ANNUAL REPORT

April 2015 – March 2016

Presented at
State Level Review Workshop
of
Krishi Vigyan Kendras of West Bengal

At
ICAR – Agricultural Technology Application Research Institute (ATARI), Kolkata, Bhumi Vihar Complex, Block – GB, Sector – III, Salt Lake City, Kolkata – 700097, West Bengal

On April 28th., 2016

By

Rathindra Krishi Vigyan Kendra
Palli Siksha Bhavana
Visva-Bharati
Sriniketan, P. O. – Sriniketan, Dist. - Birbhum
West Bengal - 731236

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ANNUAL REPORT 2015 (April 2015 to March 2016)

1. GENERAL INFORMATION ABOUT THE KVK

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

Address	Telephone		E-mail
	Office	FAX	
Rathindra Krishi Vigyan Kendra, Palli Siksha Bhavana, Visva-Bharati, Sriniketan, P. O. – Sriniketan, Dist. – Birbhum, Pin. – 731236, West Bengal.	03463-264771	03463-264771	**rathindrakvk@gmail.com** **rathindrakvk@rediffmail.com**

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

Address	Telephone		E-mail
	Office	FAX	
Visva-Bharati, Santiniketan, P. O. – Santiniketan, Dist. – Birbhum, Pin. – 731235, West Bengal.	03463-262451	03463-262672	**Vice-Chancellor: vice-chancellor@visva-bharati.ac.in** **Registrar: registrar@visva-bharati.ac.in**

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

Name	Telephone / Contact		E-mail
	Residence	Mobile	
Dr. Dulal Ch. Manna	03463-264415	09434079511	dcmanna@gmail.com

1.4. Year of sanction of KVK: Memo No. F.2 (2)\ 93-AE-1 of ICAR on 9th October, 1994.

1.5. Staff Position (as on 1st April, 2016)

Sl. No.	Sanctioned post	Name of the incumbent	Designation	Discipline	Pay Scale with present basic	Date of joining	Permanent /Temporary	Category (SC/ST/ OBC/ Others)
1	**Programme Coordinator**	Dr.Dulal Chandra Manna	Programme Coordinator	Horticulture	PB- 4, Rs.37400-67000+RGP Rs.9000 (Rs.56480/-)	01.08.1996	Permanent	GC
2	**Subject Matter Specialist**	Mrs. Ruma Addy	Subject Matter Specialist	Home Science	PB- 3 , Rs. 15600-39100/- +GP-Rs.5400/- (Rs. 31910/-)	06.06.1995	Permanent	GC
3	**Subject Matter Specialist**	Dr.Subrata Mandal	Subject Matter Specialist	Agronomy	PB- 3 , Rs. 15600-39100/- +GP-Rs.5400/- ,(Rs. 23740/-)	01.08.2004	Permanent	GC
4	**Subject Matter Specialist**	Sri Sourav Mondal	Subject Matter Specialist	Plant Protection	PB- 3 , Rs. 15600-39100/- + GP-Rs.5400/- (Rs. 23740/-)	01.08.2004	Permanent	SC
5	**Subject Matter Specialist**	Dr. Krishna Mitra	Subject Matter Specialist	Fishery	PB- 3 , Rs. 15600-39100/- + GP-Rs.5400/- (Rs. 20520/-)	26.05.2012	Permanent	GC
6	**Subject Matter Specialist**	Dr. Prabuddha Ray	Subject Matter Specialist	Agricultural Extension	PB- 3 , Rs. 15600-39100/- + GP-Rs.5400/- (Rs. 17550/-)	19.06.2012	Permanent	GC
7	**Subject Matter Specialist**	Dr. Madhuchhanda Khan	Subject Matter Specialist	Animal Science	PB- 3 , Rs. 15600-39100/- + GP-Rs.5400/-+ NPA 25% (Rs. 16230/-)	10.06.2014	Permanent	GC
8	**Programme Assistant**	Vacant	Programme Assistant	-	PB-2 , Rs. 9300-34800/- + GP-Rs.4200/-	-	Permanent	-
9	**Computer Programmer**	Sri Suraj Kumar Bhakta	Programme Assistant	-	PB-2 , Rs. 9300-34800/- + GP-Rs.4200/- (Rs. 9710/-)	16.06.2014	Permanent	OBC
10	**Farm Manager**	Sri Palash Ankure	Programme Assistant	-	PB-2 , Rs. 9300-34800/- + GP-Rs.4200/- (Rs. 9710/-)	18.09.2014	Permanent	SC
11	**Accountant / Superintendent**	Sri Madhu Sudan Chatterjee	Senior Assistant	-	PB-2, Rs. 9300-34800/- + GP- Rs.4600/- (Rs. 21660/-.)	13.04.1995	Permanent	GC
12	**Stenographer**	Sri Makbul Ahmed	Jr. Stenographer cum Computer Operator	-	PB-1, Rs. 5200-20200/- + GP-Rs.2400/- (Rs. 11310/-)	13.04.1995	Permanent	GC
13.	**Driver**	Sri Krishna Bansi Chatterjee	Driver-Cum-Mechanic	-	PB-2, Rs. 9300-34800/ - + GP- Rs.4200/- (Rs. 11100/-)	06.05.1997	Permanent	GC

14.	**Supporting staff**	Sri Bikash Chandra Ghosh	Driver-Cum-Mechanic	-	PB-2, Rs. 9300-34800/ - + GP- Rs.4200/- (Rs. 11100/-)	06.05.1997	Permanent	GC
15.	**Supporting staff**	Sri Chowdhury Md. Anwar	Supporting Staff	-	PB-1, Rs. 5200-20200/ - + GP- Rs.1900/- (Rs. 9500/-)	13.04.1995	Permanent	GC
16.	**Supporting staff**	Sri Naran Tudu	Supporting Staff	-	PB-1, Rs. 5200-20200/ - + GP- Rs. 1800/- (Rs. 5860/-)	05.06.2014	Permanent	ST

1.6. Total land with KVK (in ha) :

Sl. No.	Item	Area (ha)
1.	Under Buildings	00.550
2.	Under Demonstration Units	00.002
3.	Under Crops for Demonstration	02.000
4.	Orchard/Agro-forestry	01.000
5.	Under Seed Production	04.000
6.	Stocking and Rearing Pond	01.000
7.	Nursery Pond	00.013
8.	Under Fallow and farm roads	07.080
6.	**Total**	**15.645**

1.7. Infrastructure Development:

A) Buildings and others

Sl. No.	Name of infrastructure	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
1.	Administrative Building					Totally completed	550.00	Under use	ICAR
2.	Farmers' Hostel					Totally completed	305.00	Under use	ICAR
3.	Staff Quarters (6)								
4.	Piggery unit								
5	Fencing								
6	Rain Water harvesting structure								
7	Threshing floor					Totally completed	180.00	Under use	ICAR
8	Farm go-down					Totally completed	46.25	Under use	ICAR
9.	Dairy unit								
10.	Poultry unit					Totally completed	80.00	Under use	ICAR
11.	Goatary unit								
12.	Mushroom Lab								
13.	Mushroom production unit								
14.	Shade house								
15.	Soil test Lab					Totally completed		Under use	ICAR
16.	(Others, Please Specify) Portable Carp Hatchery for Fish Breeding					Totally completed	15.00	Under use	ICAR
17.	(Others, Please Specify) Duckery unit					Totally completed	80.00	Under use	ICAR
18.	(Others, Please Specify) Plant Diagnostic Laboratory					Totally completed	25.00	Under 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
Motor Bike (Rajdoot)	1997	32,000.00	39,013	Not in running condition
Moped (Toro Jaz)	1997	12,500.00		Not in running condition
Multi Utility Vehicle (Bolero Plus)	2010	5,20,495.00	86,126	In running condition
Motor Bike (Hero Splendor Pro)	2016	59,223.00	Yet to run	In running condition
Scooter (Hero Edge LX)	2016	60,323.00	Yet to run	In running condition

C) Equipment & AV aids

Name of equipment	Year of purchase	Cost (Rs.)	Present status	Source of fund
a. Lab Equipment				
Desiccators	1995-96	1540.00	Working condition	ICAR
Sewing machine	1995-96	3605.60	Working condition	ICAR
Mixer cum grinder	1995-96	3430.50	Working condition	ICAR
Weighing balance	1995-96	1700.00	Working condition	ICAR
Mixer grinder Kenstar	2004-05	5,000.00	Working condition	ICAR
Refrigerator Whirlpool	2004-05	16,750.00	Working condition	ICAR
Stabilizer Fizi	2004-05	2450.00	Working condition	ICAR
Shaker	2004-05	24500.00	Working condition	ICAR
Oven	2004-05	9000.00	Working condition	ICAR
Kelplus Digestation System Model KES 08L	2004-05	85,719.00	Working condition	ICAR
Kelplus Distillation System Elite Ex	2004-05	1,38,943.00	Working condition	ICAR
Systronics Micro controller based visible spectra-photometer	2004-05	53,064.00	Working condition	ICAR
Systronics P-H system	2004-05	21,582.00	Working condition	ICAR
Systronics Digital conductivity meter	2004-05	15,444.00	Working condition	ICAR
Systronics Flame photometer Type 128	2004-05	73405.00	Working condition	ICAR
Hotplate with energy regulator	2004-05	2,340.00	Working condition	ICAR
Glass distillation apparatus flux	2004-05	15,617.00	Working condition	ICAR
Physical balance cap.250g with weight box	2004-05	6,310.00	Working condition	ICAR
Shimadzu Electronic Balance	2004-05	66,254.00	Working condition	ICAR
Kjeldal digestion unit	2004-05	6,205.00	Working condition	ICAR
Kjeldal distillation unit	2004-05	10,411.00	Working condition	ICAR
Microscope- Trinocular	2010-11	47,069.00	Working condition	ICAR
Microscope – Stereo	2010-11	21,055.00	Working condition	ICAR
BOD incubator	2010-11	39,132.00	Working condition	ICAR
Autoclave- Vertical	2010-11	21,814.00	Working condition	ICAR
Centrifuge	2010-11	14,200.00	Working condition	ICAR
Microscope Image Projection System (MIPS)	2010-11	31,885.00	Working condition	ICAR
Laminar Flow	2010-11	53,465.00	Working condition	ICAR
Desiccators	2010-11	6,072.00	Working condition	ICAR
Rotary Shaker	2010-11	21,700.00	Working condition	ICAR
Digital Weighing machine	2010-11		Working condition	ICAR
Soil Testing Mini-Lab Mrishaparikshak Solar Operated	2015-16	70,000.00	Working condition	ICAR
b. Farm machinery				

Bench Floor Scale (Capacity – 200 kg) Model Sana	2010-11	8,000.00	Working condition	ICAR
Precision Scale (Capacity – 600 gms) Model Sana	2010-11	11,200.00	Working condition	ICAR
Portable Carp Hatchery	2010-11	2,21,956.00	Working condition	ICAR
Seed Processing Machine Model 15X/C.H. Standard Capacity 1.5 ton / Hour	2015-16	2,57,800.00	Working condition	ICAR
Elevator 16 Feet complete with 1.5 HP 440 Volt Electric Motor	2015-16	55,000.00	Working condition	ICAR
Mini Grinder	2015-16	73,500.00	Working condition	ICAR
Palletizer Machine	2015-16	39,900.00	Working condition	ICAR
Generator 15 KVA 3 Phase Model CD- 15 of Copper Corporation	2015-16	3,95,025.00	Working condition	ICAR
Laptop HP G 240	2015-16	43,000.00	Working condition	ICAR
Desktop All-in-One HP 20	2015-16	44,430.00	Working condition	ICAR
UPS APC 600 VA	2015-16	2,300.00	Working condition	ICAR
Printer Laserjet M 126 nw	2015-16	12,900.00	Working condition	ICAR
c. AV Aids				
Overhead Projector	1994-95	24,477.55	Working condition	ICAR
Sony TV	1998-99	20999.00	Working condition	ICAR
Sony audio system	1998-99	5,990.00	Working condition	ICAR
Sharp VCR	1998-99	13,750.00	Working condition	ICAR
Slide projector	2001-02	14,672.00	Working condition	ICAR
PA system			Working condition	ICAR
Amplifier	2001-02	6400.00	Working condition	ICAR
Microphone ASM580	2001-02	2700.00	Working condition	ICAR
Microphone ACM66	2001-02	1300.00	Working condition	ICAR
Speaker	2001-02	2500.00	Working condition	ICAR
DGT stand	2001-02	290.00	Working condition	ICAR
DGN stand	2001-02	490.00	Working condition	ICAR
LCD projector	2008-09	99,990.00	Working condition	ICAR
Camera	2008-09	23,900.00	Working condition	ICAR
d. Office Equipments				
Word processor	1995-96	2,100.00	Working condition	ICAR
Canon photo copier	2003-04	69,988.00	Working condition	ICAR
Stabilizer 2 KVA	2003-04	4,000.00	Working condition	ICAR
Generator	2008-09	49,500.00	Working condition	ICAR
Finger Print based Attendance Register Eurovigil I Deter 200	2015-16	20,600.00	Working condition	ICAR
Printer HP L3 1020 Plus	2015-16	8,200.00	Working condition	ICAR

D) Farm implements

Name of equipment	Year of purchase	Cost (Rs.)	Present status	Source of fund
ASPEE Sprayer (10 liters)	1995 - 96	2,050.00	Working condition	ICAR
ASPEE Hand Sprayer	1995 - 96	1,090.00	Working condition	ICAR
Paddy Thresher	1995 - 96	4,000.00	Working condition	ICAR
Hand Rotary Duster	1995 - 96	650.00	Working condition	ICAR
Spray Machine 16 lit. Capacity PVC Burret	2009-10	2,300.00	Working condition	ICAR
Mould Board Plough Model – Bengal Motor Works	2009 - 10	30,000.00	Working condition	ICAR
Mounted Offset 10”X20” Disc Harrow Model – Bengal Motor Works	2009 - 10	35,000.00	Working condition	ICAR
Self Propelled Power Ripper	2010 - 11	81,156.00	Working condition	ICAR

Model Kumco KB - 120				
Zero Tillage Machine 11 Tynes	2010 - 11	40,000.00	Working condition	ICAR
Cono Weeder	2012 - 13	Free Supply	Working condition	ICAR
Drum Seeder	2012 – 13	Free Supply	Working condition	ICAR

1.8. Details SAC meeting* conducted in the year

Sl. No.	Date	Number of Participants	Salient Recommendations	Action taken	If not conducted, state reason
1.	18.01.2016.	23	Protection of Instructional Farm of Rathindra KVK at Mouldanga from cattle grazing.	A letter had been sent to the the Upacharya, Visva-Bharati regarding protection of crops from cattle grazing of Instructional Farm of Rathindra KVK at Mouldanga on 29.01.2016	Not Applicable
2.			Hostel Accommodation for the residential trainees of KVK is inadequate specially women trainees.	The University Administration was requested on 29.01.2016 to provide some accommodations for the trainees of KVK in the Hostels of Visva-Bharati temporarily. The ICAR may be requested to sanction necessary grants required for construction of the 1st. Floor of the Trainees Hostel.	
3.			Replacement of Boro Paddy through the cultivation of other crops	KVK took initiative to cultivate different types of pulses and oilseeds, vegetables for replacement of Boro Paddy.	
4.			Low cost feed production system for cattle.	KVK has taken initiatives for low cost cattle feed production system through the demonstration of fodder cultivation, silage preparation. This may be noted that KVK is going to establish a feed production unit in its campus. After installation of feed production units, efforts will be made for low cost feed preparation.	
5.			Initiatives for demonstration of cultivation of pulses of 100 days maturity.	Some pulses are demonstrated under FLD programme which are below 100 days maturation such as Black gram var. WBU-109 which is of 85 days maturity and Green Gram var. PDM-84-139 of 70 days maturity.	

2.a. District level data on agriculture, livestock and farming situation (2015-16)

2.a.1 Major Farming system/enterprise

Sl. No.	Farming System/Enterprise
1.	**Upland**- Paddy, red gram, fruit crops
2.	**Medium land**- Paddy, mustard, potato, sugarcane, sesame, black gram, vegetables, fruit crops, cow, goat, backyard poultry, fishery
3.	**Lowland**- Paddy, sugarcane, wheat, potato, vegetables, duckery, fishery

2.a.2 Agro-climatic Zone

Agro Ecological Sub Region (ICAR):- Assam and Bengal Plain, Hot Sub-humid to Humid (Inclusion of Per-humid) Eco-Region. (15.1)

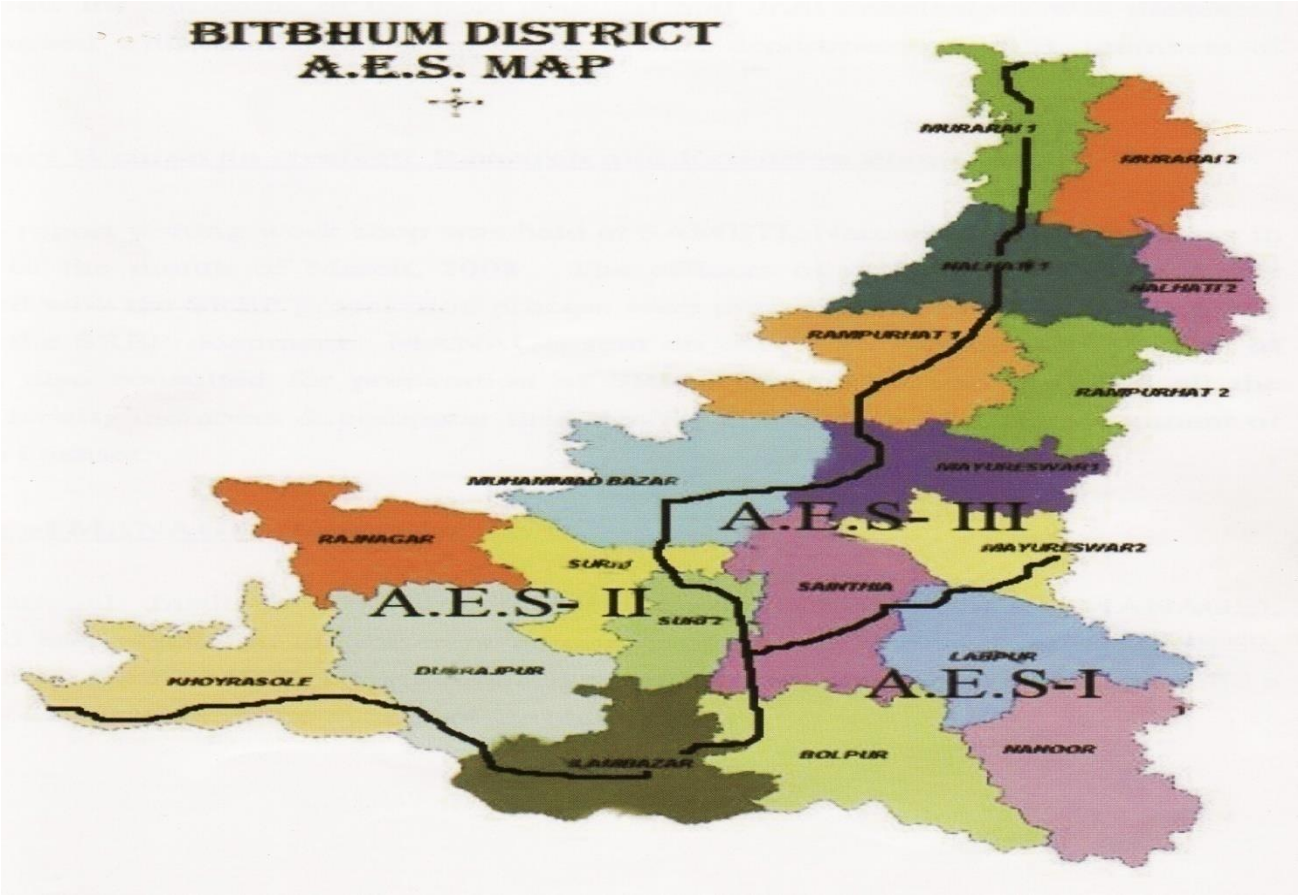
Eastern plateau (Chotanagpur) And Eastern Ghats, Hot Sub-humid Eco-Region (12.3)

Agro-Climatic Zone (Planning Commission):- Lower Gangetic Plain Region (III)

Agro Climatic Zone (NARP):- Red and lateritic Zone (WB-5)

2.a.3 Agro-ecological situation

The Birbhum District is divided into three Agro-Ecological Situation viz. AES – I, AES – II and AES – III. The Rathindra KVK is situated in the AES – I. The Map and detailed features of the Ago-ecological Situations of the District of Birbhum are given here under.



Source: - SREP, Birbhum – 2009.

Agro-ecological Situations of the District of Birbhum

Characteristics	AES - I	AES – II	AES – III
Blocks covered	Blocks under this AES are Bolpur-Sriniketan, Nanoor, Sainthia, parts of Mayureswar – I and Mayureswar – II. parts of Labhpur, Illambazar	Blocks under this AES are Rajnagar, Dubrajpur, Khyrasole, parts of Nalhati – I, Rampurhat – I, Murarai – I, Mayureswar – I, Illambazar, Labhpur, Suri – I and Md. Bazar.	Blocks under this AES are Rampurhat – II, parts of Murarai – I, Murarai – II, Nalhati I, Nalhati – II, Md. Bazar, Suri – I and Suri – II.
Soil Type	Fertile loamy clay soil, 60 percent of cultivable area under loam – clay loam soil.	Sandy to sandy clay soil. 80 percent of cultivable area under clay soil and slightly acidity problem soil.	Clay to clay loam soil. 70 percent clay soil with 30 percent loam to clay loam soil.
	pH – 4.5 – 6.5	pH – 5.2 – 6.5	pH – 4.8 – 6.5
Irrigation	75 percent of the total cultivable area is under irrigation out of which 51 percent of area is under surface irrigation.	30 percent of the total cultivable area is under irrigation out of which 20 percent of the area is irrigated from surface water and the rest area is irrigated from minor irrigation sources. Ground water is not easily available.	70 percent of the total cultivable area is under irrigation out of which 60 percent of the area is irrigated from available groundwater. Surface irrigation area is only 10 percent. Ground water is easily available for irrigation purpose.
Important River	Ajoy, Mayurakshi, Dwaraka, Kopai	Hinglow, Bakreswar, Shaal, Ajoy, Chandrabhaga	Dwaraka, Brahmani, Mayurakshi, Pagla, Bansloi
Flood / Draught Proneness	Moderate flood prone area	Moderate draught prone area	Flood prone area
Available Water Area for Fish Cultivation	30 percent of ponds of the district of Birbhum are situated. Sweet water is available for fisheries.	20 percent of ponds of the District of Birbhum are under this AES. A vast sweet water resource is available for fish cultivation.	50 percent of the ponds of the District of Birbhum are under this AES. Sweet water area is available for fish cultivation.
Animal Resources	20 percent of the total Milch Cows of the District of Birbhum is available under this AES out of which upgraded Breed percentage is only 5 percent. Only 15 percent of the total Goat population of the District of Birbhum and 30 percent of the Poultry Population of the	50 percent of the total Milch Cows of the District of Birbhum is available under this AES out of which upgraded Breed percentage is only 5 percent. 60 percent of the total Goat population of the District of Birbhum and 40 percent of the Poultry Population of the District	30 percent of the total Milch Cows of the District of Birbhum is available under this AES out of which upgraded Breed percentage is only 5 percent. Only 25 percent of the total Goat population of the District of Birbhum and 30 percent of the Poultry Population of the District of Birbhum are

	District of Birbhum are available in this AES.	of Birbhum are available in this AES.	available in this AES.
Major Crops:			
Paddy -	Pre-Kharif, Kharif and Boro Paddy	Pre-Kharif, Kharif and Boro Paddy	Pre-Kharif, Kharif and Boro Paddy
Oil Seeds –	Mustard, Groundnut and Sesame	Mustard and Groundnut and Sesame in limited areas.	Mustard, Groundnut and Sesame
Pulses –	Black and Green Gram, Lentil, Bengal Gram, Kulthi	Khesari, Black and Green Gram, Lentil, Bengal Gram, Kulthi	Black and Green Gram
Vegetables –	Seasonal vegetable round the year	Seasonal vegetables round the year	Seasonal vegetables round the year
Fruits -	Mango, Guava, Citrus, Banana, Coconut	Mango, Guava, Citrus, Banana, Coconut	Mango, Guava, Citrus, Banana, Coconut.

Source: - SREP, Birbhum – 2009.

2.a.4 Soil Type

The predominant soil types are old alluvial and red lateritic with low to medium in organic carbon and phosphate content and medium to high in potash. The soil is acidic in nature with pH. range of 5.0 to 6.5.

This district (Birbhum) is enriched by various types of soil namely, Metal (Clay soil retentive of moisture which is best suited for growing winter paddy, sugarcane, wheat, gram and kalai); Ental (a sticky brownish clay, it is poor soil and is capable of producing paddy only if manured); Bagha Ental (ental having colour or tiger, it is poor soil capable of producing paddy only if manured); Beley (is a whitish loose and poor soil , capable of growing paddy and vegetable); Kankure ((it is a redish, loose laterite soil capable of growing bajra, maize, kurthi, bean and marual); Bastu (it is a blackish friable rich soil and is largely used for rabi crops); Bindi (it is a poor sandy soil which improves with continued cultivation, capable of producing paddy but can also grow rabi crops if irrigated); Reti Rfi (is lighter variant of Pali, it does not grow paddy it is best suited for vegetables, wheat, barley etc.) Pali (deposit of soil is bed of river or in areas subject to riverine inundation; it is very rich soil and is well suited for sugarcane, wheat, gram, potato and other vegetables. It is generally reserved for more valuable crops rather than paddy).

2.a.5 Productivity of major 2-3 crops under cereals, pulses, oilseeds, vegetables, fruits and others

Sl. No.	Year	Crops	Area ('000 ha)	Production ('000 tonnes)	Yield rate (kg.s / ha)
01.	1980-81	Total Cereals	378.8	620.5	1638
02.	1990-91		391.9	838.7	2140
03.	2000-01		345.7	875.3	2532
04.	2008-09		429.4	1311.6	3055

05.	2009-10		392.0	1050.7	2681
06.	2010-11		282.2	836.4	2964
07.	1980-81	Total Pulses	28.9	14.4	498
08.	1990-91		08.6	05.4	626
09.	2000-01		20.2	16.8	832
10.	2008-09		16.3	15.3	937
11.	2009-10		15.8	14.1	891
12.	2010-11		17.0	17.1	1004
13.	1980-81	Total Food-Grains	407.7	634.9	1557
14.	1990-91		400.5	844.1	2108
15.	2000-01		365.9	892.1	2438
16.	2008-09		445.7	1326.9	2977
17.	2009-10		407.8	1064.8	2611
18.	2010-11		299.2	853.5	2852

Source:- Economic Review 2011-2012, Govt. of West Bengal

Yield Rates of Some Selected Crops in the District of Birbhum and West Bengal

(Kilogram per hectare)

Crops	2003-04		2004-05		2005-06		2006-07		2007-08	
	District	West Bengal	District	West Bengal	District	West Bengal	District	West Bengal	District	W.B.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Rice	2981	2504	2805	2574	3029	2509	3128	2593	3098	2573
Wheat	2630	2315	2568	2103	2511	2109	2643	2281	2952	2602
Gram	1262	1026	792	1024	826	911	792	768	1166	984
Jute	3240	2428	3204	2484	3258	2572	3204	2545	3006	2425
Rapeseed & Mustard	1108	928	786	749	934	909	1019	803	1161	888
Potato	21067	24711	19139	22170	20511	21053	8538	12384	22111	24704
Tea	-	1769	-	1891	-	1899	-	2091	-	1983

Sources: - 1. Directorate of Agriculture, Govt. of W.B. 2. BAE&S, Govt. of W.B.. 3. Tea Board of India

Index numbers of Agricultural Area, Production & Productivity in the district of Birbhum

Base: Triennium ending crop year 1981-82 = 100

Year	Area		Production		Productivity	
	Cereals	All Crops combined	Cereals	All Crops combined	Cereals	All Crops combined
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2003-04	**108.31**	**109.66**	**200.34**	**203.56**	**184.97**	**185.63**
2004-05	111.09	112.99	195.79	196.51	176.24	173.92
2005-06	106.20	108.74	203.49	207.82	191.61	191.12
2006-07	110.60	114.08	216.70	213.82	195.93	187.43

2007-08	**113.58**	**115.99**	**220.84**	**232.14**	**194.44**	**200.14**
2008-09	**114.31**	**117.29**	**219.00**	**214.71**	**169.94**	**188.72**
2009-10	**104.35**	**107.64**	**177.34**	**203.14**	**181.99**	**194.76**
2010-11	**75.14**	**82.58**	**136.75**	**160.84**	**145.06**	**146.23**

Source: B.A.E.& S., Govt. of W.B. and Economic Review 2011-2012, Govt. of West Bengal

Coverage and Productivity of Major Crops in the District of Birbhum

Sl. No.	**Name of the Crop**	**Coverage (ha.)**		**Yield Rate (kg. / ha.)**	
		Year 2003 - 04	**Year 2011 – 12**	**Year 2003 -04**	**Year 2011 - 12**
1	Pre-Kharif Paddy	5100	2554	2399	3466
2	Kharif Paddy	300600	326412	2921	4324
3	Boro Paddy	70600	57912	3118	4664
	Total Paddy	376300	386878	2981	4369
4	Wheat	30200	32998	2630	2612
5	Barley	200	15	1310	1217
6	Bhadio Maize		154		1574
7	Rabi Maize		-		-
8	Summer Maize		75		1600
	Total Maize	200	229	1563	1581
9	Kulthi		179		403
10	Mator		122		1178
11	Khesari		1460		1280
12	Kharif Moong		-		-
13	Rabi Moong		-		-
14	Summer Moong		1100		692
	Total Moong		110		692
15	Kharif Maskalai		57		282
16	Rabi Maskalai		-		-
	Total Maskalai		57		282
17	Gram		7147		1076
18	Tur	-	11	-	329
19	Musur		5803		628
	Total Kharif Pulses		507		418
	Total Rabi Pulses		15912		893
	Total Pulses	16500	16419	1092	878

20	Bhadui Til		-		-
21	Winter Til		-		-
22	Summer Til		5422		543
	Total Til		5422		543
23	Rape and Mustard	37400	32282	1108	923
24	Linseed	200	136	58	149
25	Sunflower		44		950
26	Bhadui Groundnut		-		-
27	Rabi Groundnut		7		1400
28	Summer Groundnut		-		-
	Total Groundnut		7		1400
29	Niger		-		-
	Kharif Oilseed		-		-
	Rabi Oilseed		37908		866
	Total Oilseed	39500	37908	1091	866
30	Jute	100	293	18.0	18.7
31	Mesta	-	-	-	-
32	Sunhemp		114		3.4
33	Sugarcane	1000	843	58553	85987
34	Potato	9800	17918	21067	30013

Source:- :- 1. Evaluation Wing, Directorate of Agriculture, Govt. of West Bengal and 2. BAE&S, Govt. of West Bengal

Coverage ,Productivity and Production of different Crops of Birbhum

		2011-12			2012-13			2013-14		
Name of Crop	**Normal Target (Ha)**	**Coverage 2011-12**	**Yield (Kg/Ha)**	**Production (MT)**	**Coverage 2012-13**	**Yield (Kg/Ha)**	**Production (MT)**	**Coverage 2013-14**	**Yield (Kg/Ha)**	**Production (MT)**
Aman (HYV)		296077	4343.7	1286070	278124	4398	1223189	267692	4274.66	1144292
Aman(local)		6055	2694	16312	4827	2741	13231	3720	2715	10100
Aus Paddy		3767	3803	14326	3500	3592	12572	3540	3666.66	12980
Boro Paddy	68650	61224	4750	290814	53473	4867	260253	79310	5139.00	407574
Jute		169	6.3	1	209	6.3	1	197	6.5	1
Bhadoi Maize				0	369	890	328	423	885	374
Bhadoi Kalai		1240	408	506	1321	502	663	1052	622	654
Soyabean		37	530	20	43	540	23	37	530	20
Bhadoi G/Nut		73	1038	76	47	1035	49	46	1037	48
Mustard	42800	31840	1096	34897	32100	1103	35406	31690	1141	36158
Linseed	1490	821	588.5	483	666	592	394	582	600	349
Sunflower	430	44	950	42	75	545	41	56	586	33

Safflower	95	17	406	7	21	410	9	56	879	49
Arhar		576	617	355	534	620	331	541	622	337
Lentil	10000	6570	618	4060	10026	623.3	6249	10908	830	9054
Khesari	4185	1834	617	1132	1831	625	1144	1815	638	1158
Gram	19900	10750	948	10191	13415	973	13053	11206	967	10836
Pea	855	471	625.7	295	538	635	342	513	651	334
Kulthi		179	403	72	138	406.6	56	94	420	39
Other Pulse (Black Pea)	540	90	290	26	90	310	28	60	320	19
Potato	23300	17930	27303.6	489554	19120	28432	543620	18795	23314.38	438194
Wheat	47100	30440	2929	89159	30810	2986	91999	28720	3044	87424
Barley	95	16	1217	19	16	1206	19	24	1216	29
R/Maize	390	119	930	111	61	945	58	9	940	8
S/Maize	950	75	1600	120	31	1626	50	114	1623	185
Sesamum	7150	5120	962	4925	5350	952	5093	4382	933	4088
S/Moong	1800	1036	605	627	1918	598.3	1148	1947	540	1051
S/Kalai	950			0			0			0
S/Cane	1850	1759	77373	136099	1722	77233	132995	1520	77817	118282
R-S/G Nut	250	127	1265	161	181	1042	189	139	1590	221

Source – Dept. of Agriculture, Birbhum District, Govt. of West Bengal.

Internet Source - DDA,%20Birbhum.html

Horticultural Development in Major Crops in Birbhum District in Terms Of Area and Yield

Major fruits and vegetables						
Crops	**2004 -2005**		**2006 - 2007**		**2012 - 2013**	
	Area (ha)	**Productivity (q/ha)**	**Area (ha)**	**Productivity (q/ha)**	**Area (ha)**	**Productivity (q/ha)**
Tomato	1680.00	55.00	1860.00	140.80		
Tomato (Winter)					900.00	164.45
Tomato (Spring)					1050.00	163.81
Cabbage	2370.00	86.00	2550.00	363.60		
Cabbage (Winter)					1200.00	267.00
Cauliflower	2130.00	52.00	2170.00	157.50		
Cauliflower (Winter)					1300.00	184.23
Cauliflower (Spring)					900.00	183.89
Peas					800.00	41.00
Brinjal	6410.00	87.00	6850.00	120.40		
Brinjal (Rainy)					2400.00	116.67
Brinjal (Winter)					5300.00	215.00
Brinjal (Summer)					2600.00	112.39
Cucurbits	8340.00	121.00	8280.00	144.20		
Cucurbits (Rainy)					300.00	100.00
Cucurbits (Winter)					900.00	177.78
Cucurbits (Summer)					8200.00	147.56
Onion	1090.00	70.00	1380.00	72.90	1455.00	112.37
Lady's Finger (Rainy)					1520.00	90.13

Lady's Finger (Winter)					420.00	100.00
Sweet Potato					850.00	220.59
Beans					760.00	31.19
Radish (Winter)					600.00	133.33
Radish (Spring)					1230.00	121.95
Watermelon					1000.00	160.00
Elephant's Foot Yam					830.00	234.94
Arum					750.00	142.67
Leafy Vegetables (Rainy)					50.00	240.00
Leafy Vegetables (Winter)					40.00	200.00
Leafy Vegetables (Spring)					1000.00	70.00
Leafy Vegetables (Summer)					20.00	15.00
Others (Rainy)					4500.00	07.11
Others (Winter)					3900.00	15.77
Others (Spring)					1150.00	15.04
Others (Summer)					3000.00	09.83
Misc. Vegetables	10350.00	14.90	22000.00	51.90		
Total Vegetables	**32370.00**	**56.00**	**45100.00**	**100.60**		
Total Vegetables (Rainy)					**10350.00**	**76.62**
Total Vegetables (Winter)					**15360.00**	**149.98**
Total Vegetables (Spring)					**8230.00**	**136.68**
Total Vegetables (Summer)					**18737.50**	**111.93**
Mango	820.00	120.00	917.00	142.50	1640.00	58.54
Banana	520.00	80.00	650.00	159.50	950.00	137.38
Guava	770.00	110.00	943.00	150.60	1205	146.47
Pine Apple					05.00	180.00
Papaya					615.00	285.90
Jack Fruit					80.00	107.50
Litchi					50.00	48.00
Mandarin Orange						
Other Citrus					620.00	61.29
Sapota					190.00	105.00
Temperate Fruits						
Misc. Fruits	1100.00	140.00	1487.00	148.60	280.00	82.14
Total Fruits	**3210.00**	**45.00**	**3997.00**	**149.50**	**5635.00**	**119.20**
Chilli	240.00	30.00	460.00	89.80		
Ginger	550.00	50.00	710.00	96.80		
Turmeric	320.00	10.00	480.00	35.20		
Total Flower	**6500.00**	**46.20 lakh spikes**	**95430.00**	**69.6 lakh spikes**	**Not Available**	**Not Available**

Source: - Dept. of Horticulture and Food Processing Industries, Govt. of West Bengal.

2.a.6 Mean yearly temperature, rainfall, humidity of the district

The climate of the district is generally dry, mild and healthy. The hot weather usually last from the middle of March to the middle of the June, the rainy season from the middle of June to the middle of October, and the cold weather from middle of

October to the middle of March. They do not always correspond to this limit. As a rule, the wind is from south-east in summer and from the north-west in winter.

