Lack of entertainment facility	Entertainment facility – like radio, TV, VCD etc. available	Time for entertainment possible due to reduced migration rate because of increased cropping intensity. Established of Farm Science Club (FSC).
8.Clothings	Use of mostly low quality dhuti and saree and concept of footwear was low.	Use of improved terry-cotton clothings and shoes.	Development of agriculture and allied agriculture leading to increased income and modernization.

Indicator	15 years before	Present situation	Reason for changes
9.Migration	Male members from most of the families were involved in earth works, brick field and worked as labourers in Howrah, Hooghly and North 24-Parganas district.	Most of the families are involved in agriculture, livestock and fisheries in their own village	Dissemination and adoption of need based area specific technology with more work opportunities. Self-help group formation.
10.Increased vegetable cultivation	Few ladies finger, chilli and pumpkin cultivation for domestic use only.	Besides domestic use, for additional income, extensive cultivation of beans, hybrid tomato, cabbage, cauliflower, chilli, bitter gourd, brinjal, cowpea, ladies finger on land shaping plots and on land and pond embankment.	Due to training imparted on improved agro and bio-technology and availability of good quality seeds and increased market demand of vegetables and communication facilities.

4.5 Details of innovations recorded by the KVK

A. Innovation of puffed paddy cleaning machine:

Name of the innovator: Shri Sukumar Mondal
Address: Vill. Tulsighata, P.O. Nimpith Ashram, Dist. South 24-Parganas, West Bengal
Contact No. 9433553359

Identified by: Ramkrishna Ashram KVK, Nimpith, South 24-Parganas, W.B.

Traditional method:

- Paddy husk is separated manually to prepare clean puffed paddy, the main ingredient of "Jaynagarer Moya".
- This is traditionally done using bamboo sieve having 2 mm mesh size.
- Uncleaned puffed paddy, after air cooling for 5-6 hours, is placed in bamboo sieve and rubbed thoroughly by hands.
- One man-day is required to clean 200 kgs. of uncleaned puffed paddy.
- About 135 kgs. of cleaned puffed paddy is produced from 200 kgs.
- Huge strain is felt on biceps and triceps muscles.
- Minor and even major wounds on hands are often noticed.
- Bending of waist imparts huge strain and even creates spondylitis.
- Monotony in work as well as dust allergy is also major problem in this process.
- About Rs. 150/- is required for getting 135 kgs. of cleaned puffed paddy.

Innovation:

- A machine has been prepared to clean puffed paddy with a quick and cost effective manner.
- The principle of paddy husking machine (Holler) has been used to prepare it.
- 1 HP electric motor is used to run the machine.
- Uncleaned puffed paddy is poured into the funnel of the machine which is larger than the traditional paddy husking machine.
- The uncleaned puffed paddy is then allowed from the funnel to one end of a rotating wooden shaft which is 195 cm. long and 8 cm in diameter. A spiral rubber band (car window glass holder) has been fixed upon the wooden shaft. The spiral is so fitted that for one circle of rotation it becomes 10 cm wide.
- A drum of galvanized iron wire net having 2 mm. mesh size is fitted over the rotating shaft. The diameter of this drum is 17.5 cm. This drum acts as sieve.
- It takes 80 minutes to clean 200 kgs of uncleaned puffed paddy for production of 135 kgs. of clean puffed paddy.
- For running the machine for 80 minutes, 8 units of electricity is consumed costing about Rs. 42/- including depreciation cost.
- It reduces drudgery and there are no health hazards.
- More output is obtained within a short period, thus improving productivity of the puffed paddy industry.

B. Innovation of Mushroom Cultivation
Name of innovator : Partho Sarathi Ghosh
Address : Village – Sahajadapur
P.O - Dakshin Bijaynogar P.S – Jaynagar
Dist. – South 24 - Parganas
Identified by : Ramkrishna Ashram Krishi Vigyan Kendra, Nimpith

Component		Traditional Method	Innovative Method
Infrastructure		Small plastic bag placed upon bamboo rack In a room of 10ft X 10ft, 162 no of bags are accommodated.	Iron frame of 10'' hight and 12'' diameter having 4ft long perforated plastic pipe (4'' dia) inserted into the centre stand of iron frame. In a room of 10ft X 10ft, 50 nos. of frame can be accommodated.
Raw materials	Structural element	12 nos. bamboo for a 10ft X 10ft room 2kg snails of 3inchs	Iron stand fitted with 4 ft long plastic pipe
	Straw	1kg/bag = 162 kg	8Kg/frame x 50 frames = 400 kg

