

Annual Report

2012



Submitted to

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

Submitted by

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Annual Report of 2011-12

(April, 2011 – March, 2012)

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Compiled and Edited

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(April 2011 to March 2012)

1. GENERAL INFORMATION ABOUT THE KVK

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

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 nimpithkvk1979@gmail.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	FAX 03218-226636	kvknimp@cal2.vsnl.net.in nimpithkvk@rediffmail.com

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 of KVK: **1979**

1.5. Staff Position (as on 1st April, 2012)

Sl. No.	Sanctioned post	Name of the incumbent	Designation	Discipline	Pay Scale with present basic	Date of joining/ if vacant since when	Permanent /Temporary	Category (SC/ST/OBC/ Others)
1	Programme Coordinator	Dr. Nilendu Jyoti Maitra	Programme Coordinator	Administrative & Animal Husbandry	15600-39100 (GP- 8000) (33,580)	01.06.2010	Permanent	Others
2	Subject Matter Specialist	Sri Swapan Kumar Samui	SMS (Agronomy)	Agronomy	15600-39100 (GP-7000) (31,850)	01.04.1997	Permanent	Others
3	Subject Matter Specialist	Sri Prasanta Chatterjee	SMS (Fishery)	Fishery	15600-39100 (GP 7000) (31,850)	28.10.1997	Permanent	Others
4	Subject Matter Specialist	Dr. Manasi Chakraborty	SMS (Home Science)	Home Science	15600-39100 (GP 7000) (32,580)	08.12.2000	Permanent	Others
5	Subject Matter Specialist	Sri Chandan Kumar Mondal	SMS (Horticulture)	Horticulture	15600-39100 (GP 6000) (25,810)	16.05.2005	Permanent	Others
6	Subject Matter Specialist	-	SMS (Plant Protection)	Plant Protection	15600-39100 (GP 6000)	Vacant		
7	Subject Matter Specialist	Dr. Subhasis Roy	SMS (Animal Husbandry)	Animal Husbandry	15600-39100 (GP 6000) (25,810)	01.07.2010	Permanent	Others
8	Programme Assistant	Dr. Dipak Kumar Roy	Programme Assistant (Agronomy)	Agronomy	9300-34800 (GP 4200) (19,810)	12.06.2001	Permanent	Others
9	Computer Programmer	Sri Partha Banik	Programme Assistant (Computer)	Office	9300-34800 (GP 4200) (18,060)	09.06.2003	Permanent	Others
10	Farm Manager	Utpal Maity	Farm Manager	Fishery	9300-34800 (GP 4200) (13,500)	02.12.2011	Temporary	Others
11	Accountant / Superintendent	Sri Aditya Guchhait	Assistant	Office	9300-34800 (GP 4200) (14,870)	01.06.2010	Permanent	Others
12	Stenographer	Sri Debjyoti Maitra	Stenographer Grade-III	Office	5200-20200 (GP 2400) (9,910)	04.01.2011	Permanent	Others
13	Driver	Sri Madhab Chandra Kayet	Driver –cum-Mechanic	Office	5200-20200 (GP 2400) (11,390)	01.06.1995	Permanent	Others
14	Driver	Sri Birendra Nath Das	Driver –cum-Mechanic	Office	5200-20200 (GP 2000) (10,090)	01.09.2003	Permanent	Others
15	Supporting staff	Sri Nemai Chand Mondal	Storekeeper-cum-Clerk	Office	5200-20200 (GP 2800) (15,550)	01.02.1982	Permanent	SC
16	Supporting staff	Sri Sailen Das	Cook	Office	5200-20200 (GP 4200) (17,470)	01.07.1979	Permanent	Others

1.6. Total land with KVK (in ha): 21.11 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 with details (demonstration units)	8.803 ha
	Total	21.11 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)	Under use or not*	Source of funding
	Administrative Building	-	-	-	-	Totally completed	777.545	Use	ICAR
2.	Farmers Hostel	-	-	-	-	-do-	359.639	Use	ICAR
3.	Staff Quarters (6)	-	-	-	-	-do-	411.680	Use	ICAR
4.	Demonstration Units (2)	-	-	-	-	-do-	675.750	Use	ICAR
5	Fencing	-	-	-	-	-do-	770.00 (mt.)	Use	ICAR
6	Rain Water harvesting structure	-	-	-	-	-do-	17500	Use	ICAR
7	Threshing floor	-	-	-	-	-do-	371.720	Use	CAPART
8	Farm godown	-	-	-	-	-do-	378.790	Use	SDB, GOWB
9.	Others (demonstration units)	-	-	-	-	-do-	397.300	Use	ICAR

* If not in use then since when and reason for non-use

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total km. Run	Present status
Tata Sumo Victa	2008-09	6,00,000.00	75,641	Running condition

C) Equipment & AV aids

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

D) Farm implements

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

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

Sl. No.	Date	Number of Participants	Salient Recommendations	Action taken	If not conducted, state reason
1.	27.07.2011	40	Correspondence will be made for availability of short duration and salt tolerant variety of greengram from IIPR, Kanpur, Universities and other Institutes instead of AVRDC, Taiwan which was recommended in the SAC held on 25.03.2011	Salt tolerant variety is not available at IIPR, Kanpur	-
			Intercropping of groundnut with sunflower may be continued where NC-92 strain of <i>Rhizobium</i> may be used as seed inoculums in groundnut. Marketing of groundnut may be developed	Sowing have been completed in the end of February, 2012	-
			Salt tolerant variety of sweet potato namely Pusa Safed may be collected from CSSRI, Canning for demonstration in saline soil of Sundarbans	CSSRI has supplied the variety to demonstrate it in field condition	
			One village may be selected where a sizable number of farmers will be involved in SRI practices and may be named as SRI village	Kamarhat village of Kakdwip block for SRI programme was selected	
			A model village may be developed where all sorts of animal husbandry practices will be in vogue. In this respect, ARD Department is requested to select the village and work jointly with KVK	Banshyamnagar village of Pathar Pratima Block has been selected for this respect.	
			Introduction of HITKARI breed of poultry bird for FLD purpose as well as a comparative study with indigenous bird may be conducted in respect of production and disease tolerant potential	Continuing	
			The OFT which has been continued for 2-3 years should be dropped and may be taken into FLD with a recommendation	Already 6 OFT have been taken into FLD	
			As beetle vine is one of the major important cash crop in South 24-Parganas district, more emphasis should be given into it	Permanent shade Net Baroj demonstration is in progress at Kakdwip Block under NHM/NAIP programme	
			To mitigate the growing demand of fish, selective exotic carps other than the existing ones may also be introduced in the composite fish culture	Already on going and one project in collaboration with CIFE, Kolkata, it is being explored.	
			One project on Sweet Water Prawn Hatchery may be established in the KVK in collaboration with CIFE, Kolkata Centre. In this regard, a joint proposal will be submitted to Sundarban Development Board, Govt. of West Bengal for financial support	Under process	
			For propagation and production of <i>Puntia sarana</i> (<i>Sar Puntia</i>), seedlings may be stocked in KVK ponds for future induced breeding programmes.	Will be stocked in this monsoon.	
			KVK should encourage the farmers to culture fresh water prawn along with ornamental fish in pond ecosystem.	Already on going	

			Salt tolerant paddy varieties like – <i>Amalmona</i> (3 ft. water stagnation) as <i>kharif</i> paddy and CSR-CS-47 for <i>boro</i> paddy should be collected from CSSRI, Canning for cultivation in NICRA village programme.	Boro paddy demonstration with variety CSR-CS-47 was not conducted in NICRA village as because sweet water is not available for irrigation but salt tolerant variety <i>Amalmona</i> will be collected from CSSRI, Canning for cultivation in NICRA village during kharif-2012	
			Leaf curl tolerant chilli varieties namely Ankur-228 and BCC-28(18) tested by KVK through RKVY project should be demonstrated in Sagar and Pathar Protima block to see its performance in field condition	Trial is going on in the different blocks including the Sagar and Pathar Protima Blocks	
			A project proposal on AICRP on Garole sheep may be sent to DDG (AH), New Delhi, ICAR through ZPD, Zone-II with a prior recommendation from the line department of the Govt. of West Bengal or Sundarban Development Board, Govt. of West Bengal.	The proposal will be sent to line department soon	
			KVK may initiate to introduce a Toll Free Help Line Number if possible by sending a proposal to the competent authority	Already several discussion held with BSNL authority but the programme is not materialized	
			Ornamental fish marketing may be facilitated to NWDPRAs villages to create interest among the ornamental fish farmers.	On going and also they themselves are marketing the produce	
			Small scale Chick Hatchery Unit may be set up through SGSY in collaboration with the line department for ready availability of the chicks in village level.	Already approached to Sabhadhipati and PD-DRDC south 24 Parganas	
2.	23.03.2012	34	Selection of beneficiary for establishment of Master Unit of Poultry through local Bank where 25% subsidy will be given by NABARD	Action will be taken in due course	
			Selection of SHG for establishment of Back Bengal Goat and Garole Sheep Unit through 25% subsidy scheme of NABARD	-do-	
			Setting up of a toll free helpline in collaboration with Reliance , if possible	-do-	
			Television Programme is to be conducted in the ornamental fish village of Amratala and Doordarshan should be informed about the development of ornamental fish/ornamental bird village	-do-	
			In corporation of statistical analysis data ($SE_{m \pm CD}$) in the OFT during presentation	-do-	
			The best Technology Option-I (Transplanting of 25 days old seedling of variety IET-5656 with a spacing of 20 cm X 15 cm N: P ₂ O ₅ : K ₂ O @ 60: 30:30 kg/ha two times of manual weeding + Azospirillum @ 1.5kg/ha + PSB @ 5.0 kg/ha at the time of puddling) of Kharif paddy OFT should taken as FLD Programme	-do-	

			Exposure visit of NICRA farmers to successful bio-villages organized by VIB	-do-	
			Emphasis should be made for setting up of agro based bio-village during the period 2012-2014 at Bongheri and other two villages	-do-	
			Conducting soil analysis before and after harvesting of shade loving crops turmeric and gingers in Sapota orchard as set in the OFT.	-do-	
			OFT on wrapping of guava should be continued for another one year before reaching conclusion of the programme	-do-	
			Assessment of comparative quality of Joynagarer Moya made form machine roasted and manual roasted Kanakchur Paddy	-do-	
			To assess the effect of light, humidity and other parameters inside Pan Boraj in shade-net and also chlorophyll estimation for successive 4-5 days after harvesting.	-do-	
			Paddy seed promotional programme should be conducted through Farmers Club	-do-	
			Under village development programme supported by NABARD, Ramkrishna Ashram Model Village Programme will be launched involving 5 Blocks Viz. Jaynagar-I, Jaynagar-II, Marthrapur-I, Maturapur-II, and Kultali	-do-	
			In this Model Village Programme two committees will be formed viz. Working Committee consisting of Ramkrishna Ashram KVK, VIB, and RDW and Advisory Committee consisting of Sri Ramkrishna Ashram, ICAR, Line Department and NABARD etc.	-do-	
			To aware the District Magistrate of Sough 24-Parganas district regarding the different projects and activities of RAKVK, CDs and reports should be sent to him	-do-	
			Feed back of SMS Alert System from the farmers should be documented	-do-	
			Financial support may be provided from NABAD for development of extension literatures of RAKVK	-do-	

** Salient recommendation of SAC in bullet form*

Copy of SAC proceedings along with list of participants

(True copy)

Meeting No. 20
Place : Nimpith

Date : 27.07.2011
Time : 10.30 a.m.

A meeting of the Scientific Advisory Committee of Ramkrishna Ashram Krishi Vigyan Kendra, Nimpith is held to-day, the 27th July, 2011 at 10.30 a.m. in the KVK premises with the following members :

Members Present:

1. Swami Sadananda, Chairman, KVK Nimpith
2. Dr. Satyajit Bal Neogi, Dy. Project Director (Agriculture), SDB, Govt. of W.B., Kolkata
3. Dr. S. K. Sarangi, Senior Scientist, CSSRI, RRS, ICAR, Canning
4. Dr. S. K. Roy, ZPD, Sr. Scientist, Zone-II, ICAR, Kolkata
5. Dr. B.K. Mahapatra, Principal Scientist & Officer-in-Charge, CIFE, ICAR, Kolkata
6. Dr. Ajit Kumar Poddar, Adviser, VIB, Nimpith
7. Dr. Shantanu Saha, V.O., BAHC, Joynagar-II Block, Nimpith
8. Sri Sumit Kumar Chakraborty, Programme Executive, A.I.R., Kolkata
9. Sri Sudipta Das, Doordarshan, Kolkata
10. Sri Tuhin Chatterjee, A.I.R., Kolkata
11. Dr. Nilendu Jyoti Maitra, Programme Coordinator, KVK Nimpith
12. Sri Swapan Kumar Samui, SMS (Agronomy), KVK Nimpith
13. Sri Prasanta Chatterjee, SMS (Fishery), KVK Nimpith
14. Dr. Manasi Chakraborty, SMS (Home Science), KVK Nimpith
15. Dr. Lakshman Chandra Patel, SMS(Plant Protection), KVK Nimpith
16. Sri Chandan Kumar Mondal, SMS (Hort.), KVK Nimpith
17. Dr. Subhasis Roy, SMS (Animal Husbandry), KVK Nimpith
18. Dr. Dipak Kumar Roy, Programme Assistant (Agronomy), KVK Nimpith
19. Dr. Avijit Roy, Junior Agronomist, AICRP, KVK Nimpith
20. Sri Utpal Maity, NAIP, KVK Nimpith
21. Sri Shyam Sundar Lakshman, Junior Breeder, AICRP, KVK Nimpith
22. Sri Debashis Halder, Technical Assistant, AICRP, KVK Nimpith
23. Sri Arabinda Samanta, Farm Manager, KVK Nimpith
24. Sri Aditya Guchhait, Assistant, KVK Nimpith
25. Sri Partha Banik, Programme Assistant (Computer), KVK Nimpith
26. Sri Tarak Nath Halder, Secretary, Radhakantapur Watershed
27. Smt. Brihaspati Naskar, Swami Vivekananda SGSY, Battala
28. Smt. Kakoli Pramanik, Secretary, Shib Durga Milan Samity, Battala
29. Smt. Lalita Halder, Maa Sarada Swanievar Gosthi, Bhadrpara
30. Sri Sushanta Roy, Kantamari Dwip Shaki, Kantamari
31. Sri Tarapada Ghosh, Rural Development Wing, SRAN
32. Sri Gouranga Naskar, Kaikhali-Bongheri
33. Sri Bhaskar Mukherjee, Technical Assistant, KVK Nimpith
34. Sri Arun Kumar Jana, SRF, NAIP, KVK Nimpith
35. Md. Sahanur Rahaman, SRF, NAIP, KVK Nimpith
36. Sri Tapas Kumar Sahana, SRF, NICRA, KVK Nimpith
37. Sri Atit Maji, SRF, NICRA, KVK Nimpith
38. Sri Partha Sarathi Ghosh, FA, NAIP, KVK Nimpith
39. Sri Deb Jyoti Maitra, Stenographer Grade-III, KVK Nimpith
40. Sri Subal Chandra Das, Volunteer, KVK Nimpith

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 April, 2011 to July, 2011 before the members present in the meeting. After a good deal of discussion, the following recommendations have come out for betterment of the KVK activities.
 - a. Correspondence will be made for availability of short duration and salt tolerant variety of greengram from IIPR, Kanpur, Universities and other Institutes instead of AVRDC, Taiwan which was recommended in the SAC held on 25.03.2011
 - b. Intercropping of groundnut with sunflower may be continued where NC-92 strain of *Rhizobium* may be used as seed inoculum in groundnut. Marketing of groundnut may be developed
 - c. Salt tolerant variety of sweet potato namely Pusa Safed may be collected from CSSRI, Canning for demonstration in saline soil of Sundarbans
 - d. One village may be selected where a sizable number of farmers will be involved in SRI practices and may be named as SRI village
 - e. A model village may be developed where all sorts of animal husbandry practices will be in vogue. In this respect, ARD Department is requested to select the village and work jointly with KVK
 - f. OFT regarding preparation of "Joynagarer Moya" may be continued giving thrust in organic preservatives, if available
 - g. Introduction of HITKARI breed of poultry bird for FLD purpose as well as a comparative study with indigenous bird may be conducted in respect of production and disease tolerant potential
 - h. The OFT which has been continued for 2-3 years should be dropped and may be taken into FLD with a recommendation
 - i. Performance of barley crop in Sundarban saline islands may be tested at Instructional Farm
 - j. As beetle vine is one of the major important cash crop in South 24-Parganas district, more emphasis should be given into it
 - k. To mitigate the growing demand of fish, selective exotic carps other than the existing ones may also be introduced in the composite fish culture
 - l. One project on Sweet Water Prawn Hatchery may be established in the KVK in collaboration with CIFE, Kolkata Centre. In this regard, a joint proposal will be submitted to Sundarban Development Board, Govt. of West Bengal for financial support before 30.08.2011
 - m. For propagation and production of *Puntia sarana* (Sar Puntia), seedlings may be stocked in KVK ponds for future induced breeding programmes. KVK should encourage the farmers to culture fresh water prawn along with ornamental fish in pond ecosystem
 - n. Salt tolerant paddy varieties like – Amalmona (3 ft. water stagnation) as kharif paddy and CSR-CS-47 for boro paddy should be collected from CSSRI, Canning for cultivation in NICRA village programme
 - o. Leaf curl tolerant chilli varieties namely Ankur-228 and BCC-28(18) tested by KVK through RKVY project should be demonstrated in Sagar and Pathar Protima block to see its performance in field condition
 - p. A project proposal on AICRP on Garole sheep may be sent to DDG (AH), New Delhi, ICAR through ZPD, Zone-II with a prior recommendation from the line department of the Govt. of West Bengal or Sundarban Development Board, Govt. of West Bengal
 - q. KVK may initiate to introduce a Toll Free Help Line Number if possible by sending a proposal to the competent authority
 - r. Ornamental fish marketing may be facilitated to NWDPRAs villages to create interest among the ornamental fish farmers.
 - s. Small scale Chick Hatchery Unit may be set up through SGSY in collaboration with the line department for ready availability of the chicks in village level
- 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, NWDPRAs, 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 27.07.2011

(True copy)

Meeting No. 21
Place : Nimpith

Date : 23.03.2012
Time : 10.30 a.m.

A meeting of the Scientific Advisory Committee of Ramkrishna Ashram Krishi Vigyan Kendra, Nimpith is held to-day, the 23rd March, 2012 at 10.30 a.m. in the KVK premises with the following members :

Members Present:

1. Swami Sadananda, Chairman, KVK Nimpith
2. Subrata Mondal, General Manager, NABARD, Kolkata
3. Dr. Buddheswar Maji, Head, CSSRI, RRS, Canning
4. Nilay Pain, Asst. D. A., Mathurapur-I
5. Dr. Amitava Jana, BLDO, Mathurapur-I
6. Dr. Ajit Kumar Poddar, Advisor, VIB
7. Dr. Sadhan Kumar Das, VIB
8. Sri Pradip Kumar Pal, Asst. Supdt. Of Livestock
9. Sudipta Das, Doordarshan Kolkata
10. Sabyasachi Chakraborty Sundarban Diary, Jaynagar
11. Dr. Nilendu Jyoti Maitra, Programme Coordinator, KVK
12. Swapan Kumar Samui, SMS (Agronomy), KVK
13. Prasanta Chatterjee, SMS (Fishery), KVK
14. Manasi Chakraborty, SMS (Home Sc.), KVK
15. Chandan Kumar Mondal, SMS (Hort.), KVK
16. Dipak Kumar Roy, Programme Asst.(Agronomy), KVK
17. Subhasis Roy SMS (A.H), KVK
18. Utpal Maity, RA, NAIP, RAKVK Nimpith
19. Shyam Sundar Lakshman, Plant breeder, AICRP
20. Arabinda Samanta, KVK Volunteer
21. Tapas Kumar Sahana, SRF, NICRA, KVK
22. Atit Maji, SRF, NICRA, KVK
23. Debasish Halder, Tech. Asst., AICRP (Sunflower)
24. Deb Jyoti Maitra, Stenographer Gr-III, RAKVK
25. Tarapada Ghosh, SRAN, R.D.W.
26. Bhaskar Mukherjee, Tech. Asst. KVK Nimpith
27. Partha Banik, Programme Assistant (Computer)
28. Tarak Nath Halder, Secretary, NWDPR, Radhakantapur
29. Prem Chand Mondal, Secretary, NWDPR, Dongajora
30. Gobinda Naiya, NWDPR, Dongajora
31. Brohaspati Naskar, Swami Vivekananda SHG, Padmapukur
32. Aditya Guchhait, Assistant, RAKVK
33. Subal Chandra Das, KVK Volunteer

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, 2011 to March, 2012 before the members present in the meeting. Thereafter, Programme Coordinator with 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 members present. After a good deal of discussion, the following recommendations have come out for betterment of the KVK activities.
 - a. Selection of beneficiary for establishment of Master Unit of Poultry through local Bank where 25% subsidy will be given by NABARD
 - b. Selection of SHG for establishment of Back Bengal Goat and Garole Sheep Unit through 25% subsidy scheme of NABARD
 - c. Setting up of a toll free helpline in collaboration with Reliance , if possible
 - d. Television Programme is to be conducted in the ornamental fish village of Amratala and Doordarshan should be informed about the development of ornamental fish/ornamental bird village
 - e. Incorporation of statistical analysis data ($SEM \pm CD$) in the OFT during presentation
 - f. The best Technology Option-I (Transplanting of 25 days old seedling of variety IET-5656 with a spacing of 20 cm X 15 cm N: P_2O_5 : K_2O @ 60: 30:30 kg/ha two times of manual weeding + Azospirillum @ 1.5kg/ha + PSB @ 5.0 kg/ha at the time of puddling) of Kharif paddy OFT should taken as FLD Programme
 - g. Exposure visit of NICRA farmers to successful bio-villages organized by VIB
 - h. Emphasis should be made for setting up of agro based bio-village during the period 2012-2014 at Bongheri and other two villages
 - i. Conducting soil analysis before and after harvesting of shade loving crops turmeric and gingers in Sapota orchard as set in the OFT
 - j. OFT on wrapping of guava should be continued for another one year before reaching conclusion of the programme
 - k. Assessment of comparative quality of Joynagarer Moya made form machine roasted and manual roasted Kanakchur Paddy
 - l. To assess the effect of light, humidity and other parameters inside Pan Boraj in shade-net and also chlorophyll estimation for successive 4-5 days after harvesting.
 - m. Paddy seed promotional programme should be conducted through Farmers Club
 - n. Under village development programme supported by NABARD, Ramkrishna Ashram Model Village Programme will be launched involving 5 Blocks Viz. Jaynagar-I, Jaynagar-II, Marthrapur-I, Maturapur-II, and Kultali
 - o. In this Model Village Programme two committees will be formed viz. Working Committee consisting of Ramkrishna Ashram KVK, VIB, and RDW and Advisory Committee consisting of Sri Ramkrishna Ashram, ICAR, Line Department and NABARD etc.
 - p. To aware the District Magistrate of Sough 24-Parganas district regarding the different projects and activities of RAKVK, CDs and reports should be sent to him
 - q. Feed back of SMS Alert System from the farmers should be documented
 - r. Financial support may be provided from NABAD for development of extension literatures of RAKVK
- 3) The progress of work of the projects like, IRM, ATMA, NAIP, AICRP, NWDPR, Chilli, NICRA & Nutrition Project for the year 2011-12 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. 23/03/2012

2. DETAILS OF DISTRICT (2011-12) : Source of information must be indicated

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

S. 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 & 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

S. No.	Agro ecological situation	Characteristics
1.	Gangetic Alluvial	Below 20cm water stagnation during monsoon, pH 6.5 – 7.5 EC 0.2 –0.45 mmhos/cm
2.	Coastal Alluvial	pH 5.6 – 8.2 EC 0.5 – 3.0 mmhos/cm
3.	Coastal Saline	pH 6.0 – 8.5 EC 0.28 – 5.4 mmhos/cm

2.3 Soil type/s

S. 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

S. No.	Crop	Area (ha)	Production (q)	Productivity (q/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

2.5. Weather data

Month	Rainfall (mm)	Temperature °C		Relative Humidity (%)	
		Maximum	Minimum	At 0630 hrs	At 1330 hrs
April, 11	52.6	34.26	20	95.2	30.2
May, 11	146.3	36	21	98.4	36.3
June, 11	361.9	37.4	24	98.1	38.4
July, 11	184.4	34.4	28.4	99.6	62.5
August, 11	715	34.2	24.8	99.7	60.6
September, 11	331.2	33	24.2	99.5	58.4
October, 11	55.8	35.2	19	99.8	55.8
November, 11	Nil	31.2	16.2	96.1	43.7
December, 11	Nil	29.2	11	45.8	99.6
January, 12	80.6	29.2	10.8	78.2	31.3
February, 12	18	33.6	11	91.5	34.2
March, 12	18	35.17	21.7	93.4	40.8

2.6. Production and productivity of livestock, poultry, fisheries etc. in the district

Category	Population	Production	Productivity
Cattle			
<i>Crossbred</i>	32550	2,65,8,750 lit	1800-2100 lit/lactation
<i>Indigenous</i>	968986	19,37,97,200 lit	400-500 lit/lactation
Buffalo	15604	56,71,300 lit	600-700 lit/lactation
Sheep			
<i>Crossbred</i>	-	-	-
<i>Indigenous</i>	212589	22,10,925 kg	10-12 kg/sheep/year
Goats	696935	78,05,672 kg	11-13 kg/sheep/year
Pigs			
<i>Crossbred</i>	-	-	-
<i>Indigenous</i>	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
<i>Desi</i>	2156106	19,83,61,752 eggs	90 – 110 eggs/year/bird
<i>Improved</i>	-	-	-
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	-	-	-
<i>Marine</i>	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	-
<i>Inland</i>	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 Details of operational area / villages (2011-12)