Summer Temperature: Max: 40^0 C

Winter Temperature: Min: 10^0 C

Rain Fall (RF) (Ten Years Average 1998-2007):-

SW Monsoon (June - September): 1196.1 Normal RF (mm)

NE Monsoon (October - December): 152.3 Normal RF (mm)

Winter (January - March): 67.1 Normal RF (mm)

Summer (April - May): 157.4 Normal RF (mm)

Annual: 1572.9 Normal RF (mm)

Normal Onset of Monsoon: 1st. week of June

Normal Cessation of Monsoon: 4th. week of September

Weather Data of Birbhum District

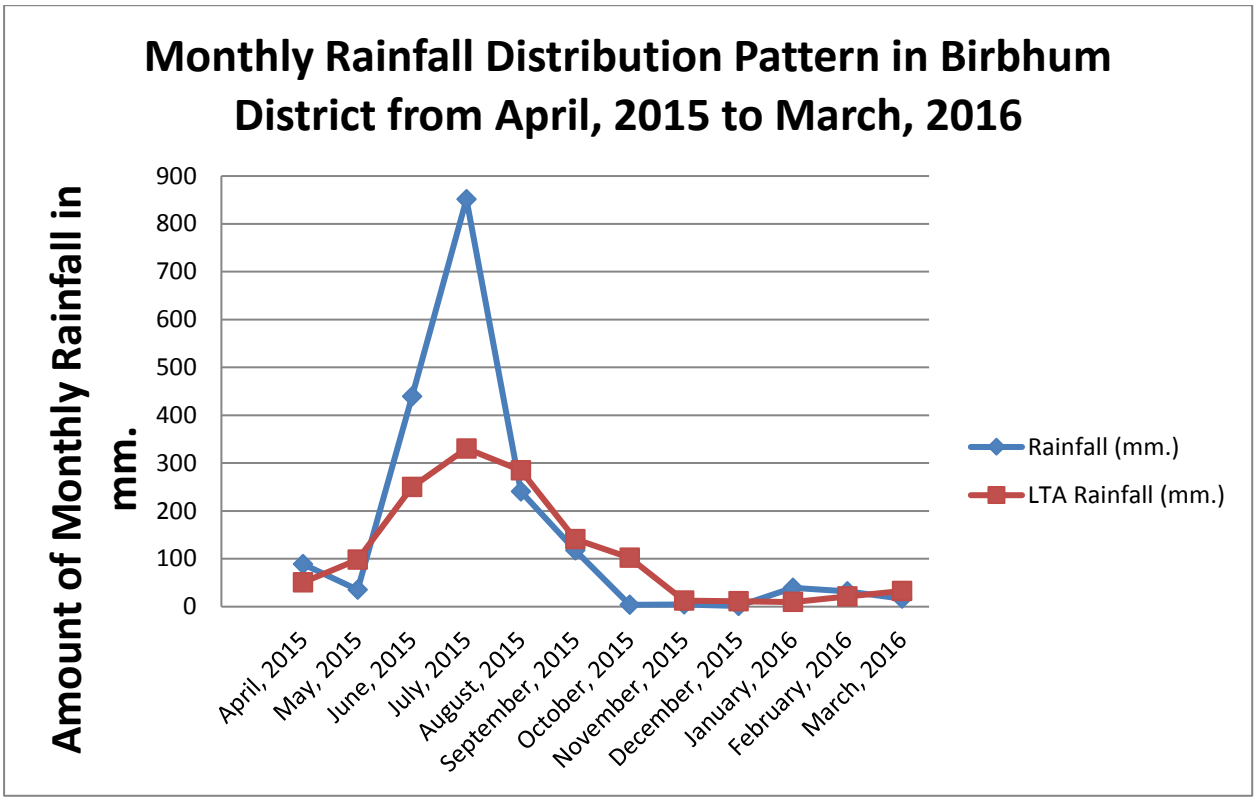
Month	Rainfall (mm.)	LTA Rainfall (mm.)	Temp. (^{0} C)	LTA Temp. (^{0} C)	Minimum Temp. (^{0} C)	LTA Minimum Temp. (^{0} C)	Average Relative Humidity (%)		Average LTA Relative Humidity (%)
			Maximum	Maximum	Minimum	Minimum	At 8.30 AM	At 5.30 PM	Average
April, 2015	89.1	50.52	34.10	37.07	22.60	23.71	75.00	64.00	61.05
May, 2015	35.5	98.09	37.70	36.71	25.90	25.03	74.00	59.00	73.07
June, 2015	439.1	250.09	34.80	34.61	26.10	25.71	79.00	71.00	80.06
July, 2015	851.6	330.47	32.90	32.73	25.30	25.88	86.00	86.00	84.59
August, 2015	240.5	285.13	33.60	32.08	26.20	25.77	83.00	82.00	87.11
September, 2015	117.4	140.80	34.50	32.18	25.70	25.25	80.00	77.00	85.04
October, 2015	004.0	102.29	33.40	31.41	22.50	22.44	77.00	75.00	76.46
November, 2015	004.9	12.71	31.40	29.17	17.90	17.34	77.00	72.00	72.19
December, 2015	001.4	11.02	26.20	26.07	14.00	12.61	78.00	69.00	71.50
January, 2016	39.5	9.61	25.30	25.15	11.20	11.86	81.00	68.00	73.56
February, 2016	31.7	21.25	29.90	28.18	16.90	14.48	77.00	68.00	62.35
March, 2016	16.3	32.96	35.00	33.76	21.10	19.59	69.00	57.00	56.38

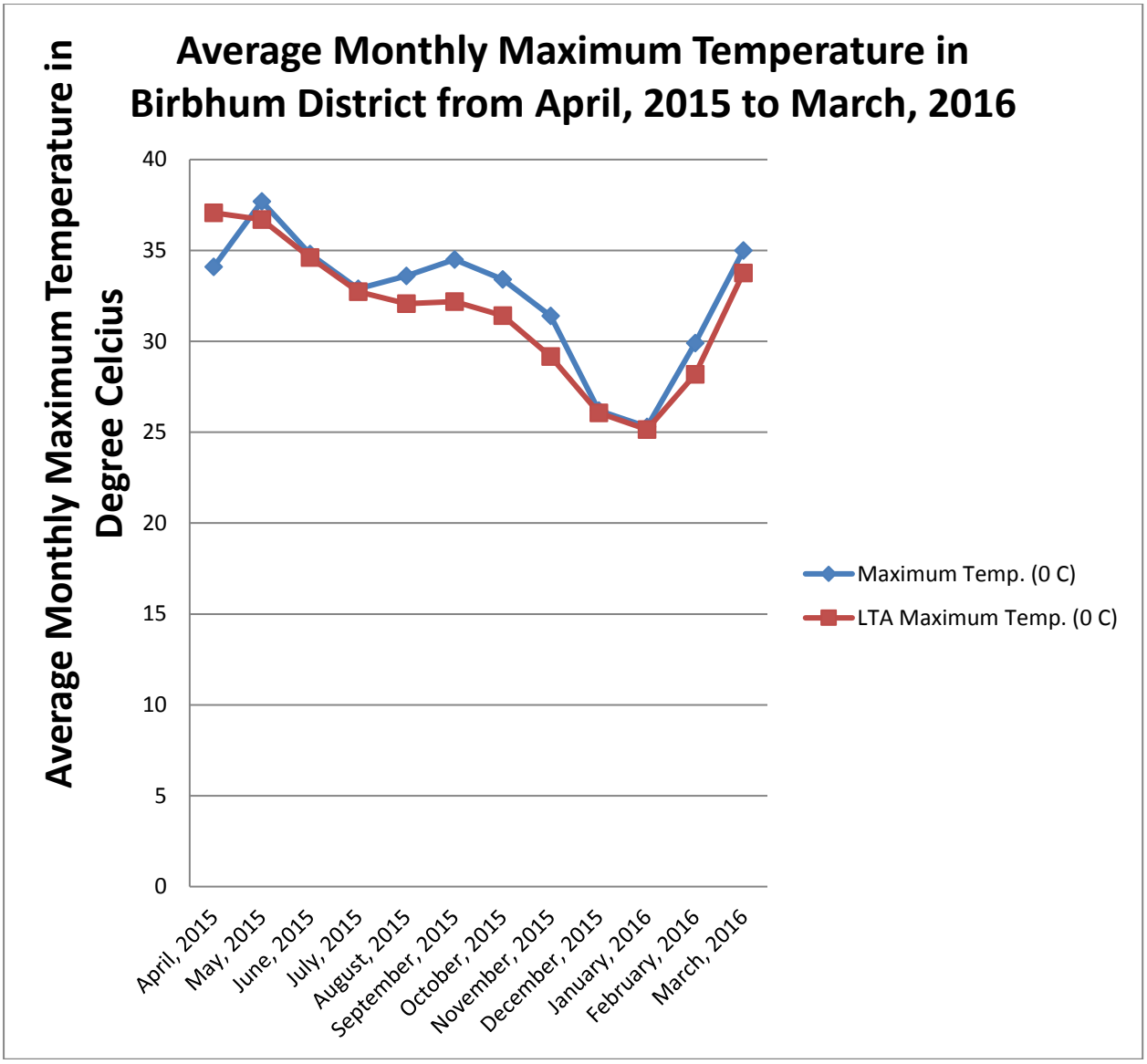
LTA = Long Term Average of 26 Years

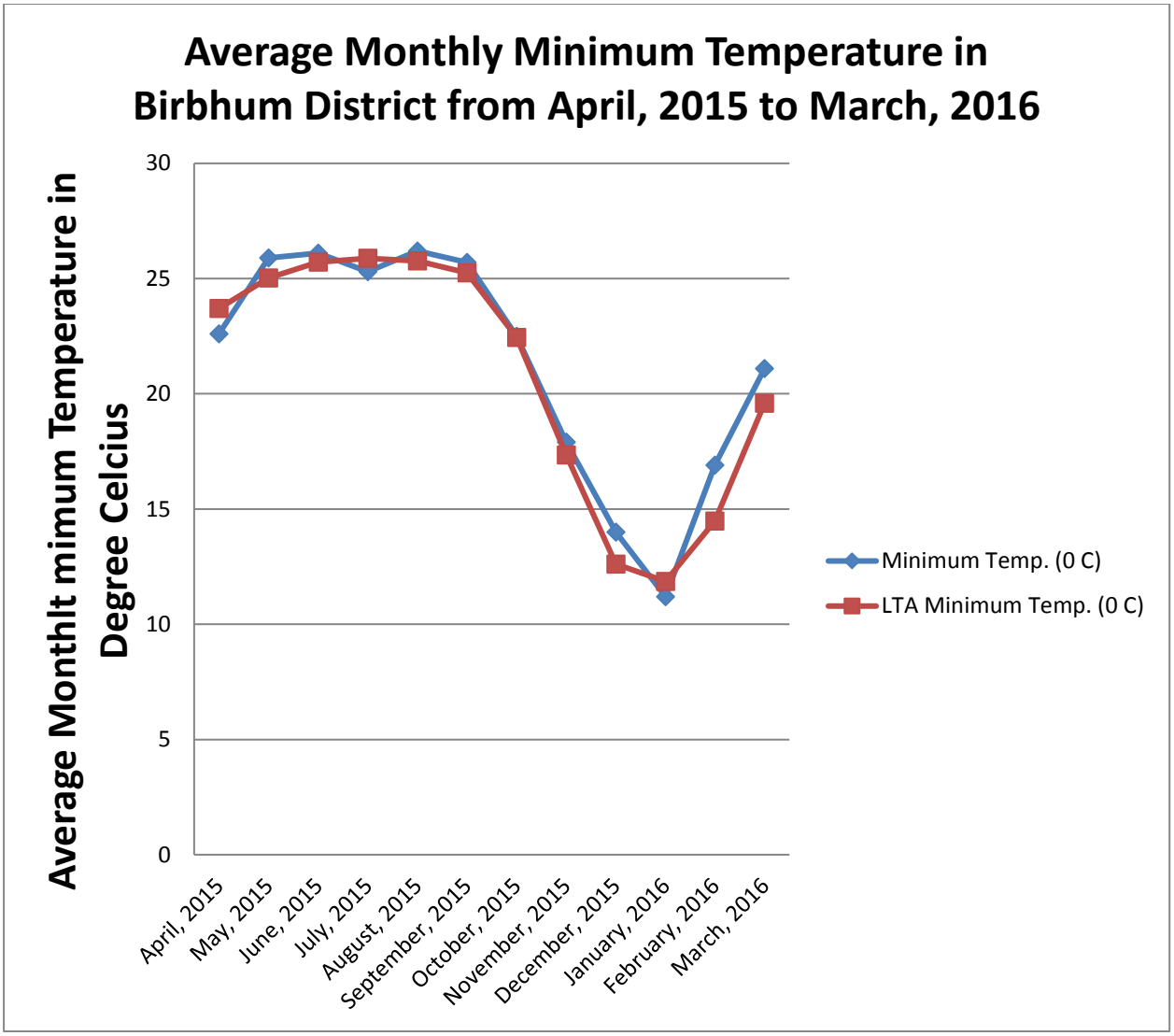
N. B. Hail Storm was reported on 05.04.2015, but no major damage to crops and live stocks were reported.

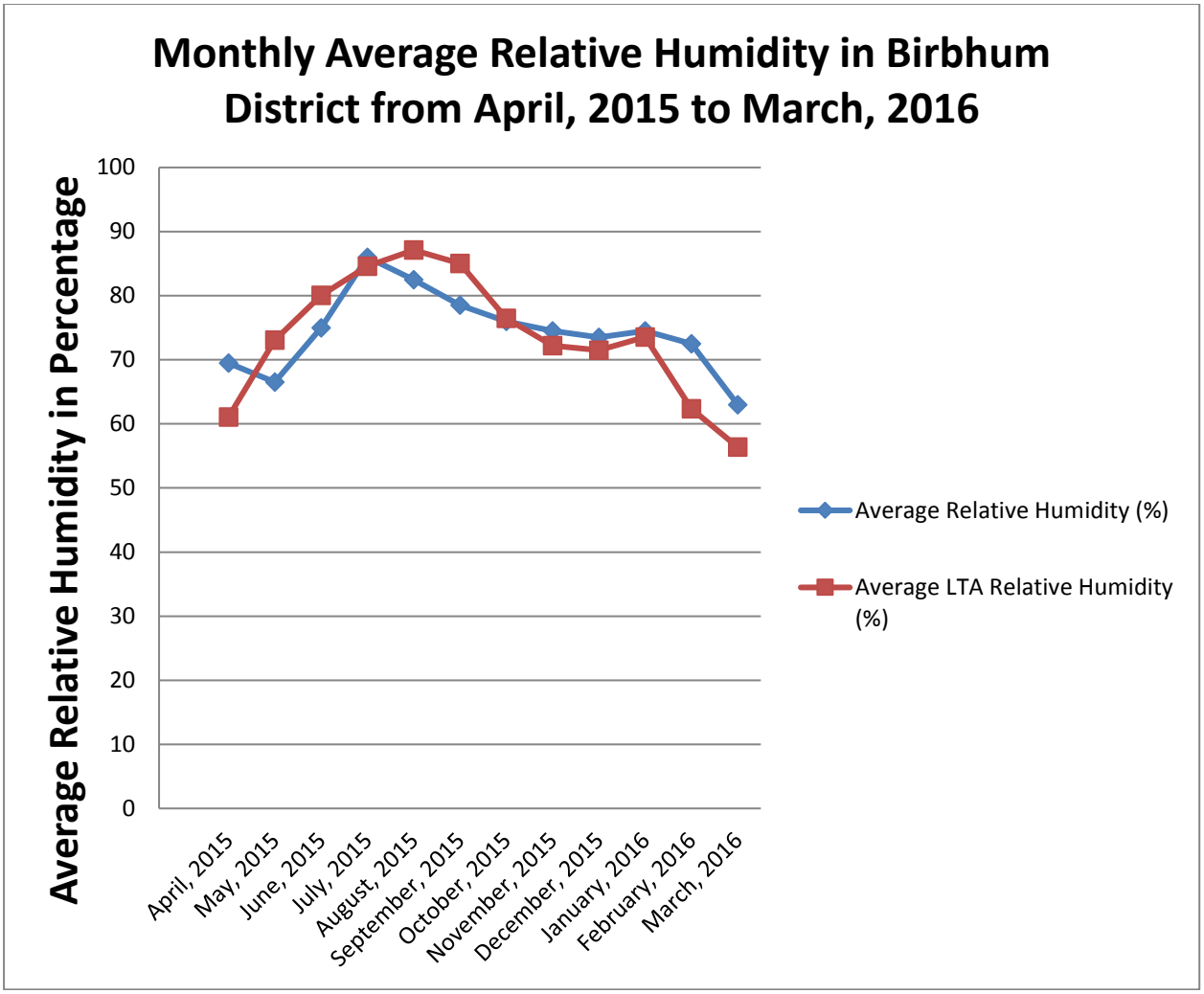
Source: - Meteorological Observatory Office, Dept. of Meteorology, Govt. of India, Sriniketan, Birbhum, West Bengal.

Weather Condition in Birbhum District from April, 2015 to March, 2016




Average Monthly Maximum Temperature in Birbhum District from April, 2015 to March, 2016
Average Monthly Maximum Temperature in Degree Celcius
40
35
30
25
20
15
10
5
0
April, 2015
May, 2015
June, 2015
July, 2015
August, 2015
September, 2015
October, 2015
November, 2015
December, 2015
January, 2016
February, 2016
March, 2016
Maximum Temp. (0 C)
LTA Maximum Temp. (0 C)


Average Monthly Minimum Temperature in Birbhum District from April, 2015 to March, 2016
Average Monthlt mimum Temperature in Degree Celcius
30
25
20
15
10
5
0
April, 2015
May, 2015
June, 2015
July, 2015
August, 2015
September, 2015
October, 2015
November, 2015
December, 2015
January, 2016
February, 2016
March, 2016
Minimum Temp. (0 C)
LTA Minimum Temp. (0 C)



2.a.7 Production of major livestock products like milk, egg, meat etc.

Live-Stock and Poultry in the District of Birbhum

(Number)

Category		Year - 1989	Year - 1994	Year - 1997	Year - 2003	Year - 2007	Year 09-10	Year 10-11	Year 11-12
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Cattle:								
	Cows	255381	266217	274094	282145	372662			
	Bulls and Bullocks	307844	347593	357919	294845	308308			
	Young Stock	328898	381066	392321	421336	452384			
	Total Cattle	892123	994876	1024334	998326	1133354	1163975	1180031	1196623
2	Buffaloes:								
	Cows	7627	7043	7132	8688	23492			
	Bulls and Bullocks	37258	45182	45753	47100	44088			
	Young Stock	6685	8076	8178	11075	..			
	Total Buffaloes	51570	60301	61063	66863	67580	63120	61002	58955

3	Sheep	163854	189122	189214	186280	216888	229300	235770	242422
4	Goats	598010	736251	816123	728113	941989	1066464	1134740	1207387
5	Horses and ponies	366	96	96	59	39	30	26	23
6	Pigs	77437	77572	83653	57680	49177	46814	45676	44565
7	Other Live-stock	..	..	. .	87735	93849	98391	100786	103280
	Total Live-stock	1783360	2058218	2174483	2125056	2502876	2668094	2758031	2853255
8	Poultry :								
	Fowls	1489187	1506982	1659044	2303418	3071493	3753562	4222424	4805424
	Ducks	828231	1076333	1218849	1274104	1150029	1165248	1097777	1086352
	Others	11275	20416	10514	3135	1609	1591	1582	1573
	Total Poultry	2328693	2603731	2888407	3580657	4223131	4920401	5321783	5893349

Source: - Live-Stock Census Report, Govt. of W. B. and Annual Administrative Reports of Aminal Resources Development Department, Govt. of West Bengal.

Estimated Production of Milk (Cow, Buffalo & Goat) and Egg (Hen & Duck) in Birbhum

Year	Milk (thousand tonnes)		Egg (number in thousands)	
	District	West Bengal	District	West Bengal
(1)	(2)	(3)	(4)	(5)
2003-04	97	3686	169883	2820317
2004-05	99	3790	175916	2887649
2005-06	100	3892	182064	2963720
2006-07	119	3984	233971	3038645
2007-08	119	4077	238117	3057342
2009-10	121.785	4300.17	290847	3697840
2010-11	123.605	4472.20	320083	4001062
2011-12	126.139	4660.23	347536	4337272
2012-13	128.518	4860.02	379785	4707268
2013-14	126.500	4906.21	386015	4746013

Source: - Live-Stock Census Report, Govt. of W.B. and Annual Administrative Reports of Aminal Resources Development Department, Govt. of West Bengal.

Production of Meat and Wool in the District of Birbhum

Sl. No.	Year	Meat Production (Metric Ton)	Wool Production (Metric Ton)
01.	2009-10	22177	108.373
02.	2010-11	23464.05	109.586
03.	2011-12	24775.00	110.846
04.	2012-13	26000.00	112.345
05.	2013-14	26408.00	112.731

Source: - Live-Stock Census Report, Govt. of W.B. and Annual Administrative Reports of Aminal Resources Development Department, Govt. of West Bengal.

Profile of Fisheries in the District of Birbhum

A. Capture

i) Marine

Inland Boat: 5

No. of fishermen: Nil

Boats – Mechanized – Nil **Non-mechanized** - Nil

Nets – Mechanized (Trawl nets, Gill nets) - Nil

Non-mechanized (Shore Seines, Stake and Trap Nets) - Nil

Storage Facilities (Ice plants etc.) - Nil

ii) Inland (**Fish Farmers** - 30112, **Fishermen** - 200747, **FC** - 20, **SHG** - 391)

No. Farmer owned Ponds - 85504 (Tank and Pond)

No. of Reservoirs – 6

No. of Village Tanks – Nil

B. Culture

i) Brackish Water –

Water Spread Area (ha) – Nil
Yield (t/ha) – Nil
Production ('000 tons) - 18 ton Prawn

ii) Fresh Water –

Culturable Area: 15720.62 ha.

Semi-Derelict Area: 1596.57ha.

Derelict Area: 413.54 ha.

Yield (t/ha) – From Ponds under FFDA Scheme = 4.4 t/ha.

Production ('000 tons) - 115174 ton Fish (2008-09)

Source: - NICRA CONTINGENCY PLAN WestBengal 3-Birbhum-31.12.2011.pdf

Fish Seed Production in the District of Birbhum during 2010-11

174.00 million Numbers.

Fish Production in the District of Birbhum during 2010-11

65045.00 tons

Fisher Folk Population in the District of Birbhum in 2010-11

a) Number of fishing Villages :- 483
b) Number of Fisher Folk Families:- 37162
c) Fisher Folk Population: - i. Male: - 113526; ii. Female: - 87221 and iii. Total:- 200747

Number of Privately owned IMC Hatcheries in the District of Birbhum in 2010-11

07 (Seven)

Numbers of Primary Fishermen's Cooperative Societies in the District of Birbhum in 2010-11

10 (Ten)

Source: - Annual Report 2010-11, Department of Fisheries, Govt. of West Bengal.

2.b. Details of operational area / villages (2015-16)

Sl. No	Name of Taluk	Name of the block	Name of the village	Major crops & enterprises	Major problem identified (Crop wise)	Identified Thrust Areas
1.	Sattore	Bolpur - Sriniketan	Srichandrapur	Rice, wheat, mustard, potato, redgram, balckgram etc. Vegetable like brinjal, chilli, tomato, Elephant foot yam, cucurbits, fruit plants like mango, guava, papaya, coconut, banana etc. and dairy, goatery, poultry, duckery, fishery, batique work,	***Bio physical:*** **Low productivity of all major crops** • Poor and Marginal soil • Low yielding seeds and plants • Limited water resource for irrigation • Imbalanced use of manures and fertilizer • Inappropriate agronomic practices • Inappropriate horticultural practices • Indiscriminate use of chemical pesticide **Poor productivity of livestock** • Inadequate, descriptive and prolific breed • Poor health and management practices • Low quality feed **Poor fish productivity:** • Poor pond management • Poor quality fingerlings **Low income generation of rural women** • Lack of skill on income generating rural crafts • Lack of skill on fruits and vegetable preservation • Lack of skill on establishment of backyard nutrition garden	• Soil health management • Quality seeds/seedlings and saplings • Balanced crop nutrition • Good agronomic practices • Good horticultural practices • Appropriate Pest Management • Formation of Self Help Groups • Formation of Farmers Club • Organization of Exposure visits of Practicing Farmers, Farm Women and Rural Youths • Improved Extension Activities like Kissan Mobile Message Services • Improvement of livestock productivity • Enhancement of fish productivity • Improvement of women led vocation • Women and child care
2.	Sattore	Bolpur - Sriniketan	Bishnubati			
3.	Sattore	Bolpur - Sriniketan	Asadullapur			

4.	Sattore	Bolpur - Sriniketan	Bautizole	decorative candle, post harvest techno-logy of fruits and vegetables, health and nutrition	**Poor health condition of women and child** • Lack of nutritious food resources • Lack of skill on establishment of backyard nutrition garden ***Socio Economic:*** • Lack of knowledge about soil testing based fertiliser application • Lack of knowledge on good agronomic and horticultural practices • Lack of knowledge on care handling of plant protection equipments • Lack of knowledge on good dairy, goatery, poultry management practices • Multi ownership of ponds • Tendency to lease out ponds • Lack of knowledge on different income generating programme for women • Lack of knowledge on low cost nutritious food for women and child • Lack of credit facilities	• Market led Extension
5.	Shian - Muluk	Bolpur - Sriniketan	Dhanyasara			
6.	Shian - Muluk	Bolpur - Sriniketan	Durgapur			
7.	Bahiri Panchshoya	Bolpur - Sriniketan	Chota Shimulia			

2. c. Details of village adoption programme:

Name of the villages adopted by PC and SMS in 2015-16 for its development and action plan

Name of village	Block	Action taken for development
Boro Shimulia (Dr. D. C. Manna)	Bolpur-Sriniketan	**A. Skill development Training Programmes** on Horticultural Crop diversification, Cultivation of Cucurbitaceous Crops, Cultivation of Solanaceous Crops, Lay out and planting of Mango and Guava Orchards, Improved package and practices of Kharif Vegetables, Improved Method of Elephant Foot Yam Cultivation, Improved Production Practices of *Barmasia* Drum Sticks, Improved Production Practices of Low Volume High Value Crops like Capsicum, Broccoli etc. **B. Skill development Training Programme** on Collection Soil Sample for Soil Testing and Green Manuring through *Dhaincha* Cultivation. **C. Skill development Training Programmes** on Integrated Pest, Disease and Weed Management in Cereals, Pulses and Oilseeds and Vegetables. **D. Knowledge development Training Programmes** on Crop Insurance, Kisan Credit Card, Farmers' Clubs, Formation of Self Help Groups (SHGs), Formation of Commodity Interest Groups (CIGs), Marketing Mechanisms and Marketing Channels of Farm Products and Protection of Plant Varieties and Farmers' Rights Act, 2001. **E. Front Line Demonstrations (FLDs)** on (i) Green Gram Var. PDM-84-139; (ii) Black Gram Var. WBU – 108; (iii) *Dhaincha*; (iv) Elephant Foot Yam Var. Bidhan Kusum; (v) Drum Sticks Var. PKM – 1; (vi) Capsicum Var. Bharat and Mahabharat; (vii) Broccoli Var. Green Magic (F_1 Hybrid); (viii) Area Specific Mineral Mixture Supplement for Lactating Deshi Cow; (ix) Fodder Oat Var. Kent and (x) Fodder Rice Bean Var. Bidhan - 2. **F. Cluster Front Line Demonstrations (Cluster FLDs) on Linseed Var. Sekhar.** **G. On Farm Testing (OFT)** on Assessment of location specific Late Kharif or Early Winter Cabbage varieties and Assessment of location specific Late Kharif or Early Winter Cauliflower varieties **H. Vaccination Camp** for Cattles and Birds. **I. Analysis of Soil Samples and preparation and distribution of Soil Health Cards.**
Asadullahpur (Smt. R Addy)	Bolpur-Sriniketan	**A. Skill development Training Programmes** on Integrated Pest, Disease and Weed Management in Cereals, Pulses and Oilseeds and Vegetables. **B. Women Empowerment** through Skill Development Training on Rural Crafts, Preservation and Value Addition of Fruits and Vegetables, Homestead Kitchen Gardening. **C. Knowledge development Training Programmes** on Crop Insurance, Kisan Credit Card, Farmers' Clubs, Formation of Self Help Groups (SHGs), Formation of Commodity Interest Groups (CIGs), Marketing Mechanisms and Marketing Channels of

		Farm Products and Protection of Plant Varieties and Farmers' Rights Act, 2001. **D. Front Line Demonstrations (FLDs)** on Area Specific Mineral Mixture Supplement for Lactating Deshi Cow **E. Awareness Generation** of rural women on Health and Hygiene Issues.
Bautizole (Dr. S. Mandal)	Bolpur-Sriniketan	**A. Skill development Training Programmes** on Horticultural Crop diversification. **B. Skill development Training Programme** on Culture and Use of *Dhaincha* and *Azolla*. **C. Skill development Training Programme** on Nursery Pond Preparation, Composite Fish Culture, Fish Feed Management and Fish Disease Management. **D. Skill development Training Programmes** on Integrated Pest, Disease and Weed Management in Cereals, Pulses and Oilseeds and Vegetables. **E. Women Empowerment** through Skill Development Training on Rural Crafts, Preservation and Value Addition of Fruits and Vegetables, Homestead Kitchen Gardening. **F. Knowledge development Training Programmes** on Crop Insurance, Kisan Credit Card, Farmers' Clubs, Formation of Self Help Groups (SHGs), Formation of Commodity Interest Groups (CIGs), Marketing Mechanisms and Marketing Channels of Farm Products and Protection of Plant Varieties and Farmers' Rights Act, 2001. **G. Front Line Demonstrations (FLDs)** on (i) Mustard Var. Pusa Bahar and Pusa Mahek, (ii) Wheat Var. HD – 2824 and (iii) Area Specific Mineral Mixture Supplement for Lactating Deshi Cow. **H. Cluster Front Line Demonstrations (Cluster FLDs) on Mustard Var. Pusa Mahek.** **I. On Farm Testing (OFT)** on Assessment of Balanced N-P-K Management for Incresing Yield of Yellow Sarson **J. Awareness Generation** of rural women on Health and Hygiene Issues. **K. Analysis of Soil Samples and preparation and distribution of Soil Health Cards.**
Dhanyasara (Sri S. Mondal)	Bolpur-Sriniketan	**A. Skill development Training Programmes** on Horticultural Crop diversification, Cultivation of Cucurbitaceous Crops, Cultivation of Solanaceous Crops, Lay out and planting of Mango and Guava Orchards, Improved package and practices of Kharif Vegetables, Improved Method of Elephant Foot Yam Cultivation, Improved Production Practices of *Barmasia* Drum Sticks, Improved Production Practices of Low Volume High Value Crops like Capsicum, Broccoli etc. **B. Skill development Training Programmes** on Collection of Soil Sample for Soil Testing, Sowing and Phosphate Management in *Dhaincha*, Rice Seed Production Technology in Kharif Season and Cultivation of Rabi Crops with Especial Emphasis on Weed Management. **C. Skill development Training Programme** on Nursery Pond Preparation and Composite Fish Culture. **D. Skill development Training Programmes** on Integrated Pest, Disease and Weed Management in Cereals, Pulses and Oilseeds and Vegetables. **E. Women Empowerment** through Skill Development Training on Rural Crafts, Preservation and Value Addition of Fruits and Vegetables, Homestead Kitchen Gardening. **F. Knowledge development Training Programmes** on Crop Insurance, Kisan Credit Card, Farmers' Clubs, Formation of Self Help Groups (SHGs), Formation of Commodity Interest Groups (CIGs), Marketing Mechanisms and Marketing Channels of Farm Products and Protection of Plant Varieties and Farmers' Rights Act, 2001. **G. Front Line Demonstrations (FLDs)** on (i) Green Gram Var. PDM-84-139; (ii) Black Gram Var. WBU – 108; (iii) *Dhaincha*; (iv) Mustard Var. Pusa Bahar and Pusa Mahek; (v) Wheat Var. HD – 2824; (vi) Elephant Foot Yam Var. Bidhan Kusum; (vii) Drum Sticks Var. PKM – 1; (viii) Capsicum Var. Bharat and Mahabharat; (ix) Broccoli Var. Green Magic (F_1 Hybrid); (x) Area Specific Mineral Mixture Supplement for Lactating Deshi Cow; (xi) Fodder Oat Var. Kent and (xii) Fodder Rice Bean Var. Bidhan – 2. **H. Cluster Front Line Demonstrations (Cluster FLDs) on Linseed Var. Sekhar.** **I. Demonstrations on Various IARI Paddy Varieties.** **J. On Farm Testing (OFT)** on Assessment of location specific Late Kharif or Early Winter Cabbage varieties and Assessment of location specific Late Kharif or Early Winter Cauliflower varieties **K. Awareness Generation** of rural women on Health and Hygiene Issues. **L. Vaccination Camp** for Cattles and Birds. **M. Animal Infertility Treatment Camp.** **N. Analysis of Soil Samples and preparation and distribution of Soil Health Cards.**

Durgapur (Dr. K. Mitra)	Bolpur-Sriniketan	**A. Skill development Training Programmes** on Horticultural Crop diversification, Cultivation of Cucurbitaceous Crops, Cultivation of Solanaceous Crops, Lay out and planting of Mango and Guava Orchards, Improved package and practices of Kharif Vegetables, Improved Method of Elephant Foot Yam Cultivation, Improved Production Practices of *Barmasia* Drum Sticks, Improved Production Practices of Low Volume High Value Crops like Capsicum, Broccoli etc. **B. Skill development Training Programmes** on Collection of Soil Sample for Soil Testing, Sowing and Phosphate Management in *Dhaincha* and Rice Seed Production Technology in Kharif Season. **C. Skill development Training Programme** on Nursery Pond Preparation, Composite Fish Culture, Portable Carp Hatchery, Fish Feed Management and Fish Disease Management. **D. Skill development Training Programmes** on Integrated Pest, Disease and Weed Management in Cereals, Pulses and Oilseeds and Vegetables. **E. Women Empowerment** through Skill Development Training on Rural Crafts, Preservation and Value Addition of Fruits and Vegetables, Homestead Kitchen Gardening. **F. Knowledge development Training Programmes** on Crop Insurance, Kisan Credit Card, Farmers' Clubs, Formation of Self Help Groups (SHGs), Formation of Commodity Interest Groups (CIGs), Marketing Mechanisms and Marketing Channels of Farm Products and Protection of Plant Varieties and Farmers' Rights Act, 2001. **G. Front Line Demonstrations (FLDs)** on (i) Green Gram Var. PDM-84-139; (ii) Black Gram Var. WBU – 108; (iii) *Dhaincha*; (iv) Mustard Var. Pusa Bahar and Pusa Mahek; (v) Sesame Var. Sabitri (SWB–32–10– 1); (vi) Wheat Var. HD – 2824; (vii) Elephant Foot Yam Var. Bidhan Kusum; (viii) Drum Sticks Var. PKM – 1; (ix) Capsicum Var. Bharat and Mahabharat; (x) Broccoli Var. Green Magic (F_1 Hybrid); (xi) Culture of Pabda Fishes as a component if Composite Fish Culture and (xii) Area Specific Mineral Mixture Supplement for Lactating Deshi Cow. **H. Cluster Front Line Demonstrations (Cluster FLDs) on Linseed Var. Sekhar.** **I. On Farm Testing (OFT)** on **(i)** Assessment of location specific Late Kharif or Early Winter Cabbage varieties and Assessment of location specific Late Kharif or Early Winter Cauliflower varieties; (ii) Assessment of Specific Vitamins as Growth Promoters in Carp Spawns and Fry Feed to Increase their Survival Rate to A Profitable Extent and (iii) Evaluation of Performance of Rural Poultry Breed Viz. Deshi, Rhode Island Red (RIR) and Vanaraja under Backyard Management System, (iv) Fish based Integrated Farming System (IFS). **J. Demonstrations on Various IARI Paddy Varieties.** **K. Soil Testing Camp.** **L. Plant Diagnostic Camp.** **M. Awareness Generation** of rural women on Health and Hygiene Issues. **N. Analysis of Soil Samples and preparation and distribution of Soil Health Cards.**
Bishnubati (Dr. P. Ray)	Bolpur-Sriniketan	**A. Skill development Training Programmes** on Horticultural Crop diversification and Improved Production Practices of Low Volume High Value Crops like Capsicum, Broccoli etc. **B. Skill development Training Programmes** on Sowing and Phosphate Management in *Dhaincha* and Cultivation of Rabi Crops with special Emphasis on Weed Management. **C. Skill development Training Programme** on Nursery Pond Preparation, Composite Fish Culture, Portable Carp Hatchery, Fish Feed Management and Fish Disease Management. **D. Skill development Training Programmes** on Integrated Pest, Disease and Weed Management in Cereals, Pulses and Oilseeds and Vegetables. **E. Women Empowerment** through Skill Development Training on Rural Crafts, Preservation and Value Addition of Fruits and Vegetables, Homestead Kitchen Gardening. **F. Formation of Two (02) Women led Self Help Groups (SHGs).** **G. Knowledge development Training Programmes** on Crop Insurance, Kisan Credit Card, Farmers' Clubs, Formation of Self Help Groups (SHGs), Formation of Commodity Interest Groups (CIGs), Marketing Mechanisms and Marketing Channels of Farm Products and Protection of Plant Varieties and Farmers' Rights Act, 2001. **H. Front Line Demonstrations (FLDs)** on (i) Maize Var. HQPM – 1 and HM – 4; (ii) Red Gram Var. ICPL-87-119; (iii) Green Gram Var. PDM-84-139; (iv) Black Gram Var. WBU – 108; (v) *Dhaincha*; (vi) Sesame Var. Sabitri (SWB–32–10– 1); (vii) Wheat Var. HD – 2824; (viii) Capsicum Var. Bharat and Mahabharat; (ix) Broccoli

		Var. Green Magic (F_1 Hybrid); (x) Culture of Pabda Fishes as a Component of Composite Fish Culture; (xi) Fodder Oat Var. Kent; (xii) Fodder Rice Bean Var. Bidhan - 2 and (xiii) Area Specific Mineral Mixture Supplement for Lactating Deshi Cow. **I. Cluster Front Line Demonstrations (Cluster FLDs) on Mustard Var. Pusa Mahek, Green Gram Var. PDM-84-139 and Sesame Var. Sabitri.** **J. On Farm Testing (OFT)** on (i) Assessment of Specific Vitamins as Growth Promoters in Carp Spawns and Fry Feed to Increase their Survival Rate to A Profitable Extent, (ii) Fish based Integrated Farming System and (iii) Evaluation of Performance of Rural Poultry Breed Viz. Deshi, Rhode Island Red (RIR) and Vanaraja under Backyard Management System. **K. Awareness Generation** of rural women on Health and Hygiene Issues. **L. Vaccination Camp** for Cattles and Birds. **M. Animal Health Camp.** **N. Analysis of Soil Samples and preparation and distribution of Soil Health Cards.**
Srichandrapur (Dr. M. Khan)	Bolpur-Sriniketan	**A. Skill development Training Programme** on Nursery Pond Preparation, Composite Fish Culture, Portable Carp Hatchery, Fish Feed Management and Fish Disease Management. **B. Skill development Training Programmes** on Integrated Pest, Disease and Weed Management in Cereals, Pulses and Oilseeds and Vegetables. **C. Women Empowerment** through Skill Development Training on Rural Crafts, Preservation and Value Addition of Fruits and Vegetables, Homestead Kitchen Gardening. **D. Knowledge development Training Programmes** on Crop Insurance, Kisan Credit Card, Farmers' Clubs, Formation of Self Help Groups (SHGs), Formation of Commodity Interest Groups (CIGs), Marketing Mechanisms and Marketing Channels of Farm Products and Protection of Plant Varieties and Farmers' Rights Act, 2001. **E. Front Line Demonstrations (FLDs)** on (i) Green Gram Var. PDM-84-139; (ii) Mustard Var. Pusa Bahar and Pusa Mahek; (iii) Wheat Var. HD – 2824; (iv) Fodder Oat Var. Kent and (v) Fodder Rice Bean Var. Bidhan - 2. **F. Cluster Front Line Demonstrations (Cluster FLDs) on Lentil Var. WBL – 77.** **G. Cluster Front Line Demonstrations (Cluster FLDs) on Mustard Var. Pusa Mahek.** **H. On Farm Testing (OFT)** on (i) Use of *Azolla* in Fish Feed Preparation and (ii) Evaluation of Performance of Rural Poultry Breed Viz. Deshi, Rhode Island Red (RIR) and Vanaraja under Backyard Management System. **I. Demonstrations on Various IARI Paddy Varieties.** **J. Awareness Generation** of rural women on Health and Hygiene Issues. **K. Vaccination Camp** for Cattles and Birds. **L. Analysis of Soil Samples and preparation and distribution of Soil Health Cards.**

2. d. Sansad Adarsh Gram Yojona

i) Name of the village under Sansad Adarsha Gram Yojona:
ii) Contribution of KVK in the programme:

2.1 Priority thrust areas

Sl. No.	Thrust Areas
1.	Crop diversification through introduction of pulses, oilseeds, major millets, horticultural crops like elephant's foot yam, drum stick and high value low volume horticultural products like capsicum, broccoli etc.
2.	Popularization of High Yielding Varieties (HYVs) of major crops like paddy, wheat, mustard, potato etc. as well as traditional varieties of those crop also.
3.	Cultivation of field crops which require least water in the Arid and Semi-Arid regions of the district and cultivation of suitable horticultural crops in those regions.
4.	Popularization of improved management practices of Animals and Fishes
5.	Market led extension, crop insurance and institutional rural credit flow mechanism
6.	Women empowerment

3. TECHNICAL ACHIEVEMENTS

3. A. Details of target and achievement of mandatory activities by KVK during 2015-16

OFT				FLD			
Number of OFTs		Number of farmers		Number of FLDs		Number of farmers	
Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
11	12	140	147	399	420	856	420

Training				Extension activities			
Number of Courses		Number of Participants		Number of activities		Number of participants	
Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
106	130	3232	3786	463	473	16,261	44,707

Seed production (q)		Planting material (Nos.)	
Target	Achievement	Target	Achievement
A. Green Gram – 0.10 B. Black Gram – 0.10 A. Mustard (Var. – B – 9) – 1.0 B. Mustard (Var. – Pusa Mahek) – 0.5 H. Paddy – 5.0	A. Field Pea (Var. Prabhat) – 0.40 B. Green Gram (Var. PDM-84-139) - 0.30 C. Black Gram (Var. WBU – 108) – 0.40 D. Mustard (Var. B – 9) – 0.13 E. Mustard (Var. Pusa Mahek) – 1.87 F. Paddy (Var. - MTU – 1010, MTU – 7029, PNR – 381, Heera) – 0.825 G. Paddy (Var. MTU – 7029, GB- 1, Pratiksha) – 7.00 H. Linseed (Var. Dipika / Sekhar) – 2.00 I. Dhaincha (Var. Local Improved) – 0.92 J. Wheat (Var. HD – 2824) – 5.00 K. Wheat (Var. PBW – 343) – 5.00 L. Ripened Mango Fruits (Var. Himsagar, Amrapali, Mallika, Kohitoor, Golap Khas, Ranipasand, Bombai etc.) – 3.20 M. Ripened Water Apple Fruits – 00.89	**Vegetables – 1,500**	A. Cauliflower (Var. PAN – 3030) – 1,000 B. Cabbage (Var. Seminis – 111) – 2,000 C. Chilli (Var. PAN – 1498) – 1,000 D. Broccoli (Var. F – 1 Hybrid Fiesta) – 1,000 E. Capsicum (Var. Bharat, Mahabharat) – 1,000 F. Drum Sticks (Var. PKM – 1) - 100

	N. Moosambi – 107 pcs. O. Poultry Birds [Breed - Rhode Island Red (RIR)] – 20 in numbers P. Poultry Birds (Breed – Vanaraja) – 25 in numbers Q. Broiler Birds (Breed – Broiler) – 200 in numbers R. Indian Carps (Specieces - Rohu. Catla and Mrigal) – 1.5 lakh fry + 67.6 kgs. of table Fishes S. Exotic Carp (Specieces - Silver Carp, Cyprinus and Grass Carp) – 0.5 lakh fry T. Small Indigenous Fish Specieces (Punti, Mouralla, Darke etc.) – 110.00 kg. U. Bio Fertilizers – *Azolla* – 307.5 kg **V.** Bio Agents - Earth-worm (*Eisenia foetidae*) – 3,500 in numbers W. Vermi-Compost – 275.0 kg		

3.1 Achievement of Technologies Assessed

A. Details of Each On Farm Trials (OFT)

OFT-1

1.	Title of On farm Trial	Assessment of profitability due to integration of different components under fish based production systems
2.	Problem diagnosed	Lack of technological knowhow in integration of components in proper way for higher profitability
3.	Details of technologies selected for assessment/refinement	Farmer's practice: Traditional fish farming
		I. composite fish culture (IMC) + Duck farming (2o nos) + *Azolla* + Pulses (Redgram-Blackgram)
		II. composite fish culture (IMC) + Duck farming (20 nos) + *Azolla* + Vegetables (ladys' finger-capsicum)
4.	Source of Technology	DARE/ICAR Annual Report, 2008-09, Page12-14 & Fertiliser News, 46 (11), pp 53-55 & 57-58
5.	Production system and thematic area	Fish based production and Integrated Farming System
6.	Performance of the Technology with performance indicators	Technology Option –I performed better than others economically viable
7.	Final recommendation for micro level situation	It may be concluded that integrated farming system with composite fish culture, duck farming, azolla and pulse cultivation (Technology option-I) in bank of the pond is very effective to integrate the components in profitable manner in Birbhum District.
8.	Constraints identified and feedback for research	Improper monetary transaction in the lean period for better profitability Other components suitable in the lean period may be studied
9.	Process of farmers participation and their reaction	Farmers helped the KVK scientists for data collection and implementation of the technology very carefully. Day to day supervisory practices was also important participation. Beside this, farmers also invested different cost of cultivation like labour etc.