Component		Traditional Method	Innovative Method
Raw materials	Spawn	100g/bag = 16 kg 200 gm 162 packets (1 Kg straw capacity)(<20 micron)	800gm/frame x 50 frames = 40 kg 50 sheeets (8 ft x22 inchs) (<20 micron)
	Plastic bag		
Harvesting from one time culture		Twice	Thrice
Longivity of Structural element		6 years for rack	10 years for iron stand
Time requirement for set up preparation		24 hrs.18 mins. (@9mins/kg)	20 hrs. (@ 3mins/kg)
Yield		650g per bag for first phase and 350g per bag in 2nd phase. Total 162 kg from 10ft X 10ft room in two month.	5 kg per stand for 1st harvest, 3kg per stand for second harvest and 1kg per stand for 3rd harvest (total 450kg per room in two month)
Watering		2 times/ day (8 lit of water)	2 times/ day (5 lit of water)
Cost	Structural element	Rs. 1440.00/- (@Rs.120/ bamboo) For 2kg snails= Rs.120.00/- (@Rs.60/Kg.) Total= Rs. 1560.00/-	For 50 frames = Rs.10,000.00/- (@Rs.200/frame)
	Straw	For 162kg = Rs. 1296.00/- (@Rs.8/ Kg)	For 400 Kg. = Rs. 3200.00/- (@ Rs.8/Kg.)
	Spawn	For 16 kg 200 gm = Rs. 972.00/- (@ Rs.60/kg)	For 40 Kg. = Rs. 2400.00/- (@ Rs.60/kg)
	Plastic bag	For 162 bags = Rs. 324.00/- (@Rs.2/ bag)	For 50 frames = Rs. 750.00/- (@Rs. 15/ bag)
	Labour	6 Heads x 8 Hrs @ Rs.150 = Rs.7200.00/-	5 Heads x 8 Hrs. @ Rs.150 = Rs.6000.00/-
	Other	Rs.150.00/-	Rs. 600.00 /-
Gross Cost		Rs. 9942.00/- + (15 % depreciation cost)= Rs .10176.00/-	Rs .12950+ (15 % depreciation cost)= Rs . 14450.00/-
Gross return		Rs .70.00 x 162 kg = Rs.11340.00 /-	Rs. 70.00 x 450 kg = 31500.00 /-
Benefit cost ratio		1.11	2.17

C. Innovation on Catching of indigenous fish species from natural water bodies by different improvised trapping gears

Profile of farmer:

(a) Name and address Sri Ratan Kumar Chatui
Vill – Kultali, P.O.- Paschim Kultali,
Block – Mathurapur – II, South 24 Parganas

(b) Phone number 9733941845

(c) Age (as on March 31, 2010) 54 years

(d) Educational qualification Class X standard (Madhyamik)

(e) Land holding (in ha) Land - 2.4ha, Pond-1.47ha

(f) Farming experience (in years) 34 years

(g) Name of crops/livestock/other enterprises -

i)Agronomical- Traditional & high yielding paddy, sunflower, moong

ii)Horticultural- Potato, onion, Chilli, tomato, French bean, bitter gourd, bottle gourd, snake gourd, Ridge gourd, elephants foot yam, colocasia, tamarind, amaranthus, basella, cow pea, papaya, okra, cucumber

iii)Fishery - Indian major carps, minor carps, indigenous fish, giant freshwater prawn

iv)Livestock- Cow, goat, poultry

(h) Social recognition -

i)President of the Radhakantapur Watershed Association under NWDPRA project run by the KVK

ii)Received certificate and medal from CIFE, Kolkata on 10.07.08 for his outstanding contribution in the field of integrated fish culture

Description of innovation :

The lowlands, marshes, creeks, canals and crevices of Sundarbans in the South 24 Parganas district of West Bengal houses a huge variety of indigenous fish species. These fish also enters into the carp culture ponds and other aquatic impoundments during the rainy season. Being natural to these habitats, these fish breeds and multiply and because of the plentiful food in these areas, they grow lavishly. Such fishes are a source of cheap nutrition and income for the the local villagers. Different types of improvised traps, mostly of split bamboo, are used to catch these wild fishes.

These traps are fixed in the path of the fishes along the creeks and canals or at the confluence of paddy fields/lowlands and ditches. Normally, the trap consists of a split bamboo cage placed at the middle of two split bamboo frames or nylon net frames .The entire structure is fixed in the waterway so that it appears as an **extended 'V' or 'W'** with the cage at the tapering end/ends. The rectangular cage is prepared in such a way that the **opening is very broad** and it **gradually tapers towards the inside.** The entrance is also kept elastic so that the fish can force its way inside. But, once inside, the trapped fish cannot escape.

D. Innovation on Alternative Approach of Sapota Propagation: A District Innovation

Name of innovator : Harulal Mondal

Address : Village & P.O – Srikrishnapur

P.S – Amtala

Dist. – South 24 - Parganas

Identified by : Ramkrishna Ashram Krishi Vigyan Kendra, Nimpith

Innovation of a new approach

In the traditional practice of inarch grafting, a rootstock (*Khirni* seedling in mudball) is taken nearer to scion (pencil thickness branch of Sapota mother plant) by tying the rootstock to the side branches of the mother plant with jute string. Thus, the stock seedling (*Khirni* seedling in mudball) hangs from the mother plant. Stem of both stock and scion are longitudinally cut half upto a length of 2 inches. After that, the cut surfaces are placed side by side and they are tied tightly with cotton string. After about a month, the graft union becomes completely developed. The newly developed grafted plant is separated from the mother plant by cutting the basal end of the scion. Then, by cutting the jute string tie, the plant is taken out from the mother plant and placed in the soil in a moist shady place for further nourishment.

About 10 years back, after a heavy cyclone, few Sapota plants fallen down over the ground in the Srikrishnapur village of Bishnupur block. One of the trees was so large that it was impossible to erect the plant again. The plant remained lying for several months. At that time one Sapota grafter thinked that, this plant will be very helpful in making grafts, as pencil thickness scion branches are nearer to the ground, so it would not need to hang the rootstock (*Khirni* seedling) upon the tree. Hanging a rootstock (in mudball) on a large and high tree not only labour intensive, but it involves further cost for watering the mudball of the rootstock also. The laid Sapota plant would completely nullify these problems. Thus, in this approach, around 2000 to 2500 nos. of grafts were prepared from one single plant in one season.