Sl. No	Taluk	Name of the block	Name of the village	Major crops & enterprises	Major problem identified	Identified thrust areas
1.	Baruipur Sub-division Diamond Harbour Sub-Division	Kultali Mathurapur-I Mathurapur-II Joynagar –II Joynagar- I Magrahat - II Patharprotima Kakdwip Namkhana	Dongajora, Shyamnagar, Madhabpur, Bongheri, Kaikhali, Sankijahan Lakshmikantapur Radhakantapur Gilarchat, Bairagirchak, Dumkal, Ateswartala, Kayeler chawk, Bhadrpara, 27 no. Lat, Mandalpara Nimpith, Tulsighata, Hanarbati, Kasthamahal, Jouthia, Baishata, Sahajadapur, Hatchapuri, Bottala, Uttarpara, Dakshin Barasat, Baharu Amratala Achintanagar, Herambagopalpur, Kuyemuri, Banashyamnagar, Kamdebpur Kamarhat, Takipur Abad, Shibkali Nagar, Madhabnagar Shibnagar, Chandanpiri	Paddy, cotton, sunflower, bitter gourd, okra, tomato, nursery raising of carp spawn, Ornamental fish, poultry	<p>Biophysical :</p> <p>i) Yield platuening of major field and horticultural crops</p> <ul style="list-style-type: none"> * Inappropriate agronomic practices * Poor genetic stock * Inadequate irrigation facilities * Marginal soil <p>ii) High post harvest loss of horticultural crops</p> <p>iii) Lesser extent of crop diversification</p> <p>iv) Poor rate of farm mechanization</p> <p>v) Poor exploitation of aquatic resources</p> <ul style="list-style-type: none"> * 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 <p>vi) Poor performance of backyard system</p> <ul style="list-style-type: none"> * Poor productive performance of existing poultry bred * Untapped potentiality of nutrition garden <p>vii) Low profitability from broiler and dairy farming</p> <ul style="list-style-type: none"> * Poor genetic resources * High cost of commercial feed * High disease incidence <p>Socio economic :</p> <p>i) Very restricted livelihood options</p> <p>ii) Recurrence of glut at pick harvest season</p> <p>iii) Lack of awareness regarding proper management of nutritional garden</p> <p>iv) Lack of market support</p> <p>v) Lack of credit support</p>	<ul style="list-style-type: none"> * 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 2011-12

Decipline	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	14	14	Nil	1	Nil	40
Horticulture	2	2	15	15	1	2	15	34
Plant protection	2	2	14	14	-	-	-	-
Animal Husbandry	2	2	12	12	2	2	20	20
Fishery	2	2	14	14	2	2	5	5
Home Science	2	2	30	30	3	3	130	153
Total	12	12	99	99	8	10	170	252

Decipline	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	30	30	750	879	165	189	821	895
Horticulture	25	28	625	974	150	166	623	650
Plant protection	32	35	960	1047	220	248	995	1023
Animal Husbandry	16	16	640	835	510	585	1235	1256
Fishery	40	44	1200	1207	410	490	834	889
Home Science	26	28	780	914	160	180	458	450
Total	149	181	4955	5856	1615	1858	4966	5163

Crop	Seed production (q)		Planting material (Nos.)	
	5		6	
	Target	Achievement	Target	Achievement
Paddy	40	43	Vegetable seedlings	108150
Green Gram	5	4.9	Fruit seedlings	7590
			Ornamental plant seedlings	6080
			Others	50995

3.1. A Achievements on technologies assessed and refined

OFT-1

1. Title of on-farm trials

Assessment of the efficacy of bio fertilizers on productivity enhancement of kharif paddy in South 24-Parganas district

2. Problem diagnosed

Low yield and profitability of kharif paddy due to imbalance use of fertilizers

3. Details of technologies selected for assessment

Farmers' practice: Transplanting of 25 days old seedlings of var. IET-5656 with a spacing of 20 cm X 15cm, N:P₂O₅:K₂O @ 60:30:30 kg/ha & two times manual weeding

Technology-1 to be assessed: FP + *Azospirillum* @ 1.5 kg/ha + PSB @ 5.0 kg /ha at the time of puddling

Technology-2 to be assessed: Transplanting of 25 days old seedlings of var. IET-5656 with a spacing of 20 cm X 15cm, Soil test based recommended fertilizers & two times manual weeding

4. Source of technology

Yadav O.M., Dahiphale V.V, Godhawale G.V.: Effect of integrated nutrient management on production and economic efficiency of rice under drilled condition, Indian Journal of Dry land Agricultural Research and Development, 2008, 23, issue 1.

5. Production system and thematic area

Rice based production/Integrated nutrient management

6. Performance of the technology with performance indicators

Treatments	No. of trials	Plant height (cm)	No. of tillers /hill	Length of panicle (cm)	No. of filled seeds /panicle	No. of unfilled seeds/panicle	Grain yield (qt/ha)	Straw yield (Kahan /ha)
Farmers' practice	7	112.6	10.8	20.8	137.1	21.3	39.43	19.5
Technology-1 to be assessed		119.4	11.1	23.3	143.6	21.1	40.75	21.6
Technology-2 to be assessed		123.3	14.6	24.2	153.7	26.7	42.30	20.5
SEm+		1.01	0.69	0.58	1.38	0.75	0.37	0.32
CD (p=0.05)		3.12	2.16	1.82	4.27	2.34	1.18	N.S

Treatments	Disease & Pest incidence	Cost of cultivation (Rs/ha)	Gross return (Rs/ha)	Net return (Rs/ha)	BC ratio
Farmers' practice	Sheath blight and Leaf folder infestation was observed in booting stage and managed by the spraying of <i>Trichoderma viride</i> & Flubendiamide 20% WG @ 2.5 gm/lit. of water respectively	22,500.00	35,444.00	12,944.00	1.57
Technology-1 to be assessed		23,350.00	36,920.00	13,570.00	1.58
Technology-2 to be assessed		23,200.00	37,940.00	14,740.00	1.63

7. Final recommendation for micro level situation

In the first year observation, results indicated that the transplanting of 25 days old seedlings of var. IET-5656 in a spacing of 20 cm X 15cm along with Soil test based recommended fertilizers & two times manual weeding enhanced 3.80% and 7.27 % higher yield over Tech. Option-1 and farmers practice respectively. The technology option-2 reduces the cost of cultivation (Rs.23,200/ha), increases the net return(Rs.14,740/ha) and Benefit- cost ratio(1.63). However, the final recommendation for micro level situation will be given after another two years observation.

8. Constraints identified and feedback for research

Heavy rainfall along with water stagnation during land preparation both chemical and bio-fertilizers have to some extent washout which may reduces the nutrient use efficacy.

9. Process of farmers participation and their reaction

Before conducting OFT programme a vigorous discussion was held with the farmers about the judicious application of nutrients. The interested farmers were selected for adopting the new technology for this purpose. The farmers observed that the soil test based fertilizer application reduced the cost of cultivation and increased the crop yield.

OFT-2

1.Title of on-farm trials

Assessment of Sustainability on production of boro paddy through integrated use of organic manures with chemical fertilisers in South 24-Parganas district

2. Problem diagnosed

Low productivity of boro paddy due to injudicious use of fertilizers

3.Details of technologies selected for assessment/refinement

Farmers' Practice: Transplanting of 25 days old seedlings of var. WGL-20471 with a spacing of 20 cm X 15cm, N:P₂O₅:K₂O @ 80:40:40 kg/ha & two times manual weeding

Technology-1 to be assessed: Transplanting of 25 days old seedlings of var. WGL-20471 with a spacing of 20 cm X 15cm, N:P₂O₅:K₂O as per soil test based recommendation through chemical fertilizers & two times manual weeding

Technology-2 to be assessed: Transplanting of 25 days old seedlings of var. WGL-20471 with a spacing of 20 cm X 15cm, N:P₂O₅:K₂O as per soil test based recommendation through 70% chemical fertilizers & 30% cowdung & poultry manures & two times manual weeding

Technology-3 to be assessed: Transplanting of 25 days old seedlings of var. WGL-20471 with a spacing of 20 cm X 15cm, N:P₂O₅:K₂O as per soil test based recommendation through 70% chemical fertilizers and 30% through vermicompost & two times manual weeding

4.Source of technology

M.E. ALI,M.R.ISLAM AND M. JAHIRUDDIN: Effect of integrated use of organic manures with chemical fertilizers in the rice-rice cropping system and its impact on soil health. Bangladesh J. Agril. Res.,34(1):81-90, March,2009

5.Production system and thematic area

Rice based production/Integrated nutrient management

6. Performance of the technology with performance indicators

Trial has been conducted in 7 numbers of farmers' field. The crop is in flowering stage and harvesting will be done in the 1st week of May, 12.

7. Final recommendation for micro level situation

This OFT is conducted for first year and the final recommendation will be given after 3 years observations.

8. Constraints identified and feedback for research- N.A

9. Process of farmers participation and their reaction

Before conducting OFT programme a vigorous discussion was held with the farmers about the judicious application of nutrients. The interested farmers were selected for adopting the new technology for this purpose.

OFT-3

1. Title of on-farm trials

Assessment of different wrapping materials to improve guava fruit quality

2. Problem diagnosed

Low profitability in guava cultivation due to fruit fly attack and secondary fungal infection on fruits

3. Details of technologies selected for assessment/refinement

Farmers' Practice: Use of transparent white polythene as wrapping material

Technological Option 1: Use of transparent white polythene as wrapping material and news paper piece within the polythene for partial cover of sunlight

Technological Option 2: Use of blue colour Non-wooven poly-fabric as wrapping material

Technological Option 3: Use of Non-wooven poly-fabric of green colour as wrapping material

4. Source of technology

CISH, Lucknow and Reliance Industries Limited (Polymer Division)

5. Production system and thematic area

Orchard based production system/Management of orchards

6. Performance of the technology with performance indicators

Technology option	No. of trials	Data related to problem addressed			Yield component	Cost of cultivation (Rs./ ha)	Gross return (Rs./ ha)	Yield (t/ha/year)	BC ratio
		Disease incidence (%)	Fruit colour*	Glossy-ness*	Size (g)				
Farmers' Practice	8	12.84	2	2	68.65	194223	433385	22.2	2.23
Technological Option 1		5.09	5	5	72.25	223958	612886	27.2	2.73
Technological Option 2		4.31	4	4	73.95	210980	596225	27.0	2.82
Technological Option 3		4.87	2	1	69.52	211125	511098	24.2	2.42
CD (p=0.05)		0.65	-	-	2.97	-	-	1.98	-

*5 point scale

7. Final recommendation for micro level situation

To be recommended after another one year of trial. However, the blue coloured wrapping material as shown in technological option 2 seems to give the best result so far.

8. Constraints identified and feedback for research- Wrapping of individual fruit is cumbersome.

9. Process of farmers participation and their reaction-

Designed jointly by researcher and farmer and managed by farmers.

OFT-4

1. Title of on-farm trials

Assessment of the performance of ginger and turmeric under the sapota orchard for better profitability from orchard based production system

2. Problem diagnosed

Low profitability from the sapota orchard due to non utilization of orchard floor.

3. Details of technologies selected for assessment/refinement

Farmers' Practice: Sapota orchard floor remain fallow without cultivation

Technological Option 1: Cultivation of turmeric(var. Surama) underneath the Sapota orchard

Technological Option 2: Cultivation of Ginger (var. Gorubathan) underneath the Sapota orchard

3. Source of technology

Dept. of Spices & plantation crops, BCKV

4. Production system and thematic area

Orchard based production system/Intercropping in orchard

5. Performance of the technology with performance indicators

Technology option	No. of trials	Data related to problem addressed			Yield of sapota (t/ha)	Cost of cultivation (Rs./ ha)	Gross return (Rs./ ha)	Net return (Rs./ ha)	BC ratio
		Sapota fruit size (g)	Yield of ginger (q/ha)	Yield of turmeric (q/ha)					
Farmers' Practice	7	122.48	-	-	25.92	67518	160373	92855	2.38
Technological Option 1		131.32	-	38.45	26.85	101972	255950	153978	2.51
Technological Option 2		132.17	15.32	-	26.57	103346	257175	153829	2.49
CD (p=0.05)		8.91	-	-	0.74	-	-	-	-

6. Final recommendation for micro level situation

To be recommended after another 2 years' of trial. However, the first year result shows that turmeric may be the best option as shown in technological option I.

7. Constraints identified and feedback for research : N.A.

8. Process of farmers participation and their reaction

Designed jointly by researcher and farmer and managed by farmers.

OFT-5

1. Title of on-farm trials

Assessment of the profitability of summer chilli by effective control measures against leaf curl in low land situation of coastal saline belt of South 24- Parganas

2. Problem diagnosed

Low profitability of chilli due to leaf curl

3.Details of technologies selected for assessment/refinement

Farmers' Practice: Spraying of conventional chemical insecticide Profenophos 50 % EC at 15 days interval

Technological 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/lit of water, rectified spirit @ 20 ml/lit of water at 15 days interval from seedling stage to early fruiting stage

Technological Option 2: Application of Diafenthuron 5% WG @ 15 days interval from seedling stage to early fruiting stage

Technological Option 3: Release of *Chrysoperla carnea* grubs @ 2/plant at 15 days interval from seedling stage to early fruiting stage

4. 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

5. Production system and thematic area

Horticulture based production system/ Integrated Pest Management

6. Performance of the technology with performance indicators

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	7	1.40	4.19	0.16	0.31	123.75	41021	148496	107475	3.62
Technological Option 1		1.87	5.08	0.53	0.77	108.00	38681	129581	90900	3.35
Technological Option 2		0.46	1.98	1.15	1.10	135.00	43098	162048	118950	3.76
Technological Option 3		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	-	-	-	-

7. Final recommendation for micro level situation

Application of Diafenthiuron 5% WG @ 15 days interval from seedling stage (Technology Option 2) 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.

8. 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 of balanced fertilizer may be incorporated into future research work.

9. Process of farmers participation and their reaction

Village meeting with the farmers and Identification of the problem , Technology managed by the farmers, Field visit with the farmers, Field day

OFT-6

1. Title of on-farm trials

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

2. Problem diagnosed

Low productivity of high yielding kharif paddy due to high infestation of brown plant hopper

3.Details of technologies selected for assessment/refinement

Farmers' Practice: Conventional chemical insecticides – endosulfan, Fertilizer: 60:30:30 Kg NPK/ha, Spacing: 20 cmx20 cm, Variety: MTU 7029

Technological Option 1: Skip row transplanting (Transplanted rows:Skip row = 8:1), Fertilizer: 60:30:30 Kg NPK/ha, Spacing: 20 cmx20 cm, Variety: MTU 7029

Technological Option 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

Technological Option 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

4. 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

5.Production system and thematic area

Rice based production system /Integrated Pest management

6.Performance of the technology with performance indicators

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 1 st spray	After 2 nd spray	Lady bird beetles		Spiders						
				After 1 st spray	After 2 nd spray	After 1 st spray	After 2 nd spray					
Farmers' Practice	7	13.50	14.25	0.05	-	0.10	0.05	35.25	30000	38775	8775	1.29
Technological Option 1		14.25	20.35	0.20	0.35	0.40	0.60	34.35	29751	37785	8034	1.27
Technological Option 2		5.50	7.10	0.15	0.25	0.40	0.55	37.55	30150	41305	11155	1.37
Technological Option 3		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	-	-	-	-

7. Final recommendation for micro level situation

Technological Option 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.

8. 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

9. 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-7

1.Title of on-farm trials

Evaluating the profitability of medium sized carp ponds(0.065ha) of South 24 Parganas by introducing giant freshwater prawn & ornamental fish

2.Problem diagnosed

Low profitability of domestic fish ponds due to culture of only carp fish

3.Details of technologies selected for assessment/refinement

Farmers' Practice: Culture of different carp species in freshwater ponds (0.065 ha) @ 11500/ha

Technological Option 1: Farmers' practice + giant freshwater prawn @ 3750/ha (prawn juveniles of 2 months age measuring 1.5 to 2.0 inches size)

Technological Option 2: Farmers practice + culture of ornamental fish in net enclosure (3 net enclosures of 6 ft.X 3 ft.X 3ft. with stocking density of 275 nos. each of koi carp, gold fish & barbs in three separate nets).

4.Source of technology

Central Institute of Freshwater Aquaculture, Bhubaneswar

5. Production system and thematic area

Fish based production system/ Mixed fish and prawn culture

6. Performance of the technology with performance indicators

Technology option	No. of trials	Survivability (%)			Yield			Unit Cost (Rs./unit)	Gross return (Rs./unit)	Net return (Rs./unit)	BC ratio
		Fish	Prawn	Orna-mental fish	Fish (kg)	Prawn (kg)	Ornam-ental fish (no.)				
Farmers' Practice	7	42	–	–	68.5	–	–	2392	5480	3088	2.29
Technological Option 1		40	38	–	52.8	7.5	–	3127	7530	4403	2.40
Technological Option 2		44	-	86	68.0	-	709	3512	8592	5080	2.45
CD (p=0.05)		NS	-	-	6.62	-	-	-	-	-	-

7. Final recommendation for micro level situation

It has been observed that although the freshwater prawn fetches high market price, its productivity is hampered due to lack of proper management in the domestic ponds which are often heavily silted up leading to acute oxygen deficiency at the bottom where the prawns actually reside. This problem is further compounded during cloudy and foggy weather conditions when oxygen shortage is more pronounced due lack of diffusion of oxygen at the air-water interface and also reduced photosynthetic activity in the pond. Moreover, the deep nature of domestic ponds in the locality hinders the growth of prawns due to insufficient production of natural fish food organisms at depths of more than 8 ft.

Hence it is recommended that prawns be cultured along with carps in either properly sloped or shallow ponds with water depth of around 4-5ft. all round the year while ornamental fish may be introduced in ponds of variable depths and also in ponds where both carp and prawns are cultured in combination for more income generation.

8. Constraints identified and feedback for research

Timely availability of prawn and more high value ornamental fish seeds is needed. It is often observed that some ornamental fish seed, produced from quality parents, do not develop bright colour even after reaching marketable size which needs to be addressed to maximize profit of the ornamental fish farmers.

9. Process of farmers participation and their reaction

Identification of the problem by farmers followed by designing of the trial jointly by researcher and farmer and managed by farmer

OFT-8

1. Title of on-farm trials

Refinement of the stocking density of goldfish reared in net enclosures fixed in small domestic ponds of South 24 Parganas

2. Problem diagnosed

Low profitability of goldfish reared in net enclosures

3. Details of technologies selected for assessment/refinement

Farmers' Practice: Rearing of gold fish fry (10mm) in net enclosure of varying size without any fixed stocking density viz. 2500 nos.

Technological Option 1: Rearing of gold fish fry (10mm) in net enclosure of 6'x 3'x3' at stocking density of 1 cm fish/20 cm² viz. 810 nos.

Technological Option 2: Rearing of gold fish fry (10mm) in net enclosure 6'x 3'x3' at stocking density of 1 cm fish/15cm² viz. 1080nos.

4. Source of technology

Central Institute of Freshwater Aquaculture, Bhubaneswar

5. Production system and thematic area

Fish based production system/ Ornamental fisheries

6. Performance of the technology with performance indicators

Technology option	No. of trials	Length of fish (cm)	Girth of fish (cm)	Survivability (%)	Disease incidence	Colour of fish	Yield (No.)	Cost of cultivation (Rs./unit)	Gross return (Rs.)	Net return (Rs.)	BC ratio
Farmers' Practice	7	2.9	1.5	40	Malnutrition, dropsy	Pale	1000	900	1500	600	1.66
Technology Option 1		5.9	3.2	75	Nil	Bright	607	750	2428	1678	3.24
Technology Option 2		5.2	2.3	68	Nil	Bright	734	830	2752	1922	3.31
CD (p=0.05)	-	1.35	0.58	8.37	-	-	47.24	-	-	-	-

7. Final recommendation for micro level situation

To maximize profitability from ornamental fish culture, it is recommended that Technological Option 2 may be adopted. In spite of the higher stocking density in Technological Option 2 leading to lowered survivability and growth of the fish than in Technological Option 1, the effect is not felt in the ultimate profit because the colour and shape of fish have only a slight effect on the market price, viz. Rs.3.75 instead of Rs.4.00 per piece. Hence, a little bit of higher stocking density than the recommended level by CIFA (Technological Option 1) is advocated for better profit.

8. Constraints identified and feedback for research

Timely availability of more high value ornamental fish seeds is needed. It is often observed that some ornamental fish seed, produced from quality parents, do not develop bright colour even after reaching marketable size which needs to be addressed to maximize profit of the ornamental fish farmers.

9. Process of farmers participation and their reaction

Identification of the problem by farmers followed by designing of the trial jointly by researcher and farmer and managed by farmer

OFT-9

1. Title of on-farm trials

Assessment of a non conventional immuno-stimulant of marine origin (MBC) in goats for prevention of infectious diseases.

2. Problem diagnosed

Lack of low cost medicines for prevention and treatment of goat diseases

3. Details of technologies selected for assessment/refinement

Farmers' Practice: Deworming + without vaccination

Technological Option 1: Deworming + MBC

Technological Option 2: Deworming + vaccination

Technological Option 3: Deworming + MBC + vaccination

4. Source of technology

Roy et al., Potential Future Applications of Spermatheca Extract from Marine Snail *Telescopium telescopium*. Turkish Journal of Veterinary and Animal Sciences. 34, (2010), 533-5405.

5. Production system and thematic area

Livestock based production system/Animal health management

6. Performance of the technology with performance indicators

Technology option	No. of trials	Disease incidence* (%/month)	Body weight gain* (%/month)	Prolonged toxicity	Yield (Kg.)	Cost of cultivation (Rs./unit)	Gross return (Rs.)	Net return (Rs.)	BC ratio
Farmers' Practice	7	18.4	11.4	Under study					
Technological Option 1		5.2	15						
Technological Option 2		13.3	11.5						
Technological Option 3		3.8	14.5						
CD (p=0.05)	-	1.08	1.15	-	-				

*1 year study report has been furnished

7. Final recommendation for micro level situation

This OFT is being conducted for the first year and the final recommendation will be given after 3 years of observation.

8. Constraints identified and feedback for research: NA

9. Process of farmers participation and their reaction

The trial has been set following problem identification by the farmers during a PRA exercise conducted in the village. The goat farmers expressed that a low cost easily available preventive for goats is urgently required for successful adoption of goat farming in the villages.

OFT-10

1. Title of on-farm trials

Assessment of production performance of broiler birds using MBC- a non conventional growth promoter of marine origin in the broiler farms of South 24 Parganas district

2. Problem diagnosed

Low productivity of broiler birds

3. Details of technologies selected for assessment/refinement

Farmers' Practice: Commercial feed

Technological Option 1: FP+ MBC @1 mg/Kg body on 3rd, 4th and 5th week

Technological Option 2: FP+ MBC @2 mg/Kg body on 3rd, 4th and 5th week

Technological Option 3: FP+ MBC @5 mg/Kg body on 3rd, 4th and 5th week

4. Source of technology

Roy et al., Potential Future Applications of Spermatheca Extract from Marine Snail Telescopium telescopium. Turkish Journal of Veterinary and Animal Sciences. 34, (2010), 533-5405.

5. Production system and thematic area

Livestock based production system/Poultry management

6. Performance of the technology with performance indicators

Technology option	No. of trials	Disease incidence* (%/6weeks)	Body weight gain* (kg/bird)	Food conversion rate	Quality evaluation of meat	Cost of cultivation (Rs./unit)	Gross return (Rs.)	Net return (Rs.)	BC ratio
Farmers' Practice	5	8	1.75	1.85	Continuing in collaboration with W.B.U.A.F.Sc				
Technological Option 1		7.85	1.85	1.85					
Technological Option 2		6.55	2.10	1.80					
Technological Option 3		7.89	1.80	1.90					
CD (p=0.05)	-	NS	NS	NS	-				

*1 year study report has been furnished

7. Final recommendation for micro level situation

This OFT is being conducted for the first year and the final recommendation will be given after 3 years of observation.

8. Constraints identified and feedback for research: NA

9. Process of farmers participation and their reaction

The trial has been set following problem identification by the farmers during a PRA exercise conducted in the village. The farmers expressed that any attempt to enhance growth rate of broilers could help them gain substantial profit by lowering the feed cost.

OFT-11

1. Title of on-farm trials

Assessment of comparative efficacy of different seed separator techniques for sunflower.

2. Problem diagnosed

Drudgery of women during seed separation of Sunflower

3. Details of technologies selected for assessment/refinement

Farmers' Practice: Seed separation of sunflower head by beating with stick (Length – 3 ft , diameter- 3cm, weight- 650g-750g)

Technological Option 1: Seed separation of sunflower head by spherical bamboo basket (diameter- 65cm)

Technological Option 2: Seed separation of sunflower by iron mesh (Rhombus shape – Each side 2.5cm and shortest diagonal length is 2 cm)

Technological Option 3: Seed separation of sunflower by iron mesh (Square shape – Each side 1.5cm) (Height of the separator 3.5 ft)

4. Source of technology

AICRP, Sunflower, Nimpith Center, Directorate of oilseed research, Hyderabad

5. Production system and thematic area

Horticulture based production system/Drudgery Reduction for Women

6. Performance of the technology with performance indicators

Technology options	No. of trials	Data related to problem addressed				Man-days /4500 flower head	Wt of collected seed (Q)	Constraints identified and feedback for research
		Ergonomic parameter		Angle of deviation	Physiological cost of work (beat/ minute)			
		Heart rate	Peak					
Farmers' Practice	15	126	110	45	47	10	211	1.Total seeds are not separated 2.Pain in biceps and triceps muscle in arms 3.Backache due to prolonged forward bending
Technology option 1		111	104	45	32	9	224	1.Seed coating are destroyed 2.Backache due to prolonged forward bending
Technology option 2		105	98	45	29	6	228	1.Intact seeds are separated 2.Less backache than T1
Technology option 3		90	82	25	23	4	231	1.Intact seeds are separated 2.Less backache than T2

7. Final recommendation for micro level situation

Technology option 3 is recommended as it reduces triceps muscle pain and back ache during operation. Intact seeds are also separated from it leading to better storage which is not usually possible in traditional beating method.