Thematic area: Integrated Farming System (Summer, 2015)

Problem definition: Lower profitability under fish based production system

Technology assessed: Assessment of profitability due to integration of different components under fish based production systems

Table 1: Profitability under fish based integrated farming system

Technology option	No. of trials	Man days utilized per year	Cost of cultivation (Rs./unit*)	Gross return (Rs./unit)	Net Return (Rs /unit)	BC Ratio
.Farmer's practice: Traditional fish farming	7	15	36,240.00	41,200.00	4960.00	1.14
I. composite fish culture (IMC) + Duck farming (2o nos) + *Azolla* + Pulses (Redgram- Blackgram)		247	55,380.00	1,22,430.00	67050.00	2.21
II. composite fish culture (IMC) + Duck farming (20 nos) + *Azolla* + Vegetables (ladys' finger-capsicum)		262	82,440.00	1,70,080.00	87640.00	2.06

- FP: 1 unit = 0.19 ha pond only + fallow land
- Opt-1: 1 unit= 0.19 ha pond + 20 nos. of Ducks + 0.13 ha utilsed land with pulse
- Opt-2: 1 unit= 0.19 ha pond + 20 nos. Of Ducks + 0.13 ha 36ocusing land by vegetables

Result:

The result of the trial (Table-1) indicated that Technology Option –I i.e. Composite fish culture +Poultry farming +Azolla+ Pulses exhibited higher BC ratio (2.21) than those of Technology Option-II (2.06) and farmers practice (1.14). Here it is to be mentioned that gross return and net return was higher in integrated farming system where vegetable cultivation was one of the component. It might be due to higher value of vegetables than pulses. But due to low cost of cultivation, BC ratio was higher in integrated farming system where pulses were the component. Droppings of ducks were also used as feed of fishes in both Technology Option-I and II. But in Technology Option-I, the leftover materials of pulses were also used as feed of fishes and ducks. So integration was more among the components in the Technology Option-I. Moreover, azolla was also used as feed of fish and ducks. Besides that, the azolla was also used as organic manure and bio fertilizer in pulses and vegetables. Further, man day's utilization (262 per year) was slightly higher in Technology Option –II than Technology Option-I (247 per year). In farmers practice, man days utilization was very low (15 per year) and BC ratio was also very low (1.14). Therefore, it may be concluded that integrated farming system with composite fish culture, duck farming, azolla and pulse cultivation in bank of the pond is very effective to integrate the components in profitable manner in Birbhum District.

OFT-2

1.	Title of On farm Trial	Assessment of different herbicides in weed management in summer pulse, blackgram var. WBU-108
2.	Problem diagnosed	The farmers sow pulse seeds by broadcasting. After a few days weeds compete with the crop. No mechanical weeding is possible in broadcasted field.
3.	Details of technologies selected for assessment/refinement	Farmer's practice: No weeding
		I. Pendimethalin @ 0.75 lit a.i./ha as pre emergence (0-3 DAS)
		II. Quizalofop- P-ethyl @ 50 ml a.i./ha as early post emergence (15-20 DAS)
		III. Fenoxaprop-P-ethyl @ 60 ml a.i./ ha as early post emergence (15-20 DAS)
4.	Source of Technology	Annual Report of All India Coordinated Research Project on Weed Control (AICRP-WC) - 2005, Visva-Bharati Centre, Palli Siksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, pp. 30.
5.	Production system and thematic area	Rice-mustard-green gram/blackgram., Rice-potato- green gram/blackgram Weed Management
6.	Performance of the Technology with performance indicators	Performance of the technology of weed control was found statistically significant
7.	Final recommendation for micro level situation	Technology Option-III i. E. Use of herbicide Fenoxaprop-P-ethyl @ 60 ml a.i./ ha as early post emergence (15-20 DAS) significantly reduced the weed population and produced more no. of branches per plant , pods/m^2, seeds per pod and higher yield than those of other technology options and farmers practice.
8.	Constraints identified feedback for research	Application of these low dose high efficiency herbicide was found difficult The efficiency of these herbicides in rainy season pulses may be studied
9.	Process of farmers participation and their reaction	Farmers actively participated in the day to day monitoring of the crop, counting pest population, and data collection with KVK scientists. Farmers incurred all the cost of cultivation except herbicide

Thematic area: Weed Management (Summer Season, 2015)

Problem definition: The farmers sow pulse seeds by broadcasting. After a few days weeds compete with the crop. No mechanical weeding is possible in broadcasted field.

Technology to be assessed: Assessment of different herbicides in weed management in summer pulse, blackgram var. WBU-108

Table 2: Effect of different herbicides in weed management in blackgram var. WBU-108

Technology option	No. of trials	Yield Component				Weed Population / m^2 At 45 DAS	Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs./ha)	Net Return (Rs /unit)	BC Ratio
		No. of Branches per Plant	No. of Pods /m^2	No. of Seeds per Pod	Test Weight (1000 Seed weight in gm)						
Farmer's practice: No weeding	7	6.96	189.16	5.90	27.16	61.16	6.55	18700.00	26200.00	7500.00	1.40
I. Pendimethalin @ 0.75 lit a.i./ha as pre emergence (0-3 DAS)		8.66	235.32	7.22	29.46	44.06	7.81	20350.00	31240.00	10890.00	1.54
II. Quizalofop- P-ethyl @ 50 ml a.i./ha as early post emergence (15-20 DAS)		11.60	263.86	7.32	31.88	4.98	9.00	21010.00	36000.00	14990	1.71
III. Fenoxaprop-P-ethyl @ 60 ml a.i./ ha as early post emergence (15-20 DAS)		12.60	270.78	7.64	32.44	3.92	9.97	21010.00	39880.00	18870.00	1.90
Sem±		0.35	2.11	0.28	0.20	0.91	0.11				
CD(P=0.05)		1.08	6.51	0.86	0.62	2.81	0.38				

Results:

An OFT in summer season, 2015 was conducted to assess better weed management practices in summer black gram (Var. WBU-108) in adopted villages. The result of the trial indicated that the Technology Option-III i. E. Use of herbicide Fenoxaprop-P-ethyl @ 60 ml a.i./ ha as early post emergence (15-20 DAS) significantly produced more no. of branches per plant (12.60), pods/m^2 (270.78), seeds per pod (7.64) and higher yield

(9.97 q/ha) than those of other technology options and farmers practice. It was found that at 45 DAT, there was heavy infestation of weed in the field of farmers practice where no weeding is done. Further the fields were almost weed free in Technology option –II and Technology option-III at peak period of crop weed competition. From the economics of cultivation, it was found that use of herbicide is more economical than no weeding. Among the herbicides the Technology Option-III Fenoxaprop-P-ethyl @ 60 ml a.i./ ha as early post emergence (15-20 DAS) fetched the higher BC ratio (1.90) than other technology opotions and farmers practice (1.40).

OFT-3

1.	Title of On farm Trial	Weed management in transplanted kharif rice under lateritic soil
2.	Problem diagnosed	Due to scarcity of labour hand weeding in proper time is not possible. Beside that hand weeding of algal weeds, ferns broad leaves is laborious and not possible successfully. The high cost of labour also increase the cost of cultivation.
3.	Details of technologies selected for assessment/refinement	**Farmers' Practice:** Hand Weeding
		Technology Opt -I: Pyrazosulfuron-ethyl @2 5 g a.i /ha as pre emergence (1-3 DAT
		Technology Option -II:Metsulfuron-methyl +chlorimuron- ethyl @ 4 g a.i /ha at 7-12 DAT
		Technology Option-III: Pretilachlor @ 1.0 lit a.i /ha as pre emergence (1-3 DAT)
4.	Source of Technology	Annual Progress Report of All India Coordinated Research Project on Weed Control (AICRP-WC) - 2000, Visva-Bharati Centre, Palli Siksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, pp. 27.
5.	Production system and thematic area	Rice-fallow, Rice-mustard, Rice-Wheat Weed Management
6.	Performance of the Technology with performance indicators	Performance of the technology of weed control was found statistically significant
7.	Final recommendation for micro level situation	Technology Option-II i. E. Use of herbicide Metsulfuron-methyl +chlorimuron- ethyl @ 4 g a.i /ha at 7-12 DAT significantly reduced the weed population and produced more no. of effective tillers, grains/panicle and higher yield than those of other technology options and farmers practice.

8.	Constraints identified feedback for research	Application of these low dose high efficiency herbicide was found difficult The efficiency of these herbicides in summer season paddy may be studied
9.	Process of farmers participation and their reaction	Farmers actively participated in the day to day monitoring of the crop, counting pest population, and data collection with KVK scientists. Farmers incurred all the cost of cultivation except herbicide

Thematic area: Weed Management (Rainy Season, 2015)

Problem definition: Due to scarcity of labour hand weeding in proper time is not possible. Beside that hand weeding of algal weeds, ferns broad leaves is laborious and not possible successfully. The high cost of labour also increases the cost of cultivation.

Technology to be assessed: Assessment of different herbicides in weed management in rainy paddy, var. MTU-7029

Table 3: Effect of different herbicides in weed management in rainy paddy var.MTU-7029

Technology option	No. of trials	Yield Component			Weed Population / m^2 At 60 DAT	Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs./ha)	Net Return (Rs /unit)	BC Ratio
		No. of effective tiller/ hill	No. of grains /panicle	Test Weight (1000 Seed weight in gm)						
Farmers' Practice: Hand Weeding	7	18.9	135.2	22.2	-	54.32	60584.00	65184.00	4600.00	1.08
Technology Opt -I: Pyrazosulfuron-ethyl @2 5 g a.i /ha as pre emergence (1-3 DAT)		26.1	142.1	22.4	17.5	57.21	55400.00	68652.00	13252.00	1.24
Technology Option -II:Metsulfuron-methyl +chlorimuron- ethyl @ 4 g a.i /ha at 7-12 DAT		29.2	147.1	22.4	10.3	58.92	53300.00	70704.00	17404.00	1.33
Technology Option-III: Pretilachlor @ 1.0 lit a.i /ha as pre emergence (1-3 DAT)		22.6	136.2	22.2	22.4	54.90	55821.00	65880.00	10059.00	1.18
Sem+		0.88	1.65	NS	-	0.66				
CD(P=0.05)		2.72	5.12	-	-	2.04				

Results:

An OFT in rainy season, 2015 was conducted to assess better weed management practices in kharif paddy (Var. MTU 7029) in adopted villages. The result of the trial indicated that the Technology Option-II i. E. Use of herbicide Metsulfuron-methyl +chlorimuron- ethyl @ 4 g a.i /ha at 7-12 DAT as early post emergence significantly produced more no. of effective tillers per hill (29.2), grains/panicle (147.1), Test Weight (22.4) and higher yield

(58.92 q/ha) than those of other technology options and farmers practice. It was found that at 60 DAT, there was again infestation of weed in the field of farmers practice done. Further the fields were almost weed free in Technology option –II and Technology option-I at peak period of crop weed competition. From the economics of cultivation, it was found that use of herbicide is more economical than hand weeding. Among the herbicides the Technology Option-II Metsulfuron-methyl +chlorimuron- ethyl @ 4 g a.i /ha at 7-12 DAT as early post emergence fetched the higher BC ratio (1.33) than other technology opotions and farmers practice (1.08).

OFT – 4

1	Title of the on farm trial	Evaluation of performance of Different Poultry Breed under Backyard System
2	Problem diagnosed	Poor body weight, poor egg production and poor egg weight of the rural poultry birds
3	Details of technologies selected for assessment/refinement	Farmers'Practice: Deshi Poultry Bird Technology option:-I: Improved Poultry Breed-Vanaraja Technology option:-II: Improved Poultry Breed-Rhode Island Red (RIR)
4	Source of Technology	Project Directorate on Poultry, Hyderabad
5	Production system and thematic area	Up land backyard, Breed replacement
6	Performance of the Technology with performance indicators	Body weight, Egg production, Egg weight
7	Final recommendation for micro level situation	Production capabilities of RIR poultry bird is better than Vanaraja and Deshi poultry bird.Vanaraja can be a suitable alternative dual purpose variety as compared with deshi poultry bird under backyard management system.
8	Constraints identified and feedback for research	Protection from predators. Supplementation of additional concentrate feed. Provide clean and fresh drinking water.

		Provide optimum space to avoid overcrowding. Proper vaccination, de-worming and veterinary care. Regular disinfection of poultry house and surrounding. Knowledge of scientific poultry rearing.
9	Process of farmers participation and their reaction	Farmers with knowledge and experienceof poultry rearing . Farmers realized the need of introduction of improved dual purpose bird having capacity to lay more eggs and gain higher body weight than the local or Desi birds.

Thematic area: Breed Replacement of Poultry (Post rainy season, 2014-15)

Problem definition: The poor body weight, poor egg production and poor egg weight of rural poultry birds

Technology assessed: Assessment of performance of different breed of poultry birds under backyard management system

Table 4: Performance of different breed of poultry birds

Technology option	No. of trials	Body weight						Age at first egg (day)	Egg production up to 72 week	Egg weight at 26 th week (gm)	Egg weight at 40 th week (gm)	Cost of cultivation (Rs./unit i.e 20 nos)	Gross return (Rs./unit i.e. 20 nos)	Net Return (Rs /unit i.e 20 nos)	B/C Ratio
		At 6 th Week (gm)		At 40th Week (gm)		At 52nd Week (gm)									
		F	M	F	M	F	M								
Farmer's practice: Deshi Poultry bird	7	247.21±4.49	365.12±5.86	785.27±6.69	1234.52±8.37	916.85±7.74	1478.32±9.91	202.64±1.24	65.73±0.71	31.85±0.18	36.52±0.13	8541/	10079/	1538/	1.18
I.Rhode Island Red (RIR)		551.17±4.17	437.81±3.23	1768.39±12.35	2349.24±14.75	2941.43±17.82	2298.14±12.57	184.58±0.92	157.23±1.10	47.35±0. 24	53.09±0.26	12675/	21168/	8493/	1.67

II. Vanaraja (Restricted feeding)		519.32±4.54	636.32±3.38	2976.61±18.08	2352±12.66	2487.01±16.73	3691.87±20.84	186.32±1.08	103.28±1.04	42.32±0.21	48.92±0.23	15244/	19665/	4421/	1.29

Result:
The data from table-4 indicated that the Technology Option –I i.e. Improved Rural Poultry Bird RIR significantly produced Better B/C ratio at 72nd week (1.67), than those of Technology Option-II (Vanaraja) and Farmer's practice (Deshi). Technology Option –II i.e.Improved Poultry Bird Vanaraja produced better B/C ratio at 72nd Week (1.29) than Farmer's practice(Deshi).

OFT-5

1.	Title of On farm Trial	Assessment of Location Specific Early Cabbage Varieties for Lateritic Area of Birbhum District
2.	Problem diagnosed	There is a high demand of early cabbage in the local market of Birbhum. It is only brought from Ranchi. So, the price is very high. On the other hand normal season cabbage does not give much profit. Therefore, the farmers are interested to cultivate early variety of Cabbage for better market price
3.	Details of technologies selected for assessment/refinement	Farmer's practice: M-111
		Technology option I. Indum-1299
		Technology option II. Super Helmate
4.	Source of Technology	Vegetable Seed News and Events, Seminis Vegetable Seed, Inc., Internet Source:- http://www.monsanto.mediaroom.com Product Catalogue "Our Products", Indo-American Hybrid Seeds Ltd. Cabbage Advantage, SAKATA, Sakata Seed America, Inc.
5.	Production system	Vegetables- fallow- vegetables

	and thematic area	Variety Replacement
6.	Performance of the Technology with performance indicators	Performance of the technology of early cabbage variety was found statistically significant
7.	Final recommendation for micro level situation	Technology Option –II i.e. Super Helmate variety of early cabbage exhibited significantly higher yield (75.92 t/ha) than those of farmer's practice and Technology Option-I i.e. Indum-1299.
8.	Constraints identified feedback for research	Seedling raising is sometimes was found difficult due to heavy rainfall in rainy season Ealrly variety of other rabi seasonal crops may be studied in this way
9.	Process of farmers participation and their reaction	Farmers actively participated in the day to day monitoring of the crop, and data collection with KVK scientists. Farmers incurred all the cost of cultivation except seeds, seed tray, pack etc.

Thematic area: Variety Replacement (Rabi Season, 2015-16)

Problem definition: The farmers are interested to cultivate early variety of Cabbage for better market price

Technology to be assessed: Assessment of Location Specific Early Cabbage Varieties for Lateritic Area of Birbhum District

Table 5: Performance of different early varieties of cabbage

Technology option	No. of trials	Av. Height of the plant (cm)	Av. Head Size (cm)	Av. Head Weight (Kg)	Yield (t/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs./ha)	Net Return (Rs /unit)	BC Ratio

Farmer's practice: Milleneum-111	10	25.50	15.53	0.88	22.83	61,250.00	79,905.00	18,655.00	1.30
Technology option I. Indum-1299		30.73	17.93	1.98	49.42	73,500.00	1,72,970.00	99,470.00	2.35
Technology option II. Super Helmate		38.08	22.85	2.96	75.92	80,850.00	2,65,720.00	1,84,870.00	3.29
Sem+		0.39	0.28	0.05	0.61				
CD(P=0.05)		1.17	0.82	0.14	1.80				

Result:
The result of the trial (Table-5) revealed that Technology Option –II i.e. Super Helmate variety of early cabbage exhibited significantly higher yield (75.92 t/ha) than those of farmer's practice and Technology Option-I i.e. Indum-1299. It was also observed that Technology Option-II (Super Helmate) produced significantly greater Head size (22.85 cm) and Head Weight (2.96 kg) than those of technology Option-I and farmers practic. The early cabbage variety Super Helmate fetched more BC Ratio (3.29) than Indum-1299 (2.35) and Milleneum-111 (1.30),

OFT-6

1.	Title of On farm Trial	Assessment of Location Specific Early Cauliflower Varieties for Lateritic Area of Birbhum District
2.	Problem diagnosed	There is a high demand of early cabbage in the local market of Birbhum. It is only brought from Ranchi. So, the price is very high. On the other hand normal season cabbage does not give much profit. Therefore, the farmers are interested to cultivate early variety of Cabbage for better market price
3.	Details of technologies selected for assessment/refinement	Farmer's practice: Pan-1008
		Technology option I. Don-175

		Technology option II. Seminis-4151
4.	Source of Technology	Vegetable Seed News and Events, Seminis Vegetable Seed, Inc., Internet Source:- http://www.monsanto.mediaroom.com
5.	Production system and thematic area	Vegetables- fallow- vegetables Variety Replacement
6.	Performance of the Technology with performance indicators	Performance of the technology of early cauliflower variety was found statistically significant
7.	Final recommendation for micro level situation	Technology Option –II i.e.Suminis-4151 (Early cauliflower hybrid) variety exhibited significantly higher yield than those of farmer's practice (Pan-1008).
8.	Constraints identified feedback for research	Seedling raising is sometimes was found difficult due to heavy rainfall in rainy season Early variety of other rabi seasonal crops may be studied in this way
9.	Process of farmers participation and their reaction	Farmers actively participated in the day to day monitoring of the crop, and data collection with KVK scientists. Farmers incurred all the cost of cultivation except seeds, seed tray, pack etc.

Thematic area: Variety Replacement (Rabi Season, 2015-16)

Problem definition: The Farmers are interested to cultivate early variety of cauliflower to get higher market price.

Technology to be assessed: Assessment of Location Specific Early Cauliflower Varieties for Lateritic Area of Birbhum District

Table 6: Performance of early cauliflower varieties

Technology option	No. of trials	Av. Height of	Av. Curd Size	Av. Curd Weight	Yield (t/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs./ha)	Net Return (Rs /unit)	BC Ratio

		plant (cm)	(cm)	(Kg)					
Farmer's practice: Pan-1008	10	44.53	10.48	0.55	13.70	85,250.00	1,71,250.00	86,000.00	2.00
Technology option I. Don-175		56.92	13.09	0.70	17.64	98,000.00	2,20,500.00	1,22,500.00	2.25
Technology option II. Suminis-4151		64.94	16.74	1.45	36.06	1,02,500.00	4,50,750.00	3,48,250.00	4.39
Sem±		0.43	0.30	0.03	0.42				
CD(P=0.05)		1.28	0.89	0.10	1.24				

Result:

The result of the trial (Table-6) pointed out that Technology Option –II i.e.Suminis-4151 (Early cabbage hybrid) variety exhibited significantly higher yield (36.06 t/ha) than those of farmer's practice (Pan-1008). It was also observed that Technology Option-II (Suminis-4151) produced significantly higher curd size (16.74 cm) and curd weight (1.45 kg) than those of other varieties. BC ratio was higher (4.39) with the cultivation of early cabbage variety Suminis-4151 than Don-175 (2.25) and Pan-1008 (2.00). Due to high price and demand in the market of early variety Sumins-4151 satisfied the farmers a lot.

OFT-7

1.	Title of On farm Trial	Assessment of specific vitamins as growth promoters in carp spawn and fry feed to increase the survival rate to a profitable manner
2.	Problem diagnosed	The survival rate of fish spawn is low in the nursery ponds and as well as rearing ponds. The farmers do not apply regular scientific fish feed supplemented with growth promoters. Therefore, due to malnutrition the fish spawn do not survive up to the level which causes

		economic losses in fish farming.
3.	Details of technologies selected for assessment/refinement	Farmer's practice: Irregular feed application without growth promoter
		I.Yeast (2%) + Cobalt Chloride (0.1%) + Scientific feed
		II. Yeast (2 %) + Vitamin C (0.5%) +Scientific feed
		III. Yeast (2%) + Vitamin B complex (0.01%) + Scientific feed
4.	Source of Technology	Fish and Fisheries of India - V. G. Jhingran, Hindustan Publishing Corporation (India), New Delhi, 1997, Page No. - 403.
5.	Production system and thematic area	Extension system Nutritional Management
6.	Performance of the Technology with performance indicators	Performance of the technology options was found statistically significant
7.	Final recommendation for micro level situation	Technology Option –I i.e. application of Yeast (2%) + Cobalt Chloride (0.1%) + Scientific feed in the nursery pond increased the survival rate (89%) of fish spawn after 20 days of release and also increased the early growth (fry stage) at 30 days
8.	Constraints identified feedback for research	Calculation of the amount of vitamins and growth promoters creates fear among the farmers Mustard Oil Cake may be replaced by azolla and any other ingredients in preparation of scientific fish feed
9.	Process of farmers participation and their reaction	Farmers shared the cost of scientific fish feed and participated actively in maintaining the pond carefully and data collection with KVK scientists effectively

Thematic area: Fish Nutrition Management (Kharif season, 2015)

Problem definition: The survival rate of fish spawn is low in the nursery ponds and as well as rearing ponds. The farmers do not apply regular scientific fish feed supplemented with growth promoters. Therefore, due to malnutrition the fish spawn do not survive up to the level which causes economic losses in fish farming.

Technology assessed: Assessment of specific vitamins as growth promoters in carp spawn and fry feed to increase the survival rate to a profitable manner

Table 7: Effect of growth promoters and vitamins on spawn survivality

Technology option	No. of trials	Survival rate (%) of fish spawn after 20 days	Growth of spawn (fry stage) at 30 days (Kg / ha)	Fish Yield at 6 month (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs./ha)	Net Return (Rs /unit)	BC Ratio
Farmer's practice: Irregular feed application without growth promoter	5	48.6	586.36	4.94	45850.00	49400.00	3550.00	1.08
I.Yeast (2%) + Cobalt Chloride (0.1%) + Scientific feed		89.0	1132.75	10.62	55850.00	111510.00	55660.00	2.00
II. Yeast (2 %) + Vitamin C (0.5%) +Scientific feed		79.6	1022.68	9.32	55960.00	97860.00	41900.00	1.75
III. Yeast (2%) + Vitamin B complex (0.01%) + Scientific feed		70.8	963.10	7.64	55550.00	80220.00	24670.00	1.44
Sem±		1.15	15.23	0.12				
CD(P=0.05)		3.55	46.94	0.37				

Scientific Feed= Rice bran (50%) + Mustard Oil Cake (50%)

Result:

The perusal of the data (Table-7) revealed that the Technology Option –I i.e. application of Yeast (2%) + Cobalt Chloride (0.1%) + Scientific feed in the nursery pond increased the survival rate (89%) of fish spawn after 20 days of release and also increased the early growth (fry stage) at 30 days (1132.75 kg/ha) significantly. In those ponds the achieved fry were disease free and healthy. This might be due to application of growth promoters and vitamins. Further the Technology Option-I produced significantly higher fish yield (10.62 q/ha) at 6 month than those of other options and farmers practice (4.94 q/ha). Accordingly, the BC ratio was also higher (2.00) in the Technology Option –I than others. All the technology options produced significantly higher results than farmers practice. But Technology Option –I i.e. application of Yeast (2%) + Cobalt Chloride (0.1%) + Scientific feed in the nursery pond is the best option according to the statistical analysis.

OFT-8

1.	Title of On farm Trial	Assessment of potentiality of food fodder intercropping for increasing crop productivity and profitability in Winter season under irrigated lateritic soil
2.	Problem diagnosed	Farmers are not willing to afford land for green fodder cultivation due to low crop productivity and profitability under sole fodder cultivation
3.	Details of technologies selected for assessment/refinement	**Farmers Practice :** Sole Oat
		Tech. Opt.- I : Oat + Chick pea (1:1)
		Tech. Opt.- II : Oat + Lentil (1:1)
		Tech. Opt.-III : Oat + Yellow Sarson (1:1)
4.	Source of Technology	Report of World Bank Contractual Forage Research Project, Palli-Siksha Bhavana, Visva-Bharati
5.	Production system and thematic area	Rice-Oat-Rice, Rice-Oat-sesame. Cropping System
6.	Performance of the Technology with performance indicators	Performance of the technology of food fodder intercropping was found statistically significant
7.	Final recommendation for micro level situation	Technology option- II i.e. Oat + lentil (1:1) food fodder intercropping system produced higher productivity of green fodder and fetched higher profit
8.	Constraints identified feedback for research	Management of two different type of crop is difficult as it was not practiced earlier Food fodder intercropping in kharif season may also be tried
9.	Process of farmers participation and their reaction	Farmers actively participated in the day to day monitoring of the crop and data collection with KVK scientists. Farmers incurred the cost of labour, irrigation etc. The farmers were excited to study the food as well as fodder in the same field in same time.

Thematic area: Cropping System (Winter Season, 2015-16)

Problem definition: Farmers are not willing to afford land for green fodder cultivation due to low crop productivity and profitability under sole fodder cultivation

Technology to be assessed: Assessment of potentiality of food fodder intercropping for increasing crop productivity and profitability in winter season under irrigated lateritic soil

Table 8 : Effect of food fodder intercropping in productivity and prifitability

Technology option	No. of trials	Yield		Soil status after harvest*				Cost of cultivation (Rs./ha)	Gross return (Rs./ha)	Net Return (Rs /unit)	BC Ratio
		Green fodder yield (t/ha) (Total 2 cuts)	Yield of intercrops (q/ha)	pH	O.C (%)	Avl. P (kg/ha)	Avl. (kg/ha)				
Farmers Practice : Sole Oat	5	32.14	-	6.04	0.35	12.1	120.2	13525.00	16070.00	2545.00	1.18
Tech. Opt.- I : Oat + Chick pea (1:1)		21.30	4.88	6.68	0.54	22.6	133.8	17513.00	35050.00	17537.00	2.00
Tech. Opt.- II : Oat + Lentil (1:1)		21.75	4.95	6.70	0.52	26.8	133.1	17810.00	40575.00	22765.00	2.28
Tech. Opt.-III : Oat + Yellow Sarson (1:1)		21.00	3.94	6.15	0.40	20.1	128.2	16810.00	30200.00	13390.00	1.80
Sem+		0.53	0.38								
CD(P=0.05)		1.59	1.14								

- Initial value of Soil parameters: pH- 6.2, O.C – 0.34, avail.P- 12.0 kg/ha. Avl. K- 122.6 kg/ha

From the above table, it is clear that food fodder intercropping produced always better effects than sole fodder Oat (Kent) cultivation. Among the intercrops lentil (var. WBL-77) performed significantly better than chickpea (var. Anuradha) and yellow sarsoon (B-9). Technology option II i.e. Oat + Lentil (1:1) may be a suitable option for increasing productivity as well as higher B:C ratio (2.28) than other options and farmers practice i.e. sole oat (1.18). Soil status were also maintained after intercropping oat and pulses than sole oat. Thus from the same field green fodder oat and food crop lentil may be grown in 1:1 row ratio profitably during winter season under lateritic soil.

OFT-9

1.	Title of On farm Trial	Weed Management in summer pulse
2.	Problem diagnosed	The farmers sow pulse seeds by broadcasting. After a few days weeds compete with the crop. No mechanical weeding is possible in broadcasted field.
3.	Details of technologies selected for assessment/refinement	Farmer's practice: No weeding
		I. Pendimethalin @ 0.75 lit a.i./ha as pre emergence (0-3 DAS)
		II. Quizalofop- P-ethyl @ 50 ml a.i./ha as early post emergence (15-20 DAS)
		III. Fenoxaprop-P-ethyl @ 60 ml a.i./ ha as early post emergence (15-20 DAS)
4.	Source of Technology	AICRP-WC, Visva-Bharati, Sriniketan
5.	Production system and thematic area	Rice-mustard-green gram/blackgram., Rice-potato- green gram/blackgram Weed Management
6.	Performance of the Technology with performance indicators	The programme is going on
7.	Final recommendation for micro level situation	
8.	Constraints identified feedback for research	
9.	Process of farmers participation and their reaction	

Thematic area: Weed Management (Summer Season, 2016)

Problem definition: The farmers sow pulse seeds by broadcasting. After a few days weeds compete with the crop. No mechanical weeding is possible in broadcasted field.

Technology to be assessed: Assessment of different herbicides in weed management in summer pulse, blackgram and greengram

Table 9: Effect of different herbicides in weed management in blackgram and greengram

Technology option	No. of trials	Yield Component				Weed Population / m^2 At 45 DAS	Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs./ha)	Net Return (Rs /unit)	BC Ratio
		No. of Branches per Plant	No. of Pods /m^2	No. of Seeds per Pod	Test Weight (1000 Seed weight in gm)						
Farmer's practice: No weeding	7	The programme is going on									
I. Pendimethalin @ 0.75 lit a.i./ha as pre emergence (0-3 DAS)											
II. Quizalofop- P-ethyl @ 50 ml a.i./ha as early post emergence (15-20 DAS)											
III. Fenoxaprop-P-ethyl @ 60 ml a.i./ ha as early post emergence (15-20 DAS)											
Sem+											
CD(P=0.05)											

OFT-10

1.	Title of On farm Trial	Evaluation of efficacy of different Training Methods for Skill Development Trainings
2.	Problem diagnosed	The selection of appropriate Training Methods is important for an effective learning. The Training Methods refer to a combination of various instructional media used for conducting the Training to achieve the learning objective

		efficiently and effectively. The selection of suitable Training Methods is largely influenced by the Training Objectives, Subject Matter handled, participants' nature, resources availability such as Time, Location and Budget, Organizational considerations and Trainers' capability. The choice of the Training Method will also depend upon whether the Training is intended to develop a general or specific level of knowledge and skill. The participants learning style, their experience and size of the group are also some of the factors that are to be kept in mind while deciding upon the Training Methods.
3.	Details of technologies selected for assessment/refinement	**Prevalent Practice: Lecture Methods**
		Technology Option – I: Group Discussion
		Technology Option – II: Case Study
		Technology Option – III: Field Visits
		Technology Option – IV: Demonstration
		Technology Option – V: Experiential Learning
4.	Source of Technology	Concepts, Approaches and Methodologies for Technology Application and Transfer – A Resource Book for KVKs, Zonal Project Directorate, Zone – III, Indian Council of Agricultural Research, Umiam, pp. 103 – 152.
5.	Training System Thematic Area	Purely Theoretical Training Method
6.	Performance of the Technology with performance indicators	The programme is going on
7.	Final recommendation for micro level situation	
8.	Constraints identified feedback for research	
9.	Process of farmers participation and their reaction	

OFT-11

1.	Title of On farm Trial	Assessment of Shelf-Life of Vegetables stored in a modified Earthen Pot Cool Chamber
2.	Problem diagnosed	In Semi-Arid Red Lateritic Zone situation of Birbhum District, extreme hot climatic conditions prevail over a large majority of time in every year and the vegetables get spoiled due to this climatic situation very quickly especially in the absence of proper storing system. In addition to this, the villagers can avail fresh vegetables once in week from the Weekly Haat held at their villages.
3.	Details of technologies selected for assessment/refinement	**Farmers' Practice –** Vegetables Stored in room temperature
		Technology Option – I: Vegetables Stored in Bamboo Baskets with Wet Gunny Bags
		Technology Option – II: Vegetables Stored in Modified Earthen Pot Cool Chambers
4.	Source of Technology	Indian Journal of Traditional Knowledge, Vol. 10 (2), April 2011, pp. 375 – 379, Council of Scientific and Industrial Research (CSIR)
5.	Production System Thematic Area	Vegetables - Vegetables - Vegetables Storage of Vegetables
6.	Performance of the Technology with performance indicators	The programme is going on
7.	Final recommendation for micro level situation	
8.	Constraints identified feedback for research	
9.	Process of farmers participation and their reaction	

OFT-12

1	Title of the on farm trial	Evaluation of efficacy of non antibiotic growth promoter in broiler poultry
2	Problem diagnosed	Potential of antibiotic resistant strains of bacteria and transfer of antibiotic resistance genes from animal to human
3	Details of technologies selected for assessment/refinement	Control: Farmer's practice Technology option-I:Lactobacillus+Saccharomyces (Probiotic)- Technology option-II:- Xylanase+ Phytase+ Amylase+protease(multiple enzyme)- Technology option-III:Probiotic+Multiple enzyme-
4	Source of Technology	Deptt. Of animal nutrition,WBUAFS
5	Production system and thematic area	Deep litter system,Broiler management
6	Performance of the Technology with performance indicators	Body weight gain,Feed conversion ratio,Mortality percentage
7	Final recommendation for micro level situation	Application of probiotic and combination of probiotic and multiple enzyme acted beneficially on productive performance of broiler as compared with application of multiple enzyme and farmer's practice.
8	Constraints identified and feedback for research	Lack of awareness of farmers about detrimental effect of usage of antibiotic growth promoter. Enhanced body weight gain and better feed conversion ratio ,less feed intake convinced farmers for further application.
9	Process of farmers participation and their reaction	Farmers having broiler farm with 2400 capacity were selected and better productive performance traits helped them to realize the need of application of non antibiotic growth promoter.

Thematic area: Broiler management (Pre kharif season, 2015-16)

Problem definition: Emergence of antibiotic resistant strains of bacteria and transfer of antibiotic resistance genes from animal to human

Technology assessed: Evaluation of efficacy of non antibiotic growth promoter in broiler poultry.

Table 10: Performance of different non antibiotic growth promoter

Technology option	No. of trials	Body weight gain		FCR		Mortality		Cost of farming (Rs./unit i.e 2400 nos)	Gross return (Rs./unit i.e. 2400 nos)	Net Return (Rs /unit i.e 2400 nos)	B/C Ratio
		At 21st Days (gm)	At 42nd Days (gm)	At 21st Days	At 42nd Days	At 21st Days	At 42nd Days				
Control: Farmer's practice	7	756.23±28.89	2216.95±44.31	1.63±0.047	1.67±0.047	15.28±2.38	25.28±3.85.	314220/	356886/	42666/	0.14
I. Probiotic		796.72±31.32	2306.92±38.75	1.48±0.035	1.51±0.042	9.57±1.63	17.95±2.67	2,88066/	3,81426/	68943/	0.32
II. Multiple Enzyme		768.41±23.45	2181.55±41.39	1.57±0.039	1.59±0.051	14.41±2.26	22 .19±3.17	3,01,990/	3,51098/	49108/	0.16
III.Probiotic+multiple enzyme		787.38±26.97	2276.19±31.38	1.51±0.031	1.55±0.039	7.09±1.46	13.08±2.36	2,95603/	3,70852/	75,249/	0.25

Result:

The data from table-5 indicated that the Technology Option –II i.e. probiotic significantly produced Better B/C ratio at 42nd day (1.67), than those of Technology Option-II and Farmer's practice.Technology option IV produces same effect as Technology option II.