Making an inarch graft in a fallen tree

Observing the ease of making graft in this technology, several grafters became very enthusiastic about this method. They started felling Sapota tree artificially / mechanically by digging one side of the plant, and by cutting few roots. After felling the tree, *Khirni* seedlings (in mud ball) are placed on the soil, side by side to the pencil thickness branches of sapota mother plant. Then, the mudball of *Khirni* seedlings are placed within the soil by making small holes. In this way, one grafter in a day can make 250 to 300 nos. of graft unions. After removal of graft unions, the mother plants are erected and good nourishment with nutritional management and pesticidal management is provided. After about 3 to 4 months of nourishment, the same tree is again fallen down in the opposite side of the previous one. Thus from a single plant, two cycles of grafting is completed in a year.

4.6 Details of entrepreneurship development by the KVK

a) Name of the enterpreneure: Milan Sinha

Address	: Vill-Dakshin Bijoynagar, P.O. Nimpith, South 24 Parganas, 743338
Enterprise	: Commercial catfish breeding and marketing
Yearly turn over	: 2.70 lakh /annum
Employment generation	: Permanent-2, Casual: 6
Contact No.	: 9475272374

b) Name of the enterpreneure: Rajjack Molla

Address	: Vill-2 no. Bhubankhali, P.O. Bhubankhali, South 24 Parganas, 743338
Enterprise	: Commercial vegetable and forestry nursery
Yearly turn over	: 6.3 lakh /annum
Employment generation	: Permanent-3, Casual: 10
Contact No.	: 9933816449

c) Name of the enterpreneure: Santanu Kayal

Address	: Vill-Amira, P.O. Amira, South 24 Parganas, 743338
Enterprise	: Commercial fruits, flower and ornamental plant nursery
Yearly turn over	: 2.5 lakh /annum
Employment generation	: Permanent-1, Casual: 5
Contact No.	: 9831506023

d)) Name of the enterpreneure: Debal Mondal

Address	: Vill-Gilerchat, P.O. Radhakantapur, South 24 Parganas, 743338
Enterprise	: Integrated farming (Agriculture + Fishery)
Yearly turn over	: 1.5 lakh /annum
Employment generation	: Casual: 140
Contact No.	: 9933653208

4.7 Any other initiative taken by the KVK

a) Initiative for the formation of Fishermen Co-operative Society by KVK trained farmers Recently, four rural youths from the *"aila"* affected villages of Sankijahan and Katamari in Kultali block received training on fish culture technologies in December, 2010. Thereafter, they took initiative to start fish culture in their villages which primarily depended on horticultural vocations. Watching them do well in fish culture more and more people from the area took interest in this vocation. The youths themselves took initiative to train these villagers where they invited the KVK fishery expert to oversee their performance. Then they thought of forming a fishermen cooperative and asked the fishery expert to give a name to their cooperative and all agreed upon the name- Sankijahan Katamari Dwip Sikha Fishermen Cooperative Society. They had already applied for registration of their society which they hope to receive within a short time

4.8 Area not covered by the above or constraints or new proposal for XII plan

(a) Administrative- Nil

(b) Financial- Nil

(c) Technical-

1) **As the district is** having diversified agro-climatic micro situation, area specific data base is required.

2) Regarding long term training programme, it is too difficult to impart because of the prior engagement of the participants in some sorts of activity like tuition, agriculture field etc.

3) Long term training programme for farm women can not be organized due to their intensive involvement in agricultural field and house hold activities

4) To organize drudgery reducing programme KVK should have the facility of improved farm implements for which fund should be provided from ICAR

5) To update technical knowledge of SMSs, provision should have been made for attainding subject oriented summer or winter school and exposure visit to different ICAR institutes.

5.0 LINKAGES

5.1 Functional linkage with different organizations

	Name of organization	Nature of linkage
1)	District Rural Development Cell, North- 24 Parganas, WB	Training
2)	Deptt. Of Agril, GOWB, (ADO Training)	
3)	Deptt. Of Agril., GOWB (NWDPRA)	
4)	WWF- India Sundarbans Programme	
5)	Lutheran World Service(India), Raidighi	
6)	Deptt. Of Agril., GOWB (State level training on cotton)	
7)	Deptt. Of Agril, GOWB, (Agril. Mechanization training)	
8)	University of Calcutta, West Bengal	
9)	University of Kalyani, Kalyani, Nadia, West Bengal	
10)	National Fisheries Development Board, Hyderabad	
11)	Central Institute of Fisheries Education, Salt Lake, Kolkata	
12)	SDB, GOWB	
13)	Vivekananda College, Kolkata	
14)	ATMA, Howrah	
15)	ATC & SAMETI, Narendrapur	
1)	ATMA, South 24 Parganas (SREP & AE survey)	Joint Survey
2)	Irrigation Deptt., GOWB (Formation of water users association-WUA and preparation of micro plan of centrally sponsored pilot project for South 24 Parganas on repair, renovation & restoration of water bodies)	
1)	TMC MM-II, DOCD, GOI (Cotton)	Demonstration
2)	SDB, GOWB (Cotton Cultivation)	
3)	CICR, Nagpur (IRM)	
4)	Advanta, Excel Crop Care Ltd.	
5)	National Horticulture Mission, Mayukh Bhavan, Salt Lake, Kolkata, West Bengal	
7)	SDB, Agril. Deptt. GOWB (FLD on IPM)	
8)	National Fisheries Development Board, Hyderabad	
9)	District Horticulture Office, Alipur, South 24 Parganas	
10)	Directorate of Oilseed Research, Hyderabad	
1)	Institute of Animal Health and Veterinary Biologicals, Kolkata, West Bengal	Joint diagnostic survey
2)	West Bengal University of Animal & Fishery Sciences, Kolkata, West Bengal	
3)	Regional Disease Diagnostic Laboratory, IVRI, Kolkata	
1)	National food security mission	Participation in meeting
2)	Directorate of Extension, BCKV, Mohanpur, Nadia	
1)	Sundarban Milk Union Limited, South 24 – Parganas	Collaborative programmes
2)	Central Institute of Fisheries Education, Salt Lake, Kolkata & Versova, Mumbai	
3)	Vivekananda College, Kolkata	
4)	BARC, Trombay	
5)	DD, ARD & PO, South 24- Parganas	
1)	Cotton Corporation of India (CCI), Kolkata	Marketing of farm produce
2)	CRM Services, Kolkata	
3)	Colour Zone, Ashoknagar, North- 24 Pgs	