8. Constraints identified and feedback for research

Indicated in table

9. Process of farmers participation and their reaction

Designed by researcher and managed by farm-women.

OFT-12

1. Title of on-farm trials

Assessment of the different food preservatives to increase the keeping quality of Joynagarer Moya in Sundarban region

2. Problem diagnosed

Joynagar Moya is a special type of Sweet which is prepared in South 24 pgs particularly in Joynagar I & Joynagar II block during winter season. It is very famous due to the special test but it can be preserved only for five days. so it will be beneficial if the shelf life of the sweet can be increased by adding some good preservatives to minimize the storage loss.

3. Details of technologies selected for assessment

Farmers' Practice: Preparation of molasses from Date palm juice and mixing with puffed paddy, Kheer for making moya, having 5 days shelf life.

Technological Option 1: Preparation of molasses from Date palm juice with 0.1% Potassium meta bi sulphite and mixing with puffed paddy, Kheer for making moya

Technological Option 2: Preparation of molasses from Date palm juice with sodium benzoate 0.2% after adjustment of acidic pH with Citric acid and mixing with puffed paddy, Kheer for making moya

4. Source of technology

1. http://en.wikipedia.org/wiki/Potassium_metabisulfite 2. http://en.wikipedia.org/wiki/Sodium_benzoate

5. Production system and thematic area

Homestead based production system/ Minimization of nutrient loss in processing

6. Performance of the technology with performance indicators

Treatment	No. of beneficiaries	Taste* (after 3 days)					Off flavor* (after 3 days)					Overall acceptability* (after 3 days)				
		Days														
		1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Farmers Practice	15	7	3	1	0	0	6	3	0	0	0	3	0	0	0	
Technology option 1		8	6	4	1	0	8	6	4	2	0	8	6	5	1	0
Technology option 2		9	7	5	2	0	9	8	6	3	0	9	8	6	2	0

*Measured in 9 point hedonic scale with 15 panelist

7. Final recommendation for micro level situation

Will be provided at the end of another two years of study

8. Constraints identified and feedback for research

Not applicable

9. Process of farmers participation and their reaction

Designed by researcher and managed by rural youths

B. TECHNOLOGY ASSESSMENT AND REFINEMENT IN DETAIL

OFT-1

INTEGRATED NUTRIENT MANAGEMENT

Problem definition: Low yield and profitability of kharif paddy due to imbalance use of fertilizers

Technology to be assessed: Assessment of the efficacy of bio fertilizers on productivity enhancement of kharif paddy in South 24-Parganas district

KVK, South 24 Parganas has initiated a trial on Assessment of the efficacy of bio fertilizers on productivity enhancement of kharif paddy in South 24-Parganas district .Observations from the first years' trial indicated that the transplanting of 25 days old seedlings of var. IET-5656 in a spacing of 20 cm X 15cm along with soil test based recommended fertilizers & two times manual weeding gave 3.80% and 7.27 % higher yield over Tech. Option-1 and farmers practice respectively. The technology option-2 reduces the cost of cultivation (Rs.23,200/ha), increases the net return(Rs.14,740/ha) and Benefit- cost ratio(1.63). However, the final recommendation for micro level situation will be given another two years observation.

Table: Efficacy of bio fertilizers on productivity enhancement of kharif paddy

Treatments	No. of trials	Plant height (cm)	No. of tillers/hill	Length of panicle(cm)	No. of filled seeds /panicle	No. of unfilled seeds /panicle	Grain yield (qt/ha)	Straw yield (Kahan/ha)
Farmers' practice	7	112.6	10.8	20.8	137.1	21.3	39.43	19.5
Technology-1 to be assessed		119.4	11.1	23.3	143.6	21.1	40.75	21.6
Technology-2 to be assessed		123.3	14.6	24.2	153.7	26.7	42.30	20.5
SEm+		1.01	0.69	0.58	1.38	0.75	0.37	0.32
CD (p=0.05)		3.12	2.16	1.82	4.27	2.34	1.18	N.S

Contd.. Table: Efficacy of bio fertilizers on productivity enhancement of kharif paddy

Treatments	Disease & Pest incidence	Cost of cultivation (Rs/ha)	Gross return (Rs/ha)	Net return (Rs/ha)	BC ratio
Farmers' practice	Sheath blight and Leaf folder infestation was observed in booting stage and managed by the spraying of Trichoderma viride & Flubendiamide 20% WG @ 2.5 gm/lit.of water respectively	22,500.00	35,444.00	12,944.00	1.57
Technology-1 to be assessed		23,350.00	36,920.00	13,570.00	1.58
Technology-2 to be assessed		23,200.00	37,940.00	14740.00	1.63

OFT-2

INTEGRATED NUTRIENT MANAGEMENT

Problem definition: Low productivity of boro paddy due to injudicious use of fertilizers

Technology to be assessed: Assessment of Sustainability on production of boro paddy through integrated use of organic manures with chemical fertilisers in South 24-Parganas district

This is the first year on going OFT. It is conducted in 7 farmers' field. The result will be obtained by the 1st week of May,2012. Therefore, further two years observation is needed for final assessment.

OFT-3

QUALITY MANAGEMENT OF FRUIT

Problem definition: Low profitability in guava cultivation due to fruit fly attack and secondary fungal infection on fruits

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

To improve the quality and thereby the profitability from guava cultivation, KVK, South 24 Parganas has been conducting trials to find out suitable wrapping materials to protect the fruits from attacks of fruit fly and secondary fungal infection. Observations obtained so far points to the fact that the blue coloured non woven poly fabric gives better result than other wrapping materials tried. This is exemplified by the higher yield obtained in terms of individual weight of fruit as well as the BC ratio, viz.73.95g and 2.82 respectively.

Table: Evaluation of profitability of guava cultivation by using different wrapping materials

Technology option	No. of trials	Data related to problem addressed			Yield component	Cost of cultivation (Rs./ ha)	Gross return (Rs./ ha)	Yield (t/ha/ year)	BC ratio
		Disease incidence(%)	Fruit colour*	Glossy-ness*	Size (g)				
Farmers' Practice	8	12.84	2	2	68.65	194223	433385	22.2	2.23
Technological Option 1		5.09	5	5	72.25	223958	612886	27.2	2.73
Technological Option 2		4.31	4	4	73.95	210980	596225	27.0	2.82
Technological Option 3		4.87	2	1	69.52	211125	511098	24.2	2.42
CD (p=0.05)	-	0.05	-	-	2.97	-	-	1.98	-

OFT-4

INTERCROPPING IN ORCHARD

Problem definition: Low profitability from the sapota orchard due to non utilization of orchard floor.

Technology to be assessed: Assessment of the performance of ginger and turmeric in the sapota orchard for better profitability

To improve the profitability from Sapota orchard, KVK, South 24 Parganas has been conducting trials to find out suitable intercropping options in the orchard floor which usually remain fallow. Observations obtained so far indicates a better net return (Rs. 153978/-) and BC ratio (2.51) by incorporating turmeric cultivation as indicated in technology option 1.

Table: Evaluation of the profitability of sapota orchard by utilizing the fallow space beneath

Technology option	No. of trials	Data related to problem addressed			Yield of sapota (t/ha)	Cost of cultivation (Rs./ ha)	Gross return (Rs./ ha)	Net return (Rs./ ha)	BC ratio
		Sapota fruit size (g)	Yield of ginger (q/ha)	Yield of turmeric (q/ha)					
Farmers' Practice	7	122.48	-	-	25.92	67518.00	160373.00	92855.00	2.38
Technology Option 1		131.32	-	38.45	26.85	101972.00	255950.00	153978.00	2.51
Technology Option 2		132.17	15.32	-	26.57	103346.00	257175.00	153829.00	2.49
CD (p=0.05)		8.91	-	-	0.74	-	-	-	-

OFT-5**INTEGRATED PEST MANAGEMENT**

Problem definition: Low profitability of chilli due to leaf curl

Technology to be assessed: Assessment of the profitability of summer chilli by effective control measures against leaf curl in low land situation of coastal saline belt of South 24- Parganas

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, South 24- Parganas conducted OFT on chilli leaf curl to find out effective control measures against chilli thrips and mites. Results of the trial indicated that application of diafenthiuron 5% WG @ 1 g/l. at 15 days interval from seedling stage to early fruiting stage (Tech. option 2) 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.

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	7	1.40	4.19	0.16	0.31	123.75	41021.00	148496.00	107475.00	3.62
Technology Option 1		1.87	5.08	0.53	0.77	108.00	38681.00	129581.00	90900.00	3.35
Technology Option 2		0.46	1.98	1.15	1.10	135.00	43098.00	162048.00	118950.00	3.76
Technology Option 3		1.54	4.48	1.02	1.04	115.2	43214.00	138284.00	95070.00	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	-	-	-	-

OFT-6**INTEGRATED PEST MANAGEMENT**

Problem definition: Low productivity of high yielding kharif paddy due to high infestation of brown plant hopper

Technology to be 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

Indiscriminate use of conventional pesticides without following skip row in kharif paddy by the farmers of South 24 Parganas has resulted in widespread infestation by brown plant hopper during flowering to milk stage resulting in low yield. To address this problem, KVK, South 24 Parganas has conducted trial to assess the efficacy of new generation pesticides and bio pesticides by following skip row method of transplanting. Results indicates that 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 7.10 nymphs or adults of BPH/hill) (Tech. option 2) successful in reducing BPH infestation by almost 50% over that found in farmers' practice in kharif paddy of the district South 24 Parganas. This treatment shows that although the cost of cultivation is almost at par with that of farmers' practice but the grain yield is higher by 6.52% leading to a higher net return of Rs.11,155.00/ha and also a higher BC ratio of 1.37.

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 1 st spray	After 2 nd spray	Lady bird beetles		Spiders						
				After 1 st spray	After 2 nd spray	After 1 st spray	After 2 nd spray					
Farmers' Practice	7	13.50	14.25	0.05	-	0.10	0.05	35.25	30000	38775	8775	1.29
Technology Option 1		14.25	20.35	0.20	0.35	0.40	0.60	34.35	29751	37785	8034	1.27
Technology Option 2		5.50	7.10	0.15	0.25	0.40	0.55	37.55	30150	41305	11155	1.37
Technology Option 3		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				

OFT-7**VALUE ADDITION IN FISHERY**

Problem definition: Low profitability of domestic fish ponds due to culture of only carp fish

Technology assessed: Evaluating the profitability of medium sized carp ponds(0.065ha) of South 24 Parganas by introducing giant freshwater prawn & ornamental fish

KVK South 24 Parganas, West Bengal conducted on-farm trial in Amratala village of Mograhat I block to evaluate the profitability of fish ponds by introducing giant freshwater prawn and ornamental fish. Results of the trial indicated that although giant freshwater prawns have great market price, introduction of ornamental fish in enclosed nets along with the normal practice of carp culture is safe and gives slightly better return than that obtained by introducing prawns in carp culture ponds. The net return of Rs.5080.00 and a BC ratio of 2.45 is higher in case of ornamental fish introduction than prawn introduction which fetches a net return of Rs.4403.00 and a BC ratio of 2.40 respectively.

However, wherever the pond conditions are suitable, one can pursue both prawns and ornamental fish for greater return.

Table: Evaluation of profitability of fish ponds introducing giant freshwater prawn and ornamental fish

Technology option	No. of trials	Survivability (%)			Yield			Unit Cost (Rs./unit)	Gross return (Rs./unit)	Net return (Rs./unit)	BC ratio
		Fish	Prawn	Ornamental fish	Fish (kg)	Prawn (kg)	Ornamental fish (no.)				
Farmers' Practice	7	42	-	-	68.5	-	-	2392	5480	3088	2.29
Technology Option 1		40	38	-	52.8	7.5	-	3127	7530	4403	2.40
Technology Option 2		44	-	86	68	-	709	3512	8592	5080	2.45
CD (p=0.05)	-	NS	-	-	6.62	-	-	-	-	-	-

OFT-8***DIVERSIFIED FISH FARMING***

Problem definition: Low profitability of goldfish reared in net enclosures

Technology refined: Refinement of the stocking density of goldfish reared in net enclosures fixed in small domestic ponds of South 24 Parganas

Bongheri village of Kultali block, South 24 Parganas was selected for Refinement of the stocking density of goldfish reared in net enclosures fixed in small domestic ponds. The result showed that the inspite of higher stocking density than the recomeneded level by CIFA, the net profit was more in the refined practices as the number of fish production was more maintaining the same colour as practiced by CIFA recommendation. Thus it may be advised to the farmers for adoption of this refined technology (technology option 2)with maximum profit inspite of lower selling price per fish.

Table: Refinement of the stocking density of goldfish reared in net enclosures fixed in small domestic ponds of South 24 Parganas

Technology option	No. of trials	Length of fish (cm)	Girth of fish (cm)	Survivability (%)	Disease incidence	Colour of fish	Yield (No.)	Cost of cultivation (Rs./unit)	Gross return (Rs.)	Net return (Rs.)	BC ratio
Farmers' Practice	7	2.9	1.5	40	Malnutrition, dropsy	Pale	1000	900	1500	600	1.66
Technology Option 1		5.9	3.2	75	Nil	Bright	607	750	2428	1678	3.24
Technology Option 2		5.2	2.3	68	Nil	Bright	734	830	2752	1922	3.31
CD (p=0.05)	-	1.35	0.58	8.37	-	-	47.24	-	-	-	-

OFT-9

ANIMAL HEALTH MANAGEMENT

Problem definition: Lack of low cost medicines for prevention and treatment of goat diseases

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

The infectious diseases are very common in goats especially goat pox and secondary bacterial infections which mainly affects the profit from the goatary. Besides malnutrition and other inhibitory factors affect the optimum production and productivity of the animals. Thus the present investigation was undertaken by KVK South 24-Parganas to explore the natural resource for its optimum use for the enhancement of immunity of the goats.

Table: Assessment of the efficacy of a non conventional immunostimulant in goat for prevention of diseases

Technology option	No. of trials	Disease incidence* (%/month)	Body weight gain* (%/month)	Prolonged toxicity	Yield (Kg.)	Cost of cultivation (Rs./unit)	Gross return (Rs.)	Net return (Rs.)	BC ratio
Farmers' Practice	7	18.4	11.4						Under study
Technological Option 1		5.2	15						
Technological Option 2		13.3	11.5						
Technological Option 3		3.8	14.5						
CD (p=0.05)	-	1.08	1.15	-					

*1 year study report has been furnished

OFT-10

POULTRY MANAGEMENT

Problem definition: Low productivity of broiler birds

Technology to be assessed: Assessment of production performance of broiler birds using MBC- a non conventional growth promoter of marine origin in the broiler farms of South 24 Parganas district.

The body weight gain in the broiler birds are main criteria for net return which sometimes affects due to disease occurrence and other inhibitory factors. The means of increasing the food conversion ratio was tried but with lack of reliability and yet to be tested for human consumption safety. Thus use of natural resources for effective body weight gain is tried by KVK South 24-Parganas with the snail extract from *Telescopium telescopium*.

Table: Assessment of the efficacy of a non conventional growth promoter in broiler birds

Technology option	No. of trials	Disease incidence* (%/6weeks)	Body weight gain* (kg/bird)	Food conversion rate	Quality evaluation of meat	Cost of cultivation (Rs./unit)	Gross return (Rs.)	Net return (Rs.)	BC ratio
Farmers' Practice	5	8	1.75	1.85					Continuing in collaboration with W.B.U.A.F.Sc
Technological Option 1		7.85	1.85	1.85					
Technological Option 2		6.55	2.10	1.80					
Technological Option 3		7.89	1.80	1.90					
CD (p=0.05)	-	Ns	NS	NS	-				

OFT-11**DRUDGERY REDUCTION**

Problem definition: Drudgery of women during seed separation of Sunflower

Technology to be assessed: Assessment of comparative efficacy of different seed separator techniques for 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 Seed separation of sunflower by iron mesh (Square shape – Each side 1.5cm) (Height of the separator 3.5 ft) (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.

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	Wt of collected seed (Q)	Constraints identified and feedback for research
		Ergonomic parameter						
		Heart rate		Angle of deviation	Physiological cost of work (beat/ minute)			
Peak	Avg.							
Farmers Practice	15	126	110	45	47	10	211	1.Total seeds are not separated 2.Pain in biceps and triceps muscle in arms 3.Backache due to prolonged forward bending
Technology option 1		111	104	45	32	9	224	1.Seed coating are destroyed 2.Backache due to prolonged forward bending
Technology option 2		105	98	45	29	6	228	1.Intact seeds are separated 2.Less backache than T1
Technology option 3		90	82	25	23	4	231	1.Intact seeds are separated 2.Less backache than T2

OFT-12**MINIMIZATION OF NUTRIENT LOSS DURING PROCESSING**

Problem definition: Less shelf life of special sweets called “Joynagorer moya”

Technology to be assessed: Assessment of the different food preservatives to increase the keeping quality of Joynagorer Moya in Sundarban region.

Joynagar Moya is a special type of Sweet which is prepared in South 24 Parganas particularly in Joynagar I & Joynagar II block during winter season. It is very famous due to the special taste but it can be preserved only for three days. So it will be beneficial if the shelf life of the sweet can be increased by adding some good preservatives to minimize the storage loss. KVK, Nimpith has conducted the OFT to assess the different food preservatives to increase the keeping quality of Joynagorer Moya. The result shows that the addition of sodium benzoate 0.2% after adjustment of acidic pH with Citric acid and mixing with puffed paddy, Kheer for making moya helps to increase the shelf life up to 6 days.

Table: Comparative efficacy of different preservatives added in Joynagorer moya

Treatment	No. of beneficiaries	Taste (after 3 days)					Off flavor (after 3 days)					Overall acceptability (after 3 days)				
		Days														
		1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Farmers Practice	15	7	3	1	0	0	6	3	0	0	0	3	0	0	0	0
Technology option 1		8	6	4	1	0	8	6	4	2	0	8	6	5	1	0
Technology option 2		9	7	5	2	0	9	8	6	3	0	9	8	6	2	0

3.2 Achievements of Frontline Demonstrations

- A. Details of FLDs implemented during 2011-12 (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*	Crop diversification	Full Package- i) Seed-Var.KBSH-44, ii) Seed treatment with <i>Trichoderma viride</i> & <i>Pseudomonas fluorescens</i> iii) Compost @ 8t/ha and RDF @ 80:40:40 kg NPK/ha iv) foliar application of boron @ 2g/lit at flowering stage	Summer, 2012	16	16	28	12	40	-

*FLD made under AICRP on Sunflower, RAKVK-Nimpith Center, under financial support of DOR, Hyderabad

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, 2012	Irrigated	Clay	212.8	26.5	480.7	Kharif paddy	2 nd week of January, 2012	Last week of April, 2012	131.8	9

Performance of FLD

Oilseeds:

Frontline demonstrations on oilseed crops

Crop	Thematic Area	Name of the technology demonstrated	No. of Farmers	Area (ha)	Yield (q/ha)		% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
					Demo	Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Sunflower*	Crop diversification	Full Package- i) Seed-Var.KBSH-44, ii) Seed treatment with <i>Trichoderma viride</i> & <i>Pseudomonas fluorescens</i> iii) Compost @ 8t/ha and RDF @ 80:40:40 kg NPK/ha iv) foliar application of boron @ 2g/lit at flowering stage	40	16			Yet to be harvested								
Total			40	16	-	-	-	-	-	-	-	-	-	-	-

Pulses : NA

Frontline demonstration on pulse crops

Crop	Thematic Area	Name of the technology demonstrated	No. of Farmers	Area (ha)	Yield (q/ha)		% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)				
					Demo	Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR	
Total																

* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.

** BCR= GROSS RETURN/GROSS COST

Maize, cotton and lentil as special programme : NA

Frontline demonstration on maize, cotton and lentil

Crop	Thematic Area	Name of the technology demonstrated	No. of Farmers	Area (ha)	Yield (q/ha)		% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)				
					Demo	Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR	
Total																

* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.

** BCR= GROSS RETURN/GROSS COST

Other crops

Category and Crop	Thematic area	Name of the technology demonstrated	No. of Farmer	Area (ha)	Yield (q/ha)		% change in yield	Other parameters		*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
					Demo.	Check		Demo	Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Cereals																	
Millets																	
Vegetable crops																	
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	10	1.0	204.70	Fallow	-	1.52 (soil salinity) 0.48(OC) 26152 (net profit-Rs./ha)	3.23 (soil salinity) 0.38(OC) -	30140	56292	26152	1.87	-	-	-	-
Flower crops																	
Ornamental crops																	
Fruit crops																	
Spices and condiments																	
Commercial crops																	
Medicinal and aromatic plants																	
Fodder crops																	
Plantation crops																	
Betel vine	Protected cultivation	Beetlevine (var. Kali Bangla) cultivation in Hi-tech boroz made-up of GI structure and shade net	24	1.0	FLD started in the month of February' 12 and plantation will be done in the month of June' 12												
Fibre crops																	
Others (pl.specify)																	
Total																	

* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.

** BCR= GROSS RETURN/GROSS COST

Livestock

Category	Thematic area	Name of the technology demonstrated	No. of Farmer	No. of units	Major parameters			% change in major parameter	Other parameter		*Economics of demonstration (Rs.)				*Economics of check (Rs.)				
					Parameter	Demonstration	Check		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	The demonstration is continuing for 1year and another 6 months is required to get the complete result of production cycle (18 months)										
					Egg production (no./bird/year)	195	165	18.18											
					Disease occurrence (%)	9.5	13	3.5											
Poultry	Layer management	Azolla feeding of Layer birds of South 24 Parganas district			Age at which laying started (month)	4.2	4.5	The demonstration is continuing for 1year and another 6 months is required to get the complete result of production cycle (18 months)											
					Egg production (no./bird/year)	135	163												
					Disease occurrence (%)	12.5	13.05												
Rabbitry																			
Piggery																			
Sheep and goat																			
Duckery																			
Others (pl.specify)																			
Total																			

* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.

** BCR= GROSS RETURN/GROSS COST

Fisheries

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 in ponds	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 (<i>Puntius</i> spp) Molly (<i>Poecilia</i> spp.)	5.8 4.6	Ornamental fish culture non existent 24.0Kg (small carps, <i>Puntius</i> , <i>Chela</i> , <i>Colisa</i> , <i>Chanda</i> , <i>Channa</i> etc.)	-	-	-	4935.00	10912.00	5977.00	2.21	1562.00	2400.00	838.00	1.53	
				Girth of fish (cm)	Barb Molly	3.0 2.1														
				Survivality (%)	Barb Molly	68 70														
				Colouration	Barb Molly	Bright Bright														
				Yield (nos)	Barb Molly	1420 1472														

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 (Rs.1350.00 for about 4600 seeds), input cost for feed and management for a period of 6 months is Rs. 3585.00, cost of *Puntius* spp @ Rs. 4.00/pc and cost of *Poecilia* spp @ Rs. 3.00/pc

Other enterprises

Category	Name of the technology demonstrated	No. of Farmer	No. of units	Major parameters (Yield of mushroom)		% change in major parameter	Other parameter		*Economics of demonstration (Rs.) or Rs./unit (unit size =10'X10' room)				*Economics of check (Rs.) or Rs./unit				
				Demonstration	Check		Demonstration	Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR	
Oyster mushroom	Production technique in innovative technology	53	45	1.125kg/kg straw	1 kg/kg straw	12.5%	-	-	14450	31500	17050	2.17	10176	11340	1164	1.11	
Button mushroom																	
Vermicompost																	
Sericulture																	
Apiculture																	
Others (pl.specify)																	
Total																	

* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.

** BCR= GROSS RETURN/GROSS COST

Women empowerment

Category	Name of technology	No. of KVKs	No. of demonstrations	Name of observations	Demonstration	Check
Women						
Pregnant women	supplementary food for pregnant mother		40	Wt gain during pregnancy	10.2Kg	6.9Kg
Adolescent Girl						
Other women						
Children						
Neonatal						
Infants	weaning feed		40	Body wt at 9 th month	6.7kg	6.1kg
				Body wt at 12 th month	7.4 Kg	7kg
				Body wt at 9 th month	8.0Kg	7.2kg
Children						

Farm implements and machinery

Name of the implement	Crop	Name of the technology demonstrated	No. of KVKs	No. of Farmer	Area (ha)	Filed observation (output/man hour)		% change in major parameter	Labor reduction (man days)				Cost reduction (Rs./ha or Rs./Unit ect.)			
						Demonstration	Check									
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.