3.2 Achievements of Frontline Demonstration (FLD)

A. Details of FLDs conducted during 2015-16

Cereals

Sl. No.	Crop	Thematic area	Technology Demonstrated with detailed treatments	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
				Proposed	Actual	SC/ST	Others	Total	
1.	Wheat (rabi-2015-16)	Varietal replacement	Improved variety HD 2824	-					
			Improved variety PBW 343	10	10			37	

B. Details of farming situation

Crop	Season	Farming situation (RF/Irrigated)	Soil type	Status of soil (Kg/ha)			Previous crop	Sowing date	Harvest date	Seasonal rainfall (mm)	No. of rainy days
				N	P_2O_5	K_2O					
1. Wheat	Rabi, 2015-16	Irrigated medium land	Sandy loam	M	L	M	Short duration paddy	26th Nov.-15th Dec.,2015	20 th - 30th March , 2016		

Performance of FLD

Pulse:

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
Blackgram	Varietal replacement	Improved variety:WBL: 109	74	10	7.6	6.4	18.75	18612	46101	27489	2.48	18325	35605	17280	1.94
Total			74	10											

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

Other crops

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)			
					Demonstration	Check			Demo	Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
1. Dhaincha Pre kharif, 2015	Soil Health Management	Green Manuring in rainy season paddy var. MTU-7029	18	6.0	60.4 (Paddy yield)	51.9 (Paddy yield)	16.4	No. of panicles/ m^2	389	362	61732	84560	22828	1.37	60932	72660	11728	1.19
								No. of grains/ panicle	162	142								
								No. of grains/ panicle	142	135								
2. Drumstick Kharif, 2015	Varietal replacement	PKM-1	26	1.6	38.75	16.90	129.3	Length of Fruits (cm)	75.6	57.9	29700	77500	47800	2.61	24000	33800	9800	1.41

3.Capsicum Rabi, 2015-2016	Varietal Replacement	Bharat	15	0.8	44.8	24.5 (California wonder)	82.9	No. of branches/ plant	41.1	19.4	91550	179200	87650	1.96	76220	98000	21780	1.28
								No. fruits / plant	26.8	12.2								
								Wt. fruits (g)	149.1	82.9								
4.Broccoli, Rabi, 2015-16	New Crop Introduction	F1 hybrid	15	0.8	13.4	-	-	Curd size (cm)	24.50	-	165500	335000	169500	2.02	-	-	-	-
								Av. Wt (g)	724.3	-								
5. Wheat, Rabi, 2015-16	Varietal replacement	HD – 2824	05	1.0	39.4	31.2 (Sonalika)	26.3	Tillers/hill	12.1	8.8	21010	47280	26270	2.25	19800	37440	17640	1.89
								Grains/ear	56.2	47.4								
		PBW-343	37	10	37.8		21.2	Tillers/hill	11.6	-do-	21010	45360	24350	2.16	-do-	-do-	-do-	-do-
								Grains/ear	52.4	-do-								
6. Yellow Sarson Rabi, 2015-16	Weed Management	Herbicides: Pendimethalin pre emergence @ 3 lt. / ha	40	5.0	9.09	6.81	33.4	Siliquae/ plant	48.6	30.98	16400	45450	28734	2.77	15300	34050	18750	2.23
								Seeds/ siliquae	18.2	15.1								
	Total		156	24.4														

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)			
					Demonstration	Check			Demo	Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Green Fodder, Sorghum , Pre kharif 2015	Varietal replacement	MP Chari/Jumbo	22	0.68	633.4	340.5 (Goma)	86	CP (%)	9.12	6.55	14250	31670	17420	2.22	12250	17025	4775	1.38
Green Fodder, Maize Kharif, 2015	Varietal replacement	African Tall	19	0.40	1020.2	706.6 (local improved)	44.4	CP (%)	8.65	8.12	21550	51010	29460	2.37	19250	35330	16080	1.84
Green Fodder, Rice bean Kharif, 2015	New introduction	Bidhan-1	13	0.2	320.5	-	-	CP (%)	27.1	-	19560	48075	28515	2.46	-	-	-	-
		Bidhan-2	5	0.5	341.4	--	-	CP (%)	27.3	-	19560	51210	31650	2.61	-	-	-	-
Green fodder, Hybrid Napier, Post Kharif, 2015	Varietal replacement	Co-4	20	0.40	Programme is going													
			79	2.18														

Live stocks

Category	Thematic area	Name of the technology demonstrated	No. of Farmer	No.of units	Major parameters		% change in parameter	Other parameters		Gross cost	Gross return	Net return	BCR
					Demonstration	Check		Demonstration	Check	Economics of demonstration			
Cow	Feed Management	Supplementation of Area Specific Mineral Mixture for Lactating Deshi Cow	10	20	A. Milk Yield (kg / wk / Cow) 23.88 ±1.11 B.Fat % 4.551 ±0.04	A. Milk Yield (kg / wk / Cow) 18.46 ±1.42 B.Fat% 4.343 ±0.01	A.29.36 B.4.78	A. SNF-9.332±0.08 B. Lactose-4.460±0.01	A. SNF-9.040±0.002 B. Lactose 4.443 0.001	6310/	14737/	8427/	1.33
										Economics of check			
										5950	10632/	4682/	0.78
Goat	Feed Management	Low cost concentration supplementation for flushing of does	20	10	The Programme is going.								
Total			30	30									

Fisheries

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.)			
					Demonstration	Check		Demonstration	Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Pabda	Crop diversification	Cultivation of pabda with composite fish culture	9	9	The Programme is going on.												
		Total	9	9													

Other enterprises

Category	Name of the technology demonstrated	No. of Farmer	No.of units	Major parameters		% change in major parameter	Other parameter		*Economics of demonstration (Rs.) or Rs./unit				*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
Self Help Groups	Group formation for accumulating Social Capital and increasing Family Incomes	60	03	The Programming is going on.												
Total		60	03													

C. Performance of FLDs in Farm Implements and Machinery

Name of the implement	Crop	Name of the technology demonstrated	No. of Farmer	Area (ha)	Filed observation (output/man hour) q/man hour		% change in major parameter	Labor reduction (man days/ha)		Cost reduction (Rs./ha or Rs./Unit)	
					Demonstration	Check		Demons Ration	Check	Demons ration	Check
Drum Seeder	Kharif Paddy Var. IET 4786	Direct Seeding of Rice in Lines	4	3.32	6.22	4.21	48	58	-	11,600.00	-
Cono Weeder	Summer paddy Var. MTU 1010	Mechanical weeding in SRI	8	5.24	6.92	4.22	64	21	-	4200.00	-
			12	8.56							

D. 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
Capsicum	Bharat	15	0.85	44.8	24.5	82.9	91550	179200	87650	1.96
Broccoli (new introduction)	F1 hybrid	15	0.85	13.4	-	100	165500	335000	169500	2.02
Napier (Fodder)	Hybrid Napier Var. Co - 4	20	0.4	The Programme is going on.						
Total		50	2.1							

Performance of the Cluster demonstration Rabi, 2015-16

Oilseeds:-

A. Technical Parameters:

Sl. No.	Crop demonstrated	Existing (Farmer's) variety name	Existing yield (q/ha)	Yield gap (Kg/ha) w.r.to			Name of Variety + Technology demonstrated	Number of farmers	Area in ha	Yield obtained (q/ha)			Yield gap minimized (%)		
				District yield (D)	State yield (S)	Potential yield (P)				Max.	Min.	Av.	D	S	P
1	Mustard	B-9	9.05	236	172	795	Var. Pusa Mahek + Herbicides, Micronutrient spray	141	51	12.87	9.30	11.92	121	167	24
2	Linseed	Local improved	4.24	176	124+	776	Var. Deepika/ Sekhar + Herbicides, Micronutrient spray	66	22	7.85	3.60	6.95	154	419	35
3	Sesame	Tilottoma	Harvesting and threshing of the Crop is going on.				Var. SWB- 32-10-1 + Herbicides, Micronutrient spray	82	30	Harvesting and threshing of the Crop is going on.					
								289	103						

B. Economic parameters

Sl. No.	Variety demonstrated & Technology demonstrated	Farmer's Existing plot				Demonstration plot				Farmers, feedback
		Gross Cost (Rs/ha)	Gross return (Rs/ha)	Net Return (Rs/ha)	B:C Ratio	Gross Cost (Rs/ha)	Gross return (Rs/ha)	Net Return (Rs/ha)	B:C ratio	
1	Pusa Mahek (Improved variety) + Herbicides, Micronutrient spray	16516	45250	28734	2.74	17277	59600	42323	3.45	Additional net return Rs. 13,589/ ha The new variety can assure yield even under late sown condition
2	Deepika/ Sekhar (Improved variety) + Herbicides, Micronutrient spray	12120	29680	17560	2.44	13100	48650	35550	3.71	Additional net return Rs. 17990/ha. New improved variety with appropriate management in linseed is more profitable than mustard in particularly their late sown condition
3	Var. SWB- 32-10-1 + Herbicides, Micronutrient	Harvesting and threshing of the Crop is going on.								

	spray	

Pulses:-

A. Technical Parameters:

Sl. No.	Crop demonstrated	Existing (Farmer's) variety name	Existing yield (q/ha)	Yield gap (Kg/ha) w.r.to			Name of Variety + Technology demonstrated	Number of farmers	Area in ha	Yield obtained (q/ha)			Yield gap minimized (%)		
				District yield (D)	State yield (S)	Potential yield (P)				Max.	Min.	Av.	D	S	P
1	Chick pea	Mahamaya-1	6.54	313	419	1546	Var. Anuradaha + Herbicides, Micronutrient spray	193	30	11.41	5.25	9.92	108	71	22
2	Lentil	Asha	6.85	145	245	815	WBL-77 + Herbicides, Micronutrient spray	79	20	10.10	6.00	9.65	193	114	35
3	Field pea	Local	3.15	5	762	1185	Pravat + Herbicides, Micronutrient spray	107	20	7.52	4.50	6.94	7580	50	32
4	Greengram	Panna	Threshing and cleaning of the Crop is going on.				PDM-84-139 + Herbicides, Micronutrient spray	81	10	Threshing and cleaning of the Crop is going on.					
								460	80						

B. Economic parameters

Sl. No.	Variety demonstrated & Technology demonstrated	Farmer's Existing plot				Demonstration plot				Farmers, feedback
		Gross Cost (Rs/ha)	Gross return (Rs/ha)	Net Return (Rs/ha)	B:C ratio	Gross Cost (Rs/ha)	Gross return (Rs/ha)	Net Return (Rs/ha)	B:C Ratio	
1	Var. Anuradaha + Herbicides, Micronutrient spray	13850	32700	18850	2.36	15125	49600	34475	3.28	Additional net return is Rs. 15,625/ha
2	Var.WBL-77 + Herbicides, Micronutrient spray	13925	41110	27185	2.95	15475	57900	42425	3.74	Additional net return is Rs. 15,240/ha
3	Var. Pravat + Herbicides, Micronutrient spray	10900	14175	3275	1.30	11500	31230	19730	2.72	Almost new introduction to most of the farmers. Additional net return is Rs.16,455/ha
4	Var. PDM-84-139 + Herbicides, Micronutrient spray	Threshing and cleaning of the Crop is going on.								

Technical Feedback on the demonstrated technologies

Sl. No.	Crop	Feed Back
1	Dhaincha (Pre kharif, 2015)	After cultivation of Dhaincha, application of Nitrogenous fertilizers was reduced up to 21 per cent for the next Paddy cultivation in the same field.
2	Use of Drum Seeder for direct seeding of rice in lines (Kharif, 2015)	It is essential and cost effective as it reduces the labour requirement. The Cost reduction by using Drum Seeder is Rs. 11,600.00 per hectare with an average cost reduction of 64 per cent.But found difficult in rainy season if heavy rain comes within 3 days of sowing
3	Drumstick (Kharif, 2015 – 2016)	The *Baramasia* Drumstick Var. – PKM -1 in rain-fed up-land fetched very good yield of 38.75 q / ha with an economic return with a B:C Ratio of 2.61 in Rainy Season as well as in Winter Season in addition to the normal yield in Summer Season.
4	Capsicum (Rabi, 2015-16)	The Capsicum Variety – Bharat is dwarf in type, its branching is more, fruiting setting is more and average fruit sizes are also more than locally available Varieties. The Yield of Var. Bharat is The Capsicum Variety – Bharat gives satisfactory yields even in late planted cases and with an increased yield of 82.9 per cent over the local chack and with a B:C Ratio of 1.96 .
5	Broccoli (Rabi, 2015-16)	The Crop of Broccoli is a new crop in the District of Birbhum and it has a great potential both in horticultural as well as in economic terms. The Broccoli has a yield of 13.4 q / ha and with a B:C Ratio of 2.02.
6	Wheat (Rabi 2015 – 2016)	The Wheat Variety HD – 2824 with an average yield of 39.4 q / ha and PBW 343 with an average of 37.8 q / ha both may be cultivated instead of Sonalika. The percentage yield of the Var. HD – 2824 increased 26.3 percentage and the percentage yield of the Var. PBW – 343 increased over 21.2 percent over the local check Sonalika.The seed rate should less in PBW 343 as it growth habit is more spreading. Both can give yield in slight late situation.
7	Use of Herbicide Pendimethalin for Yellow Sarson in Rabi in 2015 - 16	Use of Herbicide Pendimethalin for Yellow Sarson in Rabi in 2015 – 16 showed an average increase Yield of 33.4 per cent over the local check with a B: C Ratio of 2.77.
8	Use of Cono Weeder for Mechanical weeding in SRI (Summer, 2016)	It is essential and cost effective as it reduces the labour requirement. The Cost reduction by using Cono Weeder is Rs. 4,200.00 per hectare with an average cost reduction of 48 per cent.
9	Fodder Sorghum (Pre kharif, 2015)	Very luxuriant green fodder was produced with an increased Yield of 86 per cent over the local Check Goma, with CP Percentage of 9.12 over 6.55 of the local check and with an increased B:C Ratio of 2.22 over the local Chech B:C Ratio of 1.38.
10	Fodder Maize (Kharif, 2015)	Very luxuriant green fodder was produced with an increased Yield of 44.4 per cent over the local Check Local Improved, with CP Percentage of 8.65 over 8.12 of the local check and with an increased B:C Ratio of 2.37 over the local Chech B:C Ratio of 1.84.
11	Fodder Rice Bean (Kharif, 2015)	Rice Bean Var. Bidhan – 1 is a very luxuriant green fodder was produced with a CP Percentage of 27.1 and Rice Bean Var. Bidhan – 2 is a very luxuriant green fodder was produced with a CP Percentage of 27.3.
12	Hybrid Napier	The Programme is going.
13	Area Specific Mineral Mixture for Lactating Deshi Cow	Area Specific Mineral Mixture for Lactating Deshi Cow is very effective as far as Milk Yield is concerned, it is increased by 29.36 percentage point over the local check and Fat Percentage is increased by 4.78 percentage point over the local check and with a B:C ratio of 1.33 in case of Demonstration over the local check B:C ratio of 0.78.
14	Low cost concentration supplementation for flushing of does	The Programme is going on.

15	Cultivation of pabda with composite fish culture	The Programme is going on.
16	Group formation for accumulating Social Capital and increasing Family Incomes	The Programme is going on.

Extension and Training activities under FLD

Sl. No.	Activity	Date	No. of activities organized	Number of participants	Remarks
1.	**Field days**	**03.04.2015**	**01**	**40**	**i. Area Specific Mineral Mixture Supplementation for Deshi Milch Cows**
		14.04.2015	**01**	**29**	**ii. Rural Back Yard Poultry Farming with Improved Breeds**
		16.05.2015	**01**	**41**	**iii. Lost Cost Concentrate for Black Bengal Does**
		30.05.2015	**01**	**25**	**iv. Cultivation of All the Year Fruting Drumsticks (Var. PKM – 1)**
		12.06.2015	**01**	**56**	**v. Cultivation of Green Fodder like Rice Bean (Var. Bidhan – 2) and Sorghum (Var. MP Chari)**
		18.07.2015	**01**	**50**	**vi. Cultivation Practices of Dhaincha as a Green Manuring Crop**
		30.07.2015	**01**	**60**	**vii. Cutivation Practices of Green Fodders like Maize (Var. African Tall), Rice Bean (Var. Bidhan – 2) and Sorgum (Var. Jumbo)**
		13.08.2015	**01**	**51**	**viii. Nursery management for Horticultural Crops**
		15.09.2015	**01**	**60**	**ix. Composite fish culture**
		18.09.2015	**01**	**64**	**x. Integrated Pest Management in Kharif Crops**
		29.10.2015	**01**	**63**	**xi. Sowing of Rabi Oilseeds**

		14.11.2015	**01**	**61**	**xii. Land Preparation and Varieties for Rabi Pulses**
		08.12.2016	**01**	**60**	**xiii. Intercultural Operations for Rabi Oilseeds**
		09.01.2016	**01**	**42**	**xiv. Final Stages of Crop Growth for Rabi Oilseeds**
		15.02.2016	**01**	**40**	**xv. Intercultural Operations for Rabi Pulses**
		29.03.2016	**01**	**41**	**xvi. Final Stages, Harvesting, Storing and Processing of selected Rabi Pulses**
			(Total No. – 16)	**(Total No. – 783)**	
2.	**Farmers Training**	**22.06.2015;**	**01**	**18**	**i. FLD Training on Dhaincha**
		26.09.2015 to 27.09.2015 and 29.09.2015;	**01**	**23**	**ii. Improved Cultural Practices of Capsicum, Broccoli, Ornamental Cabbage, Lettuce**
		16.10.2015;	**01**	**40**	**iii. Improved Variety and Sowing of mustard**
		30.10.2015;	**01**	**24**	**iv. Improved Varieties of rabi pulses**
		03.11.2015;	**01**	**31**	**v. Sowing and Phosphate Management of Green Gram and Field Pea**
		07.11.2015;	**01**	**28**	**vi. Improved Variety and Sulpher Application in Rabi Oilseeds**
		09.11.2015;	**01**	**25**	**vii. Use of Bio-Fertilizers and Inorganic Phosphorus for Pulse Cultivation**
		26.11.2015;	**01**	**39**	**viii. Improved Variety and Sowing of Lentil and Chick Pea**
		28.11.2015;	**01**	**20**	**ix. Improved Fertilizer Management in Lentil and Field Pea**
		07.12.2015;	**01**	**33**	**x. Improved Variety and Irrigation Management in wheat cultivation**

		15.01.2016;	**01**	**10**	**xi. FLD Training on Low Cost Concentrate Supplement to Black Bengal Does**
		12.02.2016;	**01**	**29**	**xii. Seed Treatment and Phosphate Management of Black Gram**
		16.02.2016;	**01**	**30**	**xiii. Seed Treatment and Phosphate Management of Green Gram**
		18.02.2016;	**01**	**35**	**xiv. Land preparation and Sowing of Sesame**
		20.02.2016;	**01**	**25**	**xv. Fertilizer Management of Sesame**
		29.02.2016	**01**	**30**	**xvi. Group Approach for Economic activities and Social capital accumulation**
		01.03.2016.	**01**	**25**	**xvii. Use of Herbicides and Micro-Nutrients in Summer Pulses**
			(Total No. – 17)	**(Total No. – 465)**	
3.	**Media coverage**	**19.04.2015**	**01**	**Not assessed**	**i. Recorded Television Programme on Green Gram for E-Tv News**
		21.06.2015	**01**	**Not assessed**	**ii. Recorded Television Programme on Dhaincha for E-Tv News**
		14.07.2015	**01**	**Not assessed**	**iii. Live Radio Phone-In Programme on Group formation and Agricultural Loan for AIR**
		28.08.2015	**01**	**Not assessed**	**iv. Recorded Radio Programme on Dairy for AIR**
		29.08.2015	**01**	**Not assessed**	**v. Recorded Television Programme on Area Specific Mineral Mixture Supplementation and Fodder Cultivation for Doordarshan**
		02.01.2016	**01**	**Not assessed**	**vi. Live Radio Phone-In Programme on Intercultural Operations of Wheat for AIR**
		18.02.2016	**01**	**Not assessed**	**vii. Recorded Television Programme**

					on Fodder Cultivation for E-Tv News
		28.02.2016	**01**	**Not assessed**	**viii. Recorded Television Programme on Improved Rural poultry Breeds for E-Tv News**
		29.02.2016	**01**	**Not assessed**	**ix. Recorded Television Programme on Area Specific mineral Mixture for feeding the Animals for E-Tv News**
		29.02.2016	**01**	**Not assessed**	**x. Recorded Television Programme on Low Cost Concentrate for Goat Cultivation for E-Tv News**
		16.03.2016	**01**	**Not assessed**	**xi. Recorded Radio Programme on Rural Livelihood Development through Back Yard Farming for AIR**
		24.03.2016	**01** **(Total No. – 12)**	**Not assessed**	**xii. Recorded Television Programme on Water Quality Management in broiler for Doordarshan**
4.	**Training for extension functionaries**	**04.06.2015 to 05.06.2015**	**01**	**17**	**i. Cultivation of Drumsticks Var. PKM – 1 (Barmasia Variety)**
		05.06.2015	**01**	**17**	**ii. Pest and Disease Management of Moringa**
		05.06.2015	**01**	**17**	**iii. Marketing Mechanism of produced Drumsticks**
		29.01.2016	**01**	**33**	**iv. Crop Diversifications of Horticultural Crops**
		28.03.2016	**01** **(Total No. – 05)**	**30** **(Total No. – 114)**	**v. Crop Diversification through cultivation of Pulses and Oilseeds**

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

A) Farmers and farm women (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
I. Crop Production													
Weed Management													
Resource Conservation Technologies	01	32	00	32	03	00	03	00	00	00	35	00	35
Cropping Systems													
Crop Diversification	03	81	00	81	12	00	12	10	00	10	103	00	103
Integrated Farming													
Water management	01	09	00	09	16	00	16	08	00	08	33	00	33
Seed production	04	76	00	76	45	00	45	11	00	11	132	00	132
Nursery management													
Integrated Crop Management													

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
Fodder production													
Production of organic inputs	02	02	00	02	02	00	02	14	00	14	18	00	18
Others, (cultivation of crops)													
II. Horticulture													
a) Vegetable Crops													
Integrated nutrient management													
Water management													
Enterprise development													
Skill development													
Yield increment													
Production of low volume and high value crops	03	07	00	07	31	00	31	25	00	25	63	00	63
Off-season vegetables													
Nursery raising													
Export potential vegetables													
Grading and standardization													
Protective cultivation (Green Houses, Shade Net etc.)													
Others, if any (Cultivation of Vegetable)													
Others, if any (Crop diversification)	02	26	20	46	11	01	12	03	00	03	40	21	61
Training and Pruning													
b) Fruits													
Layout and Management of Orchards	02	00	13	13	00	12	12	24	05	29	24	30	54
Cultivation of Fruit	01	19	00	19	04	00	04	00	00	00	23	00	23
Management of young plants/orchards													
Rejuvenation of old orchards													
Export potential fruits													
Micro irrigation systems of orchards													
Plant propagation techniques													
Others, if any(INM)													
c) Ornamental Plants													
Nursery Management													
Management of potted plants													
Export potential of ornamental plants													
Propagation techniques of Ornamental Plants													
Others, if any													
d) Plantation crops													
Production and Management technology													
Processing and value addition													
Others, if any													
e) Tuber crops													
Production and Management technology													
Processing and value addition													
Others, if any													
f) Spices													
Production and Management technology													
Processing and value addition													
Others, if any													

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
g) Medicinal and Aromatic Plants													
Nursery management													
Production and management technology	01	12	00	12	01	00	01	01	00	01	14	00	14
Post harvest technology and value addition													
Others, if any													
III. Soil Health and Fertility Management													
Soil fertility management	02	15	00	15	15	00	15	19	00	19	49	00	49
Soil and Water Conservation													
Integrated Nutrient Management	03	33	00	33	29	00	29	19	00	19	81	00	81
Production and use of organic inputs													
Management of Problematic soils													
Micro nutrient deficiency in crops	02	27	02	29	05	00	05	00	00	00	32	02	34
Nutrient Use Efficiency													
Soil and Water Testing													
Others, if any													
IV. Livestock Production and Management													
Dairy Management	02	20	00	20	03	00	03	54	00	54	77	00	77
Poultry Management	03	14	11	25	16	07	23	31	11	42	61	29	90
Piggery Management													
Rabbit Management													
Disease Management	02	00	00	00	00	00	00	28	32	60	28	32	60
Feed management	03	32	00	32	09	00	09	09	11	20	59	11	70
Production of quality animal products													
Others, if any Goat farming	01	07	09	16	02	11	13	00	01	01	09	21	30
Others, if any Sheep farming	01	00	00	00	00	00	00	18	12	30	18	12	30
V. Home Science/Women empowerment													
Household food security by kitchen gardening and nutrition gardening	02	00	31	31	00	19	19	00	09	09	00	59	59
Design and development of low/minimum cost diet													
Designing and development for high nutrient efficiency diet	01	02	16	18	02	06	08	00	00	00	04	22	26
Minimization of nutrient loss in processing													
Gender mainstreaming through SHGs													
Storage loss minimization techniques													
Enterprise development													
Value addition	01	00	03	03	00	17	17	00	05	05	00	25	25
Income generation activities for empowerment of rural Women													
Location specific drudgery reduction technologies													
Rural Crafts	02	00	11	11	00	14	14	00	20	20	00	45	45
Capacity building													
Women and child care	01	00	09	09	00	11	11	00	05	05	00	25	25
Others, if any													
VI. Agril. Engineering													
Installation and maintenance of													

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
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	04	51	21	72	30	07	37	11	02	13	92	30	122
Integrated Disease Management	03	14	13	27	10	14	24	38	19	57	62	46	108
Bio-control of pests and diseases	02	30	09	39	08	10	18	00	02	02	38	21	59
Production of bio control agents and bio pesticides													
Others, if any	02	51	00	51	02	00	02	06	00	06	59	00	59
VIII. Fisheries													
Integrated fish farming	02	14	11	25	12	13	25	04	05	09	30	29	59
Carp breeding and hatchery management	01	08	00	08	05	00	05	15	00	15	28	00	28
Carp fry and fingerling rearing	01	25	00	25	05	00	05	00	00	00	30	00	30
Composite fish culture & fish disease	03	32	12	44	25	16	41	18	03	21	75	25	100
Fish feed preparation & its application to fish pond, like nursery, rearing & stocking pond													
Hatchery management and culture of freshwater prawn													
Breeding and culture of ornamental fishes													
Portable plastic carp hatchery													
Pen culture of fish and prawn													
Shrimp farming													
Edible oyster farming													
Pearl culture													
Fish processing and value addition													
Others, if any	01	05	16	21	02	07	09	00	02	02	07	27	34
IX. Production of Inputs at site													
Seed Production													
Planting material production													
Bio-agents production	01	25	00	25	03	00	03	00	00	00	28	00	28
Bio-pesticides production													
Bio-fertilizer production	02	14	00	14	37	00	37	13	00	13	64	00	64
Vermi-compost production	02	10	00	10	02	10	12	32	00	32	54	00	54
Organic manures production													
Production of fry and fingerlings													
Production of Bee-colonies and wax sheets													
Small tools and implements													
Production of livestock feed and fodder													
Production of Fish feed													
Others, if any													
X. Capacity Building and Group Dynamics													
Leadership development													

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
Group dynamics	02	58	00	58	04	00	04	03	00	03	65	00	65
Formation and Management of SHGs	02	47	00	47	35	00	35	12	00	12	94	00	94
Mobilization of social capital	01	07	11	18	02	06	08	00	04	04	09	21	30
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) Disaster Management	01	14	00	14	12	01	13	07	00	07	33	01	34
Crop Insurance	01	00	16	16	00	10	10	00	04	04	00	30	30
Rural Credit	01	00	13	13	00	12	12	00	02	02	00	27	27
TOTAL	**71**	**819**	**247**	**1066**	**391**	**204**	**595**	**433**	**154**	**587**	**1643**	**605**	**2248**

B) Rural Youth (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
Mushroom Production													
Bee-keeping													
Integrated farming													
Seed production													
Production of organic inputs													
Integrated Farming													
Planting material production													
Vermi-culture	01	01	00	01	02	00	02	00	00	00	03	00	03
Sericulture													
Protected cultivation of vegetable crops													
Commercial fruit production													
Repair and maintenance of farm machinery and implements													
Nursery Management of Horticulture crops	01	02	00	02	05	00	05	06	00	06	13	00	13
Training and pruning of orchards													
Value addition													
Production of quality animal products													
Dairying													
Sheep and goat rearing													
Quail farming													
Piggery													
Rabbit farming													
Poultry production	01	03	00	03	04	00	04	03	00	03	10	00	10
Ornamental fisheries													

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
Enterprise development													
Para vets	01	04	00	04	07	00	07	10	00	10	21	00	21
Para extension workers	01	20	00	20	05	00	05	00	00	00	25	00	25
Composite fish culture	01	08	00	08	07	00	07	04	00	04	19	00	19
Freshwater prawn culture													
Shrimp farming													
Pearl culture													
Cold water fisheries													
Fish harvest and processing technology													
Fry and fingerling rearing													
Small scale processing													
Post Harvest Technology													
Tailoring and Stitching													
Rural Crafts													
Animal Resource Development	01	09	00	09	07	00	07	04	00	04	20	00	20
Carp Breeding and Hatchery	01	02	00	02	08	00	08	04	00	04	14	00	14
Soil Testing	01	09	00	09	06	00	06	05	00	05	20	00	20
Horticulture as a source of Livelihood	01	11	00	11	13	00	13	00	00	00	24	00	24
TOTAL	**10**	**69**	**00**	**69**	**64**	**00**	**64**	**36**	**00**	**36**	**169**	**00**	**169**

C) Extension Personnel (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
Productivity enhancement in field crops	02	05	01	06	17	02	19	05	10	15	27	13	40
Crop diversification of Hotrticultural Crops	03	34	14	48	14	12	26	04	12	16	52	38	90
Value addition													
Integrated Pest Management	02	08	14	22	04	12	16	01	13	14	13	39	52
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													

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
Care and maintenance of farm machinery and implements													
WTO and IPR issues													
Management in farm animals	01	07	14	21	02	08	10	00	03	03	09	25	34
Livestock feed and fodder production													
Household food security	02	20	01	21	06	02	08	01	10	11	27	13	40
Women and Child care													
Low cost and nutrient efficient diet designing													
Production and use of organic inputs													
Gender mainstreaming through SHGs													
Concept, Formation and Functioning of KVK	02	16	17	33	03	11	14	01	02	03	20	30	50
Marketing Mechanisms of Farm Produce	01	01	01	02	02	02	04	01	10	11	04	13	17
Kisan Credit Cards	01	07	13	20	02	09	11	00	03	03	09	25	34
Fish based Integrated Farming System	01	07	13	20	01	10	11	00	02	02	08	25	33
Fishery for Livelihood Development	01	00	19	19	00	01	01	00	00	00	00	20	20
Soil Health and Sustainable Agriculture	01	06	13	19	00	03	03	01	08	09	07	24	31
Crop Diversification	01	23	01	24	04	01	05	01	00	01	28	02	30
Animal Resource Development	01	00	20	20	00	01	01	00	00	00	00	21	21
Refreshment Training of AI Workers	01	18	00	18	07	00	07	02	00	02	27	00	27
Fish Production for Livelihood Development	01	00	19	19	00	11	11	00	00	00	00	30	30
Fish based Integrated Farming System	01	07	13	20	01	10	11	00	02	02	08	25	33
TOTAL	**22**	**112**	**144**	**256**	**28**	**69**	**97**	**07**	**40**	**47**	**147**	**253**	**400**

D) Farmers and farm women (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
I. Crop Production													
Weed Management													
Resource Conservation Technologies	01	00	00	00	00	00	00	30	05	35	30	05	35
Cropping Systems													
Crop Diversification	02	58	00	58	05	00	05	00	00	00	63	00	63
Integrated Farming													
Water management													
Seed production	01	03	00	03	14	02	16	00	02	02	17	04	21
Nursery management													
Integrated Crop Management													
Fodder production													
Production of organic inputs	01	03	00	03	07	02	09	03	00	03	13	02	15
Others, (cultivation of crops)													
II. Horticulture													
a) Vegetable Crops													
Integrated nutrient management													
Water management													
Enterprise development													
Skill development													
Yield increment													
Production of low volume and high													

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
value crops													
Off-season vegetables													
Nursery raising													
Export potential vegetables													
Grading and standardization													
Protective cultivation (Green Houses, Shade Net etc.)													
Others, if any (Cultivation of Vegetable)	02	02	00	02	22	00	22	16	00	16	40	00	40
Training and Pruning													
b) Fruits													
Layout and Management of Orchards													
Cultivation of Fruit	01	05	00	05	13	23	36	01	00	01	19	23	42
Management of young plants/orchards													
Rejuvenation of old orchards													
Export potential fruits													
Micro irrigation systems of orchards													
Plant propagation techniques													
Others, if any(INM)													
c) Ornamental Plants													
Nursery Management													
Management of potted plants													
Export potential of ornamental plants													
Propagation techniques of Ornamental Plants													
Others, if any													
d) Plantation crops													
Production and Management technology													
Processing and value addition													
Others, if any													
e) Tuber crops													
Production and Management technology													
Processing and value addition													
Others, if any													
f) Spices													
Production and Management technology													
Processing and value addition													
Others, if any													
g) Medicinal and Aromatic Plants													
Nursery management													
Production and management technology													
Post harvest technology and value addition													
Others, if any													
III. Soil Health and Fertility Management													
Soil fertility management													
Soil and Water Conservation													
Integrated Nutrient Management	01	27	00	27	01	00	01	00	00	00	28	00	28
Production and use of organic inputs													
Management of Problematic soils													
Micro nutrient deficiency in crops													

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
Nutrient Use Efficiency													
Soil and Water Testing													
Others, if any (Use of Fertilizer in Rainfed Situation)	01	00	00	00	00	00	00	18	12	30	18	12	30
IV. Livestock Production and Management													
Dairy Management													
Poultry Management	02	44	00	44	13	00	13	05	00	05	62	00	62
Piggery Management	02	00	00	00	00	00	00	00	100	100	00	100	100
Rabbit Management													
Disease Management	02	14	00	14	00	00	00	41	09	50	55	09	64
Feed management													
Production of quality animal products													
Others, if any Goat farming	01	00	00	00	00	00	00	43	07	50	43	07	50
V. Home Science/Women empowerment													
Household food security by kitchen gardening and nutrition gardening	01	00	17	17	00	11	11	00	02	02	00	30	30
Design and development of low/minimum cost diet													
Designing and development for high nutrient efficiency diet	03	06	11	17	02	07	09	00	103	103	08	121	129
Minimization of nutrient loss in processing													
Gender mainstreaming through SHGs													
Storage loss minimization techniques													
Enterprise development													
Value addition													
Income generation activities for empowerment of rural Women													
Location specific drudgery reduction technologies													
Rural Crafts													
Capacity building													
Women and child care	01	00	00	00	00	00	00	00	50	50	00	50	50
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	02	25	00	25	15	00	15	60	00	60	100	00	100
Integrated Disease Management													
Bio-control of pests and diseases													
Production of bio control agents and bio pesticides													
Others, if any													
VIII. Fisheries													
Integrated fish farming													

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
Carp breeding and hatchery management													
Carp fry and fingerling rearing													
Composite fish culture & fish disease													
Fish feed preparation & its application to fish pond, like nursery, rearing & stocking pond													
Hatchery management and culture of freshwater prawn													
Breeding and culture of ornamental fishes													
Portable plastic carp hatchery													
Pen culture of fish and prawn													
Shrimp farming													
Edible oyster farming													
Pearl culture													
Fish processing and value addition													
Others, if any													
IX. Production of Inputs at site													
Seed Production													
Planting material production													
Bio-agents production													
Bio-pesticides production													
Bio-fertilizer production													
Vermi-compost production													
Organic manures production													
Production of fry and fingerlings													
Production of Bee-colonies and wax sheets													
Small tools and implements													
Production of livestock feed and fodder													
Production of Fish feed													
Others, if any													
X. Capacity Building and Group Dynamics													
Leadership development													
Group dynamics	01	07	00	07	03	00	03	21	00	21	31	00	31
Formation and Management of SHGs													
Mobilization of social capital	01	02	21	23	00	16	16	00	04	04	02	41	43
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) Crop Insurance	01	00	00	00	11	02	13	20	03	23	31	05	36
TOTAL	**27**	**196**	**49**	**245**	**106**	**63**	**169**	**258**	**297**	**555**	**560**	**409**	**969**

E) RURAL YOUTH (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
Mushroom Production													
Bee-keeping													
Integrated farming													
Seed production													
Production of organic inputs													
Integrated Farming													
Planting material production													
Vermi-culture													
Sericulture													
Protected cultivation of vegetable crops													
Commercial fruit production													
Repair and maintenance of farm machinery and implements													
Nursery Management of Horticulture crops													
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													
Freshwater prawn culture													
Shrimp farming													
Pearl culture													
Cold water fisheries													
Fish harvest and processing technology													
Fry and fingerling rearing													
Small scale processing													
Post Harvest Technology													
Tailoring and Stitching													
Rural Crafts													
Others, if any													
TOTAL													

F) Extension Personnel (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
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													
Household food security													
Women and Child care													
Low cost and nutrient efficient diet designing													
Production and use of organic inputs													
Gender mainstreaming through SHGs													
Crop intensification													
TOTAL													

G) Consolidated table (ON and OFF Campus)

i. Farmers & Farm Women

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
I. Crop Production													
Weed Management													
Resource Conservation Technologies	02	32	00	32	03	00	03	30	05	35	65	05	70
Cropping Systems													
Crop Diversification	05	139	00	139	17	00	17	10	00	10	166	00	166
Integrated Farming													
Water management	01	09	00	09	16	00	16	08	00	08	33	00	33
Seed production	05	79	00	79	59	02	61	11	02	13	149	04	153
Nursery management													
Integrated Crop Management													
Fodder production													

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
Production of organic inputs	03	05	00	05	09	02	11	17	00	17	31	02	33
Others, (cultivation of crops)													
II. Horticulture													
a) Vegetable Crops													
Integrated nutrient management													
Water management													
Enterprise development													
Skill development													
Yield increment													
Production of low volume and high value crops	03	07	00	07	31	00	31	25	00	25	63	00	63
Off-season vegetables													
Nursery raising													
Export potential vegetables													
Grading and standardization													
Protective cultivation (Green Houses, Shade Net etc.)													
Others, if any (Cultivation of Vegetable)	02	02	00	02	22	00	22	16	00	16	40	00	40
Others, if any (Crop Diversification)	02	26	20	46	11	01	12	03	00	03	40	21	61
Training and Pruning													
b) Fruits													
Layout and Management of Orchards	02	00	13	13	00	12	12	24	05	29	24	30	54
Cultivation of Fruit	02	24	00	24	17	23	40	01	00	01	42	23	65
Management of young plants/orchards													
Rejuvenation of old orchards													
Export potential fruits													
Micro irrigation systems of orchards													
Plant propagation techniques													
Others, if any(INM)													
c) Ornamental Plants													
Nursery Management													
Management of potted plants													
Export potential of ornamental plants													
Propagation techniques of Ornamental Plants													
Others, if any													
d) Plantation crops													
Production and Management technology													
Processing and value addition													
Others, if any													
e) Tuber crops													
Production and Management technology													
Processing and value addition													
Others, if any													
f) Spices													
Production and Management technology													
Processing and value addition													
Others, if any													

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
g) Medicinal and Aromatic Plants													
Nursery management													
Production and management technology	01	12	00	12	01	00	01	01	00	01	14	00	14
Post harvest technology and value addition													
Others, if any													
III. Soil Health and Fertility Management													
Soil fertility management	02	15	00	15	15	00	15	19	00	19	49	00	49
Soil and Water Conservation													
Integrated Nutrient Management	04	60	00	60	30	00	30	19	00	19	109	00	109
Production and use of organic inputs													
Management of Problematic soils													
Micro nutrient deficiency in crops	02	27	02	29	05	00	05	00	00	00	32	02	34
Nutrient Use Efficiency													
Soil and Water Testing													
Others, if any (Use of Fertilizers in rainfed Situations)	01	00	00	00	00	00	00	18	12	30	18	12	30
IV. Livestock Production and Management													
Dairy Management	02	20	02	22	03	00	03	54	00	54	77	02	79
Poultry Management	05	58	11	69	29	07	36	36	11	47	123	29	152
Piggery Management	02	00	00	00	00	00	00	00	100	100	00	100	100
Rabbit Management													
Disease Management	04	14	00	14	00	00	00	69	41	110	83	41	124
Feed management	03	32	00	32	09	00	09	09	11	20	59	11	70
Production of quality animal products													
Others, if any Goat farming	02	07	09	16	02	11	13	43	08	51	52	28	80
Others, if any Sheep farming	01	00	00	00	00	00	00	18	12	30	18	12	30
V. Home Science/Women empowerment													
Household food security by kitchen gardening and nutrition gardening	03	00	48	48	00	30	30	00	11	11	00	89	89
Design and development of low/minimum cost diet													
Designing and development for high nutrient efficiency diet	04	08	27	35	04	13	17	00	103	103	12	143	155
Minimization of nutrient loss in processing													
Gender mainstreaming through SHGs													
Storage loss minimization techniques													
Enterprise development													
Value addition	01	00	03	03	00	17	17	00	05	05	00	25	25
Income generation activities for empowerment of rural Women													
Location specific drudgery reduction technologies													
Rural Crafts	02	00	11	11	00	14	14	00	20	20	00	45	45
Capacity building													

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
Women and child care	02	00	09	09	00	11	11	00	55	55	00	75	75
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	06	76	21	97	45	07	52	71	02	73	192	30	222
Integrated Disease Management	03	14	13	27	10	14	24	38	19	57	62	46	108
Bio-control of pests and diseases	02	30	09	39	08	10	18	00	02	02	38	21	59
Production of bio control agents and bio pesticides													
Others, if any	02	51	00	51	02	00	02	06	00	06	59	00	59
VIII. Fisheries													
Integrated fish farming	02	14	11	25	12	13	25	04	05	09	30	29	59
Carp breeding and hatchery management	01	08	00	08	05	00	05	15	00	15	28	00	28
Carp fry and fingerling rearing	01	25	00	25	05	00	05	00	00	00	30	00	30
Composite fish culture & fish disease	03	32	12	44	25	16	41	18	03	21	75	25	100
Fish feed preparation & its application to fish pond, like nursery, rearing & stocking pond													
Hatchery management and culture of freshwater prawn													
Breeding and culture of ornamental fishes													
Portable plastic carp hatchery													
Pen culture of fish and prawn													
Shrimp farming													
Edible oyster farming													
Pearl culture													
Fish processing and value addition													
Others, if any	01	05	16	21	02	07	09	00	02	02	07	27	34
IX. Production of Inputs at site													
Seed Production													
Planting material production													
Bio-agents production	01	25	00	25	03	00	03	00	00	00	28	00	28
Bio-pesticides production													
Bio-fertilizer production	02	14	00	14	37	00	37	13	00	13	64	00	64
Vermi-compost production	02	10	00	10	02	10	12	32	00	32	54	00	54
Organic manures production													
Production of fry and fingerlings													
Production of Bee-colonies and wax sheets													
Small tools and implements													
Production of livestock feed and													

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
fodder													
Production of Fish feed													
Others, if any													
X. Capacity Building and Group Dynamics													
Leadership development													
Group dynamics	03	65	00	65	07	00	07	24	00	24	96	00	96
Formation and Management of SHGs	02	47	00	47	35	00	35	12	00	12	94	00	94
Mobilization of social capital	02	11	32	41	02	22	24	00	08	08	11	62	73
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) Disater Management	01	14	00	14	12	01	13	07	00	07	33	01	34
Crop Insurance	02	00	16	16	11	12	23	20	07	27	31	35	66
Rural Credit	01	00	13	13	00	12	12	00	02	02	00	27	27
TOTAL	**98**	**1015**	**296**	**1311**	**497**	**267**	**764**	**691**	**451**	**1142**	**2203**	**1014**	**3217**

H. RURAL YOUTH (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
Mushroom Production													
Bee-keeping													
Integrated farming													
Seed production													
Production of organic inputs													
Integrated Farming													
Planting material production													
Vermi-culture	01	01	00	01	02	00	02	00	00	00	03	00	03
Sericulture													
Protected cultivation of vegetable crops													
Commercial fruit production													
Repair and maintenance of farm machinery and implements													
Nursery Management of Horticulture crops	01	02	00	02	05	00	05	06	00	06	13	00	13
Training and pruning of orchards													
Value addition													
Production of quality animal products													
Dairying													
Sheep and goat rearing													
Quail farming													

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
Piggery													
Rabbit farming													
Poultry production	01	03	00	03	04	00	04	03	00	03	10	00	10
Ornamental fisheries													
Enterprise development													
Para vets	01	04	00	04	07	00	07	10	00	10	21	00	21
Para extension workers	01	20	00	20	05	00	05	00	00	00	25	00	25
Composite fish culture	01	08	00	08	07	00	07	04	00	04	19	00	19
Freshwater prawn culture													
Shrimp farming													
Pearl culture													
Cold water fisheries													
Fish harvest and processing technology													
Fry and fingerling rearing													
Small scale processing													
Post Harvest Technology													
Tailoring and Stitching													
Rural Crafts													
Animal Resource Development	01	09	00	09	07	00	07	04	00	04	20	00	20
Carp Breeding and Hatchery	01	02	00	02	08	00	08	04	00	04	14	00	14
Soil Testing	01	09	00	09	06	00	06	05	00	05	20	00	20
Horticulture as a source of Livelihood	01	11	00	11	13	00	13	00	00	00	24	00	24
TOTAL	**10**	**69**	**00**	**69**	**64**	**00**	**64**	**36**	**00**	**36**	**169**	**00**	**169**

I. Extension Personnel (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
Productivity enhancement in field crops	02	05	01	06	17	02	19	05	10	15	27	13	40
Crop diversification of Hotrticultural Crops	03	34	14	48	14	12	26	04	12	16	52	38	90
Value addition													
Integrated Pest Management	02	08	14	22	04	12	16	01	13	14	13	39	52
Integrated Nutrient management													
Rejuvenation of old orchards													
Protected cultivation technology													
Formation and Management of SHGs													

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
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	01	07	14	21	02	08	10	00	03	03	09	25	34
Livestock feed and fodder production													
Household food security	02	20	01	21	06	02	08	01	10	11	27	13	40
Women and Child care													
Low cost and nutrient efficient diet designing													
Production and use of organic inputs													
Gender mainstreaming through SHGs													
Concept, Formation and Functioning of KVK	02	16	17	33	03	11	14	01	02	03	20	30	50
Marketing Mechanisms of Farm Produce	01	01	01	02	02	02	04	01	10	11	04	13	17
Kisan Credit Cards	01	07	13	20	02	09	11	00	03	03	09	25	34
Fish based Integrated Farming System	01	07	13	20	01	10	11	00	02	02	08	25	33
Fishery for Livelihood Development	01	00	19	19	00	01	01	00	00	00	00	20	20
Soil Health and Sustainable Agriculture	01	06	13	19	00	03	03	01	08	09	07	24	31
Crop Diversification	01	23	01	24	04	01	05	01	00	01	28	02	30
Animal Resource Development	01	00	20	20	00	01	01	00	00	00	00	21	21
Refreshment Training of AI Workers	01	18	00	18	07	00	07	02	00	02	27	00	27
Fish Production for Livelihood Development	01	00	19	19	00	11	11	00	00	00	00	30	30
Fish based Integrated Farming System	01	07	13	20	01	10	11	00	02	02	08	25	33
TOTAL	**22**	**112**	**144**	**256**	**28**	**69**	**97**	**07**	**40**	**47**	**147**	**253**	**400**