NB: The nature of linkage should be indicated in terms of joint diagnostic survey, joint implementation, participation in meeting, contribution received for infrastructural development, conducting training programmes and demonstration or any other

5.2 List special programmes undertaken by the KVK, which have been financed by ATMA/ Central Govt./ State Govt./NHM/NFDB/Other Agencies

Name of the scheme	Purpose of programme	Date/ Month of initiation	Funding agency	Amount (Rs.) for the year 2010-11 (in Lakh)
Cotton promotion programme under TMC, MM-II through State Government	Utilization of aman rice fallow land through rainfed cotton cultivation	October, 2001	Deptt. of Agriculture, GOWB	19.15
Micro watershed development under NWDPRA scheme	i)Increase cropping intensity through development of land and creating rainwater harvesting structures ii)Creation of alternative livelihood among landless and marginal farmers through functioning of SHG groups.	July, 2007	Deptt. of Agriculture, GOWB	41.57892
Insecticide Resistance Management strategy development	Dissemination of IRM based IPM module for management of cotton pests	December, 2004	CICR, Nagpur, ICAR	4.10
AICRP on Sunflower	To develop area specific high yielding variety and demonstration on sunflower new variety	July, 2009	ICAR, New Delhi	19.74
Identification of Chilli genotype tolerant to leaf curl complex suitable for the cropping system of Sundarbans	To find out leaf curl tolerant high yielding varity and to develop standard package of practice	May, 2009	RKVY, Dept. of FPI & H, GOWB	7.84850
FLD on Sunflower	To promote the sunflower cultivation	December, 2009	DOR, Hyderabad	0.80
Strategies for Sustainable Management of Degraded Coastal Land and Water for Enhancing Livelihood Security of Farming Communities	Sustainable enhancement of the productivity of degraded land and water for livelihood security of poor farming communities of the coastal region	September, 2009	NAIP through ICAR, New Delhi	72.30134
Bio-village	To guide the farmers the ways of organic farming by using bio-botanical and natural resource inputs for pest management	November, 2011	DDA, South 24 Parganas, WB	1.0
Promotion of nutrition and medicinal garden aiming towards food and health security of backward womenfolk of Sundarbans with an emphasis on economic empowerment	Improve health and economical status of womenfolk	December, 2010	SDB, GOWB	4.835
National Initiative on Climate Resilient Agriculture	To adopt appropriate agro-technologies foreseeing future climatic changes	March, 2011	ICAR, New Delhi	30.35

5. PERFORMANCE OF INFRASTRUCTURE IN KVK

6.1 Performance of demonstration units (other than instructional farm)

Sl. No.	Demo Unit	Year of estt.	Area	Details of production			Amount (Rs.)		Remarks
				Variety	Produce	Qty.	Cost of inputs	Gross income	
1	Dairy	1984-85	455.750 sq. mt	Cross breed	Milk Cow dung	82080 lit 2640 qnt	1658600.00	1641600.00 90000.00	
2	Broiler	1984-85	225.000 sq. mt.	-	meat	4800 nos	451200.00	595000.00	
3	Layer			Upkari, Nirbheek, Hitkari	Eggs	590 nos	172300.00	234200.00	
4	Goatary	2009-10	0.13 ha	Black Bengal	Aim is to preserve the germplasm	86 nos	62500.00	-	
5	Carp hatchery	1989-90	355 sq. mt.	IMC and Exotic carps	Carp spawn	4 million	4000.00	10000.00	
6	Nursery and grow-out ponds	1985-86	4.276 ha	IMC and Exotic carps	Carp fry & fingerling	2015 kg	91500.00	177400.00	
7	Catfish & Ornamental fish unit	1997-98	505 sq.m	i.Asian Catfish ii.Live bearers (molly, guppy, platy, sword tail) iii.Egg bearers (goldfish, angel, barb, tetra, gourami, zebra, cichlid)	Catfish fry & fingerling Adult & fry Adult & fry	6785 nos.	16225.00	33925.00	