** BCR= GROSS RETURN/GROSS COST

Demonstration details on crop hybrids

Crop	Name of the Hybrid	No. of farmers	Area (ha)	Yield (kg/ha) / major parameter			Economics (Rs./ha)			
				Demo	Local check	% change	Gross Cost	Gross Return	Net Return	BCR
Cereals										
Bajra										
Maize										
Paddy										
Sorghum										
Wheat										
Others (pl.specify)										
Total										
Oilseeds										
Castor										
Mustard										
Safflower										
Sesame										
Sunflower	PAC-361,KBSH-44	402 nos.	5ha	Yet to be harvested						
Groundnut										
Soybean										
Others (pl.specify)										
Total										
Pulses										
Greengram	PDM-84/139	275 nos.	40ha	Yet to be harvested						
Blackgram										
Bengalgram										
Redgram										
Others (pl.specify)										
Total										
Vegetable crops										
Bottle gourd										
Capsicum										
Cucumber										

Tomato	Abinash2,SG-1458,CCS-448	275nos.	40 ha							
Brinjal										
Okra	SG Shravan, Sarika, Avantika	305 nos.	45 ha							
Onion										
Potato										
French bean	Falguni, VNR-Akash, U.S.-6214	95 nos.	15 ha							
Others (pl.specify) Bittergourd	Kajal Gouri, Meghna 2	135 nos	20 ha							
Total										
Commercial crops										
Cotton	Suravi	1500 nos.	200 ha							
Coconut										
Others (pl.specify)										
Total										
Fodder crops										
Napier (Fodder)										
Maize (Fodder)										
Sorghum (Fodder)										
Others (pl.specify)										
Total										

NB: Attach a few good action photographs with title at the back with pencil

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
Betel vine		1. Seed/Variety- Kali Bangla	Upland, irrigated	Planting will be done in the month of June' 12		
		2. Bio-fertilizer				
		3. Fertilizer management				
		4. Plant Protection				
		5. Combination of components (Please specify) – Boroz made up of GI structure and 75% shade net				

Technical Feedback on the demonstrated technologies

S. No	Feed Back
1	
2	

Farmers' reactions on specific technologies

S. No	Feed Back
1	
2	

Extension and Training activities under FLD

Sl.No.	Activity	No. of activities organized	Date	Number of participants	Remarks
1	Field days	6	06.05.11 15.04.11 20.12.11 06.01.12 20.01.12 22.03.12	208	
2	Farmers Training	10	-	452	
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	2	9	-	9	26	15	41	-	-	-	35	15	50
Cropping Systems													
Crop Diversification	1	12	13	25	16	18	34	1	1	2	29	32	61
Integrated Farming	3	25	3	28	36	11	47	-	-	-	61	14	75
Water management													
Seed production	4	53	-	53	55	-	55	-	-	-	108	-	108
Nursery management	1	12	7	19	10	12	22	-	-	-	22	19	41
Integrated Crop Management	1	13	-	13	15	-	15	-	-	-	28	-	28
Fodder production													
Production of organic inputs													
Others, (cultivation of crops)													
II Horticulture													
a) Vegetable Crops													
Production of low volume and high value crops													
Off-season vegetables	2	20	7	27	15	6	21	4	-	4	39	13	52
Nursery raising	2	31	18	49	18	2	20	-	-	-	49	20	69
Exotic vegetables like Broccoli	2	36	11	47	19	32	51	-	-	-	55	43	98
Export potential vegetables													
Grading and standardization													
Protective cultivation (Green Houses, Shade Net etc.)	1	13	2	15	3	2	5	-	-	-	16	4	20
Others, if any (Cultivation of Vegetable)													
Training and Pruning													
b) Fruits													
Layout and Management of Orchards													
Cultivation of Fruit	2	8	5	13	99	13	112	-	-	-	107	18	125
Management of young plants/orchards	2	31	12	43	13	10	23	-	-	-	44	22	66
Rejuvenation of old orchards													
Export potential fruits													
Micro irrigation systems of orchards	1	13	15	28	18	16	34	1	1	2	32	32	64
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	1	8	-	8	13	2	15	-	-	-	21	2	23
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	1	11	-	11	12	-	12	-	-	-	23	-	23
Soil and Water Conservation													
Integrated Nutrient Management	4	80	40	120	55	35	90	-	-	-	135	75	210
Production and use of organic inputs													
Management of Problematic soils	2	10	20	30	20	4	24	-	-	-	30	24	54
Micro nutrient deficiency in crops													
Nutrient Use Efficiency													
Soil and Water Testing													
Others, if any													
IV Livestock Production and Management													
Dairy Management	2	5	43	48	4	8	12	-	2	2	9	53	62
Poultry Management	1	15	6	21	9	9	18	-	-	-	24	15	39
Piggery Management													
Rabbit Management													
Disease Management	2	42	25	67	23	13	36	7	-	7	72	38	110
Feed management	1	15	12	27	16	14	30	-	-	-	31	26	57
Production of quality animal products													
Others, if any													
Goat farming	1	1	24	25	-	13	13	-	-	-	1	37	38
V Home Science/Women empowerment													
Household food security by kitchen gardening and nutrition gardening	5	-	26	26	-	42	42	-	-	-	-	68	68
Design and development of low/minimum cost diet													
Designing and development for high nutrient efficiency diet	1	-	14	14	-	7	7	-	-	-	-	21	21
Minimization of nutrient loss in processing													
Gender mainstreaming through SHGs	1	18	19	37	12	11	23	-	-	-	30	30	60
Storage loss minimization techniques													
Value addition													
Income generation activities for empowerment of rural Women													
Location specific drudgery reduction technologies	1	-	13	13	-	9	9	-	-	-	-	22	22
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													
Others, if any													
VII Plant Protection													
Integrated Pest Management	2	21	8	29	20	10	30	4	-	4	45	18	63
Integrated Disease Management	3	80	-	80	29	-	29	-	-	-	109	-	109
Bio-control of pests and diseases	2	21	9	30	18	7	25	1	-	1	40	16	56
Production of bio control agents and bio pesticides	1	13	4	17	12	5	17	-	-	-	25	9	34
Others, if any													

VIII Fisheries													
Integrated fish farming													
Carp breeding and hatchery management													
Carp fry and fingerling rearing	1	13	12	25	17	18	35	1	1	2	31	31	62
Composite fish culture	2	12	15	27	7	9	16	2	2	4	21	26	47
Hatchery management and culture of freshwater prawn													
Breeding and culture of ornamental fishes	2	-	14	14	4	39	43	1	5	6	5	58	63
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	1	5	6	11	13	2	15	-	-	-	18	8	26
Planting material production													
Bio-agents production													
Bio-pesticides production													
Bio-fertilizer production													
Vermi-compost production													
Organic manures production													
Production of fry and fingerlings	2	3	6	9	26	35	61	-	2	2	29	43	72
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	1	13	10	23	5	3	8	-	-	-	18	13	31
Formation and Management of SHGs	3	-	68	68	-	57	57	2	9	11	2	134	136
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	67	662	487	1149	658	489	1147	24	23	47	1344	999	2343
(B) RURAL YOUTH													
Mushroom Production													
Bee-keeping													
Integrated farming													
Seed production													
Production of organic inputs													
Integrated Farming													
Planting material production													
Vermiculture	1	4	2	6	13	2	15	-	-	-	17	4	21
Sericulture													
Protected cultivation of vegetable crops													
Commercial fruit production													
Repair and maintenance of farm machinery and implements													
Nursery Management of Horticulture crops													
Training and pruning of orchards													
Value addition													
Production of quality animal products													
Dairying													
Sheep and goat rearing													
Quail farming													
Piggery													
Rabbit farming													
Poultry production													

(B) RURAL YOUTH													
Ornamental fisheries	1	7	3	10	17	5	22	5	3	8	29	11	40
Para vets													
Para extension workers													
Composite fish culture	1	6	-	6	15	-	15	-	-	-	21	-	21
Freshwater prawn culture	2	14	23	37	5	3	8	4	2	6	23	28	51
Shrimp farming													
Pearl culture													
Cold water fisheries													
Fish harvest and processing technology													
Fry and fingerling rearing	2	19	29	48	4	3	7	-	-	-	23	32	55
Small scale processing													
Post Harvest Technology													
Tailoring and Stitching													
Rural Crafts													
Bio-control of pests and diseases	2	17	4	21	8	2	10	-	-	-	25	6	31
Food and nutrition security	1	-	15	15	-	-	-	-	-	-	-	15	15
Others, if any													
TOTAL	10	67	76	143	62	15	77	9	5	14	138	96	234
(C) Extension Personnel													
Productivity enhancement in field crops	1	6	-	6	5	-	5	-	-	-	11	-	11
Integrated Pest Management	3	38	-	38	22	1	23	-	-	-	60	1	61
Integrated Nutrient management	1	12	-	12	5	-	5	-	-	-	17	-	17
Rejuvenation of old orchards													
Protected cultivation technology													
Formation and Management of SHGs	1	-	12	12	-	4	4	-	-	-	-	16	16
Group Dynamics and farmers organization	1	-	10	10	-	5	5	-	-	-	-	15	15
Information networking among farmers													
Capacity building for ICT application	1	7	3	10	6	1	7	-	-	-	13	4	17
Care and maintenance of farm machinery and implements													
WTO and IPR issues													
Management in farm animals	5	180	-	180	53	-	53	21	-	21	254	-	254
Livestock feed and fodder production	3	49	-	49	25	-	25	2	-	2	76	-	76
Household food security													
Women and Child care	1	-	5	5	-	5	5	-	-	-	-	10	10
Low cost and nutrient efficient diet designing	1	-	12	12	-	-	-	-	-	-	-	12	12
Production and use of organic inputs	4	65	2	67	23	1	24	-	-	-	88	3	91
Gender mainstreaming through SHGs	1	-	8	8	-	2	2	-	3	3	-	13	13
Any other (Pl. Specify)													
Breeding & culture of Asian catfish	2	11	-	11	5	-	5	-	-	-	16	-	16
Horticultural nursery raising	2	57	-	57	27	-	27	-	-	-	84	-	84
Mixed fish & prawn culture	3	55	10	65	16	-	16	-	-	-	71	10	81
Ornamental fisheries	2	19	20	39	18	6	24	-	-	-	37	26	63
TOTAL	32	499	82	581	205	25	230	23	3	26	727	110	837

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													
Resource Conservation Technologies	1	12	8	20	12	14	26	-	-	-	24	22	46
Cropping Systems													
Crop Diversification	3	22	2	24	71	6	77	-	-	-	93	8	101
Integrated Farming	4	38	-	38	48	5	53	-	-	-	86	5	91
Water management													
Seed production	3	26	8	34	30	5	35	4	-	4	60	13	73
Nursery management													
Integrated Crop Management	2	35	16	51	20	15	35	-	-	-	55	31	86
Fodder production													
Production of organic inputs													
Others, (cultivation of crops)													

II Horticulture													
a) Vegetable Crops													
Production of low volume and high value crops	1	14	-	14	11	-	11	-	-	-	25	-	25
Off-season vegetables													
Nursery raising	2	27	6	33	21	3	24	-	-	-	48	9	57
Exotic vegetables like Broccoli													
Export potential vegetables													
Grading and standardization													
Protective cultivation (Green Houses, Shade Net etc.)													
Others, if any (Cultivation of Vegetable)	1	8	8	16	5	10	15	-	-	-	13	18	31
Training and Pruning													
b) Fruits													
Layout and Management of Orchards	1	15	2	17	3	3	6	-	-	-	18	5	23
Cultivation of Fruit													
Management of young plants/orchards													
Rejuvenation of old orchards													
Export potential fruits													
Micro irrigation systems of orchards													
Plant propagation techniques	1	1	-	1	18	-	18	2	-	2	21	-	21
Others, if any													
c) Ornamental Plants													
Nursery Management	6	68	16	84	32	18	50	80	14	94	180	48	228
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													
Soil and Water Conservation													
Integrated Nutrient Management													
Production and use of organic inputs													
Management of Problematic soils	2	35	17	52	18	5	23	-	-	-	53	22	75
Micro nutrient deficiency in crops	1	13	7	20	10	5	15	-	-	-	23	12	35
Nutrient Use Efficiency													
Soil and Water Testing													
Others, if any													
IV Livestock Production and Management													
Dairy Management													
Poultry Management	1	4	18	22	2	4	6	-	-	-	6	22	28
Piggery Management													
Rabbit Management													
Disease Management	2	40	10	50	10	20	30	3	-	3	53	30	83
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	6	-	61	61	-	156	156	-	5	5	-	222	222
Design and development of low/minimum cost diet	3	-	65	65	-	31	31	-	-	-	-	96	96
Designing and development for high nutrient efficiency diet	3	-	40	40	-	32	32	-	-	-	-	72	72
Minimization of nutrient loss in processing													
Gender mainstreaming through SHGs	1	-	15	15	-	13	13	-	-	-	-	28	28
Storage loss minimization techniques													
Value addition													
Income generation activities for empowerment of rural Women	4	-	52	52	-	26	26	-	-	-	-	78	78
Location specific drudgery reduction technologies	1	-	12	12	-	8	8	-	-	-	-	20	20
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													
Others, if any													
VII Plant Protection													
Integrated Pest Management	7	73	32	105	57	23	80	2	-	2	132	55	187
Integrated Disease Management	1	2	-	2	41	-	41	10	3	13	53	3	56
Bio-control of pests and diseases	2	20	8	28	17	5	22	-	-	-	37	13	50
Production of bio control agents and bio pesticides													
Others, if any													
VIII Fisheries													
Integrated fish farming	2	17	-	17	27	-	27	1	-	1	45	-	45
Carp breeding and hatchery management													
Carp fry and fingerling rearing	2	-	7	7	-	29	29	-	3	3	-	39	39
Composite fish culture	1	10	8	18	9	2	11	1	-	1	20	10	30
Hatchery management and culture of freshwater prawn													
Breeding and culture of ornamental fishes	1	7	3	10	13	4	17	-	-	-	20	7	27
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													
Mixed fish and prawn farming	1	12	-	12	14	-	14	-	-	-	26	-	26
IX Production of Inputs at site													
Seed Production													
Planting material production													
Bio-agents production													
Bio-pesticides production	1	3	7	10	11	8	19	-	-	-	14	15	29
Bio-fertilizer production													
Vermi-compost production													
Organic manures production													
Production of fry and fingerlings	3	6	15	21	15	19	34	1	3	4	22	37	59
Production of Bee-colonies and wax sheets													
Small tools and implements													
Production of livestock feed and fodder	2	17	38	55	7	16	23	1	2	3	25	56	81
Production of Fish feed													
Others, if any													

X Capacity Building and Group Dynamics													
Leadership development													
Group dynamics	3	-	32	32	-	43	43	-	30	30	-	105	105
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	525	513	1038	522	528	1050	105	60	165	1152	1101	2253
(B) RURAL YOUTH													
Mushroom Production													
Bee-keeping													
Integrated farming													
Seed production													
Production of organic inputs													
Integrated Farming													
Planting material production	1	-	-	-	12	5	17	6	3	9	18	8	26
Vermi-culture	1	14	-	14	13	-	13	-	-	-	27	-	27
Sericulture													
Protected cultivation of vegetable crops													
Commercial fruit production	1	6	-	6	12	-	12	-	-	-	18	-	18
Repair and maintenance of farm machinery and implements													
Nursery Management of Horticulture crops													
Training and pruning of orchards													
Value addition													
Production of quality animal products													
Dairying													
Sheep and goat rearing													
Quail farming													
Piggery													
Rabbit farming													
Poultry production													
Ornamental fisheries													
Para vets													
Para extension workers													
Composite fish culture	2	19	27	46	5	2	7	-	-	-	24	29	53
Freshwater prawn culture													
Shrimp farming													
Pearl culture													
Cold water fisheries													
Fish harvest and processing technology													
Fry and fingerling rearing	2	13	2	15	42	6	48	2	-	2	57	8	65
Small scale processing													
Post Harvest Technology													
Tailoring and Stitching													
Rural Crafts													
Others, if any													
TOTAL	7	52	29	81	84	13	97	8	3	11	144	45	189
(C) Extension Personnel													
Productivity enhancement in field crops													
Integrated Pest Management													
Integrated Nutrient management													
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													

(C) Extension Personnel														
Household food security														
Women and Child care														
Low cost and nutrient efficient diet designing														
Production and use of organic inputs														
Gender mainstreaming through SHGs														
Any other (Pl. Specify)														
TOTAL														

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														
Resource Conservation Technologies	3	21	8	29	38	29	67	-	-	-	59	37	96	
Cropping Systems														
Crop Diversification	4	34	15	49	87	24	111	1	1	2	122	40	162	
Integrated Farming	7	63	3	66	84	16	100	-	-	-	147	19	166	
Water management														
Seed production	7	79	8	87	85	5	90	5	-	5	169	13	182	
Nursery management	1	12	7	19	10	12	22	-	-	-	22	19	41	
Integrated Crop Management	3	48	16	64	35	15	50	-	-	-	83	31	114	
Fodder production														
Production of organic inputs														
Others, (cultivation of crops)														
II Horticulture														
a) Vegetable Crops														
Production of low volume and high value crops	1	14	-	14	11	-	11	-	-	-	25	-	25	
Off-season vegetables	2	20	7	27	15	6	21	4	-	4	39	13	52	
Nursery raising	4	58	24	82	39	5	44	-	-	-	97	29	126	
Exotic vegetables like Broccoli	2	36	11	47	19	32	51	-	-	-	55	43	98	
Export potential vegetables														
Grading and standardization														
Protective cultivation (Green Houses, Shade Net etc.)	1	13	2	15	3	2	5	-	-	-	16	4	20	
Others, if any (Cultivation of Vegetable)	1	8	8	16	5	10	15	-	-	-	13	18	31	
Training and Pruning														
b) Fruits														
Layout and Management of Orchards	1	15	2	17	3	3	6	-	-	-	18	5	23	
Cultivation of Fruit	2	8	5	13	99	13	112	-	-	-	107	18	125	
Management of young plants/orchards	2	31	12	43	13	10	23	-	-	-	44	22	66	
Rejuvenation of old orchards														
Export potential fruits														
Micro irrigation systems of orchards	1	13	15	28	18	16	34	1	1	2	32	32	64	
Plant propagation techniques	1	1	-	1	18	-	18	2	-	2	21	-	21	
Others, if any														
c) Ornamental Plants														
Nursery Management	6	68	16	84	32	18	50	80	14	94	180	48	228	
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	1	8	-	8	13	2	15	-	-	-	21	2	23	
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	1	11	-	11	12	-	12	-	-	-	23	-	23
Soil and Water Conservation													
Integrated Nutrient Management	4	80	40	120	55	35	90	-	-	-	135	75	210
Production and use of organic inputs													
Management of Problematic soils	4	45	37	82	38	9	47	-	-	-	83	46	129
Micro nutrient deficiency in crops	1	13	7	20	10	5	15	-	-	-	23	12	35
Nutrient Use Efficiency													
Soil and Water Testing													
Others, if any													
IV Livestock Production and Management													
Dairy Management	2	5	43	48	4	8	12	-	2	2	9	53	62
Poultry Management	2	19	24	43	11	13	24	-	-	-	30	37	67
Piggery Management													
Rabbit Management													
Disease Management	4	82	35	117	33	33	66	10	-	10	125	68	193
Feed management	1	15	12	27	16	14	30	-	-	-	31	26	57
Production of quality animal products													
Others, if any													
Goat farming	1	1	24	25		13	13	-	-	-	1	37	38
V Home Science/Women empowerment													
Household food security by kitchen gardening and nutrition gardening	11	-	87	87	-	198	198	-	5	5	-	290	290
Design and development of low/minimum cost diet	3	-	65	65	-	31	31	-	-	-	-	96	96
Designing and development for high nutrient efficiency diet	4	-	54	54	-	39	39	-	-	-	-	93	93
Minimization of nutrient loss in processing													
Gender mainstreaming through SHGs	2	18	34	52	12	24	36	-	-	-	30	58	88
Storage loss minimization techniques													
Value addition													
Income generation activities for empowerment of rural Women	4	-	52	52	-	26	26	-	-	-	-	78	78
Location specific drudgery reduction technologies	2	-	25	25	-	17	17	-	-	-	-	42	42
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													
Others, if any													
VII Plant Protection													
Integrated Pest Management	9	94	40	134	77	33	110	6	-	6	177	73	250
Integrated Disease Management	4	82	-	82	70	-	70	10	3	13	162	3	165
Bio-control of pests and diseases	4	41	17	58	35	12	47	1	-	1	77	29	106
Production of bio control agents and bio pesticides	1	13	4	17	12	5	17	-	-	-	25	9	34
Others, if any													

VIII Fisheries													
Integrated fish farming	2	17	-	17	27	-	27	1	-	1	45	-	45
Carp breeding and hatchery management													
Carp fry and fingerling rearing	3	13	19	32	17	47	64	1	4	5	31	70	101
Composite fish culture	3	22	23	45	16	11	27	3	2	5	41	36	77
Hatchery management and culture of freshwater prawn													
Breeding and culture of ornamental fishes	3	7	17	24	17	43	60	1	5	6	25	65	90
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													
Mixed fish & prawn farming	1	12	-	12	14	-	14	-	-	-	26	-	26
IX Production of Inputs at site													
Seed Production	1	5	6	11	13	2	15	-	-	-	18	8	26
Planting material production													
Bio-agents production													
Bio-pesticides production	1	3	7	10	11	8	19	-	-	-	14	15	29
Bio-fertilizer production													
Vermi-compost production													
Organic manures production													
Production of fry and fingerlings	5	9	21	30	41	54	95	1	5	6	51	80	131
Production of Bee-colonies and wax sheets													
Small tools and implements													
Production of livestock feed and fodder	2	17	38	55	7	16	23	1	2	3	25	56	81
Production of Fish feed													
Others, if any													
X Capacity Building and Group Dynamics													
Leadership development													
Group dynamics	4	13	42	55	5	46	51	-	30	30	18	118	136
Formation and Management of SHGs	3	-	68	68	-	57	57	2	9	11	2	134	136
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	142	1187	1000	2187	1180	1017	2197	130	83	213	2497	2100	4597
(B) RURAL YOUTH													
Mushroom Production													
Bee-keeping													
Integrated farming													
Seed production													
Production of organic inputs													
Integrated Farming													
Planting material production	1	-	-	-	12	5	17	6	3	9	18	8	26
Vermiculture	2	18	2	20	26	2	28	-	-	-	44	4	48
Sericulture													
Protected cultivation of vegetable crops													
Commercial fruit production	1	6	-	6	12	-	12	-	-	-	18	-	18
Repair and maintenance of farm machinery and implements													
Nursery Management of Horticulture crops													
Training and pruning of orchards													
Value addition													
Production of quality animal products													
Dairying													
Sheep and goat rearing													
Quail farming													
Piggery													

(B) RURAL YOUTH													
Rabbit farming													
Poultry production													
Ornamental fisheries	1	7	3	10	17	5	22	5	3	8	29	11	40
Para vets													
Para extension workers													
Composite fish culture	3	25	27	52	20	2	22	-	-	-	45	29	74
Freshwater prawn culture	2	14	23	37	5	3	8	4	2	6	23	28	51
Shrimp farming													
Pearl culture													
Cold water fisheries													
Fish harvest and processing technology													
Fry and fingerling rearing	4	32	31	63	46	9	55	2	-	2	80	40	120
Small scale processing													
Post Harvest Technology													
Tailoring and Stitching													
Rural Crafts													
Bio-control of pests and diseases	2	17	4	21	8	2	10	-	-	-	25	6	31
Food and nutrition security	1	-	15	15	-	-	-	-	-	-	-	15	15
Others, if any													
TOTAL	17	119	105	224	146	28	174	17	8	25	282	141	423
(C) Extension Personnel													
Productivity enhancement in field crops	1	6	-	6	5	-	5	-	-	-	11	-	11
Integrated Pest Management	3	38	-	38	22	1	23	-	-	-	60	1	61
Integrated Nutrient management	1	12	-	12	5	-	5	-	-	-	17	-	17
Rejuvenation of old orchards													
Protected cultivation technology													
Formation and Management of SHGs	1	-	12	12	-	4	4	-	-	-	-	16	16
Group Dynamics and farmers organization	1	-	10	10	-	5	5	-	-	-	-	15	15
Information networking among farmers													
Capacity building for ICT application	1	7	3	10	6	1	7	-	-	-	13	4	17
Care and maintenance of farm machinery and implements													
WTO and IPR issues													
Management in farm animals	5	180	-	180	53	-	53	21	-	21	254	-	254
Livestock feed and fodder production	3	49	-	49	25	-	25	2	-	2	76	-	76
Household food security													
Women and Child care	1	-	5	5	-	5	5	-	-	-	-	10	10
Low cost and nutrient efficient diet designing	1	-	12	12	-	-	-	-	-	-	-	12	12
Production and use of organic inputs	4	65	2	67	23	1	24	-	-	-	88	3	91
Gender mainstreaming through SHGs	1	-	8	8	-	2	2	-	3	3	-	13	13
Any other (Pl. Specify)													
Breeding & culture of Asian catfish	2	11	-	11	5	-	5	-	-	-	16	-	16
Horticultural nursery raising	2	57	-	57	27	-	27	-	-	-	84	-	84
Mixed fish & prawn culture	3	55	10	65	16	-	16	-	-	-	71	10	81
Ornamental fisheries	2	19	20	39	18	6	24	-	-	-	37	26	63
TOTAL	32	499	82	581	205	25	230	23	3	26	727	110	837

Details of training programmes as Annexure (Date wise)

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		
PF												
04.04.11-09.04.11	PF	Fresh water fish & prawn farming	6	On	-	25	25	-	19	19		
04.04.11-08.04.11, 21.04.11-25.04.11	PF	Dairy Management	5	On	4	10	14	9	53	62		
10.04.11	PF	Poultry Management	1	Off	6	22	28	2	4	6		
10.04.11	PF	Use of seed separator for seed separation of Sunflower	1	Off	-	32	32	-	25	25		

