

RATHINDRA KRISHI VIGYAN KENDRA



**Palli Siksha Bhavana
(Institute of Agriculture)**



Visva-Bharati

Sriniketan, Dist. - Birbhum, West Bengal- 731236

REPORTS FOR QUINQUENNIAL REVIEW TEAM (QRT)

2011-12 TO 2018-19

**PRESENTED AT THE QRT MEETING
AT**

**WEST BENGAL UNIVERSITY OF ANIMAL AND FISHERY SCIENCES,
BELGACHIA, KOLKATA
ON 19TH AUGUST, 2019**

ORGANIZED BY

ICAR-ATARI, ZONE – V, KOLKATA



CONTENTS

SL. NO.	PARTICULARS	PAGE NO.
1.	Name and location of KVK	4
2.	Name of the Head of KVK with Postal address and Telephone No.	4
3.	Name of District and State Head Qtrs.	4
4.	Sanction order No. and date	4
5.	Date of Establishment	4
6.	Name and Address of the Host Instt.	4
7.	Mandate and Functions of KVKs	4-5
8.	Staff Position (based on Sanctioned Strength) and their mobility	5-6
9.	Allocation under various Heads	6-7
10.	Infrastructural facilities available at KVK	8-14
11.	Budget	15
12.	Agro climatic zone and jurisdiction (District/State Boundaries)	15-28
13.	Major Activities Undertaken	29-36
14.	SWOT (Strengths, Weakness, Opportunities and threats) Analysis of KVK	36-39
15.	Brief account of progress made towards modernization of office, equipments, staff amenities, Transport, O & M reforms etc.	39-41
16.	Efforts and achievements made in the last eight years towards upgradation of knowledge and skills of staff of KVK i.e. Human Resource Development (Training of Staff in Trainers' Training Centres and other Institutes etc)	42-60
17.	Details of technology assessed / refined / generated during the period under review	60-63
18.	Details of Training Programmes Conducted	64-66
19.	Frontline Demonstration Programme	67-83
20.	Critical input supplied during the period under review	84-88
21.	Soil Testing and Soil Health Cards Issued	88
22.	Entrepreneur development during the period of QRT	88-95
23.	Capacity building of KVK Staff / Trainers	95
24.	Linkage establishment with other Govt. Department / NGOs	95-97

25.	Revolving Fund Status	97-98
26.	Resource generation	98-100
27.	Number of new crop varieties evaluated by the KVK scientists and identification of most suited	100-102
28.	Supply of seed of new varieties (crop-wise) as sample pack	102-104
29.	Technologies that have created impact in sizable areas and made KVK credible	105-107
30.	Impact assessment of KVK made so far by any dependable agency	107
31.	New Initiative	107-112
32.	Other Programmes (not covered in the format) conducted	112-117
33.	Details of awards / prize received by the KVK	117
34.	Broad-basing of Front Line Extension	117
35.	Extension Activities Undertaken	117-118
36.	Publications made during the QRT period	118-148
37.	Final Considered Views in KVK's perceived opinion (five points in order of merit) that your KVK could have performed far better if	148-149
Annexure - I	Status of Research – Extension Linkages at the District Level	150-156
Annexure - II	Impact of KVK in Terms of Agricultural and Animal Productivity, Socio-economic Conditions and Employment Generation during the QRT period in the Adopted villages	157-158

**Report of the
Quinquennial Review Team (QRT)
for the period of 2011-12 to 2018-19**

1	Name and location of KVK	<p>Name: - Rathindra Krishi Vigyan Kendra</p> <p>Location: - Rathindra Krishi Vigyan Kendra (Rathindra KVK) is located within the Sriniketan Campus of Visva-Bharati University and just beside the Playground and Library of Palli Siksha Bhavana (Institute of Agriculture), Visva-Bharati in the District of Birbhum of the State of West Bengal. This Sriniketan Campus is just out-side the Bolpur Town, one of the three Sub-Divisional Towns of Birbhum District and Sriniketan is itself the Head Quarter of the Bolpur-Sriniketan Community Development Block of the District. The locational Address of the Rathindra KVK is Palli Siksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, P. O. - Sriniketan, Dist. - Birbhum, Pin. - 731236, West Bengal.</p> <p>GPS Location: - Rathindra KVK is located at 23.66°N Latitude and 87.66°E Longitude. It has an average elevation of 49 metres (161 ft.) above Mean Sea Level.</p>
2	Name of the Head of KVK with Postal address and Telephone No.	<p>Prof. Ashis Kumar Chatterjee, Principal, Palli Siksha Bhavana (Institute of Agriculture) and In-Charge, Rathindra KVK, Visva-Bharati, Sriniketan, P. O. - Sriniketan, Dist. - Birbhum, Pin. - 731236, West Bengal, India.</p> <p>Telephone No.: - 9475212006</p>
3	Name of District and State Head Qtrs.	<p>Name of District: - Birbhum</p> <p>State Head Qtrs.: - Kolkata</p>
4	Sanction order No. and date	F.2 (2)\ 93-AE-1; Dated 4 th . October, 1994
5	Date of Establishment	01.04.1995
6	Name and Address of the Host Instt.	Visva-Bharati, Santiniketan, P. O. - Santiniketan, Dist. - Birbhum, Pin. - 731235, West Bengal, India
7	Mandate and Functions of KVKs	<p>Mandate of KVKs: - The mandate of KVK is Technology Assessment and Demonstration for its Application and Capacity Development.</p> <p>Functions of KVKs: - To implement the mandate effectively, the following functions are envisaged for each KVK.</p> <p>a) On-farm testing to assess the location specificity of</p>