6.2 Performance of instructional farm (Crops) including seed production

Name Of the crop	Date of sowing	Date of harvest	Area (ha)	Details of production			Amount (Rs.)		Remarks (distributed to farmers)
				Variety	Type of Produce	Qty. / No.	Cost of inputs	Gross income	
Cereals									
Paddy	11.6.2010	16.11.2010	0.32	IET-5656	Foundation seed	11.71	2100.00	29275.00	48
	12.6.2010	18.11.2010	1.15		Certified seed	26.45	6588.00	52900.00	142
	14.6.2010	19.11.2010	1.30		TL seed	26.58	5925.00	42528.00	-
	10.6.2010	14.11.2010	0.06	MTU-7029	Foundation seed	1.00	508.00	2500.00	2
	11.6.2010	12.11.2010	0.15		Certified seed	3.67	1130.00	7340.00	20
	11.6.2010	24.11.2010	0.26	NC-492	Foundation seed	5.24	950.00	13100.00	16
	13.6.2010	25.11.2010	0.20		Certified seed	7.64	880.00	15280.00	37
	14.6.2010	26.11.2010	0.10		TL seed	2.50	450.00	4000.00	-
	09.6.2010	02.11.2010	0.50	Jarava	Certified seed	15.50	2875.00	31,000.00	75
	12.6.2010	16.10.2010	0.26	WGL-20471	Certified seed	8.60	1550.00	18,920.00	49
	14.6.2010	16.11.2010	0.20	Swarna Sub-1	TL seed	4.70	900.00	7520.00	35
	18.6.2010	20.11.2010	1.0	Lunishree	TL seed	21.00	5800.00	29400.00	60
	10.6.2010	27.11.2010	3.5	Mota	Food grain	75.70	6350.00	90840.00	-
Pulses									
Greengram(2009-10)	13.01.2010	02.04.2010	1.0	PDM-84-139	TL seed	5.10	5025.00	15,300.00	80
	12.01.2010	03.04.2010	0.20	IPM-99-125	TL seed	1.60	1005.00	4,800.00	22
Greengram(2010-11)	18.01.2011	07.04.2011	0.80	PDM-84-139	TL seed	-	-	-	-
Oilseeds Sunflower	08.02.2011	13.05.2011	0.40	PAC-361	Food grain	-	-	-	-
Fibers Cotton	22.01.11	-	0.26	Surabhi	General	-	-	-	-
Spices & Plantation crops									
Coconut	18.08.2009	09.07.2010	0.05	Kerala semitall, COD	Seedling	950	9000.00	28500.00	231
Arecanut	11.07.2009	20.08.2010	0.03	Local	Seedling	2250	2250.00	9750.00	182
Floriculture									

Name Of the crop	Date of sowing	Date of harvest	Area (ha)	Details of production			Amount (Rs.)		Remarks (distributed to farmers)
				Variety	Type of Produce	Qty. / No.	Cost of inputs	Gross income	
Fruits									
Papaya seedlings	12.11.2010 – 03.2.2011	02.01.2011 – 28.3.2011	0.01	Honey dew, Ranchi	Seedling	18100		54300	423
Sapota	12.06.2009	18.08.2010	0.05	Cricket ball	Seedling	870		17400	93
Mango	12.06.2009 – 17.07.2009	18.08.2010 - 23.10.2010	0.11	Amrapali, Mallika, Himsagar	Seedling	2580		5160	165
Guava	16.07.2010	21.09.2010	0.06	Baruipur, L 49	Seedling	790		7900	153
Vegetables									
French Bean	09.10.2010	11.2.2011		Shyama	TL seed	0.83		16,600	52
				Saraswati	TL seed	1.52			
				Parvati (bush)	TL seed	0.68			
Okra	11.06.2010	08.11.2010		Nimpith Selection 1	TL seed	0.11		2,500	
				Nimpith Selection 2	TL seed	0.27			
Radish	18.11.2009	16.04.2010		Lalima	TL seed	1.24		4,900	
Palak	19.11.2009	09.04.2010		Allgreen	TL seed	0.78		1,400	
Elephant Foot Yam	08.02.2010	19.10.2010		Gajendra	TL seed	19.0		26,800	6
				Bidhan Kusum	TL seed	14.5			
Others (specify)									
Sweet potato	11.10.2010	20.12.2011		Sree Nandini, Sree Vardhini	Vine	18200		9100	11

6.3 Performance of production Units (bio-agents / bio pesticides/ bio fertilizers etc.,)

Sl. No.	Name of the Product	Qty	Amount (Rs.)		Remarks
			Cost of inputs	Gross income	
1	Sl NPV	9.5 lit	1800.00	4750.00	Distributed to 23 no. of farmers
2	*Trichoderma viride*	409 Kg	12270.00	24540.00	Distributed to 23 no. of farmers
3	*Trichogramma chilonis*	1800 trichocards with 180 lakh wasp	10800.00	18000.00	Distributed to 356 no. of farmers
4	*Chrysoperla carnea*	15500 grubs	560.00	1550.00	Distributed to 10 no. of farmers

6.4 Performance of instructional farm (livestock and fisheries production)

Sl. No	Name of the animal / bird / aquatics	Details of production			Amount (Rs.)		Remarks
		Breed	Type of Produce	Qty.	Cost of inputs	Gross income	
1	Dairy	Cross breed	Milk Cow dung	82080lit 2640 qnt	1658600.00	1641600.00 90000.00	
2	Broiler	-	meat	4800nos	451200.00	595000.00	
3	Layer	Upkari, Nirbheek, Hitkari	Eggs	590 nos	172300.00	234200.00	
4	Goatary	Black Bengal	Aim is to preserve the germplasm	86nos	62500.00	-	
5	Carp hatchery	IMC and Exotic carps	Carp spawn	4 million	4000.00	10000.00	
6	Nursery and grow-out ponds	IMC and Exotic carps	Carp fry & fingerling	2015 kg	91500.00	177400.00	
7	Catfish & Ornamental fish unit	i.Asian Catfish ii.Live bearers (molly, guppy, platy, sword tail) iii.Egg bearers (goldfish, angel, barb, tetra, gourami, zebra, cichlid)	Catfish fry & fingerling Adult & fry Adult & fry	6785 nos.	16225.00	33925.00	