J) Vocational training programmes for Rural Youth

Details of training programmes for Rural Youth

Crop / Enterprise	Identified Thrust Area	Training title*	Duration (days)	No. of Participants			Self employed after training			Number of persons employed else where
				Male	Female	Total	Type of units	Number of units	Number of persons employed	
Vermi-composting	Organic Input Production	Preparation of Vermicompost in large Scale for Entrepreneurship Development	20	03	00	03	Large Scale Vermi-compost Unit	01	01	02
Horticultural Crops	Recent Advances in Horticulture	Horticulture as a Source of Livelihood	02	24	00	24	Orchards and Nurseries	04	20	04
Cattles, Poultry Birds, Goats	Recent Advances in Animal Science	Animal Resource Development	02	20	00	20	Small scale Dairy, Poultry	05	15	05

							and Goatery Units			
Fishery	Recent Advances in Fish Culture	Fishery Activity as a Source of Livelihood	02	19	00	19	Composite Fish Culture	10	18	01
Horticultural Nursery	Nursery Management of Horticultural Crops	Nursery and Its Management	15	13	00	13	Horticultural Nursery	09	09	04
Agricultural Inputs	Promotion and Marketing of Agricultural Inputs	Tata Rallis Agri Input Training Scheme (TRAITS) Phase - I	10	25	00	25	Service	01	25	00
Analysis of Soil Sample and Preparation of Soil Health Cards	Analysis of Soil samples	Analysis of Soil and preparation of Soil Health Card	21	20	00	20	Soil Analysis and Soil Health Card Preparation Unit	03	05	15
Poultry Birds	Scientific Methods of Animal Rearing	Broiler Management	15	10	00	10	Rural Poultry Units	06	06	04
Private Para-Vets	Service as Private Para-Vets	Capacity building of Rural Youths as Private Para-Vets	30	21	00	21	Private Para-Vets	08	08	13
Carp Breeding	Scientific Method of Carp Breeding and Hatchery Management	Scientific Method of Carp Breeding in Hatchery	15	14	00	14	Fish Hatchery	03	06	08
Total			**132**	**169**	**00**	**169**		**56**	**113**	**56**

K) Sponsored Training Programmes

Sl. No.	Title	Thematic area	Month	Duration (days)	Client	No. of courses	No. of Participants									Sponsoring Agency
							Male			Female			Total			
					PF/RY/EF		Others	SC	ST	Others	SC	ST	Others	SC	ST	Total	
01.	Improved Agro Technology for Homestead Papaya and Drum Sticks Cultivation	Crop Diversification	April	01	PF & PFW	01	05	13	01	00	23	00	05	36	01	42	Kabi Guru Prakalpa, Dwaranda, Birbhum
02.	Recent Agro Technology in Pulse and Oil Seed Production in Kharif Season	rop Diversification	April	01	PF	01	27	03	00	00	00	00	27	03	00	30	ADA (Nanoor), Dept. of Agriculture, Govt. of W. B.
03.	Preparation and Use of Vermi-Compost in Homestead Garden	Organic Input Production	April	01	PF & PFW	01	03	07	03	00	02	00	03	09	03	15	Kabi Guru Prakalpa, Dwaranda, Birbhum

04.	Poultry Disease and Its Prevention	Disease Management of Poultry Birds	April	01	PF	01	14	00	00	00	00	00	14	00	00	14	Rural Training Centre, Allahabad Bank
05.	Mechanism of KVK Functioning and Its Linkages with Financial Institutions	Linkage between KVK and Financial Institutions	April	01	EF	01	16	03	01	05	00	00	21	03	01	25	BIRD, NABARD, Birbhum
06.	Fish Production for Livelihood Development	Recent Advances in Fishery	May	02	EF	01	00	00	00	19	01	00	19	01	00	20	PIA-IWMP-I, Barua Gopalpur Watershed, DDA (Soil and Water Management), Dept. of Agriculture, Govt. of W. B., Suri, Birbhum
07.	Animal Resource Development	Improved Practices for Livestock Production	May	02	EF	01	00	00	00	20	01	00	20	01	00	21	PIA-IWMP-I, Barua Gopalpur Watershed, DDA (Soil and Water Management), Dept. of Agriculture, Govt. of W. B., Suri, Birbhum
08.	Fishery Activity as a Source of Livelihood	Improved Fishery Production Technology	May	02	RY	01	08	07	04	00	00	00	08	07	04	19	PIA-IWMP-I, Barua Gopalpur Watershed, DDA (Soil and Water Management), Dept. of Agriculture, Govt. of W. B., Suri, Birbhum
09.	Animal Resource Development	Recent Advances in Livestock Production	May	02	RY	01	09	07	04	00	00	00	09	07	04	20	PIA-IWMP-I, Barua Gopalpur Watershed, DDA (Soil and Water Management), Dept. of Agriculture, Govt. of W. B., Suri, Birbhum
10.	Cultivation of Drum Sticks (Barmasia Variety)	Crop Diversification	June	02	EF	01	01	02	01	01	02	10	02	04	11	17	Deputy Director, Horticulture, Govt. of West Bengal, Suri
11.	Pest and Disease Management of Moringa	IPM of Vegetables	June	01	EF	01	01	01	02	01	01	10	02	04	11	17	Deputy Director, Horticulture, Govt. of West Bengal, Suri
12.	Marketing Mechanism of Produced Drum Sticks	Market Led Extension	June	01	EF	01	01	01	02	01	01	10	02	04	11	17	Deputy Director, Horticulture, Govt. of West Bengal, Suri

13.	Tata Rallis Agri Input Training Scheme (TRAITS) Phase I	Promotion and Marketing of Agri Inputs	August	10	Ry	01	20	05	00	00	00	00	20	05	00	25	Tata Rallis India Limited
14.	Dairy Farming	mproved Livestock Production	August	01	PF	01	00	00	52	00	00	00	00	00	52	52	ICAR-NDRI-ERS, Kalyani
15.	Multiplication of *Azolla* and Its Use in Agriculture and Allied Fields	Organic Input production	Septembe r	04	PF	01	12	17	05	00	00	00	12	17	05	34	NABARD, Birbhum
16.	Establishment of Commercial Orchard in Upland Situation as One of the Component of Dryland Horticulture and Management of Orchard	Dry Land Horticulture	Septembe r	04	PF	01	00	00	24	00	00	00	00	00	24	24	NABARD, Birbhum
17.	Improved Package and Practices of Beet, Carrot, French Beans, Broccoli, Capsicum	Crop Diversification	Septembe r	04	PF	01	02	05	13	00	00	00	02	05	13	20	NABARD, Birbhum
18.	Disaster Management with Especial Reference to agriculture and Allied Sectors	Disaster Management	October	03	PF & PF W	01	14	12	07	00	01	00	14	13	07	34	NABARD, Birbhum
19.	Use of Fertilizer in Rainfed Farming	Integrated Nutrient Management	Novembe r	01	PF & PF W	01	00	00	18	00	00	12	00	00	30	30	Surul Supreetee Sangha
20.	Development of Marketing Channels for SHG Products	Market led Extension	Decembe r	02	PF	01	28	16	07	00	00	00	28	16	07	51	NABARD, Birbhum
21.	Low Cost Feed Preparation for Poultry Feed	eed Preparation for Poultry Birds	Decembe r	04	PF	01	19	09	02	00	00	00	19	09	02	30	NABARD, Birbhum
22.	Identification of Different Bio-Pesticides and Seed borne Diseases and their Treatments	Bio-Pesticide Preparation	Decembe r	03	PF	01	14	10	06	00	00	00	14	10	06	30	NABARD, Birbhum
23.	Fish based Integrated Farming System for More Economic Benifits	Integrated Farming System	January	01	EF	01	07	01	00	13	10	02	20	11	02	33	Lok Kalyan Parishad, Illumbazar, Birbhum
24.	Environment Friendly Protection Measures for Paddy Cultivation and Insect and Diseses Control Measures for Paddy Cultivation	Integrated Pest Management	January	01	EF	01	07	02	00	13	10	03	20	12	03	35	Lok Kalyan Parishad, Illumbazar, Birbhum
25.	Soil Health and Sustainable Agriculture	Soil Health Management	January	01	EF	01	06	00	01	13	03	08	19	03	09	31	Lok Kalyan Parishad, Illumbazar, Birbhum
26.	Seed Bed Preparation with SRI in Summer	Resource Conservation technologies	January	01	PF & PF W	01	00	00	30	00	00	05	00	00	35	35	Surul Supreeti Sangha, Surul, Sriniketan, Birbhum
27.	Establishment of Homestead Kitchen Garden and Cultivation of Various Nutritious Vegetables for enhancement of Nutritional Security	Nutrition Gardening	February	01	PF W	01	00	00	00	12	11	06	12	11	06	29	Agricultural Training Centre, Ramakrishnaa Mission Aashrama, Narendrapur, Kolkata
28.	Crop Diversification through Pulse Cultivation replacing Summer Paddy	Crop Diversification	February	01	PF	01	31	02	00	00	00	00	31	02	00	33	ADA, Nanoor, Dept. of Agriculture, Govt. of West Bengal
29.	Identification and Control of Diseases in Livestocks with Prophylactic Measures	Disease Management in Animals	February	04	PF & PF W	01	00	00	18	00	00	12	00	00	30	30	NABARD, Birbhum
30.	Preparation of Orchard in the Back Yard and Homestead Farms for Nutritional Security	Preparation of Orchard	March	01	PF W	01	00	00	00	13	12	05	13	12	05	30	Agricultural Training Centre, Ramakrishna Mission Aashrama, Narendrapur, Kolkata

31.	Agricultural Loan, Kisan Credit Card and Pradhan Mantri Fasal Bima Yojana	Rural Credit and Crop Insurance	March	01	PF W	01	00	00	00	13	12	02	13	12	02	27	Agricultural Training Centre, Ramakrishna Mission Aashrama, Narendrapur, Kolkata
32.	Identification of Bio-Pesticides and Seed borne Diseases and their Management Practices	Bio-Pesticides	March	03	PF & PF W	01	04	05	00	09	10	02	13	15	02	30	NABARD, Birbhum
Total				**68**		**32**	**24 9**	**128**	**201**	**13 3**	**100**	**87**	**38 2**	**228**	**28 8**	**898**	

3.4. A. 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	625	158	783	45	18	63	670	176	846
Kisan Mela	01	1025	565	1590	06	02	08	1031	567	1598
Kisan Ghosthi										
Exhibition	05	311	529	840	30	10	40	341	539	880
Film Show	04	301	371	672	24	08	32	325	379	704
Method Demonstrations	01	61	107	168	06	02	08	67	109	176
Farmers Seminar	01	40	05	45	06	02	08	46	07	53
Workshop	01	55	00	55	05	02	07	60	02	62
Group meetings										
Lectures delivered as resource persons										
Advisory Services through SMS through National Farmers' Portal	32	25647	10861	36508	160	64	224	25807	10925	36732
Scientific visit to farmers field	151	445	207	652	45	18	63	490	225	715
Farmers visit to KVK	164	287	109	396	45	18	63	332	127	459
Diagnostic visits										
Exposure visits	03	119	00	119	06	02	08	125	02	127
Ex-trainees Sammelan										
Soil health Camp										
Animal Health Camp	09	250	19	269	45	18	63	295	37	332
Agri mobile clinic										
Soil test campaigns	10	760	456	1216	20	06	26	780	482	1262
Farm Science Club Conveners meet	03	150	35	185	18	06	24	168	59	227
Self Help Group Conveners meetings	04	111	101	211	24	08	32	135	109	244
Mahila Mandals Conveners meetings										

Awareness Camps in Schools	03	121	25	146	05	02	07	126	27	153
Celebration of important days (specify) Jai Kisan Jai Vigyan Diwas	01	59	07	65	06	02	08	65	09	74
Any Other (Specify) Celebration of World Veteriary Day	02	43	07	50	06	02	08	49	09	58
Total	**412**	**30,410**	**13,600**	**44,010**	**502**	**190**	**692**	**30,912**	**13,790**	**44,702**

B. Other Extension activities

Nature of Extension Activity	No. of activities
Newspaper coverage	**04**
Radio talks	**13**
TV talks	**16**
Popular articles	**05**
Extension Literature	**16**
Other, if any Ansswers to the Questions of the readers in the Section "Jaldi Jabab (Quick Answers)" published in "Chasher Disha" of Anandabazar Patrika, South Bengal edition in every Wednesday on various issues related to Agriculture and Allied Sectors.	**07**

3.5 Production and supply of Technological products

Village Seed

Crop	Variety	Quantity of Seed (q)	Value (Rs)	Provided to Number of Farmers
Paddy	PNR – 381, MTU-1010, IET-4786, IR-64, Rajendra Masuri, Pratiksha, MTU-7029, GB - 1	320.00	Yet to be sold	-
Wheat	HD 2824, PBW 343	192.00	5,31,000.00	430
Black Gram	WBU – 108, WBU - 109	74.00	2,32,000.00	802
Lentil	WBL- 77	725.00	70,000.00	340
Sesame	Sabitri	64.00	1,43,500.00	853
Green Gram	Samrat	84.00	2685.00	-
Linseed	Deepika	40.00	535.00	-
Field Pea		77.00		
Total		**1576.00**	**9,79,720.00**	**2,425**

KVK farm

Crop	Variety	Quantity of Seed (q)	Value (Rs)	Number of Farmers Provided
Field Pea	Prabhat	0.40	1,200.00	Kept in KVK go-down
Green Gram	PDM-84-139	0.30	3,150.00	10
Black Gram	WBU - 108	0.30	3,150.00	10
Black Gram	WBU - 108	0.10	1,000.00	Kep in KVK go-down
Mustard	B – 9	0.13	650.00	13
	Pusa Mahek	1.87	9,350.00	187
Linseed	Dipika	2.00	12,000.00	Kept in KVK go-down
Paddy	MTU – 1010, MTU – 7029, PNR – 381, Heera	0.825	2,475.00	13
Paddy	MTU – 7029, GB- 1, Pratiksha, Heera	7.00	21,000.00	Kept in KVK go-down
Dhaincha	Local Improved	0.92	3,680.00	20
Wheat	HD - 2824	5.00	17,500.00	25
Wheat	PBW - 343	5.00	17,500.00	Kept in KVK go-down
Ripened Mango Fruits	Himsagar, Amrapali, Mallika, Kohitoor, Golap Khas, Ranipasand, Bombai etc.	03.20	12,800.00	Sold to 122 numbers of persons.
Ripened Water Apple Fruits		00.89	2685.00	Sold to 31 numbers of persons.
Moosambi		107 pcs.	535.00	Sold to 10 numbers of persons.
Grand Total		**25.935**	**1.02,675.00**	**278**

Production of planting materials by the KVKs

Crop	Variety	No. of planting materials	Value (Rs.)	Provided to number of farmers
Vegetable seedlings				
Cauliflower	PAN - 3030	1000	2,000.00	06
Cabbage	Seminis – 111	2000	4,000.00	12
Tomato				
Brinjal				
Chilli	PAN - 1498	1000	3,000.00	08
Onion				
Others				
Broccoli	F – 1 Hybrid Fiesta	1000	3,000.00	15
Capsicum	Bharat, Mahabharat	1000	3,000.00	35
Drum Sticks	PKM - 1	100	2,000.00	7
Fruits				
Mango				
Guava				
Lime				
Papaya				
Banana				
Others				
Ornamental plants				

Medicinal and Aromatic				
Plantation				
Spices				
Turmeric				
Tuber				
Elephant yams				
Fodder crop saplings				
Forest Species				
Others, pl.specify				
Total		**6,100**	**17,000.00**	**83**

Production of Bio-Products

Name of product	Quantity Kg	Value (Rs.)	No. of Farmers
Bio Fertilizers - *Azolla*	307.5	15,375.00	20
Bio-pesticide			
Bio-fungicide			
Bio Agents - Earth-worm (*Eisenia foetidae*)	3500 No.	7,000.00	35
Others - Vermi-Compost	275.0	2,200.00	Used in KVK Flower and Vegetable garden.
Total		**24,575.00**	**55**

Production of livestock materials

Particulars of Live stock	Name of the breed	Number	Value (Rs.)	No. of Farmers
Dairy animals				
Cows				
Buffaloes				
Calves				
Others (Pl. specify)				
Poultry	Rhode Island Red (RIR) Vanaraja	20 25	2,500.00	7
Broilers	Broiler	200	27,000.00	15
Layers				
Duals (broiler and layer)				
Japanese Quail				
Turkey				
Emu				
Ducks				
Others (Pl. specify)				
Piggery				
Piglet				
Others (Pl. specify)				
Fisheries				
Indian carp	Rohu. Catla and Mrigal	1.5 lakhs Fry	3,000.00	10
Exotic carp	Silver Carp, Cyprinus and Grass Carp	0.5 lakhs Fry	1,000.00	03
Others (Pl. specify)				
Grand Total			**33,500.00**	**35**

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

Item	Title	Authors' Names	Number	Circulation
Research paper	**1.** "Importance of Ekangi (*Kaempferia galanga* L.) as Medicinal Plants – A Review", *International Journal of Innovative Research and Review (Online ISSN No. 2347-4424),* Vol. 3, No. 1, January – March, 2015, pp. 99 – 106.	Sudipa Nag and Subrata Mandal	**08 (Eight)**	-
	2. "Assessment of Ideal Crop Geometry for Yield Improvement of French Bean during Rabi Season under Irrigated Medium Land Situation of Birbhum District", *Agro Economist - An International Journal (Print ISSN No. 2350-0786 and Online ISSN No. 2394-8159),* Vol. 2, No. 1, June, 2015, pp. 49 – 55.	Dulal Chandra Manna and Prabuddha Ray		-
	3. "Challenges in Indian Agriculture and Its Implications for Organizing Extension", *International Journal of Social Science (Print ISSN No. 2249-6637 and Online ISSN No. 2321-5771), Vol. 4, No. 2 & 3,* June & September, 2015, pp. 201 – 215.	Prabuddha Ray and Sarthak Chowdhury,		-
	4. "Kisan Call Centre - A New Vista for Indian Agricultural Extension System", *International Journal of Social Science (Print ISSN No. 2249-6637 and Online ISSN No. 2321-5771), Vol. 4, No. 2 & 3,* June & September, 2015, pp. 171 – 183.	Dr. Prabuddha Ray and Prof. Sarthak Chowdhury		
	5. "Determination of Transplanting Time of the Capsicum Seedlings for Yield and Profit Maximization", *International Journal of Bioresource Science (ISSN No. 2347-9655), Vol. 2, Issue 2,* July, 2015, pp. 71 – 80.	Dulal Chandra Manna and Prabuddha Ray		
	6. "Knowledge Gain Profile of the Elephant Foot Yam Growers – A Study among the Trainees of RKVK, Birbhum", *Indian Agriculturist (ISSN No. 0019-4336),* Vo. 59, No. 1, 2015, pp. 47 – 53.	Dr. Prabuddha Ray and Prof. Sarthak Chowdhury		
	7. "Growth Attributes of Kharif Onion (*Allium cepa* L.) as Influenced by Combination of Organic and Inorganic Nutrients", Hort Flora Research Spectrum, Vol. 4, No. 3, September, 2015, pp. 289 – 290.	Joydip Mandal, Arun Sharma and Subrata Mandal		
	8. "Economic Liberalization and Agricultural Policies in the Context of Planning", *Economic Affairs (Print ISSN No. 0424-2513 and Online ISSN No. 0976-4666),* Vol. 60, No. 3, September, 2015, pp. 505 – 515.	Dr. Prabuddha Ray and Prof. Sarthak Chowdhury		
Seminar/conference / symposia papers	**1.** "Potentiality of Different Nutrient Sources with Special Emphasis to Phosphorus in Growth and Productivity of Summer Blackgram Cultivation under Lateritic Soil of Birbhum", presented at the National Seminar on "Soil Health Management and Food Security: Role of Soil Science Research and Education" on Oct 8-10 2015 organised by Indian Society of Soil Science and International Plant Nutrition Institute, Kolkata.	Subrata Mandal, Sourav Mondal and D. C. Manna	**06 (Six)**	-

	2. "Assessment of Nutrient Combination emphasizing Phosphorus on Summer Blackgram Cultivation under Lateritic Soil of Birbhum", *Book of Abstracts of the National Seminar on Soil Health: Key to Sustainable Agriculture*, organized by the Soil Science and Agricultural Chemistry Section, Palli Siksha Bhavana (Institute of Agriculture), Visva-Bharati from 14th. November – 15th. November, 2015, Paper Code T2-22, pp. 65.	Subrata Mandal, Sourav Mondal, Prabuddha Ray and D. C. Manna		
	3. "Participatory Message Development for Short Text Messaging (SMS) – A New Tool for Reaching the Client", *Book of Abstracts of the National Seminar on Health, Education and Women Empowerment*, organized by the A. K. Dasgupta Centre for Planning and Development, Department of Economics and Politics, Visva-Bharati from 20th. November – 21st. November, 2015, Session – 5, Serial No. 2.	Dr. Prabuddha Ray and Prof. Sarthak Chowdhury		
	4. "Improved Method of Elephant's Foot Yam Cultivation: A Successful Initiative taken up by the Rathindra KVK for Economic Stabilization of the Farmers", *Book of Abstracts of the National Seminar on Family Farming Challenges and Opportunities*, organized by the Department of Agricultural Extension, Agricultural Economics and Agricultural Statistics, Palli Siksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum from 5th. March – 6th. March, 2016.	Prabuddha Ray, Subrata Mandal and Dulal Chandra Manna		
	5. "Inclusive Innovation: A Shift in Innovation Paradigms for reaching the Un-reached Farmers", *Book of Abstracts of the National Seminar on Family Farming Challenges and Opportunities*, organized by the Department of Agricultural Extension, Agricultural Economics and Agricultural Statistics, Palli Siksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum from 5th. March – 6th. March, 2016.	Prabuddha Ray and Sarthak Chowdhury		
	6. "Crop Insurance in India: A Historical Transverse and Issues related to Extension Efforts for Resource Poor Farmers", *Book of Abstracts of the National Seminar on Family Farming Challenges and Opportunities*, organized by the Department of Agricultural Extension, Agricultural Economics and Agricultural Statistics, Palli Siksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum from 5th. March – 6th. March, 2016.	Prabuddha Ray and Sarthak Chowdhury		
Books	-	-	-	-
Bulletins	-	-	-	-
News letter	-	-	-	-
Popular Articles	**1.** "Dhan Chashey Anu-Sar Prayog (Micro-Nutrient Application in Paddy)", *Chasher Disha, South Bengal Edition, Ananda Bazar Patrika*, Page No. -18, 1st. July, 2015.	Subrata Mandal	**05 (Five)**	-
	2. "Matir Sasthya Card (Soil Health Card)", *Chasher Disha, South Bengal*	Subrata Mandal		

	Edition, Ananda Bazar Patrika, Page No. -14, 2nd. December, 2015. **3.** "Sonalika Cherey Natun Gamer Chash (Replacing Sonalika Wheat Variety with New Varieties)", *Chasher Disha, South Bengal Edition, Ananda Bazar Patrika,* Page No. - 20, 30th. December, 2015. **4.** "Aaloor Nabi Dhasa Abong Gora Pacha (Early Blight and Rot in Potato)", *Chasher Disha, South Bengal Edition, Ananda Bazar Patrika,* Page No. -18, 28th. January, 2016. **5.** "Basantey Moong abong Kalai – er Chash (Cultivation of Green Gram and Black Gram in Spring)", *Chasher Disha, South Bengal Edition, Ananda Bazar Patrika,* Page No. -18, 30th. January, 2016.	Subrata Mandal Subrata Mandal Subrata Mandal		
Book Chapter	**1.** "Improved Method of Elephant's Foot Yam Cultivation: A Successful Initiative taken up by the Rathindra KVK for Economic Stabilization of the Farmers", *Family Farming Challenges and Opportunities [ISBN No. 978-93-85502-22-4]*, edited by Bitan Mondal, Debasish Sarkar, Siddhartha Dev Mukhopadhyay, Souvik Ghosh, Bidhan Chandra Roy and Sarthak Chowdhury, Renu Publishers, New Delhi, 2016, pp. 86 – 92. **2.** "Inclusive Innovation: A Shift in Innovation Paradigms for reaching the Un-reached Farmers", *Family Farming Challenges and Opportunities [ISBN No. 978-93-85502-22-4]*, edited by Bitan Mondal, Debasish Sarkar, Siddhartha Dev Mukhopadhyay, Souvik Ghosh, Bidhan Chandra Roy and Sarthak Chowdhury, Renu Publishers, New Delhi, 2016, pp. 252 – 266. **3.** "Crop Insurance in India: A Historical Transverse and Issues related to Extension Efforts for Resource Poor Farmers", *Family Farming Challenges and Opportunities [ISBN No. 978-93-85502-22-4]*, edited by Bitan Mondal, Debasish Sarkar, Siddhartha Dev Mukhopadhyay, Souvik Ghosh, Bidhan Chandra Roy and Sarthak Chowdhury, Renu Publishers, New Delhi, 2016, pp. 328 – 338.	Prabuddha Ray, Subrata Mandal and Dulal Chandra Manna Prabuddha Ray and Sarthak Chowdhury Prabuddha Ray and Sarthak Chowdhury	**03 (Three)**	-
Extension Pamphlets / literature	1. Improved Cultivation of Ber (*Kuler Chash*) 2. Improved Package of Practices of Mango (*Aam Chash*) 3. Improved Cultivation Practices of Arum (*Kachu Chash*) 4. Improved Package of Practices of Drum Sticks (Year round) (*Barmeshey Sajney Chash*) 5. Improved Cultivation Practices of Capsicum, Broccoli, Brussels' Sprout (*Capsicum, Broccoli, Brussels' Sprout – Er Chash*) 6. Improved Package of Practices of Coconut (*Narkel Chash*)	**Dr. Dulal Chandra Manna**	**16 (Sixteen)**	**4000 (Four thousand)**

	7. Processing and Value Addition of Sweet Potato (Misthi Aloor Prakriyajatakaran) 8. Production of "Mora" through Cottage Industries (Basat Baritey Mora Tairi)	**Smt. Ruma Addy**		
	9. Improved Cultivation Practices of Pulses: More Profit and Conservation of Soil Health (*Unnat Prathay Dal Chash: Adhik Labh Abong Matir Sasthya Raksha*) 10. Intercultural Operations of Mustard (*Sarsher Antarbartikalin Paricharya*) 11. Technology for Improving Productivity of Acid Soils (*Amla Matir Utpadanshilata Baranor Prajukti*) 12. Preliminary Phase of Wheat Cultivation (*Gom Chasher Prathamik Parjay*) 13. Phospho-compost for Conservation of Soil Health: A Phosphorus rich Organic Fertilizer (*Matir Swasthyarakshay Phospo-compost:Eaikti Phosphorus Samriddha Jaiba*)	**Dr. Subrata Mandal**		
	14. Mono Culture of Thailand Koi Fish (Thailand Koi Macher Ekak Chash Prajukti)	**Dr. Krishna Mitra**		
	15. Good Agricultural Practices (GAP): A Concept Note (*Uttam Krishi Paddhati: Eaikti Dharanapatra*)	**Dr. Prabuddha Ray**		
	16. Artificial Insemination (AI) of Cows and Some Relevant Information (*Gavir Krittim Projanan Abong Sei Sankranta Kichu Tathya*)	**Dr. Madhuchhanda Khan**		
Technical reports	1. Annual Progress Report (April, 2013 – March, 2014) of Rathindra KVK 2. Report on Feedback from Farmers Relating to Technology Implementation by the Rathindra Krishi Vigyan Kendra 3. Report on the Training Programme on "Creation of Awareness Among the Farmers and Other Stakeholders about the Provisions of PPV & FR Act – 2001" 4. Report on the Participation of the Rathindra Krishi Vigyan Kendra in the Especial Agriculture and Related Sector Campaigns of Govt. of West Bengal 5. Training Need Assessment and Training Plan of the Staff of Rathindra Krishi Vigyan Kendra, Palli Siksha Bhavana, Visva-Bharati, Sriniketan, P. O. - Sriniketan, Dist. – Birbhum, West Bengal – 731236 6. Introduction of Giant Prawn (*Macrobrachium rosenbergii)* as A New Component of Composite Fish Culture in Birbhum District, West Bengal: A Successful Intervention by the Rathindra KVK, Birbhum 7. Crop Diversification through Cultivation of Broccoli: A Successful Intervention by the Rathindra KVK, Birbhum 8. Crop Diversification through Introduction of Commercial Cultivation of All the Year Round Drumstick: A Successful Intervention by the Rathindra KVK, Birbhum 9. Report on the "SWACHH BHARAT ABHIYAN" from 22nd. June, 2015 to 26th. June, 2015 10. Report on the "Swachhta Abhiyan (National Cleanliness Campaign)", organized by Rathindra Krishi Vigyan Kendra from 3rd. October, 2015 to 11th. October, 2015 11. Folk Songs related to Agriculture and Allied Sectors Collected by the	**Rathindra KVK**	**Twenty seven (27)**	Among all the concerned.

	Rathindra KVK, Birbhum, West Bengal 12. Information on Livestock and Poultry Related Activities (April, 1994 – March, 2015) organized by Rathindra Krishi Vigyan Kendra 13. Report on Initiatives of Linkages between Farmers and Market, organized by the Rathindra Krishi Vigyan Kendra 14. Report on the Physical Progress of Demonstrations Component under Central Sector Scheme of DAC, Ministry of Agric. & Coop. GoI, New Delhi on **"Promotion of Agriculture Mechanization through Demonstrations of Newly Developed Farm Equipment"** 15. Report on the Demonstrations on Wheat Varieties supplied by the IARI, Pusa, Samastipur, Bihar 16. Report on the Demonstrations on Paddy Varieties supplied by the IARI, Pusa, Samastipur, Bihar 17. Researchable Issues in Agriculture and Allied Sectors for Birbhum District, West Bengal 18. Report on the Observation Day of the International Year of Soil – 2015 organized by the Rathindra Krishi Vigyan Kendra 19. Report on the Observance of International Soil Day 5th. December, 2015, organized by the Rathindra Krishi Vigyan Kendra 20. Report on the Pre-Rabi Kisan Sammelan – 2015, organized by the Rathindra Krishi Vigyan Kendra 21. Report on Cluster FLD on Rabi Pulses organized by the Rathindra KVK in 2015-16 22. Report on the Various Special Programmes organized by Rathindra KVK in 2015-16 23. Report on Farm Sector Training Programme, Sponsored by NABARD, Birbhum and organized by Rathindra KVK in 2015-16 24. Information about Perception of Farmers of the District of Birbhum regarding the Neem coated Urea 25. Report of Fishery Sector Activities organized by Rathindra KVK 26. Report on Successful Farmers and Farm Women attached to the Rathindra KVK, Palli Siksha Bhavana, Visva-Bharati, Birbhum, West Bengal 27. Report on Technology Week – 2016, organized by Rathindra KVK			
Electronic Publication (CD/DVD etc)	1. Folk Songs of Birbhum District related to Agriculture and Allied Sectors	**Rathindra KVK**	**06 (Six)**	ICAR-ATARI, Kolkata
TOTAL	**48**		**71 (seventy one)**	

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

(B) Details of HRD programmes undergone by KVK personnel:

Sl. No.	Name of programme	Name of course	Name of KVK personnel and designation	Date and Duration	Organized by
1.	"Orientation Course on IPM in Important Crops with Special Reference to West Bengal, Bihar, Jharkhand, Andaman and Nicobar Islands"	IPM in Important Crops with Special Reference to West Bengal, Bihar, Jharkhand, Andaman and Nicobar Islands	Sri Sourav Mondal, Subject Matter Specialist (Plant Protection)	16.06.2015 to 18.06.2015. (03 Days)	ICAR- National Research Centre for Integrated Pest Management (NCIPM), New Delhi; Zonal Project Directorate, Zone – II, Kolkata and Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, West Bengal
2.	Review and Final Master Trainer Training on Revisiting of Strategic Research and Extension Plan (SREP)	Revisiting of Strategic Research and Extension Plan (SREP)	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	06.07.2015 to 10.07.2015. (05 Days)	National Institute of Agricultural Extension Management, Ministry of Agriculture, Govt. of India, Hyderabad and the State Agricultural Management and Extension Training Institute, Govt. of West Bengal, Narendrapur, Kolkata – 700103.
3.	Review and Final Master Trainer Training on Revisiting of Strategic Research and Extension Plan (SREP)	Revisiting of Strategic Research and Extension Plan (SREP)	Dr. Madhuchhanda Khan, Subject Matter Specialist (Animal Science)	06.07.2015 to 10.07.2015. (05 Days)	National Institute of Agricultural Extension Management, Ministry of Agriculture, Govt. of India, Hyderabad and the State Agricultural Management and Extension Training Institute, Govt. of West Bengal, Narendrapur, Kolkata – 700103.
4.	Review and Final Master Trainer Training on Revisiting of Strategic Research and Extension Plan (SREP)	Revisiting of Strategic Research and Extension Plan (SREP)	Sri Palash Ankure, Farm Manager	06.07.2015 to 10.07.2015. (05 Days)	National Institute of Agricultural Extension Management, Ministry of Agriculture, Govt. of India, Hyderabad and the State Agricultural Management and Extension Training Institute, Govt. of West Bengal, Narendrapur, Kolkata – 700103.
5.	National Conference of Krishi Vigyan Kendras - 2015	Functionings and Strategies for Activities of Krishi Vigyan Kendras	Dr. Dulal Chandra Manna, Programme Coordinatior	25.07.2015 to 26.07.2015 (02 Days)	ICAR-RRC, Patna, Bihar
6.	National Conference of Krishi Vigyan Kendras - 2015	Functionings and Strategies for Activities of Krishi Vigyan Kendras	Dr. Subrata Mandal, Subject Matter Specialist (Agronomy)	25.07.2015 to 26.07.2015 (02 Days)	ICAR-RRC, Patna, Bihar
7.	National Conference of Krishi Vigyan Kendras - 2015	Functionings and Strategies for Activities of Krishi Vigyan Kendras	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	25.07.2015 to 26.07.2015 (02 Days)	ICAR-RRC, Patna, Bihar
8.	National Conference of Krishi Vigyan Kendras - 2015	Functionings and Strategies for Activities of Krishi Vigyan Kendras	Dr. Madhuchhanda Khan, Subject Matter Specialist (Animal Science)	25.07.2015 to 26.07.2015 (02 Days)	ICAR-RRC, Patna, Bihar

9.	NRDMS (DST) Sponsored Training Programme on "Geospatial Technologies in Mapping, Monitoring and Management of Natural Resources"	"Geospatial Technologies in Mapping, Monitoring and Management of Natural Resources"	Dr. Subrata Mandal, Subject Matter Specialist (Agronomy)	05.08.2015 to 25.08.2015 (21 Days)	ICAR-National Bureau of Soil Survey and land Use Planning (NBSS&LUP), Nagpur, Maharasthra
10.	Indian Council of Agricultural Research (ICAR) Sponsored Summer School on Multi-pronged Extension Management Strategies for Dryland Agricultural Development with special reference to promoting Climate Resilient Agriculture	Multi-pronged Extension Management Strategies for Dryland Agricultural Development with special reference to promoting Climate Resilient Agriculture	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	05.08.2015 to 25.08.2015. (21 Days)	Department of Agricultural Extension and Rural Sociology, Centre for Agricultural and Rural Development Studies, Tamil Nadu Agricultural University, Coimbatore – 641003, Tamil Nadu
11.	Training Programme on Cluster Front Line Demonstrations (Cluster FLDs)	Closter FLDs on Rabi Pulse and Oilseeds	Dr. Subrata Mandal, Subject Matter Specialist (Agronomy)	23.09.2015 to 25.09.2015 (03 Days)	ICAR-ATARI, Kolkata
12.	Workshop-cum-Meeting on Soil Health Card	Preparation of Soil Health Card	Dr. Subrata Mandal, Subject Matter Specialist (Agronomy)	28.09.2015. (01 Day)	ICAR-ATARI, Kolkata
13.	Winter School on Current Concepts and Frontier Technologies for Fertility Management in Farm Animal	Current Concepts and Frontier Technologies for Fertility Management in Farm Animal	Dr. Madhuchhanda Khan, Subject Matter Specialist (Animal Science)	05.10.2015 to 25.10.2015 (21 Days)	ICAR-National Dairy Research Institute (NDRI), Kurnool, Haryana
14.	Workshop on Cluster Front Line Demonstrations and Protection of Plant Varieties and Farmers' Righta Act - 2001	Cluster FLD and PPV&FRA - 2001	Dr. Subrata Mandal, Subject Matter Specialist (Agronomy)	08.12. 2015 to 10.12.2015 (03 Days)	Director of Extension Education, Bidhan Chandra Krishi Viswavidyalayas, Farmers' Convention Centrre and Farmers' Academy, Lake Hall, Kalyani, Nadia.
15.	Workshop on Strategies for Promoting Farmers Producer Organizations (FPOs)	Strategies for Promoting Farmers Producer Organizations (FPOs)	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	09.12.2015 to 11.12.2015. (03 Days)	ICAR-National Academy of Agricultural Research Management, Rajendranagar, Hyderabad – 500030, Telengana, India.
16.	Orientation Training Programme on "Advance Agriculture and Allied Technologies in Farm Sector"	Advance Agriculture and Allied Technologies in Farm Sector	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	21.03.2016 to 22.03.2016. (02 Days)	Directorate of Extension Education, Bidhan Chandra Krishi Viswavidyalaya, P. O. – Krishi Viswavidyalaya - 741252, Mohanpur, Dist. – Nadia, West Bengal.

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

A. Jute based Rural Handicrafts: a Successful Intervention of Rathindra KVK for Ensuring Women Empowerment

Smt. Mallika Das, aged about 35 years, wife of Sri Gouranga Das, a resident of Village + P. O. – Raipur, Police Station: - Bolpur, Community Development Block: - Bolpur-Sriniketan, Dist. – Birbhum, Pin. – 731304, West Bengal (Mobile Phone No. – 09474024981) is a housewife of a low middle class family in the rural hinterland of Bolpur Town.

Smt. Das first got a connection with the Rathindra Krishi Vigyan Kendra some Ten (10) years back when she had undergone a Skill development Training Programme on various aspects of improved techniques for Kantha Stitch Works and its related modern designs and necessary implements in 2005 – 2006 financial year. This association has gone from strength to strength and it is still continuing. Later Smt. Mallika Das has also undergone Skill Development Training Programme on preparation of Jute based Crafts in the Rathindra KVK. Smt. Das got an exposure to improved techniques, materials, designs and related plan of works during the numerous numbers of skill development training programmes organized by the Rathindra KVK, in most of which Smt. Das participated as a Trainee for her own interest and as well as the motivation she has got from the KVK.

As a result of the knowledge and skills acquired by Smt. Das from these Training Programmes, she is now very efficient as well as expert in preparing modern, artistic Jute based handicraft products of immense aesthetic value. These Jute based handicraft products include a wide range of items such as Pen Stand, Decorative Horses, Statues of Lord Buddha, Flower Vases, many other customized products as per the needs and creative demands of the customers.

Ten years back, in 2005-06, when Smt. Mallika Das has not undergone any formal skill development Training Programme in the Rathindra KVK and has no exposure to the modern Techniques, Materials, Designs, Implements etc. for preparing Jute Crafts, she could hardly prepare one or two pieces of Kantha Stitched Churidar Sets in a time span of two to two and half months and this would proved her a meager income of Rs. 150 – Rs. 200 per Month on an average. Now after undergoing several rounds of Skill based Training Programmes on Jute based Craft Products in the Rathindra KVK, she is now earning Rs. 5,000 – Rs. 6,000 per Month. She is not only earning money for herself, but also Mrs. Das is now engaging 13 – 14 unemployed rural female youths for preparation of the Jute based handicraft products. Each one of these unemployed rural female youths is earning Rs. 2,000 – Rs. 3,000 per month on an average.

Smt. Das has been marketing her products through participation in the Trade Fairs and Exhibitions organized by the various Public and Private Sector development support agencies in the metropolitan areas such as Kolkata, Siliguri, Bhubaneswar, Jamshedpur, Jalpaiguri etc. and during the Puja festivals especially in and around Kumartully Sarbojonin in the North Kolkata area. In this way, products of Mrs. Das have got

a national fame. This outplace marketing is being mainly performed by Smt. Das's husband Sri Gouranga Das. In addition to this type of marketing, District Rural Development Centre (DRDC), various private parties are buying her products from her household as well as large wholesale buyers and stockists from Barobazar Area of North Kolkata are also coming in a flock for buying her products in a bulk from her door-steps. Smt. Mallika Das, herself, organized temporary Stalls for exhibiting and selling her Jute based Handicraft products in Poush Mela at Santiniketan and in Magh Mela at Sriniketan Area for the last 5 - 6 years at a stretch. These Stalls attract a large number of visitors and buyers.

Besides these economic activities, Smt. Das was instrumental in establishing a Self Help Group (SHG) named "Asha", consisting of 15 rural women, of whom Smt. Sabita Ghosh, a neighbor of Smt. Das, is Leader of the Group and Smt. Das, herself is the Deputy Leader of the SHG for creation and proper mobilization of social capital. This Group is instrumental in marketing the Jute based Handicraft Products at the "Shani Barer Haat" (Saturday Local Market) at the bank of irrigation Canal in the Sonajhuri area near the Kopai River and Khoai meadows of Bolpur-Santiniketan in Birbhum District.