12.04.11	PF	Production of non-conventional high value vegetables	1	Off	25	-	25	11	-	11
19.04.11	PF	Use of seed separator for seed separation of Sunflower	1	Off	-	31	31	-	7	7
20.04.11	PF	Quality management of cotton	1	Off	30	1	31	15	1	16
21.04.11 – 23.04.11	PF	Protected cultivation of beetle vine in hi-tech boroz	3	On	16	4	20	3	2	5
23.04.11	PF	Preparation and management of Nutrition Garden to attain Nutritional Security	1	Off	-	20	20	-	8	8
10.5.11 – 12.5.11	PF	Off-season vegetable raising	3	On	21	6	27	8	4	12
10.05.11- 12.05.11	PF	Promotion of proper cooking practice for maintenance of nutritional status	3	On	-	44	44	-	28	28
10.05.11- 12.05.11, 15.06.11- 17.06.11	PF	Disease Management	3	On	72	38	110	30	20	50
20.05.11	PF	Selection of rice varieties as per land situations, seed treatment & nursery management	1	Off	26	-	26	12	-	12
23.05.11	PF	Selection of rice varieties as per land situations, seed treatment & nursery management	1	Off	25	-	25	12	-	12
27.05.11	PF	Cultivation of rainy season vegetables on land embankment	1	Off	13	18	31	5	10	15
28.05.11- 30.05..11	PF	Leadership development for empowering women	3	On	-	21	21	-	14	14
06.06.11 -08.06.11	PF	Maintenance of reproductive health and nutritional status to be a healthy mother	3	On	-	24	24	-	13	13
08.06.11	PF	Nursery raising of vegetable crops	1	Off	23	6	29	14	2	16
13.06.11 – 15.06.11	PF	Scientific methods of kharif paddy cultivation according to land situation in Sundarbans	3	On	22	-	22	15	-	15
13.06.11 – 16.06.11	PF	Nursery raising of vegetable crops	4	On	20	16	36	7	2	9
14.6.11 – 16.6.11	PF	Integrated disease management	3	On	39	-	39	11	-	11
15.06.11- 17.06.11	PF	Preparation nutrient rich weaning food and maintenance of infant health	3	On	-	27	27	-	12	12
17.06.11	PF	Management of <i>Aila</i> affected soil and selection of salt tolerant kharif paddy varieties	1	Off	21	5	26	21	5	26
17.06.11	PF	Mushroom cultivation at homestead land to attain nutritional security	1	Off	-	31	31	-	16	16

21.06.11	PF	Possibilities of multiple cropping on landshaping plots	1	Off	28	-	28	5	-	5
24.06.11 – 25.06.11	PF	Technique of kharif paddy seed production	2	On	15	-	15	7	-	7
27.06.11- 28.06.11	PF	Participatory monitoring and evaluation of SHG	3	Off	-	32	32	-	14	14
28.06.11	PF	Mixed fish & prawn farming	1	On	25	-	25	11	-	11
28.6.11 – 30.6.11	PF	Integrated disease management	3	On	34	-	34	9	-	9
05.07.11	PF	Nursery raising of vegetable crops	1	Off	25	3	28	7	1	8
04.07.11 – 06.07.11	PF	Integrated pest management	3	On	23	8	31	13	6	29
07.07.11	PF	Mixed fish & prawn farming	1	On	25	-	25	3	-	3
12.07.11	PF	Feed management of fish	1	On	23	7	30	17	4	21
13.07.11	PF	Fertiliser application and disease pest management	1	Off	20	12	32	10	6	16
14.07.11	PF	Fertiliser application and disease pest management	1	Off	6	24	30	4	15	19
14.07.11 - 16.07.11	PF	Integrated pest management	3	On	22	10	32	11	4	15
15.07.11 – 16.07.11	PF	Landshaping – an unique model for Sundarbans	2	On	20	5	25	8	5	13
18.7.11	PF	Bio-control of pest & disease	1	Off	20	3	23	7	5	12
19.07.11 – 21.07.11	PF	Nursery raising of vegetable crops	3	On	29	4	33	11	-	11
21.07.11	PF	Preparation nutrient rich food for pregnant and lactating mother to meet the extra nutritional demand	1	Off	-	27	27-	-	27	27
21.07.11	PF	Feed management	1	On	31	26	57	16	14	30
23.07.11	PF	Breeding of important ornamental fish	1	Off	-	30	30	-	6	6
26.7.11	PF	Bio-control of pest & disease	1	Off	17	10	27	10	-	10
27.07.11 – 29.07.11	PF	Exotic vegetable cultivation	3	On	29	21	50	9	20	29
01.08.11- 03.08.11	PF	Sweet water pisciculture with special emphasis on mixed fish & prawn farming in fresh water ponds	3	On	5	19	24	5	19	24
03.08.11	PF	Mixed fish & prawn farming	1	On	21	-	21	-	-	-
03.08.11 – 05.08.11	PF	Integrated disease management	3	On	36	-	36	9	-	9
05.08.11	PF	Fresh water fish & prawn farming in domestic ponds	1	Off	24	1	25	6		6
05.08.11 – 06.08.11	PF	Off-season vegetable raising	2	On	18	7	25	11	2	13

16.08.11 – 17.08.11	PF	Methods of fertilizer application in lowland rice and scientific method of highland paddy cultivation	2	On	22	-	22	10	-	10
17.08.11	PF	Scientific approach of pisciculture (colour fish cultivation)	1	On	35	5	40	23	-	23
20.08.11	PF	Methods of fertilizer application in lowland rice	1	Off	26	-	26	14	-	14
23.8.11	PF	Bio-pesticide production	1	Off	14	15	29	11	8	19
01.09.11-03.09.11	PF	Integrated fish farming	3	On	29	5	34	20	1	21
06.09.11	PF	Mixed fish & prawn farming	1	On	28	-	28	1	-	1
06, 09, 12, 15, 20, 23, 28 th Sep, 11	PF	Integrated pest management	1	7 Off	132	55	187	59	23	82
08.09.11	PF	Integration of poultry & fishery	1	On	21	25	46	12	8	20
12.09.11	PF	Weed management practices in medium and lowland paddy	1	Off	27	-	27	15	-	15
14.09.11	PF	Plant propagation technique	1	Off	20	-	20	20	-	20
14.09.11	PF	Preparation and utilization of nutritional garden to improve the nutritional status	1	Off	-	46	46	-	46	46
15.09.11	PF	Integration of poultry & fishery	1	On	28	16	44	15	7	22
15.09.11	PF	Preparation and utilization of nutritional garden to improve the nutritional status	1	Off	-	42	42	-	27	27
16.09.11	PF	Preparation and utilization of nutritional garden to improve the nutritional status	1	Off	-	44	44	-	-	-
23.09.11	PF	Cultivation of mushroom at homestead land to attain food and nutritional security	1	Off	-	45	45	-	-	-
28.09.11	PF	Cultivation of mushroom at homestead land to attain food and nutritional security	1	Off	-	-	-	-	43	43
29.09.11	PF	Cultivation of mushroom at homestead land to attain food and nutritional security	1	Off	-	38	38	-	11	11
28.09.11-30.09.11	PF	Integrated fish farming	3	On	27	3	30	13	1	14
17.10.11 – 18.10.11	PF	Suitable cropping for rabi and summer season in landshaping plots	2	On	16	10	26	12	10	22

19.10.11	PF	Layout & management of orchard	1	Off	13	18	31	5	10	15
24.10.11 - 25.10.11	PF	Production technology of vermicompost	2	On	19	5	24	14	5	19
01.11.11 – 02.11.11	PF	Bio-control of pest & disease	2	On	17	6	33	9	3	12
14.11.11- 19.11.11	PF	Fresh water fish & prawn farming	6	On	-	19	19	-	12	12
16.11.11	PF	Micro irrigation system in orchard	1	On	32	32	64	19	17	36
16.11.11 – 19.11.11	PF	Production of bio-agents & biopesticides	4	On	25	9	34	12	5	17
19.11.11	PF	Weed management and roughing method in kharif paddy seed production	1	Off	42	-	42	11	-	11
21.11.11 – 22.11.11	PF	Production technology of vermicompost	2	On	18	2	20	1	1	2
21.11.11- 26.11.11	PF	Fresh water fish & prawn farming	6	On	-	20	20	-	17	17
28.11.11 - 30.11.11	PF	Boro paddy cultivation through SRI	3	On	18	1	19	9	-	9
29.11.11	PF	Modern technology of sunflower cultivation	1	Off	12	2	14	3	1	4
30.11.11	PF	Greengram cultivation under residual moisture	1	Off	16	-	16	-	-	-
12.12.11- 13.12.11	PF	Brakish water and estuarine fish and prawn culture	2	On	5	-	5	1	-	1
12.12.11	PF	Cultivation of mushroom at homestead land to attain food and nutritional security	1	Off	-	31	31	-	-	-
13.12.11	PF	Agriculture cum fishery training program	1	On	45	30	75	29	13	42
13.12.11	PF	Integrated disease management	1	Off	53	3	56	51	3	54
13, 14, 16, 20, 22, 27 Dec., 11	PF	Nursery management of ornamental tree	1	Off (6)	180	48	228	112	32	144
15.12.11	PF	Agriculture cum fishery training program	1	On	49	26	75	34	17	51
16.12.11	PF	Cultivation of mushroom at homestead land to attain food and nutritional security	1	Off	-	29	29	-	29	29
19.12.11- 23.12.11	PF	Gender friendly agricultural implement for women farmer	5	On	-	63	63	-	51	51
21.12.11	PF	Boro paddy cultivation through SRI	1	Off	8	15	23	4	6	10
22.12.11	PF	Carp breeding in eco-hatchery and composite fish culture	1	On	3	5	8	1	-	1
22.12.11 – 23.12.11	PF	Advanced technology of second crop cultivation in Sundarbans	2	On	12	17	29	1	-	1
26.12.11 – 27.12.11	PF	Modern technology of sunflower cultivation	2	On	28	-	28	28	-	28

26.12.11-37.12.11, 01.08.11-03.08.11	PF	Livestock feed and fodder production	2	On	49	-	76	27	-	27
26.12.11-30.12.11	PF	Gender friendly agricultural implement for women farmer	5	On	-	67	67	-	6	6
28.12.11	PF	Cultivation of mushroom at homestead land to attain food and nutritional security	1	Off	-	32	32	-	17	17
02.01.12	PF	Modern technology of sunflower cultivation	1	Off	24	-	24	22	-	22
03.01.12 – 04.01.12	PF	Cultivation technique of non-conventional vegetables	2	On	26	22	48	10	12	22
09.01.12 – 10.01.12	PF	Production technology of tuber crops	3	On	21	2	23	13	2	15
09.01.12 – 10.01.12	PF	Bio-control of pest & disease	2	On	23	10	33	10	4	14
12.01.12	PF	Summer greengram cultivation under residual moisture	1	Off	34	-	34	3	-	3
16.01.12	PF	Cotton cultivation under residual moisture	1	Off	28	-	28	12	-	12
16.01.12	PF	Ornamental fish culture	1	Off	20	8	28	16	5	21
17.01.12	PF	Mixed fish & prawn culture and ornamental fish culture	1	Off	14	3	17	9	2	11
17.01.12-18..01.12	PF	Processing of fruits and vegetables during seasonal glut	2	On	-	12	12	-	3	3
19.01.12	PF	Ornamental fish culture	1	On	1	13	14	1	12	13
20.01.12 – 21.01.12	PF	Summer greengram cultivation under residual moisture	2	On	22	-	22	18	-	18
31.01.12	PF	Mixed fish & prawn farming	1	On	46	-	46	18	-	18
13.02.12 – 15.02.12	PF	Sustainable integrated farming	3	On	17	8	25	11	6	17
15.02.12	PF	Sustainable integrated farming	1	On	12	18	30	7	6	13
15.2.12 – 16.2.12	PF	Cultivation of guava for higher income	2	On	50	11	61	49	8	57
21.02.12	PF	Hybrid paddy seed production	1	On	44	-	44	38	-	38
22.02.12	PF	Hybrid maize seed production	1	On	32	-	32	22	-	22
23.2.12 – 24.2.12	PF	Management of guava plants for off season flowering	2	On	21	13	34	6	6	12
12.03.12 – 14.03.12	PF	Sustainable integrated farming	3	On	25	3	28	16	-	16
14.3.12 – 15.3.12	PF	Management of sapota plants on soil heaps in the saline low-lands	2	On	23	9	32	7	4	11
15.03.12 – 17.03.12	PF	Sustainable integrated farming	3	On	23	10	33	9	5	14
16.03.12	PF	Disease Management	1	Off	53	20	83	13	20	33
19.03.12-22.03.12	PF	Integrated resource management	4	On	12	-	12	9	-	9
19.03.12 – 22.03.12	PF	Sustainable integrated farming	3	On	12	-	12	9	-	9

26.3.12 – 27.3.12	PF	Cultivation of sapota on soil heaps in saline low lands for better return	2	On	57	7	64	50	5	55
26.03.12. 30.03.12	PF	Integrated farming approach for minimizing the risk in production system	5	On	30	30	60	5	11	16
12.04. 11	RY	Fresh water fish & prawn farming	1	Off	25	-	25	25	-	25
30.04.11	RY	Promotion of Nutritional status of adolescent girls by use of locally available foods	1	Off	-	31	31	-	24	24
14.05.11- 16.05.11	RY	Goat farming	3	On	1	37	38	-	13	13
24.05.11 – 25.05.11	RY	Vermicomposting	2	On	17	4	21	13	2	15
14.06. 11	RY	Integrated farming-cum-exposure visit	1	On	18	10	28	12	6	18
15.06.11- 17.06.11	RY	Poultry Management	3	On	24	15	39	9	9	18
22.06.11- 23.06. 11	RY	Induced breeding of IMC & catfish	2	On	2	-	2	-	-	-
13.07.11	RY	Scientific fishery in South 24 Pgs	1	On	30	30	60	21	23	44
19.7.11 - 20.7.11	RY	Bio- control of pest & diseases	2	On	13	3	16	5	-	5
25.07.11	RY	Composite fish culture & fish diseases	1	Off	40	-	40	7	-	7
29.07.11	RY	Cultivation of Bagda & freshwater prawn	1	Off	8	-	8	2	-	2
01.08.11	RY	Planting Material Production	1	Off	18	8	26	18	8	26
11.08.11- 12.08.11	RY	Mushroom cultivation as an income generating avenue	2	On	-	10	10	-	2	2
09.09.11	RY	Vermicomposting	1	Off	27	-	27	27	-	27
13.09.11	RY	Renovation of ponds & Scientific pisciculture	1	On	11	2	13	6	-	6
20.09.11	RY	Ornamental fish culture- a prospective income generation avenue	1	On	58	12	70	23	4	27
26.9.11 – 27.9.11	RY	Bio- control of pest & diseases	2	On	12	5	17	3	2	5
15.11.11	RY	Mushroom cultivation as an income generating avenue	1	Off	-	16	16	-	-	-
23.11.11	RY	Commercial fruit cultivation	1	Off	18	-	18	12	-	12
01.12.11	RY	Mixed fish & prawn farming	1	On	1	5	6	1	-	1
03.12.11	RY	Mixed fish & prawn farming	1	On	4	6	10	1	1	2
23.12.11	RY	Mixed fish & prawn farming	1	On	9	4	13	-	1	1
09.01.12	RY	Induced breeding and mixed fish & prawn farming	1	On	14	24	38	2	2	4
10.01.12- 12.01.12	RY	Small scale ornamental fish farming for additional income generation	3	On	9	8	17	1	1	2

10.01.12-12.01.12	RY	Application of PRA tool to develop participatory micro planning of a village	3	On	12	-	12	-	-	-
21.02.12	RY	Mixed fish & prawn farming	1	On	11	8	19	2	1	3
06.03.12	RY	Mixed fish & prawn farming	1	On	17	22	39	4	4	8
12.03.12	RY	Mixed fish & prawn farming	1	On	7	7	14	2	1	3
17.03.12	RY	Mixed fish & prawn farming	1	On	24	12	36	4	3	7
02.04.12-05.04.12	RY	Technological options for judicious resource utilization by fish & prawn farming in freshwater impoundments	4	On	17	8	25	2	1	3
11.04.11	EP	Fresh water fish & prawn farming	1	On	6	-	6	4	-	4
18.4.11 – 19.4.11	EP	Integrated pest management	2	On	21	-	21	6	-	6
03.05.11	EP	Integrated fish farming	1	On	12	-	12	2	-	2
10.5.11 – 12.5.11	EP	Management in farm animals	3	On	49	-	49	13	-	13
14.05.11-16.05.11	EP	Strengthening of SHG Through proper utilization of Group fund	3	On	-	30	30	-	17	17
06.06.11-08.06.11	EP	Management in farm animals	3	On	53	-	53	16	-	16
30.06.11-02.07.11	EP	Improvement of nutritional status and proper health care during pre and post natal period	4	On	-	9	9	-	5	5
07.07.11 – 08.07.11	EP	Forest plant & road side plant nursery raising	2	On	43	-	43	10	-	10
13.07.11	EP	Freshwater aquaculture	1	On	10	-	10	3	-	3
19.7.11 – 21.7.11	EP	Management in farm animals	3	On	51	-	51	14	-	14
8.8.11 – 9.8.11	EP	Integrated pest management	2	On	22	1	23	12	1	13
11.8.11 – 12.8.11	EP	Integrated pest management	2	On	17	-	17	4	-	4
16.08.11 – 17.08.11	EP	Management in farm animals	3	On	48	-	48	15	-	15
13.09.11 – 15.09.11	EP	Suitable cropping pattern for rabi and summer season of different districts of West Bengal	3	On	11	-	11	5	-	5
13.09.11 – 15.09.11	EP	Management in farm animals	3	On	53	-	53	17	-	17
18.11.11 – 19.11.11	EP	Horticultural nursery raising	2	On	41	-	41	7	-	7

19.12.11 – 23.12.11	EP	Capacity building for ICT application	5	On	13	4	17	6	1	7
13.01.12- 14.01.12	EP	Growth and development monitoring of Children	2	On	-	12	12	-	4	4
20.2.12 – 21.2.12	EP	Production and use of organic inputs	2	On	35	-	35	7	-	7
23.2.12 – 24.2.12	EP	Production and use of organic inputs	2	On	21	1	22	4	-	4
7.3.12 – 8.3.12	EP	Production and use of organic inputs	2	On	24	-	24	3	-	3
20.3.12 – 21.3.12	EP	Production and use of organic inputs	2	On	18	2	20	9	1	10

(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 elsewhere
				M	F	T	Type of units	Number of units	No. of persons employed	
Fish	Efficient utilization of water resources	Fresh water fish & prawn farming	1	25	-	25	Small ponds	22	31	3
Fish, livestock, horticulture	Diversification of existing production system	Integrated fish farming	1	18	10	28	Small ponds	21	27	7
Fish	Improvement of backyard system performance	Induced breeding of IMC & catfish	2	1	1	2	Backyard hatchery	2	2	0
Fish	Efficient utilization of water resources	Renovation of ponds & scientific pisciculture	1	11	2	13	Small ponds	11	19	2
Fish	Efficient utilization of water resources	Mixed fish & prawn farming	1	1	5	6	Small ponds	2	2	4
Ornamental fish	Improvement of backyard system performance	Small scale ornamental fish farming for additional income generation	3	9	8	17	Cemented tanks and hapa	14	9	3
Fish	Efficient utilization of water resources	Mixed fish & prawn farming	1	11	8	19	Small ponds	18	14	1
Fish	Improvement of backyard system performance	Mixed fish & prawn farming	1	17	22	39	Small ponds	31	27	8
Fish	Efficient utilization of water resources	Mixed fish & prawn farming	1	7	7	14	Small ponds	12	14	2
Fish	Improvement of backyard system performance	Mixed fish & prawn farming	1	24	12	36	Small ponds	33	27	3
Organic farming	Soil health management	Vermicomposting	2	27	-	27	Domestic units	5	12	4

*training title should specify the major technology /skill transferred

(E) Sponsored Training Programmes

Sl. No	Title	Thematic area	Month	Duration (days)	Client	No. of courses	No. of Participants										Sponsoring Agency
					PF/R Y/ EF		Male			Female			Total				
							Oth	SC	S T	Oth	SC	S T	Oth	SC	S T	Total	
1.	Suitable cropping pattern for rabi and summer season of different districts of West Bengal	Productivity enhancement in field crops	Sept.'11	3	EP	1	6	5	-	-	-	-	6	5	-	11	IFFCO
2.	Sustainable integrated farming	Integrated farming	Feb.'12	3	PF	1	6	11	-	2	6	-	8	17	-	25	LWSI
3.	Hybrid rice seed production	Seed production	Feb.'12	1	PF	1	6	38	-	-	-	-	6	38	-	44	Seed certification, DOA, GOWB
4.	Hybrid maize seed production	Seed production	Feb.'12	1	PF	1	10	22	-	-	-	-	10	22	-	32	Seed certification, DOA, GOWB
5.	Sustainable integrated farming	Integrated farming	Mar.'12	3	PF	3	26	30	4	8	5	-	34	35	4	73	LWSI
6	Forest plant & roadside plant nursery raising	Nursery raising	July'11	2	EP	1	43	10	-	-	-	-	43	10	-	53	MGNREGA cell, South 24 PGS district
7	Vermicomposting	Vermiculture	May'11	2	RY	1	4	13	-	2	2	-	6	15	-	21	LWSI
8	Integrated farming approach for minimizing the risk in production system	Integrated Farming	March, 12	5	PF	1	25	85	-	5	11	-	30	30	-	60	ATC, Narendrapur

9	Fresh water fish & prawn farming	Mixed fish & prawn farming	April' 11	6	PF		0	0	0	6	18	1	6	18	1	25	DRDC
10	Fresh water fish & prawn farming	Mixed fish & prawn farming	April' 11	1	EP		2	4	0	0	0	0	2	4	0	6	Shroff Foundation Trust
11	Integrated farming-cum-exposure visit	Integrated farming	June' 11	1	RY		6	12	0	4	6	0	10	18	0	28	Loknath Divine Life Mission
12	Induced breeding of IMC & catfish	Induced breeding	June' 11	2	RY		1	0	0	1	0	0	2	0	0	2	Marrine Science (A.U.)
13	Mixed fish & prawn farming	Mixed fish & prawn farming	June' 11	1	PF		14	11	0	0	0	0	14	11	0	25	CIFE
14	Mixed fish & prawn farming	Mixed fish & prawn farming	July' 11	1	PF		22	3	0	0	0	0	22	3	0	25	ATMA
15	Feed management of fish	Composite fish culture	July' 11	1	PF		6	17	0	3	4	0	9	21	0	30	CIFA
16	Scientific fishery in domestic ponds	Composite fish culture	July' 11	1	RY		9	19	2	7	22	1	16	41	3	60	ATC
17	Freshwater aquaculture	Composite fish culture	July' 11	1	EP		7	3	0	0	0	0	7	3	0	10	CIFE
18	Sweet water pisciculture with special emphasis on mixed fish & prawn farming in fresh water ponds	Mixed fish & prawn farming	August' 11	3	PF		0	4	1	0	17	2	0	21	3	24	Loknath Divine Life Mission
19	Mixed fish & prawn farming	Mixed fish & prawn farming	August' 11	1	PF		21	0	0	0	0	0	21	0	0	21	CIFE
20	Integrated fish farming	Integrated fish farming	September' 11	3	PF		9	19	1	4	1	0	13	20	1	34	LWSI

21	Mixed fish & prawn farming	Mixed fish & prawn farming	September'11	1	PF		27	1	0	0	0	0	27	1	0	28	CIFE
22	Integration of poultry & fishery	Integrated fish farming	September'11	1	PF		9	11	1	17	6	2	26	17	3	46	DRDC
23	Renovation of ponds & Scientific pisciculture	Composite fish culture	September'11	1	RY		5	6	0	2	0	0	7	6	0	13	IFFCO
24	Integration of poultry & fishery	Integrated fish farming	September'11	1	PF		13	14	1	9	6	1	22	20	2	44	DRDC
25	Ornamental fish culture- a prospective income generation avenue	Ornamental fisheries	September'11	1	RY		35	22	1	8	4	0	43	26	1	70	ATMA
26	Integrated fish farming	Integrated fish farming	September'11	3	PF		14	12	1	2	1	0	16	13	1	30	LWSI
27	Fresh water fish & prawn farming	Mixed fish & prawn farming	November'11	6	PF		0	0	0	7	12	0	7	12	0	19	DRDC
28	Fresh water fish & prawn farming	Mixed fish & prawn farming	November'11	6	PF		0	0	0	0	17	3	0	17	3	20	DRDC
29	Brackish water and estuarine fish and prawn culture	Brackish-water fish culture	December'11	2	PF		4	1	0	0	0	0	4	1	0	5	CIFE
30	Integrated fish farming	Integrated fish farming	December'11	1	PF		16	27	2	17	12	1	33	39	3	75	SDB
31	Integrated fish farming	Integrated fish farming	December'11	1	PF		15	32	2	9	16	1	24	48	3	75	SDB
32	Carp breeding in eco-hatchery and composite fish culture	Induced breeding	December'11	1	PF		2	1	0	5	0	0	7	1	0	8	CIFE

33	Small scale ornamental fish farming for additional income generation	Ornamental fisheries	January'12	3	RY		8	1	0	7	1	0	15	2	0	17	Vivekananda College, Kolkata
34	Mixed fish & prawn farming	Mixed fish & prawn farming	January'12	1	PF		28	18	0	0	0	0	28	18	0	46	CIFE
35	Integrated resource management	Integrated fish farming	March'12	4	PF		3	8	1	0	0	0	3	8	1	12	CIFRI
36	Processing of fruits and vegetables during seasonal glut	Minimization of nutrient loss	January'12	2	PF	1	-	-	-	9	3	-	9	3	-	10	NWDpra
37	Gender friendly agricultural implement for women farmer	Location specific drudgery reduction	December'11	5	PF	1	-	-	-	61	6	-	61	6	-	67	Dept of Ag. Govt of WB
38	Gender friendly agricultural implement for women farmer	Location specific drudgery reduction	March'12	5	PF	1	-	-	-	12	51	-	12	51	-	63	Dept of Ag. Govt of WB
39	Scientific management of farm animals	Disease management	May-June'11	3	PF	2	20	30	35	20	10	5	40	45	25	110	Dept of forest, South 24 Pgs