6.5 Utilization of hostel facilities

Accommodation available (No. of beds)

Months	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
April 2010	124	277 (8)	-
May,2010	151	513 (20)	-
June,2010	195	386 (16)	
Juky,2010	164	452 (24)	-
August,2010	95	188 (6)	-
September,2010	262	820 (24)	-
October, 2010	150	360 (12)	-
November,2010	260	714 (22)	-
December,2010	131	612 (21)	-
January,2011	408	1136 (23)	-
February,2011	264	664 (18)	-
March 2011	353	1092 (23)	-

6.5 Utilization of staff quarters

Whether staff quarters has been completed:
No of staff quarters: 8
Date of completion : 1979

Occupancy

Months	Q I	QII	Q III	QIV	Q V	QVI	QVII	QVIII
April 2010	Full	Full	Full	Full	Full	Full	Full	Full
May,2010	Full	Full	Full	Full	Full	Full	Full	Full
June,2010	Full	Full	Full	Full	Full	Full	Full	Full
Juky,2010	Full	Full	Full	Full	Full	Full	Full	Full
August,2010	Full	Full	Full	Full	Full	Full	Full	Full
September,2010	Full	Full	Full	Full	Full	Full	Full	Full
October, 2010	Full	Full	Full	Full	Full	Full	Full	Full
November,2010	Full	Full	Full	Full	Full	Full	Full	Full
December,2010	Full	Full	Full	Full	Full	Full	Full	Full
January,2011	Full	Full	Full	Full	Full	Full	Full	Full
February,2011	Full	Full	Full	Full	Full	Full	Full	Full
March 2011	Full	Full	Full	Full	Full	Full	Full	Full

7. FINANCIAL PERFORMANCE

7.1 Details of KVK Bank accounts

Bank account	Name of the bank	Location	Account Number
With Host Institute	-	-	-
With KVK	SBI	Nimpith	11259497721

7.2 Utilization of funds under FLD on Oilseed *(Rs. In Lakhs)*

Item	Released by ICAR		Expenditure		Unspent balance as on 1st April 2010
	Kharif 2009	Rabi 2009 -10	Kharif 2009	Rabi 2009 -10	
Inputs	-	0.63	-	0.61775	NIL
Extension activities	-	0.09	-	0.10225	
TA/DA/POL etc.	-	0.135	-	0.135	
TOTAL	-	0.855	-	0.855	

7.3 Utilization of funds under FLD on Pulses *(Rs. In Lakhs)*

Item	Released by ICAR		Expenditure		Unspent balance as on 1st April 2010
	Kharif 2009	Rabi 2009 -10	Kharif 2009	Rabi 2009 -10	
Inputs	-	0.35	-	0.3505	NIL
Extension activities	-	0.05	-	0.0495	
TA/DA/POL etc.	-	0.75	-	0.75	
TOTAL	-	0.475	-	0.475	

7.4 Utilization of funds under FLD on Cotton *(Rs. In Lakhs)*

Item	Released by ICAR		Expenditure		Unspent balance as on 1st April 2011
	Kharif 2009	Rabi 2009 -10	Kharif 2009	Rabi 2009 -10	
Inputs	-	2.00	-	2.10	(-) 0.1000
Extension activities	-	0.07	-	0.8335	(-) 0.6180
TA/DA/POL etc.	-	-	-	0.4665	(-) 0.2120
TOTAL	-	2.07	-	3.00	(-) 0.9300

7.5 Utilization of KVK funds during the year 2009 -10 and 2010 -11 (year-wise separately) (current year and previous year)

S. No.	Particulars	Sanctioned		Released		E xpenditure	
		2009-10	2010-11	2009-10	2010-11	2009-10	2010-11
A. Recurring Contingencies							
1	**Pay & Allowances**	40.00	124.78	40.00	124.78	48.40971	120.58979
2	**Traveling allowances**	0.80	1.00	0.80	1.00	0.80	1.00
3	**Contingencies**						
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	1.50	1.57	1.50	1.57	1.50	1.74193
B	POL, repair of vehicles, tractor and equipments	1.50	1.50	1.50	1.50	1.50	1.44223
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)	1.75	1.75	1.75	1.75	1.75	1.75
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	0.30	0.23	0.30	0.23	0.30	0.21569
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	0.60	0.60	0.60	0.60	0.60	0.502
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	0.75	0.75	0.75	0.75	0.75	0.74790
G	Training of extension functionaries	0.80	0.80	0.80	0.80	0.80	0.80025
H	Training of Rural Youth	0.30	0.30	0.30	0.30	0.30	0.30
I	Establishment of Soil, Plant & Water Testing Laboratory	-	-	-	-	-	-
J	Library	-	-	-	-	-	-
TOTAL (A)		48.30	133.28	48.30	133.28	56.70971	129.08979
B. Non-Recurring Contingencies							
1	Works	4.75	1.00	4.75	1.00	4.75	1.084
2	Equipments including SWTL & Furniture	2.10	32.65	2.10	32.65	2.10	32.54375
3	Vehicle (Four wheeler/Two wheeler, please specify)	-	-	-	-	-	-
4	Library (Purchase of assets like books & journals)	0.05	0.05	0.05	0.05	0.05	0.7225
TOTAL (B)		6.90	33.70	6.90	33.70	6.90	33.70
C. REVOLVING FUND		-	-	-	-	-	-
GRAND TOTAL (A+B+C)		55.20	166.98	55.20	166.98	63.60971	162.78979