Now Smt. Das at the age of 35 years is confident enough not only for establishing her family in a firm economic footing and giving avenues for quality higher education to her children, but also providing avenues for meaningful and dignified earning for other unemployed rural women and youths.

<u>Various Jute based Handicraft Products prepared by the Trainees of Rathindra KVK</u>

B. Modern Kantha Stitch Works: A Huge Success of the Rathindra KVK for Ensuring Empowerment of Rural Women

Smt. Alpana Majumder, aged about 45 years, wife of Sri Kajal Majumder, a resident of Village:- kankutia, P. O. – Raipur, Police Station: - Bolpur, Community Development Block: - Bolpur-Sriniketan, Dist. – Birbhum, Pin. – 731304, West Bengal (Mobile Phone No. – 09732241666) is a housewife of a lower middle class family in the rural hinterland of Bolpur Town.

Smt. Majumder first got a connection with the Rathindra Krishi Vigyan Kendra some Seven (07) years back when she had undergone a Skill development Training Programme on various aspects of improved techniques for Kantha Stitch Works and its related modern designs and necessary implements and materials in 2008 – 2009 financial year. This association has gone from strength to strength and it is still continuing. Smt. Majumder got an exposure to improved techniques, materials, designs and related plan of works during the numerous numbers of skill development training programmes organized by the Rathindra KVK, in most of which Smt. Majumder participated as a Trainee for her own interest and as well as the motivation she has got from the KVK.

As a result of the knowledge and skills acquired by Smt. Majumder from these Training Programmes, she is now very efficient as well as expert in preparing modern, artistic Kantha Stitched clothes like Bags, Sharee, Punjabee, Blouse Piece, Top, Kurti etc. of immense aesthetic value. She also prepares many other customized products as per the needs and creative demands of the customers.

Seven years back, in 2008-09, when Smt. Alpana Majumder has not undergone any formal skill development Training Programme in the Rathindra KVK and has no exposure to the modern Techniques, Materials, Designs, Implements etc. for preparing Kantha Stitched products, she could hardly prepare Batique printed clothes in a patchy manner which gave her an average monthly income of Rs. 1,500 – Rs. 2,000. Now after undergoing several rounds of Skill based Training Programmes on Kantha Stitched Products in the Rathindra KVK, she is now earning Rs. 5,000 – Rs. 6,000 per Month. She is not only earning money for herself, but also Mrs. Mjumder is now engaging 10 – 12 unemployed rural female youths for preparation of the Kantha Stitched products. Each one of these unemployed rural female youths is earning Rs. 1,500 – Rs. 2,000 per month on an average.

Various private parties are buying her products from her household as well as large wholesale buyers and stockists are also coming in a flock for buying her products in a bulk from her door-steps as well from her parent's house in Durgapur Town. Smt. Alpana Majumder, herself, organized temporary Stalls for exhibiting and selling her Kantha Stitched products in Poush Mela at Santiniketan and in Magh Mela at Sriniketan Area for the last 5 - 6 years at a stretch. These Stalls attract a large number of visitors and buyers.

Besides these economic activities, Smt. Majumder was instrumental in establishing a Self Help Group (SHG) named "Shilpashree", consisting of 15 rural women, of whom Smt. Nabnita Majumder, is Leader of the Group and Smt. Alpana Majumder, herself is one of the members of the SHG for creation and proper mobilization of social capital. This Group is instrumental in marketing the Kantha Stitched Products at the "Shani Barer Haat" (Saturday Local Market) at the bank of irrigation Canal in the Sonajhuri area near the Kopai River and Khoai meadows of Bolpur-Santiniketan in Birbhum District.

Now Smt. Majumder at the age of 45 years is confident enough not only for establishing her family in a firm economic footing and giving avenues for quality life to other members of her family, but also providing avenues for meaningful and dignified earning for other unemployed rural women and youths.

Kantha Stitched Bag produced by Smt. Alpana Majumder

Kantha Stitched Blouse Pieces produced by Smt. Alpana Majumder

Kantha Stitched Sharee produced by the members of the SHG named "Shilpashree"

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

The Rathindra KVK has adopted the following innovative methodologies or innovative technologies of Transfer of Technology –

A. The Rathindra KVK acting as a Technology Demonstration Centre - This can overcome the problems, faced by developing countries, especially the LDCs, of demonstrating technology utilization potential and promoting overall technology awareness. Science and technology exhibitions, both stationary and mobile, and school and mass media programmes are being undertaken this KVK and these exhibitions (especially through organizing programmes on Cluster Front Line Demonstrations on Rabi Pulses and Oilseeds, International Year of Soil, Soil Health Card preparation, Pre-Rabi Kisan Sammelan, Jai Kisan Jai Vigyan Diwas, Awareness Camps in Rural Schools, celebration of Technology Week etc.) are necessary if the cultural aspects of technology transfer and development are to be addressed.

B. The Rathindra KVK's Role in Information development - The role of information in technology transfer and development is crucial, and therefore capacities are needed to ensure access to the information required for adequate technological capability. There is much information in the public domain that is useful for technology transfer and development. However, the information needed should go beyond simple inventories of costs and environmental parameters, and should include specific technical data that will facilitate technology selection, development and use. Keeping these factors in mind, the Rathindra KVK is developing Technological Modules in the forms of Extension Literatures like Booklets, Leaflets, Folders, Brochures, CDs, DVDs etc. using the information generated from its past rearch and extension activities as well as information generated from both the ICAR and SAU or CU Systems to meeting the information gaps prevalent among the practicing farmers, farm women, rural youths and extension functionaries of the district of Birbhum. This KVK also focuses on (a) information assessment and screening, (b) maximal use of electronic systems and (c) the development of relevant databases in Agriculture and related sectors.

C. The Rathindra KVK's Role in Technology partnerships and networking - Technology partnerships between the Rathindra KVK and reputed Governmental Organizations (GOs) and Non-Governmental Organizations (NGOs) have been very effective in technology development and transfer and market development, provided they are two-way relationships involving a long-term commitment with the objective of sharing knowledge, enhancing technological capabilities, fostering innovation and strengthening competitiveness. Interaction and mutual dependency, as well as risk and cost sharing among partners, are important. The Rathindra KVK and its associated Networks consist of a group of institutions or associations with the aims of enhancing the capacity to conduct research and improving training and education through interaction. The Rathindra KVK thus forms a network to improve access to new ideas, methods, and information sharing and materials exchange. Both technology partnerships and networking require a certain level of technical competence among partners. There are many such partnerships and networks among this KVK, reputed GOs and reputed NGOs and these activities are growing. This recent initiative shows that these partnerships and networks can foster technological upgrading and improvement and quicker and more efficient Extension activities at a much lower cost to each of the partners thus creating a Win-Win situation for all the partners.

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)

Sl. No.	Crop / Enterprise	ITK Practiced	Purpose of ITK
01.	Milch Cows / Dairy Farming	Decoction of *Vasak* leaves are given to animal suffering from cough and cold.	Treatment of cough and cold of animals.
02.	Milch Cows / Dairy Farming	Farmers treat fever of animals by providing adequate quantity of Fig leaves thrice a day in the first stage and then rubbing the fig leaves in the tongue of the animals.	Treating animals suffering from fever.
03.	Milch Cows / Dairy Farming	Paste of raw turmeric and molasses are given to animals 2-3 times a day.	Indigenous treatment of animals suffering from fever.
04.	Milch Cows / Dairy Farming	Animals are given bamboo leaves in adequate quantities twice a day.	Treating diarrhoea with bamboo leaves.
05.	Milch Cows / Dairy Farming	Animals are fed with a unripe or half-ripe Bel with kitchen wastes twice a day. Sometimes un-ripe Bel is burnt and then it is given to animals to check diarrhea.	Treating diarrhea with Bel (*Aegle marmelos*)
06.	Milch Cows / Dairy Farming	Farmers practice feeding of animals with rice husk along with banana thrice a day to control diarhhoea. It is followed for 2-3 days.	Feeding of rice husk with banana against diarhhoea.
07.	Milch Cows / Dairy Farming	Animals are fed with whey (a by-product obtained during the production process of *Chhana*)	Feeding of whey to control diarhhoea.
08.	Milch Cows / Dairy Farming	Animals are fed with tamarind leaves and Sarsoon or Mustard (*Brassica sp.*) seeds with some water consecutive three days in the morning in empty stomach to control bleeding dysentery.	Feeding of tamarind leaves and mustard seeds to control bleeding dysentery.
09.	Milch Cows / Dairy Farming	Neem leaves are boiled in the water. After cooling, the green water is used to wash the infected hooves.	Treating Foot and Mouth Disease (FMD) with Neem leaves.
10.	Milch Cows / Dairy Farming	Raw turmeric pastes mixed with molasses are fed to animals twice a day.	Treating animals with Turmeric against Bloat.
11.	Parboiling of paddy	Villagers consume Rice parboiled with imporovised traditional processor called "Dhenki".	These types of Rice are rich in Vit. B_{12} which prevents Night Blndness among villagers.
12.	Processing of Pulses (Dal)	Villagers process Pulses (Dal) with improvised traditional crusher called "Janta".	This type of processing of pulses helps to split the cotyledons without affecting the seed coats which remain with pulse seeds and these type of Pulse seeds intact with seed coats act as laxative and prevent constipation.

3.10 Indicate the specific training need analysis tools/methodology followed by KVKs

Need Assessment of Rathindra KVK Clientele

i. Practicing Farmers and Farm Women: - Rathindra KVK family coordinates the work of all scientists for smooth functioning of the KVK as well as for the benefit of the rural people of that particular area. Programme Co-ordinator is liaisoning with other line departments for coordination and effective implementation of different programs of the KVK in the adopted village. Rathindra KVK tried to adopt a Cluster of 4 to 6 economically, culturally and technologically backward villages situated within 10-20 Kms radius of the KVK. These villages are not too small or too large. Before adoption a detailed survey of the village was conducted to study the socio-economic and cultural status of that village. Now-a-days Participatory Rural Appraisal (PRA) tool was used to conduct the survey in which the village people are actively participated in the process.

The village map was drawn by the help of different colour by the villagers themselves and different prominent structures of the village such as school, temple, river, club etc. were depicted in that map. These structures will help the scientists to conduct the survey easily and smoothly. Basing upon the survey the field crop maps, animal resource map and other ancillary maps were prepared for future use. After the survey work detailed plan of work was chalked out and depending upon the requirement different activities was undertaken in different areas by the Rathindra KVK scientists.

ii. Rural Youth: - Rathindra KVK assesses the needs of the Rural Youth mainly through Participatory Tools like Resource map, Transact map, Employment Opportunity Analysis, Job Availability Matrix, Job Choice Matrix, Un-Employment Problem Cause Diagram etc. and also administering them a Structured Question Schedule regarding the needs of the Rural Youth prepared by the Rathindra KVK in consultation with other experts of ICAR and Visva-Bharati.

iii. Extension Functionaries: - Rathindra KVK assesses the need of the Extension Functionaries mainly through questioning the respective clientele about their needs and their job needs and the needs of their sponsoring agencies. Here mainly PRA tools like problem – cause diagram, Resource map, Organizational Diagram, Job Analysis, Job Satisfaction Matrix etc. are used.

3.11. a. Details of equipment available in Soil and Water Testing Laboratory

Sl. No	Name of the Equipment	Qty.
1.	Mixer grinder Kenstar	2 nos.
2.	Refrigerator Whirlpool	2 nos.
3.	Stabilizer Fizi	2 nos.
4.	Shaker	1 no.
5.	Oven	1 no.
6.	Kelplus Elect Digestation System Model KES 08L	1 no.
7.	Kelplus Elect Distillation System Elite Ex	1 no.
8.	Systronics Micro controller based visible Spectrophotometer	2 nos.
9.	Systronics P-H system	2 nos.
10.	Systronics Digital Conductivity Meter	2 nos.
11.	Systronics Flame Photometer Type 128	2 nos.
12.	Hotplate with energy regulator	1 no.
13.	Glass Distillation apparatus flux	3 nos.
14.	Physical Balance Cap.250g with weight box	4 nos.
15.	Shimadzu Electronic Balance	2 nos.
16.	Kjeldal digestion unit	2 nos.
17.	Kjeldal distillation unit	2 nos.
18.	Soil Testing Mini-Lab Mridhaparikshak Solar Operated	1 no.
Total		**33 nos.**

3.11.b. Details of samples analyzed so far:

Details	No. of Samples	No. of Farmers	No. of Villages	Amount realized
i. Parameters for Soil Analysis – pH., EC, Organic Carbon, Avail. N, Avail. P, Avail. K, Avail. S, Zn, B, Fe.	**666**	**666**	**63**	**Free Analysis for OFT, FLD and Universal Soil Health card preparation for the International day of soil 5th. December, 2015 programmes**

				of the Rathindra KVK + Rs. 2,200.00
ii. Parameters for Water Analysis – pH.	**64**	**32**	**05**	**Free Analysis for OFT and FLD programmes of the Rathindra KVK.**
Total	**730**	**698**	**68**	

3.12. Activities of rain water harvesting structure and micro irrigation system – Not Applicable

No. of training programme	No. of demonstrations	No. of plant material produced	Visit by the farmers	Visit by the officials

3.13 Technology week celebration – 14.03.2016 – 18.03.2016.

Type of activities	No. of activities	Number of participants	Related crop/livestock technology
Technical Sessions	25	840	1. Soil Health Card – Its Utility 2. Improved Technologies for Preparation of Organic Inputs 3. Improved Technological Package of Practices for Cultivation of High Valued Vegetables 4. Kisan Credit Cards 5. Technologies for Biological Pest Control 6. Improved Technological Package of Practices for Cultivation of Different Fruit Crops 7. Improved Technologies for Management of Fish Diseases 8. Food and Nutritional Security for Farming Community 9. Improved Technologies for Managerial Practices of Rearing of Black Bengal Goats 10. Different Technical Aspects of Crop Insurance 11. Water Quality Management Technologies for Broiler Farming 12. Balanced Diet, Different Deficiency Diseases and Its Management 13. Different Technical Aspects of Pradhan Mantri Fasal Bima Yojana 14. Different Technical Aspects of Breeding Policy of Govt. of West Bengal and Its Implementation 15. Improved Technologies for Management of Pest and Diseases in Boro Paddy 16. Improved Technologies for Flower Cultivation in Summer Season 17. Appropriate Disease Management in Summer Oilseed Cultivation 18. Improved Technologies for Organic Livestock Farming 19. Concept, Formation and Functioning of Farmer Producer Organizations (FPOs) 20. Improved Technological Package of Practices for Summer Pulse 21. Rural Livelihood Security through Back Yard Livestock Farming 22. Improved Technologies for Culture of *Pabda* 23. Post Harvest Technologies for Fruits and Vegetables 24. Appropriate Disease Management Technologies in Summer Pulse 25. Improved Technological Package of Practices for Cultivation of Different Medicinal Plants in Homestead Situation
Publication of Extension Literatures	11	200	1. Cultivation Package of Practices of Capsicum, Broccoli and Brussels' Sprout *(Capsicum, Broccoli, Brussels' Sprouter Chash)* 2. Improved Technologies for Cultivation of Guava *(Peayarar Chash)*

			3. Improved Technological Package of Practices of All the Year Long Drum Stick Cultivation (*Baramasia Sajina Chash)* 4. Improved Technologies for Artificial Insemination of Cows and Some related Information *(Gavir Krittim Projanan Abong Sei Sankranta Kichhu Tathya)* 5. Improved Cultural Practices for Coconut Cultivation *(Narikeler Chash)* 6. Improved Cultivation Practices for Ber *(Kooler Chash)* 7. Improved Technological Package of Practices for Mango cultivation *(Aam Chash)* 8. Good Agricultural Practices (GAP): A Concept Note *(Uttam Krishi Paddhati: Eaikti Dharanapatra)* 9. Improved Technologies for Prepasration of Tools made from Bamboo / Canes in Households *(Basat Baritey Morah Tairy)* 10. Improved Technologies for Cultivation of Arum *(Kachu Chash)* 11. Improved Technologies for Processing of Sweet Potatoes *(Misthi Aaloo Prakriyajatakaran)*
Visit of Farmers' Groups to Rathindra KVK and Technology Week – 2016	02	79	Two Farmers' Groups viz. Najrul Sukanta Farmers' Club, Village – Radhanagar, P. O. – Chhototurigram, Mayureswar, Dist. – Birbhum and Srjan Uttaran Farmers' Club Federation, Mohammad Bazar, Dist. – Birbhum visited the Rathindra KVK Campus as well as the Technology Week – 2016 for an exposure as well as a firsthand experience to the cutting edge technologies on agriculture and allied sectors.
Video Show	04	672	1. User Friendly Technology for Vermi-Compost Preparation 2. Improved Technological Package of Practices for Fodder Cultivation 3. Improved Technologies for Breeding and Culture of *Clarias sp.* (Magur) of Fish 4. Improved Technologies of Sheep Farming for Increased Income
Agricultural Fair	01	846	1. Stall of the Rathindra KVK showcasing the cutting edge Technologies of the ICAR through A. displaying Seeds and Planting Materials; B. displaying Improved Agricultural and Farm Implements and C. free distribution of Extension Literatures.
Distribution of Organic Inputs	01	168	1. Free Distribution of Azolla @ 200 grams totaling distribution of 33.6 kilograms. 2. Distribution of Earth Worms @ 50 in numbers per participant totaling 8400 numbers of earthworms. 3. Distribution of Planting Materials of Medicinal Plant *Ekangi* @ 200 grams per participants totaling 33.6 kilograms.
Method Demonstration	01	168	1. Preparation and maintenance of Medicinal Plants Garden in Back Yard and Homestead Farming Situations.

3.14. RAWE / FET programme - is KVK involved? Yes.

No. of students / ARS trained	No. of days stayed
45 nos. of students of RAWE	As KVK is within University Campus, the students stay in their respective hostels or residences.
06 nos. of ARS scientists	21 Days

3.15. List of VIP visitors (MP/MLA/DM/VC/Zila Sabhadipati/Other Head of Organization/Foreigners)

Date	Name of the person	Purpose of visit
04.06.2015.	Sri Bikash Roy Chowdhury, Sabhadhipati, Birbhum Zillah Parishad	To gain a firsthand experience on the different aspects of Skill Development Training on Medicinal Plants Cultivation Practices undertaken by the Rathindra KVK.
29.06.2015.	Dr. Bimal Chandra Biswas, Ex-Additional Director, FAI, New Delhi and Principal, KVK Morabadi, Ranchi	To know about the procedures of research, demonstration and extension of agricultural and related field technologies adopted by the Rathindra

		KVK
28.08.2015	Dr. T. K. Dutta, Principal Scientist and Head, ICAR-NDRI-ERS, Kalyani	To participate in the Skill Development Training Programme and Animal Health Camps being organized jointly by the Rathindra KVK and ICAR-NDRI-ERS, Kalyani
17.11.2015.	Sri Amlan Kusum Ghosh, SDPO, Bolpur	To know about the nitty-gritty of the modus operandi of the Rathindra KVK as well as the uniqueness of the concept of the Krishi Vigyan Kendras as a whole.
05.12.2015.	Sri Chandra Nath Sinha, Minister-in-Charge, Dept. of Fishery, Govt. of West Bengal	To inaugurate the Pre-Rabi Kisan Sammelan – 2015 and Soil Health Day – 05.12.2015.
05.12.2015.	Prof. Sushanta Dattagupta, Vice-Chancellor, Visva-Bharati	To inaugurate the Pre-Rabi Kisan Sammelan – 2015 and International Soil Health Day – 05.12.2015.
05.12.2015.	Sri Bikash Roy Chowdhury, Sabhadhipati, Birbhum Zillah Parishad	To inaugurate the Pre-Rabi Kisan Sammelan – 2015 and International Soil Health Day – 05.12.2015.
21.12.2015.	Dr. Ashutosh Sarkar, **Project Coordinator (ICARDA),** Coordinator and Food Legume Breeder (ICARDA), South Asia Program, NASC Complex, CGIAR Complex, New Delhi - 110012, India.	To know about the nitty-gritty of the modus operandi of the Rathindra KVK as well as the uniqueness of the concept of the Krishi Vigyan Kendras as a whole.
06.02.2016.	Prof. Sabyasachi Bhattacharya, Former Vice-Chancellor, Visva-Bharati	To inaugurate the Sriniketan Mela – 2016 and to know about the activities and programmes of the Rathindra KVK which was established during his tenure.

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 (Rs.)	
			Before (Rs./Unit)	After (Rs./Unit)
Seed Production of Paddy	70	85.72	Rs. 67,080.00 per ha	Rs. 1,03,200.00 per ha
Seed Production of Pulses	230	52.18	Rs.31,600.00 per ha	Rs.66,500.00 per ha
Varietal Replacement of Mustard with Improved Mustard Variety RW – 351	170	88.24	Rs. 23,520.00 per ha	Rs. 73,800.00 per ha
Improved Method of Elephant's Foot Yam Cultivation	207	89.00	Rs. 2,36,250.00 per ha	Rs. 14,17,500.00 per ha
Low Cost Fish Feed Preparation	51	49.02	Rs. 20,000.00 per Year	Rs. 96,000.00 per Year
Kantha Stitch Work	71	56.34	Nil	Rs. 12,000.00 to Rs. 36,000.00 per Year
Preparation and Use of Vermin-Composting	290	62.07	Nil	Rs. 19,000.00 per 2.5 ft X 2.0 ft X 3.0 ft area /year

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

Horizontal Spread of Technologies	
Technology	**Horizontal spread**
Seed Production of Paddy	60 farmers Trained in the Rathindra KVK on various aspects of Paddy Seed Production adopted the Technology and from them the Technology was spreaded with culminating effect of adoption among another 120 numbers of farmers of whom 32 numbers of farmers

	resided within 0.1 – 5 kms. Radius of the Rathindra KVK; 40 numbers of farmers resided within 5.1 – 10 kms. Radius of the Rathindra KVK; 24 farmers resided within 10.1 – 15 kms. Radius of the Rathindra KVK and the rest 24 numbers of the farmers resided within 15.1 kms and above radius of the Rathindra KVK.
Seed Production of Pulses	120 farmers Trained in the Rathindra KVK on various aspects of Pulse Seed Production adopted the Technology and from them the Technology was spreaded with culminating effect of adoption among another 70 numbers of farmers of whom 19 numbers of farmers resided within 0.1 – 5 kms. Radius of the Rathindra KVK; 23 numbers of farmers resided within 5.1 – 10 kms. Radius of the Rathindra KVK; 14 farmers resided within 10.1 – 15 kms. Radius of the Rathindra KVK and the rest 14 numbers of the farmers resided within 15.1 kms and above radius of the Rathindra KVK.
Varietal Replacement of Mustard with Improved Mustard Variety RW – 351	150 farmers Trained in the Rathindra KVK on various aspects of Cultivation of Improved Mustard Variety RW – 351 adopted the Technology and from them the Technology was spreaded with culminating effect of adoption among another 100 numbers of farmers of whom 27 numbers of farmers resided within 0.1 – 5 kms. Radius of the Rathindra KVK; 34 numbers of farmers resided within 5.1 – 10 kms. Radius of the Rathindra KVK; 20 farmers resided within 10.1 – 15 kms. Radius of the Rathindra KVK and the rest 19 numbers of the farmers resided within 15.1 kms and above radius of the Rathindra KVK.
Improved Method of Elephant's Foot Yam Cultivation	185 farmers Trained in the Rathindra KVK as well as 110 of them were involved in the FLD Programmes of Rathindra KVK on various aspects of improved method of Elephant's Foot Yam Cultivation adopted the Technology and from them the Technology was spreaded with culminating effect of adoption among another 118 numbers of farmers of whom 31 numbers of farmers resided within 0.1 – 5 kms. Radius of the Rathindra KVK; 39 numbers of farmers resided within 5.1 – 10 kms. Radius of the Rathindra KVK; 24 farmers resided within 10.1 – 15 kms. Radius of the Rathindra KVK and 20 numbers of the farmers resided within 15.1 kms and above radius of the Rathindra KVK. **It was necessary to mention here that 4 numbers of farmers of the neighbouring Dumka District of the Jharkhand State also adopted the above mention Technology through the horizontal spread of the Technology.**
Low Cost Fish Feed Preparation	25 farmers Trained as well as getting involved in the FLD Programmes of the Rathindra KVK on various aspects of low cost fish feed preparation adopted the Technology and from them the Technology was spreaded with culminating effect of adoption among another 12 numbers of farmers of whom 03 numbers of farmers resided within 0.1 – 5 kms. Radius of the Rathindra KVK; 04 numbers of farmers resided within 5.1 – 10 kms. Radius of the Rathindra KVK; 02 farmers resided within 10.1 – 15 kms. Radius of the Rathindra KVK and the rest 03 numbers of the farmers resided within 15.1 kms and above radius of the Rathindra KVK.
Replacement of Deshi Poultry Breed by Rhode Island Red Breed (RIR)	309 farmers Trained as well as getting involved in the FLD Programmes of the Rathindra KVK on various aspects of replacement of local Deshi Poultry Breed by introduction of High Yielding Poultry Breed viz. Rhode Island Red (RIR) adopted the Technology and from them the Technology was spreaded with culminating effect of adoption among another 512 numbers of farmers of whom 302 numbers of farmers resided within 0.1 – 5 kms. Radius of the Rathindra KVK; 109 numbers of farmers resided within 5.1 – 10 kms. Radius of the Rathindra KVK; 23 farmers resided within 10.1 – 15 kms. Radius of the Rathindra KVK and the rest 78 numbers of the farmers resided within 15.1 kms and above radius of the Rathindra KVK.
Kantha Stitch Work	40 farm women and female rural youths Trained in the Rathindra KVK on various aspects of Kantha Stitch Work adopted the Technology and from them the Technology was spreaded with culminating effect of adoption among another 25 numbers of farm women and female rural youths of whom 07 numbers resided within 0.1 – 5 kms. Radius of the Rathindra KVK; 08 numbers resided within 5.1 – 10 kms. Radius of the Rathindra KVK; 05 numbers of farm women and female rural youths resided within 10.1 – 15 kms. Radius of the Rathindra KVK and the rest 05 numbers of the farm women and female rural youths resided within 15.1 kms and above radius of the Rathindra KVK.
Preparation and Use of Vermin-Composting	180 farmers Trained in the Rathindra KVK on various aspects of preparation and use of Vermin-Composting adopted the Technology and from them the Technology was spreaded with culminating effect of adoption among another 110 numbers of farmers of whom 29 numbers of farmers resided within 0.1 – 5 kms. Radius of the Rathindra KVK; 37 numbers of farmers resided within 5.1 – 10 kms. Radius of the Rathindra KVK; 22 farmers resided within 10.1 – 15 kms. Radius of the Rathindra KVK and the rest 22 numbers of the farmers resided within 15.1 kms and above radius of the Rathindra KVK.

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

Over All Impact of Rathindra KVK

A. Rationale

The Rathindra KVK used the working definition of "impacts" as "sustained changes in people/farmers' lives brought about by specific interventions". Therefore, impact analysis presented here referred not to any immediate outputs or effects of a programme but to the everlasting and sustained changes brought about. In light of the above, impact assessment is therefore, an evaluation of how, and to what extent change had occurred. This required an understanding of the perspectives of various stakeholders particularly the local population.. The Rathindra KVK has taken up initiatives such as organizing women and men farmers providing technologies for Crop Diversification , promoting activities to supplement peoples income and relevant infrastructure, developing entrepreneurships for Rural Youths so that, collectively the Rathindra KVK can achieve the KVK mandate and the goals of social, economic and institutional development. The Process of impact assessment examined the factors of efficiency, effectiveness and consistency of the interventions. The specific activities implemented based on the mandate of KVK were already explained in detail in the previous chapters.

B. Institutional / Social Impacts

The Rathindra KVK provided the much needed organizational and institutional base in the form of Farm Science Clubs, Farmers' Clubs and Self Help Groups (SHGs) to the women and men farmers and rural youths. Later the Rathindra KVK got involved in building social and technical awareness, transfer of technology, empowering communities and brings about economic and social change. The primary target group is practicing farmers, farm women and rural youths, who have become the core of delivery system. **32,903** numbers of practicing farmers, farm women, rural youths and extension functionaries have been trained in knowledge and skill aspects of various technologies in the operational area of the Rathindra KVK.

Right from the beginning, the Rathindra KVK has paid much attention to intensify the involvement of the practicing farmers, farm women and rural youth at village level and develop necessary skills to build up the capacity among these stakeholders. These clientele of the Rathindra KVK are partners in development in the truest sense for they are involved in the practical implementation of the training programmes The participatory approach in imparting the trainings have developed self confidence in the Trainees.

Role of the Rathindra KVK in helping the vulnerable sections of the Rural Population viz. SC, ST, Minorities, Women and Rural Youth:-

The main thrusts of the Rathindra KVK is the human resource building at the grass-root level for effective and area specific transfer of technology and promote its adoption at the micro level. Keeping in view the primary necessities of the above mentioned vulnerable target group, the mandate of the Rathindra KVK have been designed to "help people to help themselves" in acquiring the skills to meet their needs. As agricultural labourers and small cultivators have no steady income, trainings are imparted in various appropriate income generation programmes like low volume high value horticulture, vermin culture, fishery, poultry and duckery, handi-crafts, kantha stitch, Batique work methods etc. Location specific trainings are given to the women farmers so as to upgrade their existing available natural resources. To bridge the gap between research and extension, demonstrations form an integral part of trainings to expose farmers to latest management practices in agriculture. On farm trails have been conducted on the cultivators' fields to create awareness about the latest management methods and dissemination of

proven technology. This has helped in establishing feedback mechanism between the scientists and society resulting in modification of the technology to suit to the locality, socio-economic and cultural situations.

Further, KVK investigators have interviewed a group of 300 randomly selected men and women ex-trainees of the Rathindra KVK about their perception of change over a period of time in 2015 -2016. They came out with the following information:-

i. All their children are attending schools more regularly.

ii. Health and sanitation improvements have become possible.

iii. Perception of own wellbeing and better-off living conditions was felt by the trainees..

iii. The trainees clearly perceived positive changes in quality of life due to increased productivity, support availability and income improvement.

iv. The trainees also felt that the quality of diet and nutritional security had improved than before.

v. Last but not the least the Trainees clearly perceived that there was a huge improvement in technical knowledge and skills regarding farming and related activities as well as non-farming activities.

C. Economic Impacts

Economic impact of the Rathindra KVK has come about through

i. Adoption of yield raising technologies i.e. FLDs/OFTs and other extension activities supported by the Rathindra KVK budget.

ii. Training and capacity building activity contributed in implementing value added activities through Income generating activities – micro enterprises at individual level and group level.

iii. Technologies transferred to project area are manifold which can broadly be listed into the following:-

a. Introduction of new varieties particularly in high volume low cost horticultural crops like Elephant Foot Yam, Drumsticks and low volume high cost vegetables like French Beans, Capsicum and Broccoli, agronomic crops like Pulses like Black Gram, Green Gram etc. and Oilseeds Crops like Sesame, Lentil, Rape Seeds, Mustard etc.

b. Skills in grafting and nursery

c. Mixed Fish farming with Indian Major Carps along with Giant Prawns

d. Integrated Poultry Management

e. Integrated Goatery Management based on **Black Bengal Breed**

f. Scientific Dairy Management

c. Integrated Pest Management (IPM)

d. Integrated Nutrition Management (INM) based Soil Testing

e. Skills in preparation of Kantha Stiched products, Tie and Dye products, Batique Works, Appliqué Works, Scented Agarbatti preparation, rural Jute based handicrafts etc.

The fact that the Rathindra KVK follows group oriented strategies, KVK's activities have got intertwined to give a **synergy** to productivity increases in the area through technology transfer. The cropping intensity in the project area i.e. the District of Birbhum has gone up from less than 80 percent in the pre-independence era to 161.88 percent in 2011 – 2012. Thus, the overall impact and its benefits in Birbhum District (Targeted area) are manifold.

D. Technology Impacts

The Rathindra KVK conducted a group exercise of participatory nature with ex-trainees in Kankutia, Senkapur, Deuli, Raipur, Kartickdanga, Srichandrapur, Asadullahpur, Bautizole and Bishnubati villages of the District of Birbhum to ascertain the impact created by activities of the Rathindra KVK. The following table describes the process using the participatory tool called trend analysis to obtain the results.

The Methodology

KVK invited those ex-trainees who participated at least in one of the Two Days On Campus and in one of the Three Days Off Campus Training Programmes conducted by the Rathindra KVK. The farmers (300 in numbers belonging to various villages) were given tamarind seeds and the staff explained the purpose of exercise. The impact/ learning outcomes were listed as knowledge, information, adoption and economic benefit. The ex-trainee was expected to give a rating for before (before the intervention of the Rathindra KVK) and present periods, 'then' and 'now'. Depending on their assessment, they placed a number of tamarind seeds. As could be seen in the Table, there was multifold improvement in every aspect as assessed by the farmers of Kankutia, Senkapur, Deuli, Raipur, Kartickdanga, Srichandrapur, Bautizole and Bishnubati villages adopted by the Rathindra KVK over the last decade and this exercise was conducted in the Year 2015 – 2016.

Impact of the activities of the Rathindra KVK as assessed by the 300 farmers

Sl. No.	Impacts	Average Impact as perceived by the Trainees (Then)	Average Impact as perceived by the Trainees (Now)	Percentage of Change as perceived by the Trainees
01.	**Impact on Knowledge**	000	00000000	266.67
02.	**Impact on Information**	00	0000000	350.00
03.	**Impact on Adoption**	0	000000	600.00
04.	**Economic Impact**	**0000**	**000000**	**150.00**

N.B.:- Here "0" means a Tamarind Seed.

4.4 Details of innovations recorded by the KVK

Thematic area	Dairy farming
Name of the Innovation	**Proper blending of Technologies and products for Scientific dairy farming**
Details of Innovator	Bidhan Chandra Singha, Village: Mirzapur, P.O. -Raipur, Block-Bolpur-Sriniketan, Dist: Birbhum.
Back ground of innovation	• Artificial insemination in cattle • Conscientious heat detection • Detection of oestrous by fern pattern of cervical mucous • Proper timing of insemination • Low cost feed formulation • Cultivation of fodder • Feeding of area specific mineral mixture • Artificial Insemination done in generation after generations of Cattles in the

	same genetic line-up help in Breed upgradation.
Technology details	Crossbreeding through A. I. is the most suitable and economical technique for generating higher genetic and production potential. Crossbreeding in indigenous low producing cattle with superior germplasm influences the genetic potential of the crossbred so born. The age at puberty have been attended at 2 to 2.5 years of age. All the female calves fed properly from the beginning of the birth so that they attain desired body weight and maturity at an early age. The traditional feeding practice is modified by providing mineral mixture, concentrate and green forages and formulation of low cost feed. After parturition animals usually always come to heat up to 2- 2 1/2 months. The owner tried that no heat should be missed and insemination should be given by trained person and timely to achieve optimum pregnancy result. Post insemination confirmation of pregnancy at 60 days. Livestock owners got educated and trained in modern profitable animal husbandry practices, especially feeding, management and care of growing calves and heifers by Rathindra Krishi Vigyan Kendra.
Practical utility of innovation	Poor quality of germplasm, poor nutrition and management and to some extent lack of proper animal husbandry practices and traditional misconception play an important role in less reproductive efficiency ofcattle in rural area. The villagers are not much aware when their animal should reach puberty and the young growing animals don't get proper attention and are raised on dry fodder and grazing. Thus the age at puberty is attended as late as 4, 5 or 6 years. In this way livestock owner miss at least one crop or two-calf crop in their lifetime. However, in the field condition the adoption of A. I. is not up to the expected level, as the farmer's education level, land holding and other economic and social factors influences the adaptation of the technique for faster multiplication of superior germ plasm. In light of the above discussion adoption of AI, formulation of low cost feed, suuplementation with mineral mixture and cultivation of fodder crops help a lot to make profit of small scale dairy farmer.

4.5 Details of entrepreneurship development

Entrepreneurship development	
Name of the enterprise	M/s. Partha Organic Products
Name & complete address of the entrepreneur	Sri Partha Mal Village + P. O. :- Daranda, Police Station – Illumbazar, C. D. Block ; Illumbazar, Dist. – Birbhum, Pin. – 731236, West Bengal, India. Mobile Phone Nos. – 08926536411, 09474613193. E-Mail Ids:- popfarm20@gmail.com
Intervention of KVK with quantitative data support:	A. Dissemination of Technology about production and application of vermin-compost in Agriculture and Allied Sectors through skill development training programme in June, 2011. B. Transfer of Technology about establishing Kitchen Garden through Skill Development Training Programmes in January, 2013. C. Dissemination of Technology about scientific procedure of Composite Fish Culture through knowledge and skill development training programme in February, 2015. D. Development of knowledge and skill in Vermin-Compost thrigh knowledge and skill development training programme in December, 2011.

	E. Intial supply of 100 numbers of Earth-Worms (*Eisenia foetidae*) from the Rathindra KVK February, 2015.in 2011. E. Dissemination of Technology about multiplication and application of Azolla in Agriculture and related Sectors through Skill development Training Programmes in June, 2012. F. Transfer of Technology about organic production protocols for Vegetable cultivation through Knowledge and skill development training programmes in February, 2015.
Time line of the entrepreneurship development	A. Establishment of the enterprise in a small-scale with only 600 numbers of Earthworms out of which 100 numbers were supplied by the Rathindra KVK. B. Since establishment upto June, 2015, 45 kilo grams of earth worms were sold. C. From July, 2015 to March, 2016, another 25 kiolo grams of eath worm were sold. D. Composite Organic Fish culture was started by the enterprise in February, 2015 with a pond of nearly 0.5 hectares (4 Bighas) of water-body. E. Upto March, 2016, 8.0 quintols of organic fishes like Catla, Rohu, Mrigal etc. were produced and marketed. F. Muralla which is a small traditional indigenous fish species were also produced organically to tune of 1.0 quintol upto March, 2016 and another 30 kilo grams in April, 2016. This small indigenous fish species generally fetches a market price of Rs. 300.00 per kilo gram which gives much higher returns than other fish specieses. G. Production of organic vegetables viz. Brinjal, Chilli, Tomato, Capsicum, Cherry Tomato was started in March, 2015 in a land area of 4.0 Acres. Now in addition to the above mentioned vegetables, Capsicum, Broccoli, Red Cabbage etc. are being produced without application of chemical inputs with active technological support from the Rathindra KVK.
Technical Components of the Enterprise	A. Vermin-Compost production in a commercial scale. B. Production of vegetables without using chemical inputs. C. Culture of fishes and indigenous fish specices without using chemicals.
Status of entrepreneur before and after the enterprise	Before the enterprise was established, Sri Partha Mal earned a meagre income of Rs. 500.00 (Rupees Five hundred) per month mainly through coaching school students. Now Sri Mal is earning on an average Rs. 20,000.00 (Rupees Twenty thousands) per month.
Present working condition of enterprise in terms of raw materials availability, labour availability, consumer preference, marketing the product etc. (Economic viability of the enterprise):	**Raw Materials Availability:-** A. Raw materials are mainly procured from local village. The materials which are locally unavailable are procured from Sukh Bazar (7.0 kilometres from Daranda) or from Mirzapur (5.0 kilometres from Daranda, the local village). **Labour Availability:-** A. 20 numbers of unemployed rural youths (both males and females) were organized by Sri Partha Mal and these rural youthe were sent to the Rathindra KVK for skill and knowledge development traiing programmes on production and application of Vermin-Compost, establishment and operationalization of organic kitchen gardens, scientific procedure of composite fish culture, commercial production practices of organic vegetables. B. Another 100 numbers of practicing farm women mainly from disadvantageous Scheduled Tribe (ST) community were further trained by Sri Mal on organic Kitchen Garden. C. These 120 numbers of rural youths and practicing farm women are working as labour force for the enterprise. **Consumer Preference:-** A. Consumers mainly prefer organic vegetables and fresh table fishes and indigenous fish specieses like Mouralla. **Marketing the Products:-** A. Regarding sales of Vermin-Compost, buy-back orders of compost are being placed by the local farmers; owners from various nurseries of Bolpur Town, Illumbazar, Durgapur City and even from North Bengal areas; various Non Governmental Organizations (NGOs) and private households of Bolpur Town. B. Fishes are being sold in Bolpur Town, Illumbazar, Sriniketan, Bonovilla, local Guest houses and at the local village. C. Organic vegetables grown at the Kitchen Gardens are being sold at the farm gates mainly to the people coming from Sriniketan and Santiniketan.