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	17	245	92	337	12	8	20	257	100	357
Kisan Mela	2	557	315	872	98	56	154	655	371	1026
Kisan Ghosthi	-	-	-	-	-	-	-	-	-	-
Exhibition	2	15786	6234	22020	386	157	543	16172	6391	22563
Film Show	54	651	623	1274	26	32	58	677	655	1332
Method Demonstrations	12	25	363	388	6	19	25	31	382	413
Farmers Seminar	2	294	257	551	7	2	9	301	259	560
Workshop	2	13	17	30	32	2	34	45	19	64
Group meetings	15	165	210	375	3	3	6	168	213	381
Lectures delivered as resource persons	59	1654	364	2018	54	45	99	1708	409	2117
Newspaper coverage	5	-	-	-	-	-	-	-	-	-
Radio talks	6	-	-	-	-	-	-	-	-	-
TV talks	12	-	-	-	-	-	-	-	-	-
Popular articles	7	-	-	-	-	-	-	-	-	-
Extension Literature	4	-	-	-	-	-	-	-	-	-
Advisory Services	-	1556	321	1877	-	-	-	1556	321	1877
Scientific visit to farmers field	126	1235	542	1777	-	-	-	1235	542	1777
Farmers visit to KVK	112	2698	1427	4125	107	49	156	2805	1476	4281
Diagnostic visits	87	854	451	1305	15	7	22	869	458	1327
Exposure visits	2	54	19	73	4	2	6	58	21	79
Ex-trainees Sammelan	2	96	39	135	-	-	-	96	39	135
Soil health Camp	5	80	32	112	-	-	-	80	32	112
Animal Health Camp	23	669	826	1495	29	9	38	698	835	1533
Agri mobile clinic	-	-	-	-	-	-	-	-	-	-
Soil test campaigns	3	60	22	82	5	-	5	65	22	87
Farm Science Club Conveners meet	2	19	3	22	3	2	5	22	5	27
Self Help Group Conveners meetings	4	12	22	34	5	7	12	17	29	46
Mahila Mandals Conveners meetings	2	-	17	17	-	2	2	-	19	19
Celebration of important days (specify)										
Fish farmers' day - 10.07.2011	1	34	4	38	4	-	4	38	4	42
Veterinarians' day - 10.01.2011	1	56	8	64	11	-	11	67	8	75
Nutrition week - 01 st to 07th Sept 2011	1	-	52	52	-	5	5	-	57	57
Prani palan Saptaha 13th to 19 th 2011	1	296	130	426	7	-	7	303	130	433
Any Other (Specify)										
Total	571	27109	12390	39499	814	407	1221	27923	12797	40720

3.5 Production and supply of Technological products

Village seed - Nil

Crop	Variety	Quantity of seed (q)	Value (Rs)	Number of farmers provided

KVK farm

Crop	Variety	Quantity of seed (q)	Value (Rs)	Number of farmers provided
Cereals				
Paddy	IET-5656	Certified- 12.0	24,000.00	82
	IET-5656	Foundation- 8.0	20,000.00	80
	NC-492	Certified- 16.0	32,000.00	110
	NC-492	Foundation- 2.5	6,250.00	25
	Pratikha	Certified- 4.5	9,000.00	32
	Jarava	T.L- 2.5	4,000.00	18
	WGL-20471	T.L- 3.5	5,600.00	35
	Gitanjali	T.L- 4.0	6,400.00	37
Oilseeds	-	-	-	-
Pulses	-	-	-	-
Greengram	PDM-84-139	T.L- 490.0	24,500.00	160
Total	-	-	1,31,750.00	579

Production of planting materials by the KVKs

Crop	Variety	Quantity of seedling (no)	Value (Rs)	Number of farmers provided
Vegetable seedlings				
Cabbage	Rare ball, Royal Challenger	18400	11040.00	520
Cauliflower	White Contessa	15600	8580.00	780
Knolkhol	White Vienna	24300	4860.00	630
Tomato	SG-1458	16200	11340.00	260
Brinjal	Boral, Muktakeshi	6700	2010.00	28
Chilli	Tejashini, JK-178	16750	10887.00	64
Beet	Crimson Globe	10200	1040.00	38
Fruits				
Papaya	Honey Dew, Ranchi	5600	11200.00	26
Mango	Amrapali, Mallika, Himsagar	670	16750.00	87
Sapota	Cricket Ball	240	6000.00	64
Coconut	Kerala Semitall	1080	21600.00	78
Ornamental plants				
Marigold	Inca	2800	6300.00	410
Dahlia	-	1300	2600.00	220
Chrysanthemum	Pompon, Snowball	1750	2625.00	240
Rose	Hybrid 'T'	230	3450.00	23
Medicinal and Aromatic				
Ocimum	-	2900	290.00	60
Kalmegh	-	1600	160.00	60
Curry leaf	-	95	475.00	30
Plantation				
Arecanut	Local	1280	6400.00	42
Tuber				
Sweet potato	Sree Nandini , Sree Vardhini	18000	3600.00	20
Forest Species				
Chandan	-	140	1400.00	-
Sonajhuri	-	25000	25000.00	-
Teak	-	1200	2400.00	-
Mahagoni	-	780	2340.00	-
Total	-	172815	1,62,347.00	3680

Production of Bio-Products

Bio Products	Name of the bio-product	Quantity (Kg)	Value (Rs.)	No. of Farmers	No. of KVKs
Bio Fertilisers					
Bio-pesticide	Sl. NPV	6 lit	3200.00	19	
Bio-fungicide	<i>Trichoderma viride</i>	947 Kg	56,820.00	764	
	<i>Trichoderma harzianum</i>	4.0 kg	400.00	8	
	<i>Pseudomonas fluorescens</i>	592.6 kg	47,408.00	730	
Bio Agents	<i>Trichogramma chilonis</i>	2117 trichocards (Having 218 lakh Trichogramma wasp)	21,170.00	422	
	<i>Chrysoperla carnea</i>	1,06,000 grubs	10,600.00	68	
Others	-	-	-	-	-
Total	-	-	1,39,598.00	2011	-

Production of livestock materials

Particulars of Live stock	Name of the breed	Number / Quantity	Value (Rs.)	No. of Farmers	No. of KVKs
Dairy animals					
Cows	J.C, HF, C, GIR Sahiwal C.	55	11,10,000	-	-
Calves	-	10	50000	-	-
Broilers	Hygrow	200 (3 cycle)	18000/cycle	-	-
Duals (broiler and layer)	RIR, Nirvik, Hitkari, Upkari	1500	90000	-	-
Goat	Black bengal	102	175000	25	
Fisheries					
Indian carp fingerlings	Rahu, Katla, Mrigal, Bata, Kalbasu	540 kg	37800.00	52	-
Exotic carp fingerlings	Silver carp, Grass carp, Common carp	161 kg	16100.00	18	-
Indian carp fry	Rahu, Katla, Mrigal, Bata, Kalbasu	24 kg	3600.00	6	-
Exotic carp fry	Silver carp, Grass carp, Common carp	11 kg	1980.00	4	-
Indian carp spawn	Rahu, Katla, Mrigal, Bata, Kalbasu	3.2 million	8000.00	7	-
Exotic carp spawn	Silver carp, Grass carp, Common carp	1.6 million	5000.00	4	-
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: 570

(B) Literature developed/published

Item	Title	Authors name	Number
Research papers	Characteristic features of garole sheep with special emphasis on worm infestation	N.J.Maitra, A.Goswami and P.K.Bandopadhyay	6
	Ethno traditional medicinal uses of mangrove plants of Sundarbans – a study	C.K.Mondal, B.Mondal and L.C.Patel	
	Ornamental fish culture in net enclosure: an approach towards additional income generation from fish culture ponds in the NICRA village under Kultali block of South 24 Parganas, West Bengal	P.Chatterjee, P.P.Pal, N.J.Maitra, S.K.Roy and A.K.Singh	
	Germination test of vegetable seed – a no cost approach	C.K.Mondal and N.J.Maitra	
	Development of cognitive learning scale to test the knowledge of duck farmers about duck farming	A.Goswami, R.K.Ghosh and N.J.Maitra	
	Cellphone – a decision support system for sustainable plant protection of the district South 24 Parganas	L.C.Patel, C.K.Mondal, D.K.Roy and N.J.Maitra	

Item	Title	Authors name	Number
Technical reports	1) All monthly reports – Year round	-	-
	2) All quarterly reports – Year round	-	
	3) One Annual Reports – April, 11 to March, 12	-	
	4) Physical and Financial achievement report, 2011-12 of Radhakantapur and Dongajora Watershed under NWDPR for 11 th plan	-	
	5) All monthly reports of Insecticide Resistance Management (IRM) project	-	
	6) Quarterly report on progress of AICRP on Sunflower – Year round	-	
	7) Annual Report of the NICRA project	-	
	8) Status report of NAIP on livelihood security, 2011-12	-	
	9) Detailed report on celebration of technology week on climate change	-	

Item	Title	Authors name	Number
Newsletters – ICAR News, Vol.17, No.3 (July-Sept.,2011)	Parthenocarpic pointed gourd	C.K.Mondal and N.J.Maitra	1
Technical bulletins	-	-	-
Popular articles	Ornamental bird rearing in Annadata Bengali magazine – March, 2012 Cotton cultivation in Annadata Bengali magazine – January, 2012	S. Roy & N.J.Maitra S.K.Samui	2
Extension literature	Book in Bengali - Vegetable Science	C.K.Mondal & L.C.Patel	1
Others (Pl. specify) Success story in ICAR website	Ornamental bird rearing empowers rural women in South 24 Parganas, West Bengal	KVK, Nimpith under NAIP sub project	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.	CD	Success story of NICRA beneficiary – Ananta Naskar	1
2.	DVD	Livelihood security in the coastal saline belt of South 24 Parganas - NAIP	1

(D) Details of HRD programmes undergone

S. No.	Name of programme	Date and Duration	Organized by
1.	Horticultural technology dissemination through KVK	18 th – 19 th Jan.'12	IIHR, Bangalore
2.	PGDAEM (distance education)	May'11 - March'12	SAMETI, Narendrapur
3.	3 rd Agro-Protech	3 rd -5 th Nov.'11	ICC, Kolkata
4.	Use of AWS & its maintenance	31 st May'11	CRIDA,Hyderabad
5.	Climate change and agriculture	6 th – 10 th Feb.'12	MANAGE, Hyderabad at ATC, Narendrapur
6.	Pilot projects identification in West Bengal with respect to adaptation to climate change	4 th April'11	ENDEV (Society for Environment & Development) at Jadavpur University, Kolkata
7.	Application of remote sensing & GIS for watershed characterization and resource planning	20 th Feb.-March'12	NBSS & LUP, Kolkata
8.	Preparation of project proposal on food & nutritional security monitoring and evaluation	13 th -14 th April'11	SAMETI, Narendrapur
9.	Integrated pest management on rice	29 th Aug.- 27 th Sept'11	ATC, Narendrapur

3.7. Success stories/Case studies, if any (two or three pages write-up on each case with suitable action photographs)

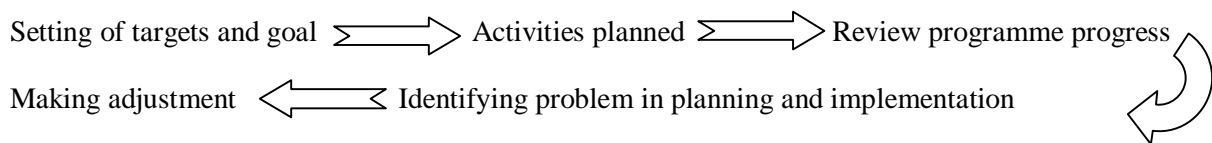
CASE STUDY

INTRODUCTION OF NGO IDEAS (Participatory monitoring and impact assessment tool)TOOL BOX :

KVK has been giving emphasis on food and Nutrition sector for last 15 years. The Nutrition Security Project is being implemented by parent NGO with the technical assistance of RAKVK integrating with Mother and Child Care Programme funded by Welt Hunger Hilfe from 2008 onwards in two villages namely Banashyamnagar and Laxmipur in Patharpratima block of south 24 Parganas district of WestBengal. PWbR and SAGE are the tools in the NGO idea impact tool box that was applied in food and nutrition sector earlier in another village i.e Damkal , a Project village of previous Nutrition Programme. RAKVK is now applying these tools in two groups, Pregnant and Lactating mothers in Banashyamnagar village. In PWbR, group explain their socio-economic status and accessibility to health situation drawing pictures for clustering their households. In SAGE, group develops goals which members want to achieve. They check their status periodically. SAGE applied for two times in pregnant mother group and made a comparative analysis to enable the target group to see the difference but PWbR was applied one which will repeat after one year.

How was monitoring system before introduction of tools at group level and at NGO level :

Organisational Monitoring System:



PROJECT MANAGEMENT AT GROUP LEVEL :

- Establishing indicators and impacts
- Setting of system to collect information relating to this indicators through Structured semi structured Questionnaire, Focus Group discussion, Survey and Interview
- Calculating and recording the information
- Analysing the information
- Using the information to inform day to day management

PREPARATION AT KVK LEVEL :

SMS (Home Science) received training at OUTREACH organized by WHH, Germany in 2008 acquired knowledge on NGO IDEAS TOOL BOX with four tools like – PWR, SAGE, PAG and PANgo having organic linkage. Later the same staff attended workshop in the KKID,Coimbatore in second regional workshop held on June, 2009 and got concrete idea on application of the tools for the ongoing project.

The trained staff imparted two days training programme to eight (8) nos. of management and field level staff on the principle of “learning and doing”. During training emphasis was given on goal setting, indicators development and mock application of the tools within the group to get a clear understanding about the tools among the group members.

The group members who have very much habituated with traditional system of monitoring and evaluation show suspicious attitude towards application of tools in tracking of impact of a particular project.

One team member asked of why the goals once again be developed during SAGE application if the project goal would have been developed during project formulation. Again they were quite skeptic about the participation of the target group as they have low level of education. PWR is very much linked with savings and credit groups and how the same would be applied in the case of health sectors. All the problems raised during training session have not been solved at that time. On consulting the same issue with the resource person of KKID and after first application of the tools at Damkal village the staff got a good understanding and developed confidence in handling of the tools.

PREPARATION AT COMMUNITY LEVEL :

The tools were applied among the beneficiaries of the Nutrition ongoing Nutrition project being implemented in one village, viz. Banashyamnagar. The mothers who were attending the medical camp are classified into two groups based on their physiological status viz. Pregnant & Lactating Mother as their goals are different. Further these two categories of mother nearly 100 were divided into small group comprising of 15-20 members in each group in order to enable them to achieve their goals.

In December, 2009 a meeting was convened in Banashyamnagar village to discuss with the pregnant & Lactating mothers about the application of NGO IDEA TOOL BOX. The objective of PWbR and SAGE and its result were discussed with the participants in details. During discussion the mother was conveyed the message that this tool is an impact monitoring tool which helps to track the impact identifying the problems and its possible solutions on the way of project progress. The mother clearly understood that they would have opportunity to express their individual views and performance and ability to modify or bridge the knowledge and attitudinal gap on necessary intervention by the facilitator to achieve their goals. Realising the benefit they agreed to participate in this exercise but two members raised the following problems –

- 1) It is difficult to stay 3 to 4 hours at a stretch during pregnancy period specially with the advanced stage of pregnancy.
- 2) Illiteracy or semi-literacy may cause problem for their active participation particularly in case of indicator fixation and expressing their status.

On vigorous discussion it was resolved that an Action Plan would be developed to apply the tool box with a view to involving the target mothers for limited time. In indicating their status, use of bindi of different colours would be used in order to understand visible changes among the different individuals. This self assessment would also motivate themselves for their spontaneous participation all along the process.

PARTICIPATORY WELL BEING RANKING (PWbR) :

In the month of January, 2009 the first exercise of PWbR was started in a group comprising 20 members to cluster the household based on the socio-economic status. Initially, the staff of SRAN took a walk in the village (Transect walk) to familiarize with the village and including understanding the various type of structure and then led the group into discussion. The staff explained the objectives, output and outcome of the PWbR tools and encouraged all the members to participate in all steps all through the session. The names of each mothers were listed and a serial no. against each mother was then given. The entire process was documented in a flip chart nicely in local languages.

The Key Informants representing the pregnant mother were selected who would be able to categorize the mothers based on their well being criteria. In this issue the mother guide (village women taking care of pregnant mothers and their children under the supervision of project doctors) were selected unanimously as they have been visiting to each household and looking after the pregnant mother. The mothers then brainstormed and prepared well being criteria for each economic category in their village under the active facilitation of SRAN staff. The criteria was developed on a flip chart with drawing a sketch to have clear understanding even to illiterate group. The following criteria were emerged out from the discussion.

The participating members then put their household number to the criteria matching with their existing life.

Having been calculated the frequency of household numbers against each criterion, the families were shorted out under different category as depicted below –

Sl No.	Criteria	Very Poor	Poor	Middle Class	Affluent
1	House	Wall – bamboo stick ; Roof – straw	Wall – clay ; Roof - straw/ mud tyles	Wall -brick ; Roof -Mud tyles/ asbestos	Concrete house
2	Homestead Land	No	Small – 2-3 Katha	Moderate– 10-15 Katha	1-3 bigha
3	Agricultural equipments	Sickle, Spade	Sickle, Spade	Sprayer, sickle, spade, cleavers	Tractor, Power tiller, sprayer, sickle, spade, cleavers
4	Pond	--	Shared (1-2 shatok)	Shared / Own(4-5katha)	Own – 2-3nos. (10 katha each)
5	Land	--	5-10 Katha	2-3 Bigha	>15 Bigha
6	Vehicles	--	Cycle, Van	Rickshaw, Auto rickshaw, Bike	Tata sumo, Matador, Truck
7	Occupation	Daily labour	Daily labour, Van puller	Vehicle driver, farmer	Service, Vehicle driver, Farmer
9	Credit	Always Borrower	Sometimes Borrower	Less borrower	Mainly Creditor
10	Savings	--	Self Help group	Post office	Bank
11	Dietary pattern	Boiled potato, dal - 4 times in a week, low cost fish - twice in a week, egg - once in a week, meat - once in 3 months	Dal - twice ,Fish - thrice, Egg - once in a week ; Meat - once in 2 months	Dal - thrice, Fish - 4 times, Egg - once in a week ; Meat - once in month	Dal- 4 times, Fish- 4 times, Egg- twice in a week ; Meat-once in a week
12	Food security	Adequate Rice for 8 months	Adequate Rice for 10months	Adequate Rice for 12 months	Adequate Rice for 12 months
13	Attaining Health Service	Primary Health Centre, Local herbs	Quack doctor	Private doctor	Private doctor, Nursing home
14	Expenditure pattern	Food –100% ; Health –0%	Food – 75 % ; Health–5% ; Education & Child care –20%	Food – 63-67 % ; Health –8-10% ; Education & Child care – 25-27%	Food – 50 % ; Health+ Education + Entertainment –50%
15	Extent of participation in decision making	100 % Husband	100 % Husband	30 % Wife + 70% Husband	50 % Wife + 50% Husband

The result was validated through the discussion and cross checked with other members of the community. The entire list of category was documented and the tools would be repeated after one year of intervention in order to check if there is any movement in their well being condition.

In the health sector major interventions are deemed to improve the nutritional status and few health practices for healthy children and reduction of child mortality. Therefore, while PWR was considered as a tool to categorize the household, effective and meaningful criteria linking to the health practices could not be developed. Hence, on consulting with other resource persons, health practices and food habits along with economic criteria was considered in process of application of this tool and PWR have been renamed as PWbR.



Categorisation During

Due cautions has to be taken in facilitating the development of relevant criteria. Criteria should always be considered keeping in view the sector where this tool is to be applied. Otherwise, no positive movement in respect of categorization will be observed among the members.

This tool is unequivocally helpful to the project management to measure the actual economic condition, well being status of the target group in the beginning and end of the project duration. It would further helpful to take substantial measure in modifying the project activity if there is any negative movement of status is observed in the middle of project implementation.

This tool is beneficial to the community by enabling themselves to measure poverty or wellbeing situation prior to and after implementation of a particular project. NGO may bring about a visible change in the community in respect of economic or wellbeing status within a given time frame and report to the funding agency accordingly.

SITUATION ANALYSIS & GOAL ESTABLISHMENT (SAGE):

In May, 2010 this tool was first applied to the same group who were categorized by the tool of PWbR.

Step-I:

The session was introduced by the staff of SRAN by asking the participants to set their goals in the ongoing project they have been availing. The facilitators cited the following examples to inculcate an idea among them.

An order has been placed to a tailor to prepare school dresses for 30 students of class I, which are to be delivered on 10th day. What does the tailor do to complete this activity within 10 days? He or she at first have to set a target to prepare numbers of dresses per day so that he/she can supply the dresses on the day of delivery as agreed upon. This is his or her goal for the day.

Likewise staff asked the members what they wanted to achieve being beneficiary of the nutrition security project. They brainstormed and listed the goal on the flip chart and displayed later on in front of them. Further, the facilitator helped to develop indicators against each goal as listed in annexure.

Step II:

The facilitator asked the participants about rating of their achievement and frequency of rating considering their level of knowledge, literacy and physiological status. In this regard, scoring technique using 1-10 scale was raised, but the participant devised a technique for rating using different color of Bindi.

- Green color indicates- I do
- Yellow color indicates- I do sometimes
- Red color indicates- I know but not practiced
- Black color indicates- I never do

Step III:

Having being stuck the flip chart displaying goals and indicators, the participants were asked to rate their status by putting different color of Bindi.

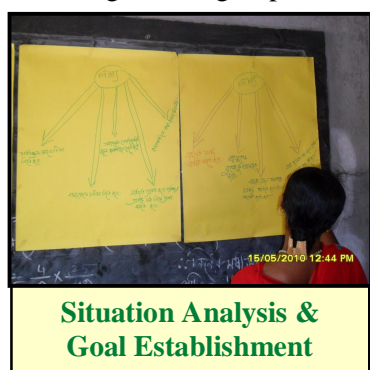
Step IV:

After completion of rating their status, the facilitator led into discussion about the knowledge attitude or practices gap in achieving the goal. The participants even themselves identified their problem and sniffed out solution for what would have to be done to reach the target goals.

In the meeting hall buzzing sound was always heard as they had been ruminating after identification of their practice gap easily.

Step V:

The entire process was documented for analyzing the situation and actions to be taken to update the knowledge of the group in achieving the goals.

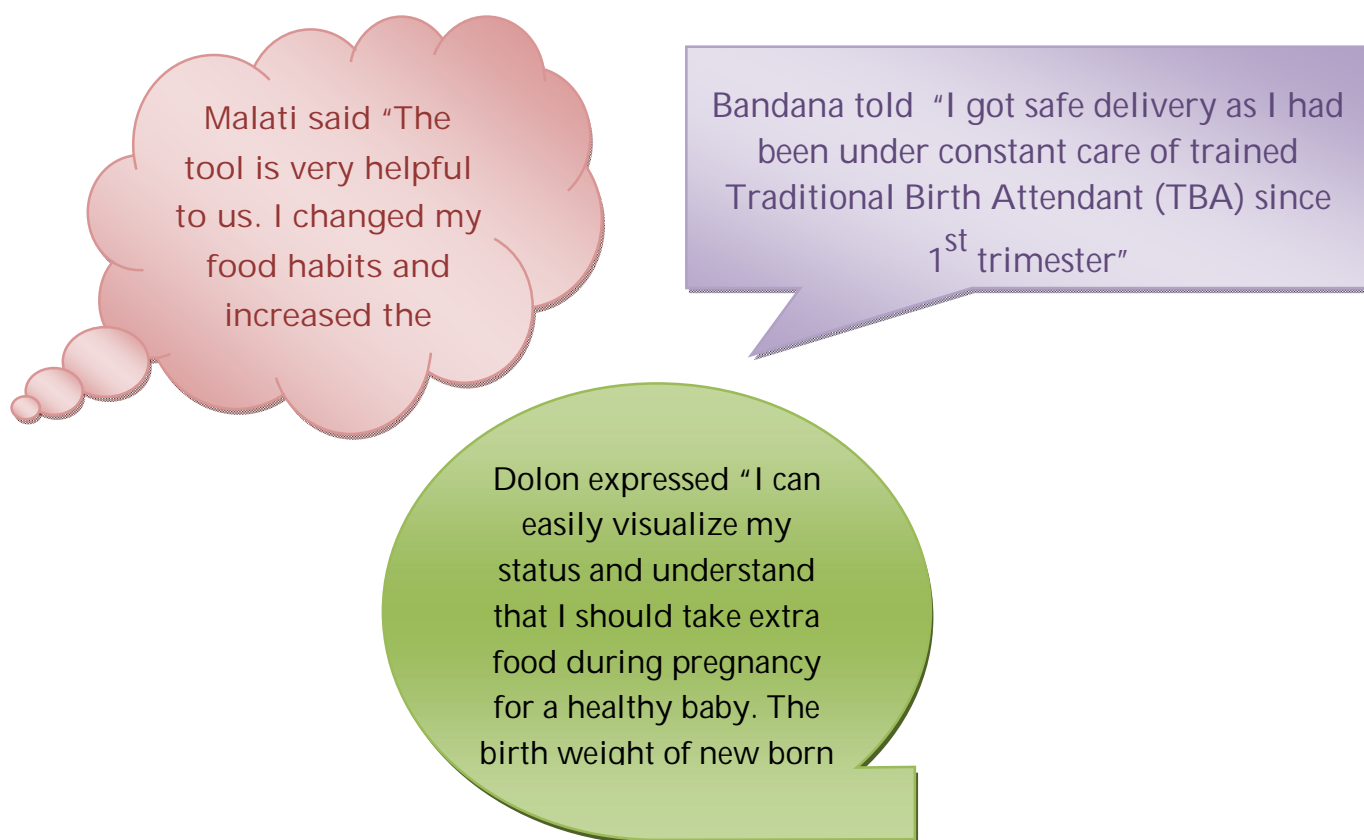


The goals fixed by the pregnant mother are appended below —

GOAL	INDICATOR
Enhancement of Knowledge & Skill	I know extra food and plenty of water should be taken after delivery
	I know the birth weight of baby should be 2.5 kg
	I know water and should not be given to the new born baby
	I know colostrums should be given to my baby
	I know only breast milk should be given upto 6 months of age of my baby
	I know weight gain is an important factor of maternal health status
	I know what is Janani Surakha Yojana
	I know weaning should be started at 7 months age of baby
	I took extra amount of food with additional leafy vegetables
	I cultivated green leafy vegetables in my backyard nutrition garden
Adoption of proper health and hygiene practice	I consulted with doctors at nearby hospitals/ quack doctors during complication
	I took medicines (supplementary) during pregnancy in last two months
	I took all vaccination during pregnancy
	I avoided heavy work load during pregnancy
	I took rest in the afternoon for 2 hrs. and 8 hrs. at night
I got assistance of trained TBA	
Improvement of maternal health status	My body weight is increasing in every month
	I can feel the movement of my foetus
	I avail the service of Janani Surakha Yojana
Reduction of complication during pregnancy	I have no complain of nausea / vomiting / breathlessness/ toxaemia
	I have no previous history of spontaneous abortion / still birth
	I recover from pregnancy related problems after attending the medical camp &by consulting doctors.