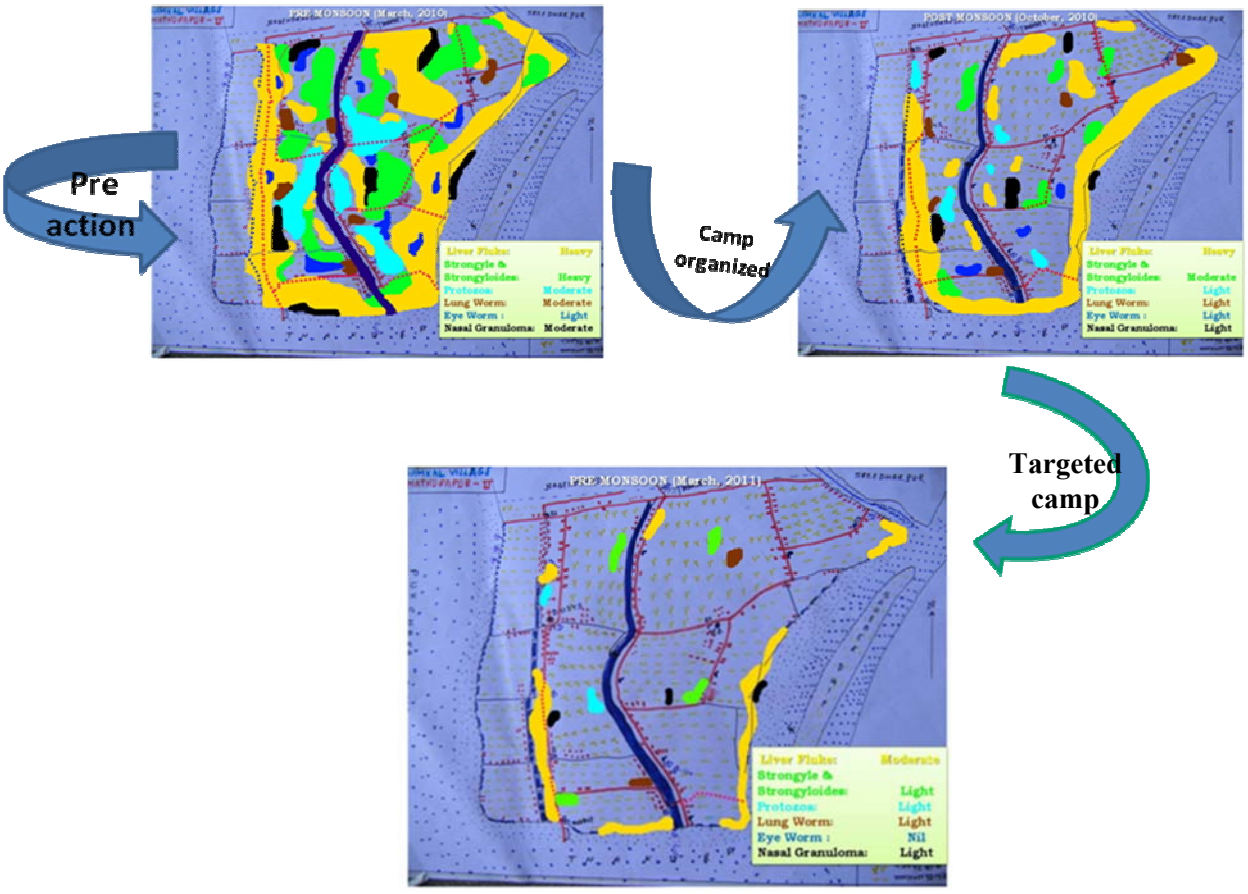
7.6 Status of revolving fund (Rs. in lakhs) for the last three years

Year	Opening balance as on 1st April	Income during the year	Expenditure during the year	Net balance in hand as on 1st April of each year (Kind + cash)
April 2008 to March 2009	10.45770	21.70295	14.70354	17.4571
April 2009 to March 2010	17.4571	30.26706	27.33598	20.38819
April 2010 to March 2011	20.38819	24.81546	23.54302	21.66063

7.7 Any other significant achievements (provide full details with action photograph)

A. Parasitological map

Animal healthcare not only includes the treatment and management of ailing animals but mainly emphasizes the prevention of diseases occurrence. Amongst the different affections of the animals, worm infestation leading to economic losses from poor production and reproductive failure is the chief contributory factor. Thus to alleviate this situation, RAKVK, Nimpith through NAIP have tried to develop a parasitological map in different phases of a village which will be followed in other villages and ultimately will fabricate one map of the district as a whole. These map will forecast the probable incidence and occurance of specific worms with specific season, thus the farmers may well ahead take the preventive measures for prevention of such.