	Economic Viability of the Enterprise:- A. Production Cost of 1.00 kilogram of Vermin-Compost is Rs. 4.50 (including costs of input materials, labour charges, electricity bills, office maintainance, security, and others). Sale Price of 1.00 kilogram of Vermin-Compost is Rs. 8.00. In a single production cycle, on an average 4 tonnes of Vermin-Compost is being produced. In a year, on an average 6 production cycles is being commercially completed giving an annual production of 24 Tonnes of Vermin-Compost annually. This production and sales of Vermin-Compost gives a Net Return of Rs. 84,000.00 (Rupees Eighty four thousand) annually. Since establishment of the enterprise in June, 2011, total Net Retirns from production and sale of Vermin-Compost is Rs. 6,00,000.00 (Rupees Six lakhs). B. For organic fish production, fish spawns of market value of Rs. 20,000.00 were cultivated involving other costs like labour charges, costs of limes, costs of Organic feeds which is to the tune of another Rs. 10,000.00. Already this fishery sector which was only started very recently in February, 2015 gave a harvest of 8 quintols of fishes which were sold in the market at the price of Rs. 150.00 per kilo gram giving a net return of nearly Rs. 90,000.00 (Rupees Ninety thousand) in a year. C. Regarding organic vegetable cultivation, generally 2 numbers of harvests are being performed in every week and each harvest gives 2 quintols of produce. Net profit from sales of organic vegetables is on an average is Rs. 2.00 per kilogram. So on an average per week a net reurn of Rs. 800.00 (Rupess Eight hundred) is being achieved production and sales of organic vegetables.
Horizontal spread of enterprise	A. 500 numbers of practicing farm women from disadvantageous Scheduled Tribe (ST) community from 14 numbers of nearby villages are now producing vegetables in their Kitchen Gardens mainly using vermin-composts and without chemical inputs. B. 50 numbers of practicing farm women from disadvantageous Scheduled Caste (SC) community (compelled to be dis-placed from Bangladesh) from 02 numbers of nearby villages namely Srichandrapur and Sahebdanga are now producing vegetables in their Kitchen Gardens mainly using vermin-composts and without chemical inputs. C. 50 numbers of practicing farm women from disadvantageos Scheduled Caste (SC) community from local Daranda village are now producing vegetables in their Kitchen Gardens mainly using vermin-composts and without chemical inputs. D. A reputed NGO namely Lok Kalyan Parishad, Illumbazar has trained 20 numbers of Practicing Farm women of Scheduled Tribe (ST) community using the facilities of the enterprise. E. Another NGO made a successful exposure visit of 25 numbersof Practicing Farmers and Farm Women of Scheduled Tribe (ST) community from Dumka District, Jharkhand to the facilities of the enterprise.
Corporate Social Responsibility	A. A portion of the profit earned by the enterprise is being channelized by Sri Mal to establish and sustainabily run supportive education centres providing free supply of text books, exercise books, pens, pencils and educational coaching, employing 12 numbers of Teachers to the school students from pre-nursery level to Class – X level of the disadvantageous sections of the rural community. B. An adult education centre was established and being run successfully giving facilities for learning functional literacy, recent advances in agriculture and allied sectors, health and hygiene issues for 40 numbers of practicing Farm Women from disadvantageous Scheduled Csate (SC) community of the local village i.e. Daranda. This intiative is being supported by the Rotary Club, Santiniketan-Bolpur, Birbhum.

4.6 Any other initiative taken by the KVK

A. Minikit Demonstrations of different Varieties of Wheat and Paddy under IARI Outreach Programme, PUSA, Samastipur

Crop	Thematic Area	Name of the varieties	No. of farmers	Area (ha)	Yield (q/ha)		% increase in yield
					Demo	Check	
Wheat	Varietal replacement	1.HD 2733	20	4.0	31.1		27.5

Rabi, 2013-14		2.HD2824 3. HD 2985 4. HI 1563 5. HD 2967 6. HW 2045 7. HI 1544			38.1 26.9 26.3 26.9 28.4 26.6	24.4 (Sonalika)	56.0 10.2 10.1 10.2 33.9 10.1
Paddy Kharif, 2014	Varietal replacement	1. Pusa - 44 (130 days) 2. Pusa Sugandh -5 (110 days) 3. PNR - 381 (120 days)	30	2.4	43.98 38.91 32.52	42.1 (MTU 7029) 30.1 (IR36) 30.1 (IR 36)	4.4 29.2 8.0
Wheat Rabi, 2014-15	Varietal replacement	1. HD2733 2.HD2824 3.HD2967 4. HI1544 5.HI1563 6.HD2985 7.HW2045 8.HD2888	14	4.0	36.2 41.0 35.7 35.2 34.8 35.9 35.8 34.7	33.3 (Sonalika)	8.7 23.1 7.2 5.7 4.5 7.8 7.5 4.2
Wheat Rabi, 2015-16	Varietal replacement	1. HD 2824	05	1.0	39.4	31.2 (Sonalika)	26.3

B. Demonstrations of different Varieties of Green Fodder under Outreach Programme of ICAR-NDRI, ERS, Kalyani, Nadia

Crop	Thematic Area	Name of the varieties	No. of farmers	Area (ha)	Yield (q/ha)		% increase in yield
					Demo	Check	
Maize Pre-Kharif, 2015	Varietal Improved	1. African Tall	19	00.40	1020.20	706.60 (Local Improved)	44.4
Rice Bean Kharif, 2015	New Crop Introduction	1. Bidhan - 1 2. Bidhan - 2	13 06	00.20 00.58	320.5	-	-
Sorghum Kharif, 2015	New Crop Introduction	1. MP – Chari 2. Jumbo	16 06	00.60 00.08	633.4	340.5	86
Oat Rabi, 2015-16	New Crop Introduction	1. JHO - 822	05	00.50	09.16	-	-

5.0 LINKAGES

5.1 Functional linkage with different organizations

Name of Organization	Nature of Linkage
Palli Sanghatana Vibagh, Visva-Bharati, Sriniketan, Birbhum	This linkage is mainly focusing on organizing joint Training programmes for the villagers as well as giving exposure to the clientele of the Rathindra KVK as about the field level situation
All India Radio, Santiniketan Kendra, Birbhum, West Bengal	Broadcasting of different Rathindra KVK activities as well as live Phone –In Programmes are being organized. As a result a vast number of farmers, farm women and rural youth are being exposed to multiple information sources regarding multiple issues. This is necessary to mention that already AIR, New Delhi has awarded three adopted farmers and regular listeners of AIR Programmes of the Rathindra KVK for their excellent contribution to farming activities.
Doordarshan, Santiniketan Kendra, Birbhum, West Bengal	Telecasting of different Rathindra KVK activities as well as live phone –In Programmes are being organized. As a result a vast number of farmers, farm women and rural youth are being exposed to multiple information regarding multiple issues. This is necessary to mention that the viewers of these Programmes have been immensely benefited by viewing Method Demonstration on various new Technologies.
Bidhan Chandra Krishi Viswavidyalaya, West Bengal	This linkage is mainly on the following aspects:- - Conducting regular basis Human Resource Development Training Programme in different discipline. - Facilitate for Annual Action Plan Development. - Facilitate On Farm Testing .Modules. - Provide different location specific germ-plasm. All the linkage activities profoundly help the Rathindra KVK clientele in updating their knowledge, skill and attitude.
IARI, Regional Station, Samastipur, Bihar	The linkage is mainly based on Collaborative Demonstration Programmeon newer Wheat and Paddy varieties. As a result of this linkage, the farmers of Birbhum District are being exposed to nearly Thirty (30) newer varieties of Wheat anf Four (04) varieties of scented as well as non-scented paddy varieties. Some varieties have shown very good potential for future introduction in the District. - Provide Weather related for Crop based Action Plan Development.
ICAR-NAARM, Hyderabad, Telengana, India.	This linkage mainly focuses on human resource development of KVK scientists through undergoing Training Programmes organized by the ICAR-NAARM as well as collaboratively organizing the Field Experience Training, a residential long duration (21 Days) Training Programme conducted for giving the newly recruited ARS Scientists on Probation a firsthand experience in research and extension activities in real life situation.
Protection of Plant	**This Linkage is basically for organizing Training Programme on "Creation of Awareness among**

Varieties and Farmers' Rights Authority, Ministry of Agriculture, Department of Agriculture and Co-operation, Govt. of India, New Delhi	**the Farmers and Other Stakeholders about the Provisions of PPV & FR Act – 2001" to** make the stakeholders aware about the Provisions of the PPV & FR Act – 2001 and for encouraging the farmers to register their traditional, extinct crop varieties with the Authority.
IIT, Kharagpur, West Bengal	**This Linkage mainly focuses on bringing and testing cutting edge Hi-Tech Technologies and for organizing Collaborative Training Programme on Green House Technologies and Micro-Irrigation System based Precision Farming.**
CIFRI, Barackpur, 24 Parganas (North), West Bengal	This linkage is basically focussed on getting Technical Support on Glass Jar Hatchery and low cost Fish Feed Preparation. Utilizing this linkage a farmer named Sri Sunil Das, Village – Srichandrapur, P. O. – Sattore, Dist. – Birbhum, West Bengal (Mobile Phone No. – 09679885667) prepared a model of Glass Jar Hatchery using low cost materials. This innovative approach was sent to ICAR. The Model of Low Cost Glass Jar Hatchery innovated by Sri Sunil Das was detailed in the Compilation titled, "Farm Innovators", published by the ICAR in October, 2010 (Page No. – 148).
ICAR-NDRI, ERS, Kalyani, West Bengal	This Linkage is basically for organizing the Collaborative Animal Health Camps, Cattle Infertility Treatment Camps, Hybrid Napier Distribution Camps and for organizing Front Line Demonstrations on improved varieties of Fodder Crops like Berseem, Oat etc.
Line Departments like Agriculture, Horticulture and Food Processing Industries, Animal Resource Development, Fisheries etc. Of the Govt. Of West Bengal, Birbhum, West bengal	This linkage is basically on Technological back-stopping.
National Research Centre on Weed Control, Jabbalpur, Madhya Pradesh	The linkage is now focusing on Technical Support for organizing Training and Awareness Camps for controlling weeds specifically weeds like Parthenium. The farmers of this District get immense benefit as they get exposure on Parthenium and other weeds through participating in "Parthenium Control Week Programme".
ATMA, Birbum, West Bengal	The linkage is now focusing on Orientation Training Programme for Farmers, Training Programme for Head Master / Achiever Farmer, Farmers-Scientists Interaction, Farmers' Exposure Visits etc. Various Short Term Researches on Topics related with Fishery, Agronomy etc. are also being performed utilizing these linkages Programme.

NABARD, Birbhum, West Bengal	The linkage mainly focuses on formation of Farmers Club, organizing Training for vulnerable areas, Organizing Technology Weeks etc. Some Farmers' Clubs are doing excellent work and they are benefitted from this Linkage. Besides above mentioned Linkages, NABARD, Birbhum sponsored the Technology Week – 2015, organized by the Rathindra KVK in its Campus from 23.02.2015 to 27.02.2015 for exposing the Practicing Farmers, Farm Women, Rural Youths and Extension Functionaries on cutting edge Agricultural and related field technologies. The NABARD is now sponsoring Skill Development Trainings in the Farm Sectors in the Financial Year of 2015 – 2016.
State Agricultural Management, Extension and Training Institute (SAMETI), Narendrapur, 24 Parganas (South), West Bengal.	This linkage is mainly on the following aspects - Conducting regular basis Human Resource Development Training Programme in different discipline for Scientists of the Rathindra KVK. - All the linkage activities profoundly help the Rathindra KVK clientele in updating their knowledge, skill and attitude.
Agricultural Training Centre (ATC), Ramakrishna Mission Aashrama, Narendrapur, Kolkata.	This linkage mainly focuses on human resource development of the practicing farmers especially practicing farm women, rural youths and extension functionaries on different improved technologies in agriculture and related sectors and gender related issues concerned with economic, social, cultural and political empowerment.
IFFCO, Kolkata, West Bengal	The linkage basically focuses on Training and Visit of the farmers' fields. The farmers get benefit through getting information on nutritional status of the soil as well as the proper fertilizer and manuring procedures.
Fertilizer Association of India (FAI), Kolkata, West Bengal	The linkage basically focuses on performing various Short Term Research on various crop nutrition and related issues, Training and Visit of the farmers' fields. The farmers get benefit through getting information on nutritional status of the soil as well as the proper fertilizer and manuring procedures..
Coconut Development Board, State Centre, Salt Lake City, Kolkata, West Bengal	• This linkage is basically giving Residential Training to selected Rural Youths on "Friends of Coconut Trees (FOCT)" and d popularizing Innovative Machine for rising up in the Coconut Trees. The second of this Type Training has been organized in collaboration with nRathindra KVK at the Rathindra KVK this Year. 20 unemployed Rural Youths were trainees in the Six Days Residential Training Programme on "Friends of Coconut Trees (FOCT)" jointly organized by the Coconut Development Board, State Centre, West Bengal, Salt Lake City, Kolkata and Rathindra Krishi Vigyan Kendra at the Rathindra Krishi Vigyan Kendra Campus from 21.08.2014 to 26.08.2014 and now they are performing as **Master Trainers** throughout the State.
TATA Rallis India Ltd., Kolkata, West	This linkage is basically focuses on Capacity Build Up Training for clientele of Rathindra KVK on Wheat, Potato, Mustard and Rabi Vegetables Crop Management and it has also started the Tata Rallis

Bengal	Agri Input Training Scheme (TRAITS) in 2015 – 16 in collaboration with the RAthindra KVK for giving long duration skill, consultancy, marketing and entrepreneurship development Training for unemployed Rural Youths who are given opportunity to be absorbed in the Tata Rallis Company after successful completion of the Training.
Lok Kalyan Parishad, Bolpur, Birbhum, West Bengal.	This linkage gives importance as well as focuses on Training and Demonstration for stakeholders for far flung areas of Birbhum District, especially areas largely dominated by the Scheduled Tribe (ST) population as well as collaborative Trial and Demonstration of Bio-Inputs for Agriculture and related Sectors.
Tagore Society For Rural Development, Santiniketan, Birbhum West Bengal	This linkage gives importance as well as focuses on Training and Demonstration for stakeholders for far flung areas of Birbhum District where normal working linkage of KVK with villagers of those areas are very weak.
Luthern World Services, Kolkata, West Bengal	This linkage gives importance as well as focuses on Training and Demonstration for stakeholders for far flung areas of Birbhum District, especially areas bordering Jharkhand State where normal working linkage of KVK with villagers of those areas are very weak.
Asansol Burdwan Seva Kendra, Burdwan, West Bengal	This linkage gives importance as well as focuses on joint Training and Demonstration for stakeholders for various non-adopted villages of Birbhum District as well as far flung areas of Birbhum District, especially areas where normal working linkage of KVK with villagers of those areas are very weak.
Manab Jamin, Birbhum, West Bengal.	This linkage gives importance as well as focuses on joint Training and Demonstration for stakeholders for various non-adopted villages of Birbhum District.
Development Research Communication and Service Centre, Kolkata, west Bengal.	This linkage mainly emphasizes on giving quality Training to the Rural Youth getting admitted in the Community College run by this NGO at Bolpur through delivering Lectures and giving exposures to hands-on field level situation by the experts from the Rathindra KVK who work as Resource Persons on various subjects like fishery, soil testing, horticulture etc.
IMSE, 195 Jodhpur Park, Kolkata - 700008	This linkage gives importance as well as focuses on joint Training and Demonstration for stakeholders for various non-adopted villages of Birbhum District as well as far flung areas of Birbhum District, especially areas where normal working linkage of KVK with villagers of those areas are very weak.
Bolpur Krishija Samabay Samity, Bolpur, Birbhum, West Bengal	This linkage is basically focuses on supply of quality agricultural inputs for various FLD and OFT Programmes of the Rathindra KVK undertakes. As a result, the clientele of the Rathindra KVK is immensely benefitted through experiencing newer and better quality agricultural inputs.
Comprehensive Area Development Corporation (CADC) KVK, Sonamukhi, Bankura, West	This linkage is basically focuses on supply of quality breeder and foundation seeds of Pulses and Oilseeds for various FLD and OFT Programmes of the Rathindra KVK undertakes. As a result, the clientele of the Rathindra KVK is immensely benefitted through experiencing newer and better quality seeds.

Bengal	
Comprehensive Area Development Corporation (CADC), Ranaghat – II, Arangghata, Nadia, West Bengal	This linkage is basically focuses on supply of quality breeder and foundation seeds of Pulses for various FLD and OFT Programmes of the Rathindra KVK undertakes. As a result, the clientele of the Rathindra KVK is immensely benefitted through experiencing newer and better quality seeds.
National Seed Corporation, Kolkata, West Bengal	This linkage is basically focuses on supply of quality breeder and foundation seeds of various Crops for various FLD and OFT Programmes of the Rathindra KVK undertakes. As a result, the clientele of the Rathindra KVK is immensely benefitted through experiencing newer and better quality seeds.
West Bengal State Seed Corporation, Kolkata, West Bengal	This linkage is basically focuses on supply of quality breeder and foundation seeds of various Crops for various FLD and OFT Programmes of the Rathindra KVK undertakes. As a result, the clientele of the Rathindra KVK is immensely benefitted through experiencing newer and better quality seeds.
Panchayati Raj Institutions (PRIs), Birbhum, West Bengal	This linkage helps the Rathindra KVK to get base-line information for choosing Target Areas both on Geographical Terms as well as on Technological Terms by going through various surveys and reports generated by the PR Institutions of the Birbhum District.
Other Krishi Vigyan Kendras (KVKs)	This linkage helps the farmers of various Districts to have an exposure and visit to Rathiondra KVK and exchange ideas and experiences with farmers of the District of Birbhum and Scientists of the Rathindra KVK.

5.2. List of special programmes undertaken during 2015-16 by the KVK, which have been financed by ATMA/ Central Govt./ State Govt./NABARD/NHM/NFDB/Other Agencies (information of previous years should not be provided)

a) Programmes for infrastructure development

Name of the programme/scheme	Purpose of programme	Date/ Month of initiation	Funding agency	Amount (Rs.)
Establishment of Minimal Processing Unit	To produce quality seeds, animal feeds, fish feeds, processed agricultural and horticultural products.	March, 2016	ICAR	15,00,000.00
Total				15,00,000.00

(b) Programme for other activities (training, FLD, OFT, Mela, Exhibition etc.)

Name of the programme/scheme	Purpose of programme	Date/ Month of initiation	Funding agency	Amount (Rs.)
Training Programme on Improved Agro Technology for Homestead Papaya and Drum Sticks Cultivation	To give Technical expertise and skill to the Trainees on Different Aspects of Crop Diversification	**18.04.2015.**	Kabi Guru Prakalpa, Dwaranda, Birbhum	The total cost of the Programme was borne by the funding agency.

Training Programme on Recent Agro Technology in Pulse and Oil Seed Production in Kharif Season	To give Technical expertise and skill to the Trainees on Different Aspects of Crop Diversification	**23.04.2015.**	ADA (Nanoor), Dept. of Agriculture, Govt. of W. B.	The total cost of the Programme was borne by the funding agency.
Training Programme on Preparation and Use of Vermi-Compost in Homestead Garden	To give Technical expertise and skill to the Trainees on Different Aspects of Organic Input Production	**25.04.2015.**	Kabi Guru Prakalpa, Dwaranda, Birbhum	The total cost of the Programme was borne by the funding agency.
Training Programme on Poultry Disease and Its Prevention	To give Technical expertise and skill to the Trainees on Different Aspects of Disease Management of Poultry Birds	**22.04.2015.**	Rural Training Centre, Allahabad Bank	The total cost of the Programme was borne by the funding agency.
Training Programme on Mechanism of KVK Functioning and Its Linkages with Financial Institutions	To give information to the Trainees on Different Aspects of Linkage between KVK and Financial Institutions	**09.04.2015.**	BIRD, NABARD, Birbhum	The total cost of the Programme was borne by the funding agency.
Training Programme on Fish Production for Livelihood Development	To give Technical expertise and skill to the Trainees on Different Aspects of Recent Advances in Fishery	**08.05.2015 to 09.05.2015.**	PIA-IWMP-I, Barua Gopalpur Watershed, DDA (Soil and Water Management), Dept. of Agriculture, Govt. of W. B., Suri, Birbhum	The total cost of the Programme was borne by the funding agency.
Training Programme on Animal Resource Development	To give Technical expertise and skill to the Trainees on Different Aspects of Improved Practices for Livestock Production	**21.05.2015 to 22.05.2015.**	PIA-IWMP-I, Barua Gopalpur Watershed, DDA (Soil and Water Management), Dept. of Agriculture, Govt. of W. B., Suri, Birbhum	The total cost of the Programme was borne by the funding agency.
Training Programme on Fishery Activity as a Source of Livelihood	To give Technical expertise and skill to the Trainees on Different Aspects of Improved Fishery Production Technology	**21.05.2015 to 22.05.2015.**	PIA-IWMP-I, Barua Gopalpur Watershed, DDA (Soil and Water Management), Dept. of Agriculture, Govt. of W. B., Suri, Birbhum	The total cost of the Programme was borne by the funding agency.
Training Programme on Animal Resource Development	To give Technical expertise and skill to the Trainees on Different Aspects of Recent Advances in Livestock Production	**21.05.2015. to 22.05.2015.**	PIA-IWMP-I, Barua Gopalpur Watershed, DDA (Soil and Water Management), Dept. of Agriculture, Govt. of W. B., Suri, Birbhum	The total cost of the Programme was borne by the funding agency.

Training Programme on Horticulture as a Source of Livelihood	To give Technical expertise and skill to the Trainees on Different Aspects of Improved Horticultural Production Technology	**21.05.2015 to 22.05.2015.**	PIA-IWMP-I, Barua Gopalpur Watershed, DDA (Soil and Water Management), Dept. of Agriculture, Govt. of W. B., Suri, Birbhum	The total cost of the Programme was borne by the funding agency.
Front Line Demonstration (FLD) Programme on Fodder Maize Var. African Tall	To disseminate the Improved Varieties, Agro-Technologies and Supporting Package of Practices for Green Fodder Cultivation	**May, 2015**	ICAR-NDRI, ERS, Kalyani	The Seeds of Improved Maize Varieties were provided by the ICAR-NDRI, ERS, Kalyani
Front Line Demonstration (FLD) Programme on Fodder Crop Rice Bean Var. Bidhan - 1	To disseminate the Improved Varieties, Agro-Technologies and Supporting Package of Practices for Green Fodder Cultivation	**May, 2015**	ICAR-NDRI, ERS, Kalyani	The Seeds of Improved Rice Bean Varieties were provided by the ICAR-NDRI, ERS, Kalyani
Front Line Demonstration (FLD) Programme on Fodder Sorghum Var. Jumbo	To disseminate the Improved Varieties, Agro-Technologies and Supporting Package of Practices for Green Fodder Cultivation	**May, 2015**	ICAR-NDRI, ERS, Kalyani	The Seeds of Improved Sorghum Varieties were provided by the ICAR-NDRI, ERS, Kalyani
Front Line Demonstration (FLD) Programme on Fodder Sorgum Var. MP Chari	To disseminate the Improved Varieties, Agro-Technologies and Supporting Package of Practices for Green Fodder Cultivation	**May, 2015**	ICAR-NDRI, ERS, Kalyani	The Seeds of Improved Sorghum Varieties were provided by the ICAR-NDRI, ERS, Kalyani
Training Programme on Cultivation of Drum Sticks (Barmasia Variety)	To give Technical expertise and skill to the Trainees on Different Aspects of Crop Diversification	**04.06.2015. to 05.06.2015.**	Deputy Director, Horticulture, Govt. of West Bengal, Suri	The total cost of the Programme was borne by the funding agency.
Training Programme on Pest and Disease Management of Moringa	To give Technical expertise and skill to the Trainees on Different Aspects of IPM of Vegetables	**04.06.2015. to 05.06.2015.**	Deputy Director, Horticulture, Govt. of West Bengal, Suri	The total cost of the Programme was borne by the funding agency.
Training Programme on Marketing Mechanism of Produced Drum Sticks	To give Technical information, knowledge and skills to the Trainees on Different Aspects of Market Led Extension	**04.06.2015. to 05.06.2015.**	Deputy Director, Horticulture, Govt. of West Bengal, Suri	The total cost of the Programme was borne by the funding agency.
Preparation of Strategic Research and Extension Plan (SREP) of Birbhum District	To outline the future course of Research and Extension works needed for development of Agriculture and Allied Sectors based on the present research and extension gaps found in the District of Birbhum in these Sectors	**July, 2015**	ATMA, Birbhum	**2,50,000.00**
Training Programme on Tata Rallis Agri Input Training Scheme (TRAITS) Phase I	To give Technical information, knowledge and skills to the Trainees on Different Aspects of Promotion and Marketing of Agri Inputs	**25.08.2015 to 03.09.2015.**	Tata Rallis India Limited	The total cost of the Programme was borne by the funding agency.

Training Programme on Dairy Farming	To give Technical expertise and skill to the Trainees on Different Aspects of Improved Livestock Production	**28.08.2015.**	ICAR-NDRI-ERS, Kalyani	The total cost of the Programme was borne by the funding agency.
Animal Health Camp	To provide Health Care support to the Cattles and Buffaloes including supply of Area Specific Mineral Mixtures and Vaccination viz. Raksha Trio Vac (FMD + HS + BQ)	**29.08.2015.**	ICAR-NDRI-ERS, Kalyani	The total cost of the Programme was borne by the funding agency.
Hybrid Napier (Fodder) Cutting Distribution Camp	To encourage the Farmers to cultivate High Yielding Improved Quality Fodder Crops	**29.08.2015.**	ICAR-NDRI, ERS, Kalyani	The cuttings of Hybrid Napier were provided by the ICAR-NDRI, ERS, Kalyani
Farm Sector Training Programme	To develop human resources among the practicing farmers, farm women and rural youths through Skill and Knowledge development Training Programmes	**September, 2015 to March, 2016.**	NABARD, Birbhum	**2,70,000.00**
Cluster Front Line Demonstrations (Cluster FLDs) on Rabi Pulses (Crops: Field Pea, Chick Pea, Lentil and Green Gram)	**To disseminate Improved Varieties, Agro-Technologies and supporting Package of Practices for Rabi Pulse Production**	**October, 2015 to March, 2016.**	**ICAR**	**6,00,000.00**
Cluster Front Line Demonstrations (Cluster FLDs) on Rabi Oilseeds (Crops: Mustard, Sesamum and Linseed)	**To disseminate Improved Varieties, Agro-Technologies and supporting Package of Practices for Rabi Oilseeds Production**	**October, 2015 to March, 2016.**	**ICAR**	**4,30,000.00**
Training Programme on Use of Fertilizer in Rainfed Farming	To give Technical expertise and skill to the Trainees on Different Aspects of Integrated Nutrient Management	**06.11.2015.**	Surul Supreetee Sangha, Village – Surul, Sriniketan, Dist. - Birbhum	The total cost of the Programme was borne by the funding agency.
Distribution of Free Soil Health Cards	**To encourage the Practicing Farmers for analyzing their Soils for better Soil Health and Nutrient Management**	**05.12.2015**	**ICAR**	**1,25,000.00**
Pre-Rabi Kisan Sammelan - 2015	**To expose the Practicing Farmers, Farm Women and Rural Youths to the cutting edge Agricultural and related Sectors Technology for modernization of agriculture and related sectors and enhancement of productivity for more income generation from a limited resource base on a sustainable basis**	**05.12.2015.**	**ICAR**	**80,000.00**
Training Programme on Women Empowerment through Food and Nutritional Security	To develop knowledge, attitude and skills among the participating Farm Women on different aspects of food and nutritional security and the relationship between these issues and the broad issue of women empowerment	**29.02.2016 to 04.03.2016.**	Agricultural Training Centre (ATC), Ramakrishna Mission Aashrama, Narendrapur, Kolkata	The total cost of the Programme was borne by the funding agency.

Training Programme on Women Empowerment through Food and Nutritional Security	To develop knowledge, attitude and skills among the participating Farm Women on different aspects of food and nutritional security and the relationship between these issues and the broad issue of women empowerment	**14.03.2016 to 18.03.2016.**	Agricultural Training Centre (ATC), Ramakrishna Mission Aashrama, Narendrapur, Kolkata	The total cost of the Programme was borne by the funding agency.
Technology Week - 2016	To expose the practicing farmers, farm women, rural youths and extension functionaries about the cutting edge technologies in agriculture and related sectors.	**14.03.2016 to 18.03.2016.**	NABARD, Birbhum	**1,00,000.00**
Visit of members of Najrul Sukanta Farmers' Club, Village – Radhanagar, P. O. – Chhototurigram, Mayureswar, Dist. – Birbhum.	To visit the Rathindra KVK Campus as well as the Technology Week – 2016 for an exposure as well as a firsthand experience to the cutting edge technologies on agriculture and allied sectors.	**15.03.2015**	NABARD, Birbhum	The total cost of the Programme was borne by the funding agency.
Visit of members of Srjan Uttaran Farmers' Club Federation, Mohammad Bazar, Dist. – Birbhum.	To visit the Rathindra KVK Campus as well as the Technology Week – 2016 for an exposure as well as a firsthand experience to the cutting edge technologies on agriculture and allied sectors.	**16.03.2015.**	NABARD, Birbhum	The total cost of the Programme was borne by the funding agency.
Total				**18,55,000.00**

6. PERFORMANCE OF INFRASTRUCTURE IN KVK

6.1 Performance of demonstration units (other than instructional farm)

Sl. No.	Name of demo Unit	Year of estt.	Area (Sq. mt)	Details of production			Amount (Rs.)		Remarks
				Variety/breed	Produce	Qty.	Cost of inputs	Gross income	
1.									
2.									
3.									
4.									
5.									
6.									
7.									
	Total								

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.(q)	Cost of inputs	Gross income	
Green Gram	18.03.2015	30.05.2015	0.03	PDM – 84 - 139	Pulse Seed	0.30	1,500.0	3,150.00	Net Return – Rs. 1,650.00
Black Gram	15.03.2015.	25.05.2015	0.03	WBU- 108	Pulse Seed	0.30	1,600.00	3,150.00	Net Return – Rs. 1,550.00

Paddy	04.08.2015 to 16.08.2015.	25.11.2015 to 05.12.2015.	0.15	MTU – 7029, GB – 1, Pratiksha, Heera	Cereal seeds	7.0	15,000.00	Yet to be sold	Kept in KVK go-down
Wheat	28.12.2015 to 30.12.201 5.	29.03.2016 to 31.03.2015.	0.45	PBW - 343	Creal Seeds	5.0	12,200.00	Yet to be sold	Kept in KVK go-down
Linseed	25.12.2015 to 27.12.2015	24.03.2016 to 27.03.2016.	0.50	Deepika	Oilseed	2.0	10,300.00	Yet to be sold	Kept in KVK go-down
Field Pea	29.12.2015	22.03.2016	0.01	Prabhat	Pulse Seeds	0.40	850.00	Yet to be sold	Kept in KVK go-down
Mango	-	17.05.2015 to 17.07.2015	1.00	Himsagar, Amrapali, Mallika, Kohitoor, Ranipasand, Bombai etc.	Ripened Mango Fruits	3.20	4,500.00	12,800.00	Net Return – 8,300.00
Mango	-	-	1.00	Himsagar, Amrapali, Mallika, Kohitoor, Ranipasand, Bombai etc.	Ripened Mango Fruits	-	10,000.00	31,500.00 (As Tender Amount)	Net Return – 21,500.00
Water Apple	-	17.05.2015 to 30.06.2015.	0.001		Ripened Water Apple Fruits	00.89	500.00	2,685.00	Net Return – Rs. 2,185.00
Moosambi	-	02.11.2015 to 07.11.2015	0.001		Ripened Moosambi Fruits	107 pcs.	100.00	535.00	Net Return – Rs. 435.00

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

Sl. No.	Name of the Product	Qty (Kg)	Amount (Rs.)		Remarks
			Cost of inputs	Gross income	
1.	***Azolla***	**307.5**	**4,000.00**	**15,375.00**	**Net Return – Rs. 11,375.00**
2.	Earth-worm (*Eisenia foetidae*)	**1,000 pc.**	**150.00**	**500.00**	**Net Return – Rs. 350.00**
3.	Vermi-Compost	**5.0**	**1,000.00**	**Yet to be sold**	**Kept in KVK go-down**

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.	Poultry	Broiler	Bird	200 nos.	26,000.00	27,000.00	Net Profit – Rs. 1,000.00
2.	Poultry	Rhode Island Red (RIR) Vanaraja	Advanced Grower	20 nos.	-	2,500.00	Net Profit – Rs. 2,500.00

				25 nos.			
3.	Indian Major Carps (IMC)	Catla	Table Fishes	67.6 kgs.	7,000.00	8894.00	Net Profit: 12,894.00
4.	Indian Minor Carps	Punti, Mouralla, Darke etc.	Small Fishes	110.00 kgs.		11,000.00	

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, 2015	02	06 (03)	**N. A.**
May, 2015	69	117 (07)	**N. A.**
June, 2015	27	27 (03)	**N. A.**
July, 2015	-	-	**N.A.**
August, 2015	26	251 (11)	**N. A.**
September, 2015	137	571 (27)	**N.A.**
October, 2015	02	04 (02)	**N.A.**
November, 2015	22	286 (13)	**N.A.**
December, 2015	193	426 (17)	**N.A.**
January, 2016	60	180 (04)	**N.A.**
February, 2016	40	75 (17)	**N.A.**
March, 2016	52	202 (09)	**N.A.**
Total :	**630**	**2145 (113)**	**N. A.**

(For whole of the year)

6.6 Utilization of staff quarters

Whether staff quarters have been completed: Not yet.
No. of staff quarters:
Date of completion:

Occupancy details:

Months	Q I	QII	Q III	QIV	Q V	QVI

7. FINANCIAL PERFORMANCE

7.1 Details of KVK Bank accounts

Bank account	Name of the bank	Location	Account Number
Current Account	**SBI**	**Santiniketan**	**10598447180**
Current Account	**Allahabad Bank**	**Bolpur-Sriniketan Road**	**50321305213**
Current Account	**IDBI**	**Sriniketan**	**0878102000001564**

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

Item	Released by ICAR		Expenditure		Unspent balance as on 1st. April, 2016
	Kharif	Rabi	Kharif	Rabi	
					6,320.56

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

Item	Released by ICAR		Expenditure		Unspent balance as on 1st April 2016
	Kharif	Rabi	Kharif	Rabi	
					13,296.58

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

Item	Released by ICAR		Expenditure		Unspent balance as on 1st April 2016
	Kharif	Rabi	Kharif	Rabi	
TOTAL					

7.5 Utilization of KVK funds during the year 2015-16 (Not audited)

Rs. in lakhs

S. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	Pay & Allowances	126.71	126.71	126.626
2	Traveling allowances	1.00	1.00	0.626
3	Contingencies			
A	Stationery, Telephone, Postage and Other Official Charges	4.20	4.20	4.009
B	POL, Repair of Vehicle, Tractor and Equipment			
C	Training of farmers	3.15	3.15	2.26
D	Training Materials			
E	Training of Extension Functioneries			
F	Training of Rural Youth			
G	Front Line Demonstration	2.10	2.10	1.44
H	On Farm Testing	1.05	1.05	0.474
I	TSP	4.00	4.00	3.851
4	Maintainance of Building	00.50	00.50	00.476
TOTAL (A)		142.71	142.71	139.762
B. Non-Recurring Contingencies				
1	Works	NIL	NIL	NIL
2	Vehicle	01.20	01.20	01.196
3	Equipment, Furniture and Furnishing	15.30	15.30	09.899
4				
TOTAL (B)		16.50	16.50	11.095
C. REVOLVING FUND		-	-	-
GRAND TOTAL (A+B+C)		159.21	159.21	150.857

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

Year	Opening balance as on 1st April	Income during the year	Expenditure during the year	Net balance in hand as on 1st April of each year (Kind + cash)
2013-14	**2,19,601.38**	**22,090.00**	**8,300.00**	**2,33,391.38**
2014-15	**2,33,391.38**	**65,421.00**	**65,505.00**	**2,33,307.38**
2015-16	**2,33,307.38**	**1,58,382.00**	**1,29,424.00**	**2,62,265.38**

7.6. (i) Number of SHGs formed by KVKs: 01 (One) number of SHG was formed by the Rathindra KVK.

(ii) Association of KVKs with SHGs formed by other organizations indicating the area of SHG activities: Mainly Technological backstopping along with proper human resource development through Training and Demonstration Programmes as well as visit of the concerned SHG members to the Rathindra KVK. SHGs were mainly involved in the preparation of Kantha Stitched Works, Jute based Rural Crafts, Batique Printed Works, Tie and Dye Works and production of Paddy, Pulses, Oilseeds, Vegetables, Fruits, Poultry Birds, Cattles, Goats, Fishes, Bio-Fertilizers, Bio-Pesticides, Seed production of Pulses, Oilseeds and Cereals etc.

7.7 Details of marketing channels created for the SHGs:

A bi-weekly KVK Haat ("Kisan Bazar") is being organized by the Rathindra KVK in its premises for opening up a marketing avenue to the producers of Self Help Groups.

7.8. Special programme on Food and Nutrition : Two (02) numbers of Five (05) days duration residential Training Programmes were organized for practicing farmers and farm women in collaboration with the Agricultural Training Centre, Ramakrishna Mission Aashrama, Narendrapur, Kolkata from 29.02.2016 to 04.03.2016 and from 14.03.2016 to 18.03.2016 on the theme of "Women Empowerment through Food and Nutritional Security".

7.9. Joint activity carried out with line departments and ATMA

Name of Activity	Number of Activity	Season	With Line Department	With ATMA	Both
Training Programme on Recent Agro Technology in Pulse and Oil Seed Production in Kharif Season	01	Pre-Kharif Season, 2015	ADA (Nanoor), Dept. of Agriculture, Govt. of W. B.	-	-
Training Programme on Fish Production for Livelihood Development	01	Pre-Kharif Season, 2015	PIA-IWMP-I, Barua Gopalpur Watershed, DDA (Soil and Water Management), Dept. of Agriculture, Govt. of W. B., Suri, Birbhum	-	-
Training Programme on Animal Resource	01	Pre-Kharif Season, 2015	PIA-IWMP-I, Barua Gopalpur Watershed, DDA (Soil and Water	-	-

Development			Management), Dept. of Agriculture, Govt. of W. B., Suri, Birbhum		
Training Programme on Fishery Activity as a Source of Livelihood	01	Pre-Kharif Season, 2015	PIA-IWMP-I, Barua Gopalpur Watershed, DDA (Soil and Water Management), Dept. of Agriculture, Govt. of W. B., Suri, Birbhum	-	-
Training Programme on Animal Resource Development	01	Pre-Kharif Season, 2015	PIA-IWMP-I, Barua Gopalpur Watershed, DDA (Soil and Water Management), Dept. of Agriculture, Govt. of W. B., Suri, Birbhum	-	-
Training Programme on Cultivation of Drum Sticks (Barmasia Variety)	01	Pre-Kharif Season, 2015	Deputy Director, Horticulture, Govt. of West Bengal, Suri	-	-
Training Programme on Pest and Disease Management of Moringa	01	Pre-Kharif Season, 2015	Deputy Director, Horticulture, Govt. of West Bengal, Suri	-	-
Training Programme on Marketing Mechanism of Produced Drum Sticks	01	Pre-Kharif Season, 2015	Deputy Director, Horticulture, Govt. of West Bengal, Suri	-	-
Informal and Formal Survey Work including Focus Group Discussion for collecting Primary Data for the preparation of SREP for the District of Birbhum in Labhpur CD Block	01	Kharif Season, 2015	-	With ATMA	-
Informal and Formal Survey Work including Focus Group Discussion for collecting Primary Data for the preparation of SREP for the District of Birbhum in Rampurhat – II CD Block	01	Kharif Season, 2015	-	With ATMA	-
Informal and Formal Survey Work including Focus Group Discussion for collecting Primary Data for the preparation of SREP for the District of	01	Kharif Season, 2015	-	With ATMA	-

Birbhum in Md. Bazar CD Block					
Farmer-Scientist Interaction for collecting Primary Data for the preparation of the SREP for the District of Birbhum at the Rathindra KVK	01	Kharif Season, 2015	-	With ATMA	-
Training Programme on Crop Diversification through Pulse Cultivation replacing Summer Paddy	01	Summer, 2015-16	Assistant Director of Agriculture, CD Block Nanoor, Dist. – Birbhum, Dept. of Agriculture, Govt. of West Bengal	-	-

8. Other information

8.1. Prevalent diseases in Livestock/Crops/Fishery – Not Applicable

Name of the disease	Crop/animal	Date of outbreak	Number of death/ % commodity loss	Number of animals vaccinated

8.2. Nehru Yuva Kendra (NYK) Training

Not Applicable

Title of the training programme	Period		No. of the participant		Amount of Fund Received (Rs)
	From	To	M	F	

8.3. PPV & FR Sensitization training Programme

Not Applicable

Date of organizing the programme	Resource Person	No. of participants	Registration (crop wise)	
			Name of crop	No. of registration

8.4. SMS PORTAL

Date of start of functioning of SMS portal

No. of messages	No. of calls	No. of farmers covered	Types of messages (No.)					
			Crop	Livestock	Weather	Marketing	Awareness	Other
32	36,732	36,732	02	23	-	02	05	-

8.5 Observation of Swacha Bharat Programme

Date of Observation	Activities undertaken
22.06.2015.	All the staff of the Rathindra KVK has taken a whole hearted effort to clean the Office Building Complex of the KVK through cleaning the dusts, cob webs, weeding out the weeds etc. through manual work.
23.06.2015.	All the staff of the Rathindra KVK has tried their level best to clean the garbage, dust and debris accumulated on the Roof of the Administrative Building through the manual work.
24.06.2015.	All the staff of the Rathindra KVK has tried their level best to clean the garbage, dust and debris accumulated in and around the Trainees' Hostel of the Rathindra KVK through the manual work.
25.06.2015.	The Instructional Farm of the Rathindra KVK like Orchard, Crop Cafeteria, Nursery etc. and Demonstration Units like the Fish Breeding Unit, the Poultry and Duckery Units etc. were thoroughly cleaned, the weeds were manually up-rooted and the farm wastages and the crop residues were used as input in the Vermi-Composting Unit of the Rathindra KVK. In this Operational procedure, the Threshing Floor of the Instructional Farm and the Medicinal Plants Garden of the Rathindra KVK was thoroughly cleaned and the Farm debris was utilized as input material for the Vermi-Composting Unit of the Rathindra KVK.
26.06.2015.	All the staffs of the Rathindra KVK has taken initiatives to clean the remaining debris, garbage and dusts inside, outside and roof of the Administrative Building of the Rathindra Krishi Vigyan Kendra.
03.10.2015.	All the staff of the Rathindra KVK has taken a whole hearted effort to clean the Office Building Complex of the KVK through cleaning the dusts, cob webs, weeding out the weeds etc. through manual work.
04.10.2015.	All the staff of the Rathindra KVK has taken a whole hearted effort to clean the outside the Office Building Complex of the KVK including the main Gate. The main path and adjoining areas through cleaning the dusts, cob webs, weeding out the weeds etc. through manual work.
05.10.2015.	All the staff of the Rathindra KVK has taken a whole hearted effort to clean the outside the Office Building Complex of the KVK including the ornamental Hedges and Garden and adjoining areas through cleaning the dusts, cob webs, weeding out the weeds etc. through manual work.
06.10.2015.	Rathindra KVK has organized a Mobile Publicity Programme regarding the "*SWACHHTA ABHIYAN (NATIONAL CLEANINESS CAMPAIGN)"* through utilizing the Office Jeep of the Rathindra KVK. The Jeep went to various Villages of the District of Birbhum, i.e. the mandate District of the Rathindra KVK and spreaded the message about the need and importance of the cleanliness in the day to day life as well as in all the Agricultural and related activities. This programme of the Rathindra KVK invoked a great response among the Villagers in all the places where this Mobile Jeep went. One of the villages was Dhanyasara, P. O. – Panchshoya, Police Station – Bolpur, Community Development (CD) Block–Bolpur-Sriniketan, Dist. – Birbhum. At this

	village, the villagers along with school going students were seen attentively listening to the Campaign being launched by the Scientists of the Rathindra KVK.
07.10.2015.	The Rathindra KVK has organized an Awareness Camp for Primary level school students, where 71 (Seventy one) students from Durgapur Sidhoo Kanoo Primary School and Dhanyasara Primary School were present at the Durgapur Sidhoo Kanoo Primary School, Village - Durgapur, P. O. – Panchshoya, Police Station – Bolpur, Community Development (CD) Block – Bolpur-Sriniketan, Dist. – Birbhum. In this Awareness Camp, the students were highlighted on the general importance of the cleanliness in the day to day life as well as the importance of the call of the Father of the Nation, Mahatma Gandhi as well as the point of view expressed by the present Union Government headed by the Honorable Prime Minister, Sri Narendra Bhai Modi were discussed in details with special emphasis on nurturing the habit of cleanliness from very beginning of a life at a tender age by the scientists of the Rathindra KVK. The conceptual discussion was followed by a lively question-answer session which was succeeded by a series of concrete actions such as cleaning of the Primary School Building and its Campus, weeding out the weeds grown in and around these campuses were spontaneously taken up by the participant students present in the Awareness Camp.
08.10.2015.	Rathindra KVK has organized a Mobile Publicity Programme regarding the "*SWACHHTA ABHIYAN (NATIONAL CLEANINESS CAMPAIGN)"* through utilizing the Office Jeep of the Rathindra KVK. The Jeep went to various Villages of the District of Birbhum, i.e. the mandate District of the Rathindra KVK and spreaded the message about the need and importance of the cleanliness in the day to day life as well as in all the Agricultural and related activities. This programme of the Rathindra KVK invoked a great response among the Villagers in all the places where this Mobile Jeep went. One of the villages was Durgapur, P. O. – Panchshoya, Police Station – Bolpur, Community Development (CD) Block–Bolpur-Sriniketan, Dist. – Birbhum. At this village, the villagers along with school going students were seen attentively listening to the Campaign being launched by the Scientists of the Rathindra KVK.
09.10.2015.	The Rathindra KVK has organized an Awareness Camp for Junior High level school students, where 69 (Sixty nine) numbers of boys and girls students from Durgapur Junior High School were present at the Durgapur Junior High School, Village - Durgapur, P. O. – Panchshoya, Police Station – Bolpur, Community Development (CD) Block – Bolpur-Sriniketan, Dist. – Birbhum. In this Awareness Camp, the students were highlighted on the general importance of the cleanliness in the day to day life as well as the importance of the call of the Father of the Nation, Mahatma Gandhi as well as the point of view expressed by the present Union Government headed by the Honorable Prime Minister, Sri Narendra Bhai Modi were discussed in details with special emphasis on nurturing the habit of cleanliness from very beginning of a life at a tender age by the scientists of the Rathindra KVK. The conceptual discussion was followed by a lively question-answer session which was succeeded by a series of concrete actions such as cleaning of the Primary School Building and its Campus, weeding out the weeds grown in and around these campuses were spontaneously taken up by the participant students present in the Awareness Camp.
10.10.2015.	The Instructional Farm of the Rathindra KVK like Orchard, Crop Cafeteria, Nursery etc. and Demonstration Units like the Fish Breeding Unit, the Poultry and Duckery Units etc. were thoroughly cleaned, the weeds were manually up-rooted and the farm wastages and the crop residues were used as input in the Vermi-Composting Unit of the Rathindra KVK. In this Operational procedure, the Threshing Floor of the Instructional Farm and the Medicinal Plants Garden of the Rathindra KVK was thoroughly cleaned and the Farm debris was utilized as input material for the Vermi-Composting Unit of the Rathindra KVK. The Threshing Floors of the Instructional Farms

	of the Rathindra KVK was thoroughly cleaned on this occasion.
11.10.2015.	All the Staffs of the Rathindra KVK has organized a thorough cleaning operation through manual weeding out of weeds, cleaning of debris with the help of brooms, destruction of weeds, placing the garbage in the specific garbage cans etc. in the areas adjacent with the Administrative Office Building of the Rathindra KVK as well as the Trainees Hostel of the Rathindra KVK.