At the initial stage the scoring technique (1-10) was used for rating the status of individual for achieving the goals. During the exercise of SAGE the facilitators observe that the mother were not convenient with it. After discussion with target groups and health workers at village an idea was come out. Normally the government health staff uses the colours to report the nutritional status of children to the parents. Then the facilitators and beneficiaries selected the bindi (a small coloured thing sticking on the forehead by the women) of different colours to express their status towards achievement of the goals. The beneficiary themselves decide that the green should represent positive and black colour means negative progress. In between the facilitator added that yellow represent that the practice is not regular and red means that they are aware but do not practice. Concept of color application facilitated them to understand by themselves that they have to score more green to achieve their goal so it is easy to visualized and assess their status on their own. That in turn helps them to motivate towards positive change. It is also observed that that the group members were also putting comments and trying to motivate the members who are in negative position. By this process the people are empowered for self motivation.

REACTIONS OF MOTHER



The SAGE tool is also very much effective to the NGOs staff because it now helps to monitor the performance of beneficiaries through participatory approach. By the application of the tool the knowledge gap becomes easier to be identified. This helps to counsel every individual in bringing out upliftment of health and nutritional status which lead to positive change among the mothers that can be observed within very short period.

The application of the SAGE tool demands an extensive thorough process of facilitation during fixing up the Goals by the beneficiaries through participatory approach along with a close link to project activities .Another challenge facing by the NGO staff is to repeat the categorization in PWbR and discussion about goal fixation in SAGE due to inclusion of new mother in almost every month.

REFLECTION

At Community level

Earlier the project would have been evaluated in a conventional way to assess the impact of the project but several loopholes were observed and intended changes have not been recorded due to poor participation of the target beneficiaries. The poor participation is attributed to the illiteracy or low level of literacy, shyness and poor socio economic condition and outlooks. This problem calls for this tools which ensured the participation and involvement of beneficiaries in the process. At the initial stage of application of tool, the participation was not spontaneous. After second assessment, the mothers participated actively.

Spontaneous participation by each member during the process of assessment opens the scope for the expression of individual opinion to a great extent. It empowers them to measure the changes in their attitude and practice by themselves. During the exercise it creates an environment of healthy competition as well as it also acted as self motivating factor to achieve the goal.

"Earlier I had a misconception"

"Later I changed my mind and allow my daughter in law to give the colosturm to my grand child"

"I also allow my daughter in law to take additional food after delivery.

My daughter in law and grand child are now physically healthy"

" I AM HAPPY "

Malati
(Mother In Law)

An interesting observation has been found during 1st assessment of SAGE that the mother in law, Arati was initially reluctant to give additional amount of food to her under weighed daughter in law during pregnancy due to fear of over weighed baby which may cause problem during home delivery. Identifying the knowledge gap the NGO staffs counseled repeatedly on the importance of weight gain during pregnancy. During discussion about the reflection of the SAGE application with the community, Arati found her neighbour's daughter in law, Sonali was achieving weight gain because of having green points in the indicator of additional food intake. Then Arati motivated and allowed her daughter in law to take additional food.

At NGO level

The participatory approach of the NGO IDEAs Tool Box is effective for monitoring the project activities. With out heavy paper work, trend of positive or negative changes about the attitude and practice can be visualized easily. Identification of knowledge and practice gap becomes simplified with application of Tool Box. This led us to select the area of intervention for tracking down the impact of the project more efficiently. Proper documentation and reporting has also been convenient to the NGO management and sponsoring authority.

The entire experience of NGO IDEA Tool Box has been shared with the management level staff of Zonal Project Directorate, Zone II, Indian Council Of Agricultural Research (ICAR), New Delhi and Department of Sundarban Affairs, Govt. of West Bengal. They have highly appreciated and paid interest on the application of the Tool Box in the different projects. KVK under the SRAN is applying the tool in the Nutrition Security Project funded by Sundarban Affairs, Govt. of West Bengal.

PURPOSE OF PARTICIPATORY IMPACT MONITORING

Purpose	Level	Rating	Examples
Learning from experience	CBO, NGO	4	The scores clearly indicate areas that to be intervened.
Steering by NGO	NGO	4	There is more effective for constant monitoring of the project activity as well as target group to track the project in positive direction
Empowerment of beneficiaries	CBO	5	Beneficiaries can now visualise their present status and also changes they want to see in their lives and set up their mind to motivate themselves to achieve the goals
Upward accountability	NGO	4	Reports will focus now more on intended and unintended changes where earlier it reflected only the output and results

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.	Catching of wild fish	Different types of indigenous trapping gears made of bamboo splits and having unidirectional entry are placed at the confluence of paddy fields & ponds or in canals.	To catch wild indigenous fish and prawn from natural water bodies like paddy fields, ditches, canals, etc.
3.	Horticultural crops	Spraying of fresh cow milk on high value vegetables and betel vine	To increase the reproductive growth as well as pest and disease management of the crop
4.	Vegetables and paddy	Application of sugar in the soil as basal dose	To get better crop stand in saline soil
5.	Guava and water apple	Wrapping of fruits at immature stage by locally available polyethylene bag	i)To protect the fruit from the attack of fruit fly and birds ii)To improve the quality of the fruits
6.	Vegetables	Use of mustard oil with fertilizer- manure mixture as basal	To enhance the efficiency of plant nutrients and better crop growth



Plastic crates for used for management of fish

Indigenous trapping gears to catch wild fish from natural habitats

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 : 40
- ii. No. of farm families selected : 623
- iii. No. of survey/PRA conducted: 3
- iv. No of participatory evaluation and monitoring- 1

3.12. Activities of Soil and Water Testing Laboratory

Status of establishment of Lab : established

1. Year of establishment : 2004-05
2. 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 Connductivity 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	Thermometre 360°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 (Whatman)	10	15000.00
23	Seive	6	2100.00
24	Hand Vaccum Pump (Terson)	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-Wangner	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	Over (Digital controller)	1	15600.00
38	Raymond Mill	1	19000.00
39	Muffle Furnace (Upto 1200°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

9. 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 Samples	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 Samples	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 Samples	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 Samples	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 Samples	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 Samples	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	47700.00
	Water Samples	638	465	102	9570.00
	Total	1433	987	255	57270.00

Year	Details	No. of Samples	No. of Farmers	No. of Villages	Amount realized (Rs.)
2011-12	Soil Samples	630	630	147	37800.00
	Water Samples	112	98	42	1680.00
	Total	742	728	189	39480.00

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
7	121	14756	1754	5

3.14 Technology week celebration

Type of activities	No. of activities	Number of participants	Related crop/livestock technology
Effect of climate change in agriculture	1	1856	Field and horticultural crops alongwith fish and livestock

3.15 RAWE programme

Is KVK is involved? No.

No of student/ARS trained	No of days stayed

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	30.25 lakhs	30.25 lakhs

3.17. List of visitors including the officials of ZPD and DEE

Date	Name of the person	Purpose of visit
27.7.11	DEE	SAC
15.03.12	Dr. S. Dixit	NICRA workshop
	Dr.A.K.Singh, ZPD-Zone-II	
	DEE, BAU	
23.3.12	Sr. S. Roy	SAC
15.3.12	Dr. S. Dixit, National Coordinator, NICRA	NICRA village
04.06.2011	Dr. K.Narayanagouda, VC, UAS, Bangalore	Chairman, QRT
	Dr. M.S.Basu, Ex. Director, NRC-Groundnut, Junagarh	Member, QRT
	Dr.A.K.Singh, ZPD, Zone-II	Member, QRT
02.02.12	Shri Rabindranath Bhattacharya, Hon'ble Minister In Charge, Dept. of Agriculture, GOWB	Annual Agricultural Exhibition 2012
03.02.12	Shri N. S. P. Rao, Chief General Manager, NABARD, Kolkata	
	Dr. Arunashis Goswami, Inspector of Colleges, WBSU, Barasat	
	Dr. B. K. Mahapatra, Principal Scientist & OIC, CIFE, Kolkata	
04.02.12	Shri Asis Laheri, Deputy Director of Agril. (Admn.), Alipore	
	Dr. D. P. Sinhababu, Principal Scientist, CRRI, Cuttack, Orissa	
	Dr. Chinmoy Kundu, Joint Director (Rice), RRI, Chinsura, Hooghly	
05.02.12	Dr. (Mrs.) Karabi Dutta, Professor, Dept. of Botany, Calcutta University	
	Dr. Amit Chaudhuri, Joint Director, Group Head (ICT & Services), CDAC, Kolkata	
06.02.12	Shri Bidyut Bhattacharya, OSD & EO, Deputy Secretary, GOWB	
09.02.12	Dr. K. S. Varapasad, PD(DOR), Hydrabad	AICRP(Sunflower)
08.02.12	Dr. S.N. Sudhakara Babu, PS, DOR, Hydrabad	AICRP(Sunflower)
08.02.12	Dr. Y.G. Sadaksharai, Sunflower Breeder, UAS, Bangalore	AICRP(Sunflower)

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.

Impact of KVK in Terms of Agricultural and Animal Productivity, Socio-economic conditions in the Adopted Villages

Sl. No.	Item	Unit	2000-2005	2006-2011
1.	Change in cropping pattern	(%)		
	a. Paddy-fallow		53	35
	b. Paddy-cotton		7	9
	c. Paddy-paddy		6	5
	d. Paddy-vegetables		12	18
	e. Paddy + vegetables-vegetables		11	15
	f. Paddy- Greengram		8	12
	g. Paddy- Sunflower		3	6
	h. Carp fish+ ornamental fish		Nil	45
2.	Change in productivity of	(kg/ha)		
	(a) cereal crop (paddy)		2220	2740
	(b) pulses		710	875
	(c) oilseeds		1015	1345
	(d) rabi vegetables		15100	18500
	(e) kharif vegetables		15750	19900
	(f) milk		Av.1.25lt / animal/day	Av. 1.75lt / animal/day
	(g) egg		12 to 13/ bird / month	15 to 18/ bird / month
	(h) fish	1000 – 1500	1200 – 1800	
3.	Use of HYV (high-yielding varieties)	(%)		
	Paddy		26.7	39.40
	Sunflower		82.9	94.2 (Hybrid)
	Green gram		79.3	86.5
	Vegetables		42.1	51.4
	Poultry bird		23.6	29.3
	Cross bred dairy animals		12.3	21.4
	Carp fish		36.8	42.5
4.	Use of fertilizers (NPK)	(kg/ha/ year)	82.5	103
5.	Use of FYM and other biofertilizers	(kg/ha)	1500	2800
6.a.	Tractor	(No.)	-	-
6.b	Power tiller	(No.)	1-2	3-4
6.c	Pumpset	(No.)	3-4	7-8
6.d	Hand sprayer	(No.)	15-16	35-40
6.e	Knapsack sprayer	(No.)	2-3	7-8
6.f	Drum seeder	(No.)	-	2

Sl. No.	Item	Unit	2000-2005	2006-2011
7.	Change in economic indicators (in adopted villages) Net return/ha/yr(by crop/enterprise)			
	(a) cereal crop (paddy)	Rs.	3540 (Cost-12000, SP- 700/qntl)	7900 (Cost-19500, SP- 1000/qntl)
	(b) pulses	Rs.	10250 (Cost-7500, SP- 2500/qntl)	20100 (Cost-15000, SP- 4000/qntl)
	(c) oilseeds	Rs.	3975 (Cost-11250, SP- 1500/qntl)	11150 (Cost-15750, SP- 2000/qntl)
	(d) <i>rabi</i> vegetables	Rs.	30450 (Cost-37500, SP- 450/qntl)	40500 (Cost-61250, SP- 550/qntl)
	(e) <i>khariif</i> vegetables	Rs.	37075 (Cost-33750, SP- 450/qntl)	52950 (Cost-56500, SP- 550/qntl)
	(f) milk	The production of milk was increased 7-15 lit./month/animal that was used for household consumption.		
	(g) egg	Rs.	20.50-22.50/ bird / month (Cost-3.50/bird/ month, SP- 2.00/egg)	39.25-48.25/ bird /month (Cost-5.75/bird/ month, SP- 3.00/egg)
	(h) fish	Rs.	40000 – 60000 (Cost-20000-30000/ha SP-60/Kg)	73000 – 117000 (Cost-35000-45000/ha SP-90/Kg)
Cost- indicates total cost of cultivation, SP- selling price				

4.2. Cases of large scale adoption

I. Agricultural diversification through land shaping (crop-livestock-fish integration module)

Since inception Nimpith KVK has been trying to develop the agricultural scenario of Sundarbans by effective utilization of land and water. Every year the Sundarban farmers experience an unique problem of almost 6 months of surplus water due to heavy rain (1700 – 1800mm) and most of the precipitation remain unutilized and mixes with the saline estuarine water as run off. During *rabi* season there is huge scarcity of sweet water accentuated with saline soil, the vegetable cultivation on low land was non existent. In this situation KVK Nimpith has conceptualized and developed a Resource Conserving Technology (RCT)-viz. the land shaping and water harvesting technology and by adopting this, along with the HYV paddy, a no. of high value vegetables can be grown with the irrigation facilities so created by excavating a pond on the existing low land.

Advantages of land shaping :

- i. Three dimensional (land, water and air) crops
- ii. Option for integration for agriculture
- iii. Aquaculture with duck rearing
- iv. Introduction of double and triple crops
- v. Diversified cropping possibilities
- vi. Additional crop in pond and land embankment
- vii. Conservation of ground water
- viii. Energy saving module with year round work opportunity

II. 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 consumption. 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 non availability 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 varieties 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 an 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-a-days, 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 guidance from DOR, Hyderabad.



III. Ornamental fish:

Ornamental fish farming is 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.



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 information 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.

**4.3 Details of impact analysis of KVK activities carried out during the reporting period
Annexed in page No. ... (Project..)**

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. Entertainment	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.

4.4 Details of innovations recorded by the KVK



Personal Profile

PROFILE OF FARM WOMAN INNOVATORS

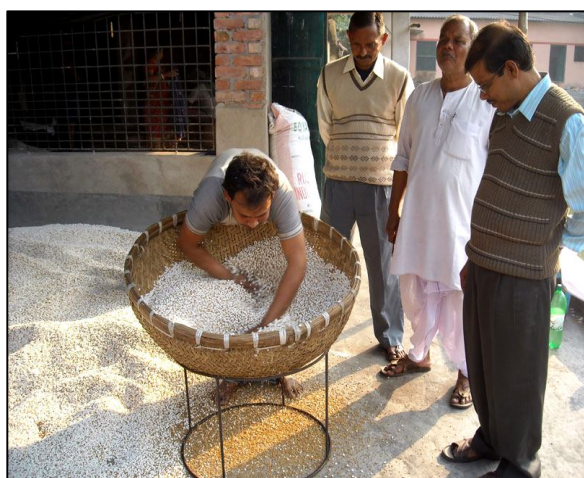
Innovation on Puffed paddy cleaning machine

The principle of paddy husking machine (holler) has been utilized to prepare the innovative puffed paddy cleaning machine. It reduces drudgery and there are no health hazards during operation. It takes 80 minutes to clean 200 Kgs of unclean puffed paddy for production of 135 Kgs of cleaned puffed rice where as 1 man day is required in traditional method. The present invention involves only Rs. 42 for electricity and depreciation cost.

Name of farmwomen	:	Pratima Mondal
Age	:	56
Education (highest level and subject)	:	Class VI
Land holding (hectare)	:	0.13 ha
Crops grown: Rice, wheat etc.	:	Vegetables
Livestock (cow, buffalo etc in number)	:	Layer bird (6)

Practical utility of the Innovation/ Model

A machine has been prepared to clean puffed paddy with a quick and cost effective manner. 1 HP electric motor is used to run the machine. Unclean puffed paddy is poured into the funnel of the machine which is larger than the traditional paddy husking machine. The unclean 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. More output is obtained within a short period, thus improving productivity of the puffed paddy industry. It reduces huge strain on biceps and triceps, minor and even major wounds on hands and dust allergy which occur during traditional operation.



Traditional model



Innovative model

4.5 Details of entrepreneurship development by the KVK

Cat fish breeding

No. of entrepreneurs	No. employed	Seed production capacity	No. of farmers benefited	Monthly income	
				Before	After
3	10	2.5 lakh approx.	120	Rs. 1,000/-	Rs. 5,000/-

Nursery culture of carp spawn and subsequent marketing of fry, fingerlings and table fish

No. of entrepreneurs	No. employed	Seed production capacity	No. of farmers benefited	Monthly income	
				Before	After
4	17	1500 kg fry, 2400 kg fingerlings & 4500 kg table fish	764	Rs. 2,000/-	Rs. 15,000/-

Nursery for horticultural crops and agro-forestry (including women SHG members)

No. of entrepreneurs	No. employed	Avg. seedlings and saplings Production / unit	No. of farmers benefited	Monthly income	
				Before	After
9	140	50,000	226	Rs. 2500	Rs. 7400

Broiler bird rearing

No. of entrepreneurs	No. employed	Production	Monthly income	
			Before	After
18 (including 5 women SHG groups)	125	800 birds/unit	Rs. 1400	Rs. 7,000

Dairy (having minimum 10 cows)

No. of entrepreneurs	No. employed	Production	Monthly income	
			Before	After
7	16	60 lit/day	Rs. 1700	Rs. 15,000

Integrated farming

No. of entrepreneurs	No. employed	No. of enterprise	No. of farmer benefited	Monthly income	
				Before	After
126	740	Fruit, vegetable, paddy, fish, duck, poultry, ornamental fish, goat, dairy	220 approx.	Rs. 3000	Rs. 12,000

Small Scale Cottage Industry

No. of entrepreneurs	No. employed	Enterprise	Monthly income	
			Before	After
2 Mahalia Mondol	30	Gloves making	Nil	Avg. Rs 1800/- per head

4.6 Any other initiative taken by the KVK

a) Mobile SMS alert for Agriculture and allied Agri- information

RAKVK has adopted a unique method of SMS alert system by which diseases in certain crops are being forecasted after getting weather data from an automatic weather station and the remedial measures are conveyed to the farmers over their cell phones in the form of SMS message. Information on various RAKVK activities is also uploaded to the RAKVK website.



b) Farmers' Field School (FFS)

It is an informal school for farmers at their own field which mainly go through the scientific aspects of integrated crop management. So far 23 nos. of schools have been organized for better adoption of the technology related to cotton cultivation, IPM and IRM modules etc.



d) PPP mode or private public partnership

Public private partnership for successful completion of any agricultural or allied venture is now-a-days very much essential, particularly in the marketing part of the end produce. Door step marketing of cotton, ornamental fish, etc. are being done with different private sectors.

e) Rural Technology Center & Cluster formation

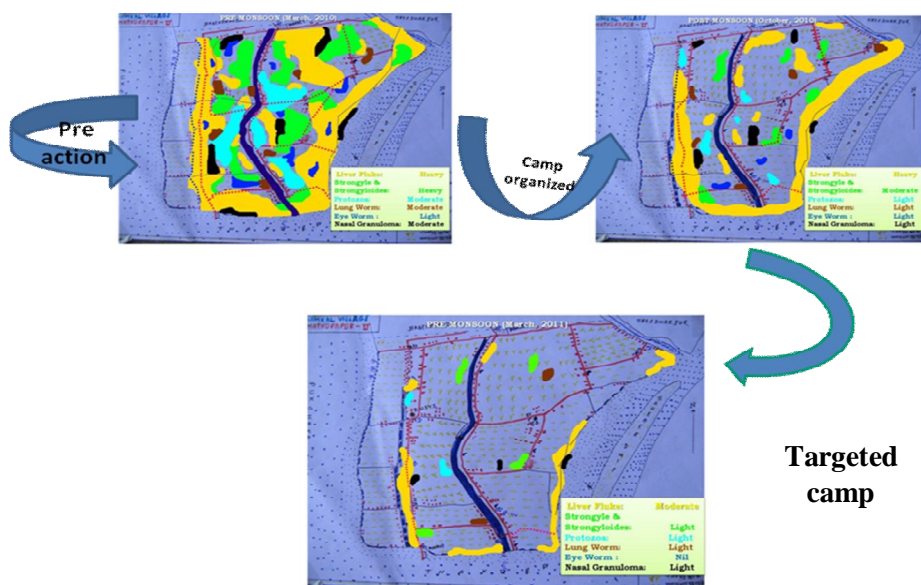
Adoption of villages is done in cluster basis of a particular block and every activity of KVK is confined in that cluster with a view to creating an overall development in agriculture and allied agricultural sector. In three villages, KVK has established Rural Technology Centre (RTC) for technology discrimination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

f) Adoption of Farm Science Club

Adoptions of Farm Science Club (FSC) through which the village level information are collected and refined technologies developed by KVK are disseminated with the help of FSC. The members of FSC act as Extension Personnel.

g) Development of Parasitological map for better execution of A/H programme

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 occurrence of specific worms with specific season, thus the farmers may well ahead take the preventive measures for prevention of such.



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

- i) **Staff** – Increasing the no. of technical staff
- ii) **Infrastructure** – More fund required for more accommodation as no. of training has been increasing
- iii) **Non-plan** – KVK should be brought under non-planned budget
- iv) **Same status for all KVK irrespective of host organization** – a general rule and claims should be followed for all KVKs
- v) **SMS should be treated as scientist**- the Scientific staff should be designated as Scientist as per ICAR rules
- vi) **More strengthened linkage with ICAR institute**-through various linkages.
- vii) **HRD support** for more national & international programmes for the scientific staff of KVK.