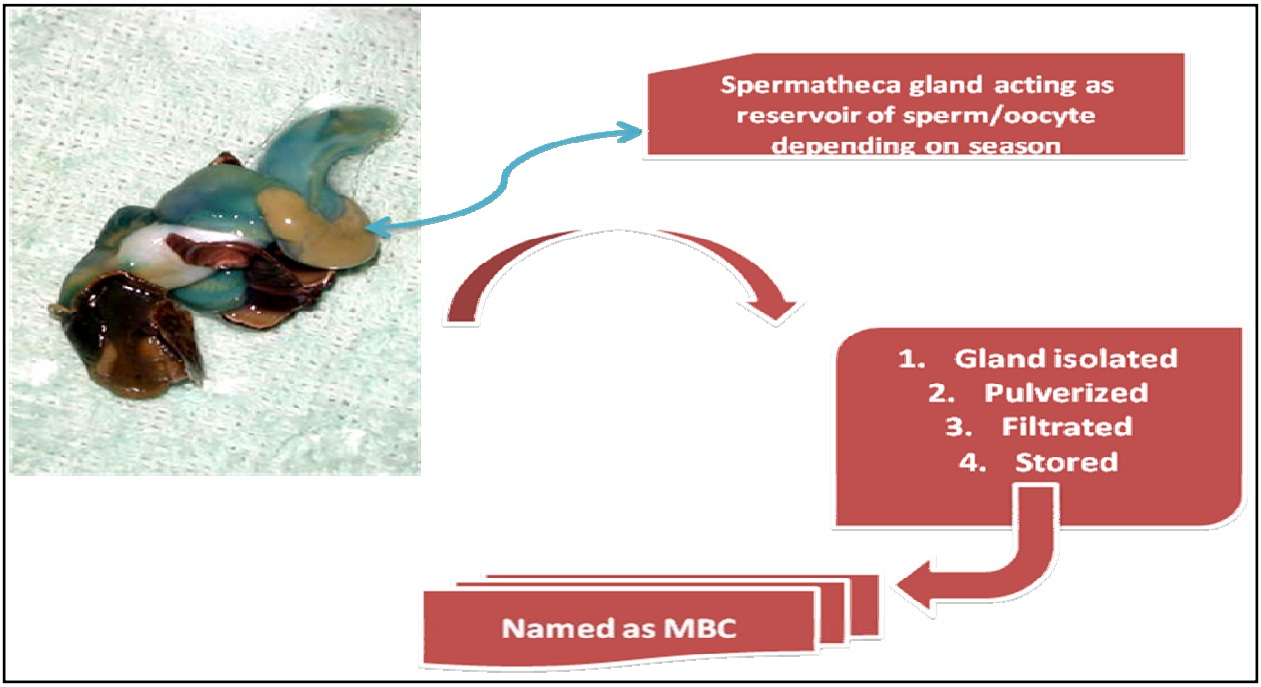
B. Patent

Patent awaited on
'Novel immunostimulator / immunomodulator from marine mollusk *Telescopium telescopium'*

Patent number (application no.) 1399/Kol/2010

The present invention relates to biogenic molecules (MBC) isolated from the glandular extract of the spermatheca and/or ovotestis from the marine gastropod mollusk, *Telescopium telescopium* that shows a promising and significant result as potent immune-enhancing agent in experimental mice as well as higher vertebrate like goats.

Incidence of diseases in goats is mainly preceded by depressed immune-suppression of varied origin. The 'Poor man's cow' instead having the capacity of giving good economic return suffers from losses leading to lack of interest to the farmers. Thus, RAKVK, Nimpith intervene to develop or utilize the local resources for optimization of profit through minimization of the losses. The Snail *Telescopium telescopium* is abundantly available in the estuaries of Sundarban and having the potential to boost up the immune system of the goats. KVK have conducted trial and found to have excellent result thus claiming one Patent.



C. Rural Technology Center

Adoption of villages is done in cluster basis of a particular block and every activity of KVK is confined in that cluster with a view to creating an overall development in agriculture and allied agricultural sector. In three villages, KVK has established Rural Technology Centre (RTC) for technology discrimination in more intensive way through cluster approach.



D. Sunflower cultivation as a programme of crop diversification:

In early 90's the sunflower cultivation was started in few patches of Sundarbans not for commercial purpose but only for homestead consumtion. KVK as a part of crop diversification programme, conducted on farm trial to find out suitable variety as well as the location specific crop management practices. It can be observed that due to nonavailability of appropriate technology and variety for this region, the sunflower cultivation got no popularity in that time. During the course of study with sunflower, a number of varities with its package of practices are developed by KVK and also demonstrated in FLD programme. As sunflower withstand little bit of salinity it opens the door to be a important second crop in rice fallows of Sundarbans. Observing the production potential of this crop, KVK approached to Sundarban Development Board, GOWB with the full basket of technology of sunflower cultivation to be demonstrated in rice fallows as a large scale basis. Now-adays, it gains a good popularity and more than 10,000 ha has come under sunflower cultivation. For further observation in regards to area specific technology and varietal development, KVK has been running AICRP on sunflower with the active participation and guiadance from DOR, Hyderabad.

Organizing ornamental fish marketing from villages by KVK trained farmers

In the year 2009, three professional ornamental fish farmers from the village of Amratala in Mograhat I block received training on scientific ornamental fish breeding and culture from the KVK. Thereafter they got in close contact with the KVK and started frequenting the fishery expert for gathering different informations and guidance on ornamental fish farming. The KVK also organized field trips for ornamental fish farmers in their farm at Amratala. The relation flourished and soon they came forward to start marketing ornamental fish produced by farmers receiving training and guidance from the KVK. Thus, a marketing channel for ornamental fish was created.

7.6 Number of SHGs formed by KVKs/associated with SHGs formed by other organizations.

6 number of new SHGs have been formed in the village Radhakantapur (Mathurapur - II) & Dongajora (Kultali) under NWDPRA scheme and associated with 16 numbers of SHG groups formed by Panchayet in SGSY scheme in the villages Battala, Mandalpara and Kamarhat under the blocks Joynagar II, Mathurapur II & Kakdwip respectiovely during the year 2010-11.

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(Nilendu Jyoti Maitra)
Programme Coordiantor