8.6 Observation of National Science day

Date of Observation	Activities undertaken

8. 7.Programme with Seema Suraksha Bal (BSF)

Not Applicable

Title of Programme	Date	No. of participants

8.8 Agriculture Knowledge in rural school:

Name and address of school	Date of visit to school	Areas covered	Teaching aids used
Durgapur Junior High School Vill. – Durgapur, P. O. – Panchshoya, Dist. - Birbhum, West Bengal.	**09.10.2015.**	**Role of Agriculture and allied sectors in everyday lives;** **Elementary knowledge about Agriculture and Allied Sectors.**	**Laptop Computer, LCD Projector, Black Board, Chalk, Specimens**
Durgapur Sidhoo Kanhoo Primary School, Vill. – Durgapur, P. O. – Panchshoya, Dist. - Birbhum, West Bengal.	**21.11.2015.**	**Elementary knowledge about Agriculture and Allied Sectors;** **Role of Agriculture and allied sectors in everyday lives;** **Elementary Knowledge of Agriculture and Allied Sectors**	**Laptop Computer, LCD Projector, Black Board, Chalk, Specimens**
Bahadurpur Primary School, Vill. – Bahadurpur, P. O. – Bahadurpur, Dist. – Birbhum, West Bengal.	**20.03.2016.**	**Elementary Knowledge about Importance of Medicinal Plants**	**Laptop Computer, LCD Projector, Black Board, Chalk, Specimens**

8.9. Details of Kharif and Rabi Sammelan (Information should be provided in two separate tables – one for Kharif and another for Rabi Sammelan)

Name of the state	Name of district / KVK	Date on which conducted	Number of participants		Name of public representative	Details of Technology Demonstrated and other programmes organized
			Farmers	Others		
West Bengal	Birbhum District /	05.12.2015	265	31	Mr. Chandranath Sinha, Minister-in-Charge, Dept. of	1. Inauguration and distribution of seventeen (17) numbers of items of

	Rathindra KVK				Fisheries, Govt. of West Bengal and Mr. Bikash Roychowdhury, Sabhadhipati, Birbhum Zillah Parishad, Suri, Birbhum.	Extension Literatures like Booklets, Leaflets on various topics ranging from soil health management, improved package of practices of field crops, improved package of practices of horticultural crops, scientific methods of animal rearing, scientific methods of fish production, good agricultural practices etc. 2. The Exhibition Stalls organized for the Pre-Rabi Kisan Sammelan – 2015 was well stocked with various preserved specimens of fishes, laminated display charts, poster flexes, seeds in seed display containers, various traditional varieties of seeds displayed in composite container, extension literatures like booklets, leaflets etc. 3. Demonstrations on the farm implements like Zero Tillage Seed-cum-fertilizer Drill, Rotavator, Drum Seeder, Cono Weeder, Disk Harrow, Mould Board Plough etc. were performed. 4. Method Demonstrations on the newly acquired Solar Powered Mini-Digital Soil Analyzer "Mriddhaparikshak" were performed. 5. A Vegetable and Crop Show was organized. 6. Handing over the Soil Heath Cards to the farmers were performed. 7. An interactive lecture on Soil Health Management in the Context of Recent Agricultural Practices was delivered. 8. A special lecture on the importance on the awareness about the need for the soil conservation practices was delivered.

8.10. Details of Pradhan Mantri Fasal Bima Yojana programme organized

Name of the state	Name of district/KVK	Date on which conducted	Number of participants		Name of public representative	Details of awareness created and other programmes organized
			Farmers	Others		

8.11. Contingent crop planning

Name of the state	Name of district / KVK	Thematic area	Number of programmes organized	Number of Farmers contacted	A brief about contingent plan executed by the KVK

8.12. Report on Citizens' Client Charter (attending the requests seeking guidance on agricultural technology and technology products)

Sl. No.	Services/ Transaction	Process	Service Standard	No. of such services attended by KVKs and ATICs during the year	No. of such services pending with KVK/ATIC beyond 30 days
1.	Guidance on Agricultural technology and technology products	Personal contact by the Service Sectors with the responsible person of KVK/ATIC	Within 30 days	**393**	**Nil**

8.13. Community Radio Station – Not Applicable

Date of establishment:

Amount of fund received year wise:

Source of fund:

Achievements:

Sl. No	Community Radio Stations (CRS)	No. of programmes in the year	Total broadcast hours in a month	Please specify details of the broadcasts
A.	Agricultural broadcasts • Talks/interviews/discussions with experts, PG students/ and farmers on Agricultural technologies • Agro-climatic conditions, weather and marketing advisory • Phone–in programme of interface with experts • Phone-in programme with interface of progressive/innovative farmers			

Sl. No	Community Radio Stations (CRS)	No. of programmes in the year	Total broadcast hours in a month	Please specify details of the broadcasts
B.	• Success stories of progressive farmers • Success stories in FLD/OFT/ Trainings /Extension activities • Women in agriculture programme • Discussions on current issues in agriculture and allied sectors. • KVK happenings • Agricultural University professors. • Any other(please specify) Community development broadcasts Please specify the programmes like rural development, educational, health, environment, public service broadcasts, sports etc.			

8.14 No. of Progressive/Innovative/Lead farmer identified (category wise)

No. of Progressive Farmers identified: 20

No. of Innovative Farmers identified: 17

No. of Lead Farmers identified: 13

8.15 HRD programmes organized by the KVK

Training programme/ Seminar/ Symposia/ Workshop etc. attended	Duration	Name of the participants	Designation	Organizer of the training Programme
Field Experience Training (FET) Programme	08.02.2016 to 29.02.2016.	A. Dr. Sangita Ganguly; B. Dr. Suman Manna; C. Kumari Sonalika Sahoo; D. Sri Aradwad Pramod; E. Sri Ambarish P. Gop and F. Dr. Anupam Barh	Scientist on Probation	ICAR-NAARM and the Rathindra KVK
Institute Seminar	23.02.2016	A. Dr. Sangita Ganguly; B. Dr. Suman Manna; C. Kumari Sonalika Sahoo; D. Sri Aradwad Pramod; E. Sri Ambarish P. Gop and F. Dr. Anupam Barh	Scientist on Probation	ICAR-NAARM and the Rathindra KVK

8.16. Revenue Generation:

Sl. No.	Name of Head	Income (Rs.)	Sponsoring agency
1.	Revolving Fund (Sale of Paddy Seeds, Wheat Seeds, Mustard Seeds, Live Earth-Worms, Vermin-Compost, Sale of Mosambi Fruits, ripened Mango Fruits, Capsicum Seedlings, Broccoli Seedlings, Elephant Foot Yam Seeds produced at the Instructional Farm)	**1,08,430.00**	**ICAR**
2.	Revolving Fund (Sale of Broiler Poultry Birds produced at the Instructional Farm)	**25,058.00**	**ICAR**
3.	Revolving Fund (Sale of Fish produced at the Instructional Pond)	**24,894.00**	**ICAR**
4.	Trainees' Hostel Rent	**82,900.00**	**ICAR**
5.	Seminar Hall Rent	**9,500.00**	**ICAR**
Total		**2,50,782.00**	**ICAR**

8.17. Resource Generation:

Sl. No.	Name of the programme	Purpose of the programme	Sources of fund	Amount (Rs. Lakhs)	Infrastructure created
01.	Preparation of Strategic Research and Extension Plan (SREP) of Birbhum District	To outline the future course of Research and Extension works needed for development of Agriculture and Allied Sectors based on the present research and extension gaps found in the District of Birbhum in these Sectors	ATMA, Birbhum	02.50	-
02.	Farm Sector Training Programme	To develop human resources among the practicing farmers, farm women and rural youths through Skill and Knowledge development Training Programmes	NABARD, Birbhum	02.70	-
03.	Distribution of Free Soil Health Cards	To encourage the Practicing Farmers for analyzing their Soils for better Soil Health and Nutrient Management	ICAR	01.25	Soil Testing Mini-Lab Mridhaparikshak Solar Operated
04.	Cluster Front Line Demonstrations (Cluster FLDs) on Rabi Pulses (Crops: Field Pea, Chick Pea, Lentil and Green Gram)	To disseminate Improved Varieties, Agro-Technologies and supporting Package of Practices for Rabi Pulse Production	ICAR	06.00	-
05.	Cluster Front Line Demonstrations (Cluster FLDs) on Rabi Oilseeds (Crops: Mustard,	To disseminate Improved Varieties, Agro-Technologies and supporting	ICAR	04.30	-

	Sesamum and Linseed)	Package of Practices for Rabi Oilseeds Production			
06.	Pre-Rabi Kisan Sammelan - 2015	To expose the Practicing Farmers, Farm Women and Rural Youths to the cutting edge Agricultural and related Sectors Technology for modernization of agriculture and related sectors and enhancement of productivity for more income generation from a limited resource base on a sustainable basis	ICAR	00.80	-
07.	Technology Week - 2016	To expose the practicing farmers, farm women, rural youths and extension functionaries about the cutting edge technologies in agriculture and related sectors.	NABARD, Birbhum	01.00	-
08.	Visit of members of Najrul Sukanta Farmers' Club, Village – Radhanagar, P. O. – Chhototurigram, Mayureswar, Dist. – Birbhum.	To visit the Rathindra KVK Campus as well as the Technology Week – 2016 for an exposure as well as a firsthand experience to the cutting edge technologies on agriculture and allied sectors.	NABARD, Birbhum	00.02	-
09.	Visit of members of Srjan Uttaran Farmers' Club Federation, Mohammad Bazar, Dist. – Birbhum.	To visit the Rathindra KVK Campus as well as the Technology Week – 2016 for an exposure as well as a firsthand experience to the cutting edge technologies on agriculture and allied sectors.	NABARD, Birbhum	00.02	-
10.	**Total**			**18.59**	

8.18. Performance of Automatic Weather Station in KVK

Date of establishment	Source of funding i.e. IMD/ICAR/Others (pl. specify)	Present status of functioning

8.19. IPNI Trail (Applicable for KVKs identified under IPNI trial)

- **I Name of Crop**
- **II No. of farmers involved**
- **III Area (ha.)**
- **IV Date of sowing**
- **V Crop Season**
- **VI Result of trial with photographs however detailed results/observation should be sent as per performance after crop harvest**
- **VII Amount Spent**

9.0 Achievement under TSP Project

Name of the village adopted under TSP	Block	Population of the village			ST Population of the village			Percentage of ST population to total population
		M	F	T	M	F	T	
Dhanyasara Adivasi Para	Bolpur-Sriniketan	577	521	1098	245	219	464	42.26
Kankutia	Bolpur-Sriniketan	810	772	1582	291	264	555	35.08
Halsidanga	Bolpur-Sriniketan	821	801	1622	219	203	422	26.02
Ballabhpur	Bolpur-Sriniketan	885	862	1747	380	373	753	43.10
Mahuli	Bolpur-Sriniketan	209	204	413	107	99	206	49.88
Bishnubati	Bolpur-Sriniketan	303	297	600	149	134	283	47.17
Asadullapur	Bolpur-Sriniketan	236	214	450	235	214	449	99.78
Durgapur	Bolpur-Sriniketan	345	304	649	196	171	367	56.55
Bautizole	Bolpur-Sriniketan	295	275	570	156	124	280	49.12

Asset created under TSP: *Azolla* Multiplication Pots – 28

Sprayers – 24

Feeders for Poultry Birds – 60

Drinkers for Poultry Birds – 30

Earthen Pot Cool Chambers for Vegetable Preservation – 20

Fund received under TSP in 2015-16: Rs. 4.00 lakhs (Rupees Four lakhs).

10. PROGRESS REPORT OF NICRA KVK (Technology Demonstration component) 2015-16 (Applicable for KVKs identified under NICRA) Not Applicable

Natural Resource Management

Name of intervention undertaken	Numbers under taken	No. of units	Area (ha)	No. of farmers covered / benefitted	Remarks

Crop Management

Name of intervention undertaken	Area (ha)	No. of farmers covered / benefitted	Remarks

Livestock and fisheries

Name of intervention undertaken	Number of animal covered	Number of units	Area (ha)	No. of farmers covered / benefitted	Remarks

Institutional interventions

Name of intervention undertaken	No. of units	Area (ha)	No. of farmers covered / benefitted	Remarks

Capacity building

Thematic area	No. of Courses	No. of beneficiaries		
		Males	Females	Total

Extension activities

Thematic area	No. of activities	No. of beneficiaries		
		Males	Females	Total

Detailed report should be provided in the circulated Performa

11. National Initiative on Fodder Technology Demonstration (NIFTD)
(Applicable for KVKs identified under NIFTD)

Not Applicable

Name of the fodder crop	Date of sowing	Area (ha)	No. of farmers involved	Demonstration Yield (q/ha)			Check Yield			% increase
				H	L	A	H	L	A	

Economics of Demonstration

Name of the fodder crop	Demonstration Cost/Rs/ha			Check Cost (Rs/ha)		
	Gross cost	Gross return	BC ratio	Gross cost	Gross return	BC ratio

12. Awards/Recognition received by the KVK

Sl. No.	Name of the Award	Year	Conferring Authority	Amount	Purpose

Award received by Farmers from the KVK district

Sl. No.	Name of the Award	Name of the Farmer	Year	Conferring Authority	Amount	Purpose
01.	Innovative Farmer Award	Sri Tapan Kumar Ghosh	2016	Director, ICAR-IARI, New Delhi	-	To encourage the innovativeness of Sri Tapan Kumar Ghosh in innovating a 4 Row SRI Marker and to popularize the Marker among the farming

						community
02.	Excellence in Farming Award	Sri Abdul Majid	2016		-	To encourage Sri Abdul Majid for his pioneering efforts in commercial seed production of Elephant's Foot Yam and to popularize seed production of Elephant's Foot Yam among the farming community
03.	Excellence in Farming and Allied Sector Award	Sri Amalendu Saha	2016		-	To encourage Sri Amalendu Saha for his painstaking efforts as a successful Private Para-Vet and to attract unemployed rural youths in the profession as a Private Para-Vet

13. Any significant achievement of the KVK with facts and figures as well as quality photograph

A. Sri Tapan Kumar Ghosh (associated with the Rathindra KVK) was awarded with the Innovative Farmer Award by the Honourable Union Cabinet Minister of Ministry of Agriculture and Farmers' Welfare, Govt. of India, Sri Radha Mohan Singh on 21.03.2016 for the Innovative 4 Row SRI Marker at the Krishi Unnati Mela – 2016 organized by the ICAR-IARI, Pusa, New Delhi held at the Pusa Campus of ICAR-IARI, New Delhi.

Sri Tapan Kumar Ghosh being felicitated by the Honourable Union Cabinet Minister for Ministry of Agriculture and Farmers' Welfare, Govt. of India, Sri Radha Mohan Singh

B. Sri Abdul Mazid (associated with the Rathindra KVK) was awarded for Excellence in Agriculture Sector for his contribution in the commercial seed production of High Yielding improved Varieties of Elephant Foot Yam by the Hounurable Union Cabinet Minister for the Ministry of Agriculture and Farmers' Welfare, Govt. of India, Sri Radha Mohan Singh on 22.02.2016 at the Foundation Day Celebration of Eastern Regional Research Complex of ICAR at Patna.

C. Sri Amalendu Saha (associated with the Rathindra KVK) was awarded for Excellence in Agriculture Sector for his excellent service as a Private Para-Vet by the Hounurable Union Cabinet Minister for the Ministry of Agriculture and Farmers' Welfare, Govt. of India, Sri Radha Mohan Singh on 22.02.2016 at the Foundation Day Celebration of Eastern Regional Research Complex of ICAR at Patna.

Felicitated Farmers at the Foundation Day Celebration of Eastern Regional Research Complex of ICAR at Patna on 22.02.2016

14. Any other programme organized by KVK not covered above

A. 12 numbers of Rural Youths from different villages of Birbhum District were nominated and organized by the Rathindra KVK for undergoing the Training Programme on "Package of Agricultural Machinery for Paddy Cultivation" under Sub Mission on Agricultural Machinery (SMAM) Scheme for 1st. Phase of the Training i.e. 29th. February to 5th. March, 2016 to held at KVK Budwan, Bud Bud, Burdwan and another 13 numbers of rural youths from different villages of Birbhum District were nominated and organized by the Rathindra KVK for undergoing the Sub Mission on Agricultural Machinery (SMAM) Scheme for 2nd. Phase of the Training i.e. 7th. March to 12th. March, 2016 to also held at KVK Budwan, Bud Bud, Burdwan. All these 25 (Twenty five) numbers of Rural Youths have successfully completed the Long Duration Skill development training Programmes.

B. 06 numbers of Rural Youths from marginalized Scheduled Tribe Community from different villages of Birbhum District were nominated and organized by the Rathindra KVK for undergoing long duration, residential skill and entrepreneurship development Training Programmes on "Scientific Dairy Farming" organized by the ICAR-NDRI, ERS, Kalyani, Nadia, West Bengal from 12.12.2015 to 18.12.2015 at the IAR-NDRI, ERS, Kalyani Campus and the above noted Rural Youths have successfully completed the Training Programme on Scientific Dairy Farming.

Annexure – I

Details of Training Programmes

Date	Clientele	Title of the Training Programme	Duration in days	Venue (Off/On Campus)	Number of participants			Number of SC/ST					
								SC			ST		
					Male	Female	Total	Male	Female	Total	Male	Female	Total
DISCIPLINE – Agronomy													
16.03.15 to 04.04.15	RY	Preparation of Vermi Compost in large scale for entrepreneurship	20	ON	3	0	3	2	0	2	0	0	0
18.04.15	PF & PFW	Improved Agro Techniques of homestead Papaya & drumstick cultivation	1	OFF	19	23	42	13	23	36	1	0	1
23.04.15	PF	Recent Agro Techniques in Pulse & Oilseed Production in Kharif Season	1	OFF	30	0	30	3	0	3	0	0	0
25.04.15	PF & PFW	Preparation & use of Vermi-compost in homestead garden	1	OFF	13	2	15	7	2	9	3	3	3
22.06.15	PF (FLD)	FLD training in Dhaincha	1	ON	18	0	18	2	0	2	14	0	14
26.06.15	PF	Improved Agro Techniques for Ekangi cultivation	1	ON	14	0	14	1	0	1	1	0	1
29.06.15	PF	Use of Fertilizers in low rainfall situations	1	ON	29	0	29	9	0	9	8	0	8
03.07.15 to 04.07.15	PF	Preparation & use of Vermi-compost in Phase – I	2	ON	27	0	27	6	0	6	16	0	16
06.07.15 to 07.07.15	PF	Preparation & use of Vermi-compost in Phase – II	2	ON	27	0	27	6	0	6	16	0	16
23.07.15 & 25.07.15	PF	Use of Azolla in Paddy cultivation	2	ON	30	0	30	20	0	20	8	0	8

27.07.15 to 28.07.15 & 30.07.15 to 31.07.15	PF	Rice Seed production technology Phase – I	4	ON	30	0	30	23	0	23	5	0	5
10.09.15 to 12.09.15	PF	Rice Seed production technology Phase – II	3	ON	32	0	32	13	0	13	0	0	0
17.09.15 to 20.09.15	PF	Multiplication of Azolla and its use in Agriculture and allied fields	4	ON	34	0	34	17	0	17	5	0	5
15.10.15	PF & PFW	Harvesting & 154hreshing of Paddy seeds	1	OFF	17	4	21	14	2	16	0	2	2
16.10.15	PF	Field training on improved variety and sowing of mustard	1	ON	14	0	14	7	0	7	1	0	1
30.10.15	PF	FLD training on improved variety on Rabi Pulses	1	ON	24	0	24	5	0	5	5	0	5
03.11.15	PF	FLD Training on sowing and Phosphate management on Green gram and field pea	1	ON	31	0	31	19	0	19	2	0	2
05.11.15	PF	Inoculation of *Rhizobium* with seeds of Pulses	1	ON	28	0	28	3	0	3	0	0	0
06.11.15	PF & PFW	Role of Fertilizer in Rain-fed farming	1	OFF	18	12	30	0	0	0	18	12	30
07.11.15	PF	FLD training On Improved variety on Sulphur application in Rabi Oilseed	1	OFF	28	0	28	1	0	1	0	0	0
09.11.15	PF	FLD training on use of Bio-Fertilizer,	1	ON	25	0	25	5	0	5	15	0	15

		Organic phosphorus for Pulse cultivation											
15.11.15 to 05.12.15	RY	Analysis of Soil and preparation of Soil Health Card	21	ON	20	0	20	6	0	6	5	0	5
26.11.15	PF	FLD training on improved variety and sowing of Lentil and Chick Pea	1	ON	20	0	20	6	0	6	11	0	11
27.11.15	PF	FLD Training on Improved Fertilizer Management in Lentil and Field Pea	1	ON	20	0	20	6	0	6	11	0	11
07.12.15	PF	FLD training on improved variety and irrigation management on wheat cultivation	1	ON	33	0	33	16	0	16	8	0	8
10.12.15 To 12.12.15	PF	Integrated pest disease & weed management in mustard	3	ON	30	0	30	12	0	12	1	0	1
07.01.16 To 10.01.16	PF	Seed production Technology of black gram & green gram in Summer	4	ON	30	0	30	5	0	5	1	0	1
09.01.16	PF	Seed bed preparation with SRI in summer	1	OFF	30	5	35	0	0	0	30	5	35
28.01.16	EF	Soil health & sustainable agriculture	1	ON	07	24	31	0	3	3	1	8	9
12.02.16	PF	Seed treatment & Phosphate management of Black gram	1	ON	29	0	29	0	0	0	2	0	2
16.02.16	PF	Seed treatment & Phosphate management of Green gram	1	ON	30	0	30	2	0	2	4	0	4
18.02.16	PF	Land preparation & sowing of Sesame	1	ON	35	0	35	3	0	3	0	0	0
20.02.16	PF	Fertilizer management of Sesame	1	ON	25	0	25	5	0	5	2	0	2
22.02.16	PF	Crop diversification through pulse cultivation replacing	1	OFF	33	0	33	2	0	2	0	0	0

		summer paddy											
01.03.16	PF	Use of herbicides & micro nutrients in summer pulse	1	ON	25	0	25	5	0	5	0	0	0
03.03.16	PF & PFW	Use of herbicides & micro nutrients in summer oilseeds	1	ON	7	2	9	0	0	0	0	0	0
14.03.16 To 18.03.16	PF	Seed production technology in black gram & green gram in summer	5	ON	40	0	40	4	0	4	5	0	5
28.03.16	EF	Crop diversification through cultivation of pulse & oilseeds	1	ON	28	2	30	4	1	5	1	0	1
Date	**Clientele**	**Title of the Training Programme**	**Duration in days**	**Venue (Off/On Campus)**	**Number of participants**			**Number of SC/ST**					
								SC			**ST**		
					Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
DISCIPLINE – Horticulture													
07.05.15	PFW	Crop diversification of Horticulture crops	1	ON	0	21	21	0	1	1	0	0	0
21.05.15 to 22.05.15	RY	Horticulture as a source of livelihood	2	ON	24	0	24	13	0	13	0	0	0
04.06.15 to 05.06.15	EF	Cultivation of drumstick (Baramasia) Variety	2	ON	4	13	17	2	2	4	1	10	11
09.07.15 to 11.07.15	PF	Improved Cultivation Practices of early Cauliflower & Cabbage	3	OFF	20	0	20	11	0	11	8	0	8
13.07.15 to 14.07.15 & 16.07.15 to 17.07.15	PF	Improved package of practices of Beet, Carrot, Beans, Capsicum cultivation	4	ON	20	0	20	11	0	11	8	0	8

30.07.15 to 01.08.15	PF	Cultivation of drumstick	3	OFF	20	0	20	11	0	11	8	0	8
03.08.15 to 18.08.15	RY	Nursery and Its Management	15	ON	13	0	13	5	0	5	6	0	6
26.08.15	EF	Cultivation of Brinjal, Chilli & Tomato	1	ON	23	0	23	4	0	4	0	0	0
03.09.15	PF	Improved Package and Practice of Guava, Ber, Pointed gourd	1	ON	23	0	23	4	0	4	0	0	0
21.09.15 to 24.09.15	PF	Establishment of Common Orchard in upland situation as one of the Component of Dryland Horticulture including management of Orchard	4	ON	24	0	24	0	0	0	24	0	24
26.09.15 to 27.09.15	PF	Improved Cultivation Practice of Capsicum, Broccoli, Ornamental Cabbage, Lettuce	2	ON	23	0	23	15	0	15	4	0	4
26.09.15 to 29.09.15	PF	Improved Package and Practice of Beet, Carrot, French Bean, Broccoli, Capsicum	4	ON	20	0	20	5	0	5	13	0	13
29.01.16	EF	Crop diversification of Horticultural crops	1	ON	8	25	33	1	10	11	0	2	2
29.02.16	PFW	Establishment of home stead, Kitchen garden for nutritional security	1	ON	0	29	29	0	11	11	0	6	6

01.03.16	PFW	Preparation of Orchard in home stead for nutritional security	1	ON	0	30	30	0	12	12	0	5	5
29.03.16	PF	Crop diversification through horticulture in Red & lateritic zone of West Bengal	1	ON	40	0	40	11	0	11	3	0	3
Date	**Clientele**	**Title of the Training Programme**	**Duration in days**	**Venue (Off/On Campus)**	**Number of participants**			**Number of SC/ST**					
								SC			**ST**		
					Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
DISCIPLINE – Plant Protection													
05.06.15	EF	Pest & Disease management of Moringa	1	ON	4	13	17	2	2	4	1	10	11
25.08.15 to 03.09.15	RY	Tata Rallis Agri Input training Scheme (TRAITS) Phase-I	10	ON	25	0	25	5	0	5	0	0	0
21.09.15 to 23.09.15	PF	Pest & Disease management on Rabi Seasonal Oilseed and Pulses	3	ON	32	0	32	13	0	13	0	0	0
03.12.15 to 05.12.15	PF	Identification of different bio pesticides and seed borne diseases and their treatment	3	ON	30	0	30	10	0	10	6	0	6
30.01.16	EF	Environment friendly protection measures for paddy cultivation & also insect & diseases control	1	ON	9	26	35	2	10	12	0	3	3
04.02.16 To 06.02.16	PF	IPM on solanaecous crop	3	ON	30	0	30	5	0	5	10	0	10

07.02.16 To 09.02.16	PF	IPM on wheat sugarcane & high value vegetables	3	OFF	50	0	50	10	0	10	30	0	30
14.02.16 To 16.02.16	PF	IPM on summer vegetables	3	OFF	50	0	50	5	0	5	30	0	30
01.03.16 To 03.03.16	PFW	Pest disease management in pulse	3	ON	0	30	30	0	12	12	0	5	5
10.03.16 To 12.03.16	PFW	IPM in potato	3	ON	0	30	30	0	7	7	0	2	2
14.03.16 To 16.03.16	PF & PFW	Identification of bio pesticides & seed born diseases & relevant management practices	3	ON	9	21	30	5	10	15	0	2	2
17.03.16	PF	Technologies for biological pest control	1	ON	29	0	29	3	0	3	0	0	0
18.03.16	PF & PFW	Appropriate diseases management technologies in summer pulse	1	ON	32	16	48	0	2	2	32	14	46
Date	**Clientele**	**Title of the Training Programme**	**Duration in days**	**Venue (Off/On Campus)**	**Number of participants**			**Number of SC/ST**					
								SC			**ST**		
					Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
DISCIPLINE – Fishery													
08.05.15 to 09.05.15	EF	Fish production for livelihood development	2	ON	0	20	20	0	1	1	0	0	0
21.05.15 to 22.05.15	RY	Fishery activities as a source of livelihood	2	ON	19	0	19	7	0	7	4	0	4

14.07.15 to 20.07.15	PF	Carp breeding & Hatchery management	5	ON	28	0	28	5	0	5	15	0	15
24.09.15, 26.09.15, 28.09.15	PF	Management and control measure for fish diseases	3	ON	40	0	40	15	0	15	11	0	11
16.11.15 to 20.12.15	PF	Fish based integrated farming	4	ON	30	0	30	12	0	12	4	0	4
10.12.15 to 31.12.15	RY	Scientific method of carp breeding in hatchery	15	ON	14	0	14	8	0	8	4	0	4
11.01.16, 12.01.16, 14.01.16, 15.01.16	PF	Carp fry & fingerling rearing	4	ON	30	0	30	5	0	5	0	0	0
21.01.16 To 23.01.16	PF	Prevention & control method of various fish diseases	3	ON	30	0	30	8	0	8	7	0	7
29.01.16	EF	Fish based integrated farming system for more economic benefits	1	ON	8	25	33	1	10	11	0	2	2
03.03.16	PFW	Fish based integrated farming system for nutritional & food security	1	ON	0	29	29	0	13	13	0	5	5
14.03.16	PF & PFW	Improved technologies for management of fish diseases	1	ON	5	25	30	2	8	10	0	3	3
18.03.16	PF & PFW	Improved technologies for culture of Pabda	1	ON	7	27	34	2	7	9	0	2	2
Date	**Clientele**	**Title of the Training Programme**	**Duration in days**	**Venue (Off/On Campus)**	**Number of participants**			**Number of SC/ST**					
								SC			**ST**		
					Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**

DISCIPLINE – Animal Science

22.04.15	PF	Poultry disease & its prevention	1	OFF	14	0	14	0	0	0	0	0	0
25.04.15	PF & PFW	Vector borne diseases with zoonotic potential	1	OFF	41	9	50	0	0	0	41	9	50
08.05.15 to 09.05.15	EF	Animal Resource Development	2	ON	0	21	21	0	1	1	0	0	0
21.05.15 to 22.05.15	RY	Animal Resource Development	2	ON	20	0	20	7	0	7	4	0	4
20.07.15 to 28.07.15	PF	Establishment, maintenance & management of small scale Dairy unit	4	ON	25	0	25	3	0	3	20	0	20
24.08.15	PF	Quail Farming	1	ON	30	0	30	6	0	6	24	0	24
28.08.15	PF	Dairy Farming	1	ON	52	0	52	0	0	0	52	0	52
04.09.15 to 05.09.15	PFW	Duck Farming	2	OFF	50	0	50	0	0	0	50	0	50
22.11.15	PF	Scientific Poultry Management	1	OFF	62	0	62	13	0	13	5	0	5
02.11.15 to 26.11.15	RY	Broiler Management	15	ON	10	0	10	4	0	4	3	0	3

27.11.15 to 28.11.15	PF & PFW	Effective and scientific preservation of pure Black Bengal breed of Goat	2	OFF	43	7	50	0	0	0	43	7	50
03.12.15 to 04.12.15 and 06.12.15 to 07.12.15	PF	Low cost feed preparation for poultry	4	ON	30	0	30	9	0	9	2	0	2
21.12.15 to 22.12.15	PFW	Piggery management	2	OFF	0	50	50	0	0	0	0	50	50
29.12.15	PF & PFW	Quality Fodder Cultivation	1	ON	29	1	30	9	0	9	7	1	8
04.01.16	PFW	Piggery Management with special reference to Gunghroo Pigs	1	OFF	00	50	50	0	0	0	00	50	50
12.01.16 and 14.01.16	PF & PFW	Identification and control of diseases of Dairy animals with prophylactic measures	2	ON	10	20	30	00	00	00	10	20	30
15.01.16	PFW	Low Cost Concentrate Feed Supplement for Black Bengal does	1	ON	00	10	10	0	0	0	0	10	10
21.01.16	PF & PFW	Quail farming	1	ON	29	01	30	09	00	09	07	01	08
29.01.16	EF	Improved Practices of Poultry and Duck Farming	1	ON	09	25	34	02	08	10	00	03	03
01.02.16 to 02.02.16	PF & PFW	Sheep Farming	2	ON	18	12	30	00	00	00	18	12	30

04.02.16 to 06.02.16 and 08.02.16	PF & PFW	Identification and Control of Diseases in Live stocks with prophylactic measures	4	ON	18	12	30	00	00	00	18	12	30
12.02.16 to 12.03.16	RY	Capacity building of Rural Youths as Private Para-Vets	30	ON	21	0	21	07	0	07	10	0	10
15.03.16	PF & PFW	Improved Technologies for Management Practices for Black Bengal goats	1	ON	09	21	30	02	11	13	0	1	1
16.03.16	PF & PFW	Water Quality Management Technology for Broiler Farming	1	ON	02	28	30	01	07	08	00	10	10
29.03.16	EF	Refreshment Training of the existing AI Workers	1	ON	27	00	27	07	00	07	02	0	02
Date	**Clientele**	**Title of the Training Programme**	**Duration in days**	**Venue (Off/On Campus)**	**Number of participants**			**Number of SC/ST**					
								SC			**ST**		
					Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
DISCIPLINE – Home Science													
07.05.15	PFW	Care & Management of Pregnant Mother	1	OFF	0	50	50	0	0	0	0	50	50
26.06.15	PFW	Nutrition Gardening	1	OFF	0	30	30	0	11	11	0	2	2
04.09.15	PFW	Nutritional requirement of Pre-School Children	1	OFF	0	50	50	0	0	0	0	50	50
07.09.15	PFW	Design of Low Cost High Nutritious Diet for Vulnerable Groups	1	OFF	0	50	50	0	00	00	00	50	50

17.12.15, 18.12.15, 19.12.15 and 21.12.15	PFW	Vegetable Preservation and Value addition	4	ON	0	25	25	0	17	17	0	5	5
07.01.16 to 09.01.16 and 11.01.16 to 12.01.16	PFW	Tie and Dye Works	5	ON	00	20	20	00	08	08	00	06	06
22.02.16, 23.02.16, 24.02.16, 25.02.16 and 27.02.16	PFW	Batik Work	5	ON	0	25	25	00	06	06	0	14	14
29.02.16	PF & PFW	Various Aspects of Health and Nutrition	1	OFF	8	21	29	2	7	9	0	3	3
07.03.16	PFW	Care and Management of Pre-School Children	1	ON	00	25	25	00	11	11	00	05	5
10.03.16 to 12.03.16	PFW	Nutrition Garden	3	ON	00	30	30	00	08	08	00	03	3
17.03.16 to 19.03.16	PF & PFW	Importance of Balanced Diet and formulation of Diet	3	ON	4	22	26	02	06	08	0	0	0
Date	**Clientele**	**Title of the Training Programme**	**Duration in days**	**Venue (Off/On Campus)**	**Number of participants**			**Number of SC/ST**					
								SC			**ST**		
					Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
DISCIPLINE – Agricultural Extension													
06.04.15, 10.04.15 and 11.04.15	PF	Formation & Functioning of Joint Liability Group	3	ON	32	0	32	2	0	2	0	0	0
09.04.15	EF	Training programme on Asstt. Managers of Gramin Bank on "Mechanism of KVK functioning & linkage with financial	1	ON	20	5	25	3	0	3	1	0	1

		Institutions"											
05.06.15	EF	Marketing Mechanism of produced drumstick	1	ON	4	13	17	2	2	4	1	10	11
01.10.15, 06.10.15, 09.10.15	PF & PFW	Disaster management with special management to Agriculture and related sectors	3	ON	33	1	34	12	1	13	7	0	7
02.11.15 to 03.11.15, 05.11.15	PF	Formation and Functioning of Joint Liability Group and revitalization of old SHGs	3	ON	43	0	43	19	0	19	5	0	5
06.11.15 to 07.11.15, 09.11.15	PF	Formation of Commodity Interest Group	3	ON	33	0	33	2	0	2	3	0	3
23.11.15 to 24.11.15	PF	Formation of Farmers' Club	2	OFF	31	0	31	3	0	3	21	0	21
01.12.15 to 02.12.15	PF	Development of Marketing Channels for SHG products	2	ON	51	0	51	16	0	16	7	0	7
24.01.16	PF & PFW	Institutional Rural Credit Flow Mechanisms and Concept of Crop Insurance	1	OFF	31	05	36	11	2	13	20	3	23
29.01.16	EF	Kisan Credit Card and Crop Insurance – Present Day Concept	1	ON	09	25	34	02	9	11	0	3	3
29.02.16	PF & PFW	Group Approach for Economic Activities, Kisan Credit Card and Crop Insurance	1	OFF	02	41	43	00	16	16	00	04	04

01.03.16	PFW	Agricultural Loan, Kisan Credit Card and Pradhan Mantri Fasal Bima Yojana	1	ON	0	27	27	00	12	12	0	2	2
03.03.16	EF	Concept, Genesis, Formation and Functions of KVKs	1	ON	00	25	25	00	11	11	0	2	2
16.03.16	PFW	Different Technical aspects of Pradhan Mantri Fasal Bima Yojana	1	ON	0	30	30	0	10	10	0	04	04
17.03.16	PF & PFW	Concept, Formation and Function of Farmers Producer Organizations (FPOs)	1	ON	9	21	30	2	6	8	00	04	04
Total					**2519**	**1267**	**3786**	**589**	**336**	**925**	**734**	**491**	**1225**