5.0 LINKAGES

5.1 Functional linkage with different organizations

Sl. No.	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 (NWDPR)	
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	
16	ATMA, South 24 Parganas (SREP & AE survey)	
17	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)	Demonstration
18	TMC MM-II, DOCD, GOI (Cotton)	
19	SDB, GOWB (Cotton Cultivation)	
20	CICR, Nagpur (IRM)	
21	Advanta, Excel Crop Care Ltd.	
22	National Horticulture Mission, Mayukh Bhavan, Salt Lake, Kolkata, West Bengal	
23	SDB, Agril. Deptt. GOWB (FLD on IPM)	
24	National Fisheries Development Board, Hyderabad	
25	District Horticulture Office, Alipur, South 24 Parganas	
26	Directorate of Oilseed Research, Hyderabad	
27	Institute of Animal Health and Veterinary Biologicals, Kolkata, West Bengal	
28	West Bengal University of Animal & Fishery Sciences, Kolkata, West Bengal	
29	Regional Disease Diagnostic Laboratory, IVRI, Kolkata	Participation in meeting
30	National food security mission	
31	Directorate of Extension, BCKV, Mohanpur, Nadia	Collaborative programme
32	Sundarban Milk Union Limited, South 24 – Parganas	
33	Central Institute of Fisheries Education, Salt Lake, Kolkata & Versova, Mumbai	
34	Vivekananda College, Kolkata	
35	BARC, Trombay	
36	DD, ARD & PO, South 24- Parganas	
37	Cotton Corporation of India (CCI), Kolkata	
38	CRM Services, Kolkata	
39	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

External funding received :

Scheme implemented by Ramkrishna Ashram Krishi Vigyan Kendra in the years 2009-10, 2010-11 & 2011-12

Sl. No.	Name of the programme/scheme	Purpose of the programme	Date/ Month of initiation	Funding agency	Amount (in lakhs.)
1	All India Coordinated Research Project on Sunflower(AICRP)	Development of early duration Hybrids for rainfed situations and Rabi-Summer	July,2009	Director of Oil Seeds Research, Rajendranagar, Hyderabad	49.32
2	Cotton Development Mission (CDM)	Production of Raw Cotton and improve the bio mass statusof the North and South 24-Parganas districts.		Directorate of Agriculture, Govt. of West Bengal	89.17
3	Mini Mission-II of the Technology Mission on Cotton (TMC)	Intensive Cotton Development in the North and South 24-Parganas districts.	Oct.,2001	Department of Agriculture, (Development Branch) Govt.of West Bengal	150.64
4	National Agricultural Innovation Project (NAIP)	Strategies for sustainable management of degraded coastal land and water for enhancing livelihood security of farming communities (Component-III)	Sept.,2009	National Co-ordinator, (NAIP), ICAR, Project Implementation Unit, Krishi Anusandhan Bhaban-II, New Delhi-110012	125.07
5	National Watershed Development Programme for Rainfed Areas (NWDpra)	Watershed Development in Rainfed Areas	July,2007	Agriculture(Inputs) Department, Govt. of West Bengal	84.55
6	TMC-MM-II-IRM(Insecticide Resistance Management)	Experimentation and collection of information for the pest from the village level cotton field and monitoring for <i>Helicoverpa armigera</i> etc.	December2004	Director of Cotton Development, Central Institute For Cotton Research, ICAR,Nagpur	10.92
7	Black Bengal Goat Farm (RKVY)	Establishment of a Black Bengal Goat Rearing Farm		Deputy Director, Animal Resource Development & Parishad Officer, Govt. of West Bengal. Through RKVY.	25.00
8	FLD on Sunflower	Frontline Demonstration on Sunflower		Director of Oil Seeds Research, Rajendranagar, Hyderabad	2.0
9	Cotton Demonstration Programme	Cotton Demonstration		Department of Sundarban Affairs Govt. of West Bengal.	25.16
10	Low Cost Poly House Technology (NHM)	Promoting Export Oriented and High value vegetable production in the Sundarban Agro Climate		Food Processing Industries and Horticulture Department, Govt. of West Bengal.	17.89

Sl. No.	Name of the programme/scheme	Purpose of the programme	Date/ Month of initiation	Funding agency	Amount (in lakhs.)
11	Establishment of Hi-Tech Poly House (NHM)	Establishment of Hi-Tech Poly House for production of off season vegetables for demonstration		Food Processing Industries and Horticulture Department, Govt. of West Bengal.	1.62
12	Low cost Ornamental Fishery	Low cost Ornamental Fishery for womenfolk(SHG Members) in Sundarbans		Department of Sundarban Affairs Govt. of West Bengal.	0.36
13	Rural Poultry Feed Plant (RKVY)	Production of low cost poultry feed with the utilization of locally available ingredients for the small poultry farmers		West Bengal University of Animal and Fishery Science through RKVY	51.57
14	Collaborative Research Work in the field of Fishery	Field level experiment regarding the effect of self-recruiting population of Fishes in composite fish culture		Central Institute of Fishery Education(Kolkata Centre),ICAR	1.67
15	Seminar on Global Warming	To arrange seminar on bad effects of global warming		NABARD	0.95
16	Identification of Chilli Genotypes (RKVY)	Identification of Chilli (Capsicum sp.)Genotypes Tolerant to Leaf Curl Complex suitable for cropping system of the Sundarban in west Bengal		Food Processing Industries and Horticulture Department, Govt. of West Bengal.	13.02
17	Nutritional, social, economic empowerment of women in Sundarban areas	Identification of nutritional, socio-economic & health problems of rural women and empower them to attain food, nutritional and socio-economic security.	Dec.'2010	SDB , Department of Sundarban Affairs, GOWB	21.50
18	Agricultural Technology Management Agency (ATMA)	Selection of suitable Agronomical crops in saline soil and demonstration of landshaping towards multiple cropping approach to attain food security in the <i>Aila</i> effected areas of Sundarbans		Deputy Director of Agriculture (Admn) & Project Director, ATMA, South 24-Pgs, Govt. of West Bengal.	3.00
19	Climate Resilient Agriculture(NICRA)	Strategies to enhance adaptive capacity to climate change in vulnerable regions of district	Mar.,2011	Indian Council of Agricultural Research, New Delhi.	30.25

Sl. No.	Name of the programme/scheme	Purpose of the programme	Date/ Month of initiation	Funding agency	Amount (in lakhs.)
20	Rastriya Krishi Vikash Yajona (RKVY)	Integrated Farming System Approach Demonstration cum Training and Allied sectors		Directorate of Agriculture, Govt. of West Bengal	10.00
21	Bio-Village Programme	Organization of demonstration to the concept of bio-village		Deputy Director of Agriculture (Admn), South 24-Pgs, GOWB	1.00
22	AI and First Aid facilities for live stocks	Extension of animal husbandry practices in the remotest areas of Sundarbans through Prani Bandhu		PBGBS, Deptt. of ARD, Govt. of West Bengal	15.00
23	Breeding standardization <i>Pangasius pangasius</i>	To popularize the <i>Pangasius</i> fish in captive condition along with its market potential	April,2011	Deptt. of Fishery, GOWB	2.00
24	Tribal Sub Plan	Popularization of Sunflower cultivation in the Tribal Belt of West Bengal		DOR, Hyderabad, ICAR	7.50
25	MGNREGS	Extrapolation of landshaping & rain water harvesting technology developed by KVK		District Magistrate, South 24-Pargans	Approx.100.00 (Yet to be received)

6. 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	1641600 90000	
2	Broiler	1984-85	225.00 sq. mt.	-	meat	4800 nos	451200	595000	
3	Layer			Upkari, Nirbheek, Hitkari	Eggs	590 nos	172300	234200	
4	Goatary	2009-10	0.13 ha	Black Bengal	Aim is to preserve the germplasm	86 nos	62500	-	
5	Carp hatchery	1989-90	355 sq. mt.	IMC and Exotic carps	Carp spawn	4 million	4000	10000	
6	Nursery and grow-out ponds	1985-86	4.276 ha	IMC and Exotic carps	Carp fry & fingerling	2015 kg	91500	177400	
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	33925	

6.2 Performance of instructional farm (Crops)

Name Of the crop	Date of sowing	Date of harvest	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Type of Produce	Qty.Kg	Cost of inputs	Gross income	
Cereals									
Paddy	22.06.11	20.11.11	1.0	IET-5656	Certified	1200	8,562.00	24,000.00	
	22.06.11	20.11.11	0.40	IET-5656	Foundation	800.0	3,425.00	20,000.00	
	16.06.11	26.11.11	1.15	NC-492	Certified	1600.0	6,205.00	32,000.00	
	16.06.11	26.11.11	0.24	NC-492	Foundation	250.0	3,350.00	6,250.00	
	02.07.11	28.10.11	0.20	Pratikha	Certified	450.0	1,800.00	9,000.00	
	22.06.11	12.11.11	0.32	Jarava	T.L	250.0	2,530.00	4,000.00	
	08.07.11	20.10.11	0.60	WGL-20471	T.L	350.0	4,460.00	5,600.00	
	16.06.11	25.11.11	0.28	Gitanjali	T.L	400.0	2,400.00	6,400.00	
	18.06.11	16.11.11	0.10	Pankaj	Grain	360.0	860.00	3,500.00	
	31.06.11	12.12.11	0.66	Agniban	Grain	1237.0	4,050.00	12,370.00	
	16.06.11	14.11.11	2.0	NC-492	Grain	2780.0	13,500.00	29,190.00	
	02.07.11	16.11.11	0.52	MTU-7029	Grain	1665.0	3620.00	16,650.00	
	25.07.11	26.11.11	0.80	Bidhan-2	Grain	1220.00	5500.00	12,200.00	
07.07.11	22.11.11	0.15	Swarna Sub-1	Grain	560.0	1000.00	5,600.00		
Pulses									
Greengram	18.01.11	07.04.11	0.80	PDM-84-139	T.L	490.0	3600.00	24,500.00	
Oilseeds									
Sunflower	08.02.11	13.05.11	0.40	PAC-361	Grain	695.0	4500.00	13,900.00	
Sesame	25.02.11	24.05.11	0.10	Sabitri	Grain	87.0	950.00	2,175.00	
Fibers									
cotton	22.01.11	10.06.11	0.26	Surabhi	Fiber	240.00	3500.00	7,200.00	

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	Trichogramma chilonis	2117 trichocards (Having 218 lakh Trichogramma wasp)	12,860.00	21,170.00	422
2	Chrysoperla carnea	1,06,000 grubs	3830.00	10,600.00	68
3	Trichoderma viride	947 Kg	30,500.00	56,820.00	764
4	Trichoderma harzianum	4.0 kg	228.00	400.00	8
5	Pseudomonas fluorescens	592.6 kg	21,800.00	47,408.00	730
6	Sl. NPV	6 lit	1350.00	3200.00	19

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	Indian Major Carps & Exotic carps	Rahu, Katla, Mrigal, Bata, Kalbasu, Silver carp, Grass carp, Common carp	Table fish	2244.0 kg	58850.00	179520.00	
2	Giant fresh water prawn	<i>Macrobrachium rosenbergii</i>	Table Size	26.5 kg	2480.00	6625.00	
3	Indian Major Carps & Exotic carps	Rahu, Katla, Mrigal, Bata, Kalbasu, Silver carp, Grass carp, Common carp	Spawn	4.8 million	3750.00	13000.00	
4	Indian Major Carps & Exotic carps	Rahu, Katla, Mrigal, Bata, Kalbasu, Silver carp, Grass carp, Common carp	Fry	35.0 kg	3070.00	5580.00	
5	Indian Major Carps & Exotic carps	Rahu, Katla, Mrigal, Bata, Kalbasu, Silver carp, Grass carp, Common carp	Fingerling	701.0 kg	28100.00	53900.00	
6.	Ornamental fish	<i>Molly, Guppy, Swordtail, Platy, Goldfish, Angel, Barb, Tetra, Gourami, Cichlid</i>	Adult & fry	1695 nos.	5200.00	8475.00	

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 2011	118	248 (12)	-
May,2011	137	506 (20)	-
June,2011	187	378 (18)	
July,2011	154	442 (22)	-
August,2011	89	176 (8)	-
September,2011	234	812 (23)	-
October, 2011	137	344 (14)	-
November,2011	256	710 (20)	-
December,2011	148	588 (20)	-
January,2012	397	1034 (22)	-
February,2012	278	646 (17)	-
March 2012	314	1026 (22)	-

(For whole of the year)

6.6 Utilization of staff quarters

Whether staff quarters has been completed:

No. of staff quarters: 8

Date of completion: 1979

Occupancy details:

Months	Q I	QII	Q III	QIV	Q V	QVI
April 2011	Full	Full	Full	Full	Full	Full
May,2011	Full	Full	Full	Full	Full	Full
June,2011	Full	Full	Full	Full	Full	Full
July,2011	Full	Full	Full	Full	Full	Full
August,2011	Full	Full	Full	Full	Full	Full
September,2011	Full	Full	Full	Full	Full	Full
October, 2011	Full	Full	Full	Full	Full	Full
November,2011	Full	Full	Full	Full	Full	Full
December,2011	Full	Full	Full	Full	Full	Full
January,2012	Full	Full	Full	Full	Full	Full
February,2012	Full	Full	Full	Full	Full	Full
March 2012	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	State Bank of India	Nimpith	11259497721

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

Item	Released by ICAR		Expenditure		Unspent balance as on 1 st April 2012
	Kharif 2011	Rabi 2011 - 12	Kharif 2011	Rabi 2011- 12	
Inputs	-	-	-	-	-
Extension activities	-	-	-	-	-
TA/DA/POL etc.	-	-	-	-	-
TOTAL	-	-	-	-	-

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

Item	Released by ICAR		Expenditure		Unspent balance as on 1 st April 2012
	Kharif	Rabi	Kharif	Rabi	
Inputs	-	-	-	-	-
Extension activities	-	-	-	-	-
TA/DA/POL etc.	-	-	-	-	-
TOTAL	-	-	-	-	-

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

Item	Released by ICAR		Expenditure		Unspent balance as on 1 st April 2012
	Kharif	Rabi	Kharif	Rabi	
Inputs	-	-	-	-	-
Extension activities	-	-	-	-	-
TA/DA/POL etc.	-	-	-	-	-
TOTAL	-	-	-	-	-

7.5 Utilization of KVK funds during the year 2011 -12

S. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	Pay & Allowances	74.70000	74.75000	74.67354
2	Traveling allowances	1.00000	1.00000	1.00980
3	Contingencies			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	1.75000	1.75000	1.77905
B	POL, repair of vehicles, tractor and equipments	1.85000	1.85000	1.84395
C	i) Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)	2.00000	2.00000	2.02200
	ii) Training of Rural Youths	0.50000	0.50000	0.51750
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	0.50000	0.50000	0.50250
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	0.60000	0.60000	0.60400
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	0.80000	0.80000	0.79800
G	Training of extension functionaries	1.00000	1.00000	1.02150
H	Maintenance of buildings	-	-	-
I	Establishment of Soil, Plant & Water Testing Laboratory	-	-	-
J	Library	-	-	-
TOTAL (A)		84.70000	84.70000	84.77184
B. Non-Recurring Contingencies				
1	Works			
2	Equipments including SWTL & Furniture	-	-	-
3	Vehicle (Four wheeler/Two wheeler, please specify)	-	-	-
4	Library (Purchase of assets like books & journals)	0.05000	0.05000	0.04900
TOTAL (B)		0.05000	0.05000	0.04900
C. REVOLVING FUND				
GRAND TOTAL (A+B+C)		84.75000	84.75000	84.82084

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

Year	Opening balance as on 1 st April	Income during the year	Expenditure during the year	Net balance in hand as on 1 st April of each year (Kind + cash)
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
April 2011 to March 2012	21.66063	6.50500	5.86400	22.30163

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

PROJECT ACHIEVEMENTS

a) NWDPRA – 4yrs. (2008-09 to 2011-12)

- ⊙ Rain water harvesting through Landshaping:
 - ✓ 4075 acre-inch water-300 numbers of ponds
 - ✓ Irrigation in 80 ha uplands & fish cultivation during rabi-summer season
- ⊙ Ail bundh & ridge-furrow:
 - ✓ 29460 sq.m high land created
 - ✓ kharif and rabi vegetables are to be grown
- ⊙ Mandays creation through NRM activities: 48,285 nos
- ⊙ Promotion of vermi-compost:
 - ✓ 30 nos. (6mx 3mx 3m)
- ⊙ Financial support to the SHG members:
 - ✓ 212 SHG members
 - ✓ Vegetable cultivation, carp fish and ornamental fish rearing, ornamental bird rearing.
- ⊙ Capacity building:
 - ✓ 58 nos training
 - ✓ 612 SHG and UG members
 - ✓ group maintenance, accounting, vegetable cultivation, ornamental fish and bird rearing



b) NICRA Project

BACKGROUND



- ✓ Island based settlement
- ✓ Storm and cyclone prone region
- ✓ Breaching of embankment leading to inundation of mainland by brackish water
- ✓ High annual rainfall
- ✓ Low mono-cropped land with insufficient drainage facility leading to water logging and flood
- ✓ Problem of salinity during *rabi* and *summer* season
- ✓ Poor economic condition
- ✓ Poor transport and communication facilities
- ✓ Lack of organized market in the locality
- ✓ Six months of excess water and six months of lack of water

COMPONENTS



- ✓ Rainwater harvesting structures
- ✓ Renovation of defunct rainwater harvesting structures
- ✓ Developing appropriate integrated farming systems
- ✓ Introduction of drought resistant/flood tolerant varieties
- ✓ Introduction of saline tolerant crops
- ✓ Suitable intercropping
- ✓ Animal health management
- ✓ Protected cultivation
- ✓ Homestead biogas plant including vermicomposting
- ✓ Green manuring for soil health improvement
- ✓ Establishment of custom hiring center

c) NAIP Project

1. Rain Water harvesting

1714.96 acre-inch rain water has been harvested in 194 numbers of ponds that have been excavated and re-excavated with an area of 25.305 ha (average 7ft depth) which created additional irrigation potential of 41.574 ha of land during *rabi* season.



2. Paddy cum Fish with Ail (Embankment) cultivation:

Under this intervention 8.76 ha area has been covered with 63 nos. of beneficiary.

Vegetable crops and fish in kharif and only vegetable in pre rabi season has been newly introduced. Economic return from the each unit (1 ha) was obtained around Rs.81,000.00 which is 4.5 times than the earlier.



3. Employment generation:

1,43,136 man days (65544 for earth work and 77592 for year round cultivation) has been created inside the villages resulting to reduction of seasonal migration.

4. Economic support to landless and marginal farmers:

200 families were supported through Ornamental Bird rearing, Ornamental Fish rearing, Goat/ Sheep/Pig rearing for effective utilization of their own resources.

5. Introduction of organic manure:

22.5 tones of compost has been distributed among 240 nos. of household. In addition to that 48 number of vermi-compost units have been constructed for production of compost at their own site.

6. Capacity building:

22 nos. of On campus and 30 nos. of Off campus training have been conducted to the beneficiaries and villagers where adoption percentage were 59% calculated on the basis of pre and post training knowledge/skill application in the field

d) Nutrition Security Project funded by Sundarban Development Board

- Livelihood Zoning of two blocks
- Household economic survey
- Nutrition and education survey
- Training programme on conducting nutritional survey (TOT)
- Organizing International workshop on Nutrition security



- ✓ Demonstration- low cost efficient diet
- ✓ Mushroom production by innovative method
- ✓ Nutrition garden

e) Black Bengal Goat Breeding Farm - RKVY scheme

- ✓ Present Status: 141 nos of goats
- ✓ Achievements: Distributed 95 nos of goats through SHG groups for promotion of the farming to remote island of Sundarban

f) Rural Poultry feed plant under RKVY scheme

Objectives: Low cost feed formulation.

g) Private AI worker : pranibandhu

In collaboration with P.B.G.S.B.S, ARD Dept. Govt. of W.B.

Objectives: Providing door step primary veterinary aids

Promotion of AI for upgradation of indigenous non descript breeds

Creation of Job opportunities for the rural youths

h) Breeding and culture of *Pangasius pangasius* under RKVY scheme

- ✓ Breeding of 1 yr. old brooders
- ✓ Production of quality spawn
- ✓ Culture in nurseries



i) 'Chilli Project for Leaf curl Control' under RKVY Scheme

- ✓ "Identification of Chilli (*Capsicum* sp.) Genotypes Tolerant to Leaf-curl Complex Suitable for the Cropping System of Sundarbans of West Bengal"
- Depending upon yield characters, disease incidence and other parameters studied, 12 better performing genotypes were selected for multilocational testing at three salinity level
- The selected genotypes are Roshni, Damkal selection, Canning Bullet, Ankur, Pusa Jwala, Pant C-1, Guntur-002, BCC-49(42), BCC-30, BCC-28(Int.), BCC-28(18), and BCC-12(sel)
- Three salinity levels were selected for multilocational trials of the selected genotypes in three villages namely Kaikhali (Kultali Block, EC- 3.72mS/cm), Kamdebpur (Pathar Pratima Block, EC- 2.55mS/cm), Kamarhat (Kakdwip Block, EC- 1.63mS/cm)
- With respect to total fresh yield per plant, best performer at high salinity condition were Damkal selection & Canning bullet
- Other than these, genotypes which showed better stability against leaf curl complex were BCC-28(18), BCC-30, Ankur, Roshni and BCC-12(sel)



Farmers' field trial at Kamdebpur, Patharpratima

j) AICRP on Sunflower

- ✓ Performance of KBSH-44 in different tribal villages under Tribal subplan programme programme at Sonamukhi, Bankura

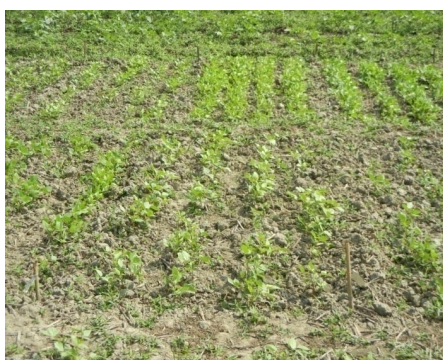


- ✓ FLD of Sunflower with full package and DRSH-1 hybrid in 40 acres at Kulpi block of South 24 Parganas



k) Moongbean project

- Genetic, physiological and sustainable management approaches for mung bean - an important pulse crop for coastal saline belts of west bengal
- Sponsoring authority: Indian Farmers Fertiliser Cooperative Limited (IFFCO)
- Commencement of the project: 2011-12
- Duration of the project : 4 years
- Total germplasm collected : 66 Numbers (Including two checks Samrat and Chaiti moong)



7.8 Number of SHGs formed by KVKs/associated with SHGs formed by other organizations indicating the area of SHG activities.

No of SHGs formed- 4 (Activity – ornamental bird rearing, vegetable cultivation)

No of SHGs associated with SHGs formed by other organizations indicating the area of SHG activities- 16 (Activity- Embroidery, Clay ornament, vegetable cultivation, Goat rearing, ornamental fish and ornamental bird rearing)

7.9 Details of marketing and financial opportunity created for the SHGs

SHG members are getting financial support from NWDPR, Sundarban Development Affairs; Marketing channels for ornamental bird are being developed and carried out by the village level unemployed rural youths who are trained on transportation care and management and make them aware about the marketing facilities available in this district as well as outside the district.

The marketing of ornamental fish has been developed through group marketing system consisting of members of SHGs.

7.10 Special programme on Food and Nutrition :

i) On farm trials conducted on food and nutrition:

Title, results, no. of beneficiaries and other information.

Title : Assessment of the different food preservatives to increase the keeping quality of Joynagarer Moya in Sundarban region.

Joynagar Moya is a special type of Sweet which is prepared in South 24 Parganas particularly in Joynagar I & Joynagar II block during winter season. It is very famous due to the special taste but it can be preserved only for three days. So it will be beneficial if the shelf life of the sweet can be increased by adding some good preservatives to minimize the storage loss. KVK Nimpith has conducted the OFT to assess the different food preservatives to increase the keeping quality of Joynagarer Moya. The result shows that the addition of sodium benzoate 0.2% after adjustment of acidic pH with Citric acid and mixing with puffed paddy, Kheer for making moya helps to increase the shelf life up to 6 days.

Results:

Table: Comparative efficacy of different preservatives added in Joynagorer moya

Treatment	No. of beneficiaries	Taste (after 3 days)					Off flavor (after 3 days)					Overall acceptability (after 3 days)				
		Days														
		1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Farmers Practice	15	7	3	1	0	0	6	3	0	0	0	3	0	0	0	0
Technology option 1		8	6	4	1	0	8	6	4	2	0	8	6	5	1	0
Technology option 2		9	7	5	2	0	9	8	6	3	0	9	8	6	2	0

ii) FLD conducted on food and nutrition

Title, results, no. of beneficiaries and other information

Title: Supplementary food for pregnant mother

Results:

Category	Name of technology	No. of demonstrations	Name of observations	Demonstration	Check
Women					
Pregnant women	Supplementary food for pregnant mother	40	Wt gain during pregnancy	10.2Kg	6.9Kg

Title: Weaning feed for infants

Results: Weaning feed for infants

Category	Name of technology	No. of demonstrations	Name of observations	Demonstration	Check
Children					
Infants	Weaning feed for infants	40	Body wt at 9 th month	6.7kg	6.1kg
			Body wt at 12 th month	7.4 Kg	7kg
			Body wt at 9 th month	8.0Kg	7.2kg

iii) Awareness programme conducted on food and nutrition for Anganwadi workers and others

No of Awareness camp-5
No of participants - 23

iv) Total Anganwadi workers trained indicating area of training:

No of Training -2
No of Participants- 12
Area of Training - 1) Evaluation and monitoring Growth and development of under 5 children
2) proper cooking method and hygienic measures to attain nutritional security

v) Number of exhibition, fair, workshops organized on food and nutrition:

Exhibition- 1 (Use of local resource to main food and nutrition security)
International Workshop – 1(Nutrition Security- A right based approach)

7.11 Community Radio Station : Form submitted at SAMETI, Narendrapur

- i) Date of start of Community Radio Station
- ii) Details of programme aired through Community Radio Station and frequency of such programme
- iii) Whether any proposal is pending for establishment of CRS at KVK, if yes, date of submission of proposal

7.12 KMAS Service : Recently KVK has implemented KMAS Service but it is under testing condition

N.B. By The KVK SMS Alert System - SMS Alerts on different crops from agronomy, horticulture, animal husbandry, fishery, home science and plant protection section have been sent to more than 6000 farmers.

Mobile Advisory								
No. of calls	No. of farmers covered	No. of messages	Type of messages					
			Crop (no.)	Livestock	Weather	Marketing	Awareness	Other enterprise

7.13 Performance of Automatic Weather Station/ Weather Station in KVK

- i) Parameters are being recorded
- ii) Advisory service based on weather data being provided to
 - a) Number of farmers
 - b) Departments with name and number
 - c) Other agency with name and number

7.14 Joint activity carried out with line departments and ATMA

Name of activity	Season	With line department	With ATMA	Both
Training to the farmers	Throughout the year	DRDC, North and South 24-Parganas	-	-
A 6 month training to the KPS on Cotton	Rabi- Summer 2010-11	Deptt. Of Agril, GOWB	-	-
Implementation of NWDPR	Throughout the year	Deptt. Of Agril, GOWB	-	-
Large Scale Cotton Demonstration	Rabi-Summer 2010-11	Deptt. Of Agril, GOWB	-	-
IRM on Cotton	Rabi-Summer 2010-11	CICR Nagpur	-	-
AICRP on Sunflower	Kharif & Rabi - summer	DOR, Hyderabad	-	-
Nutritional Security	Throughout the year	SDB, WB	-	-
Poultry Feed Plant	Throughout the year	-	RKVY	-
Bengal Goat Conservation	Throughout the year	-	RKVY	-
Training to the headmasters of different farm schools	Throughout the year	-	ATMA, Howrah & Hoogly	-
Establishment of Community Radio Centre	Form submitted	SAMETI, Narendrapur	ATMA	-
Activities coup up with Climate Resilient	Throughout the year	NICRA, New Delhi	-	-
Livelihood Security	Throughout the year	NAIP, New Delhi	-	-