		<p>agricultural technologies under various farming systems.</p> <p>b) Frontline demonstrations to establish production potential of technologies on the farmers' fields.</p> <p>c) Capacity development of farmers and extension personnel to update their knowledge and skills on modern agricultural technologies.</p> <p>d) To work as Knowledge and Resource Centre of agricultural technologies for supporting initiatives of public, private and voluntary sector in improving the agricultural economy of the district.</p> <p>e) Provide farm advisories using ICT and other media means on varied subjects of interest to farmers</p> <p>In addition, KVK produce quality technological products (seed, planting material, bio-agents, livestock) and make it available to farmers, organize frontline extension activities, identify and document selected farm innovations and converge with ongoing schemes and programmes within the mandate of KVK.</p>
--	--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

8. Staff Position (based on Sanctioned Strength) and their mobility

Sl. No.	Designation	No. of Sanctioned Post	Name of the person	Present Pay Scale (Rs.)	Date of joining	Dt. of Leaving / Retirement
1	Programme Coordinator	01	Vacant	PB- 4, Rs.37400-67000/- + RGP - Rs.9000/-	Vacant since 01.11.2016.	Not Applicable
2	Programme Coordinator (Officiating) and Subject Matter Specialist (Agronomy)	01	Dr. Subrata Mandal	PB- 3, Rs. 15600-39100/- + GP-Rs.5400/- (Rs. 24650/-)	01.08.2004	31.12.2031
3	Subject Matter Specialist (Plant Protection)	01	Sri Sourav Mondal	PB- 3, Rs. 15600-39100/- + GP-Rs.5400/- (Rs. 24650/-)	01.08.2004	31.07.2034
4	Subject Matter Specialist (Fishery)	01	Dr. Krishna Mitra	PB- 3, Rs. 15600-39100/- + GP-Rs.5400/- (Rs. 21300/-)	26.05.2012	31.03.2020
5	Subject Matter Specialist (Agricultural Extension)	01	Dr. Prabuddha Ray	PB- 3, Rs. 15600-39100/- + GP-Rs.5400/- (Rs. 18240/-)	19.06.2012	30.09.2035
6	Subject Matter Specialist	01	Dr. Madhuchhanda	PB- 3, Rs. 15600-	10.06.2014	30.06.2037

Works	*4.080	**9.062	-	-	-	-	-	-
Vehicle	-	-	-	-	1.195	-	-	-
Equipment	3.979	-	-	-	9.898	-	02.44	-
Library	00.049	-	-	-	-	-	-	-
Other, if any HRD	-	-	00.134	00.087	-	00.036	00.185	-

NRC= Non- recurring contingency

* Fund utilized against revalidated amount of Rs. 4.56 Lakhs in 2011-12.

** Fund utilized against revalidated amount of Rs. 9.588 Lakhs in 2012-13.

10. Infrastructural facilities available at KVK

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

Office Building of KVK:

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

Farmers' Hostel of KVK:

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.	Farmers' Hostel					Totally completed	305.00	Under use	ICAR

Vehicles of KVK:

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	1,37,820	In running condition
Motor Bike (Hero Splendor Pro)	2016	59,223.00	5,490	In running condition
Scooter (Hero Edge LX)	2016	60,323.00	2,960	In running condition

Tractor of KVK:

Name of equipment	Year of purchase	Cost (Rs.)	Present status	Source of fund
Tractor Model Mahindra B 275 – DI	1998-99	2,99,496.00	Working condition	ICAR

e-Connectivity of KVK:

1. Internet Connection of Bharat Sanchar Nigam Limited (BSNL) through Landline
2. Visva-Bharati Wi-Fi provided through <http://visvabharati.wifi> by MHRD Wi-Fi as a Part of the UGC Gyan Vigyan Network with Service Provider Rail Wire (RLWIRE) of RAILTEL.

Demo Unit etc. of KVK:

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.	Poultry unit					Totally completed	80.00	Under use	ICAR
2.	Soil test Lab					Totally completed	26.00	Under	ICAR

								use	
3.	Portable Carp Hatchery for Fish Breeding					Totally completed	15.00	Under use	ICAR
4.	Duckery unit					Totally completed	80.00	Under use	ICAR
5.	Plant Diagnostic Laboratory					Totally completed	25.00	Under use	ICAR
6.	Threshing floor					Totally completed	180.00	Under use	ICAR
7.	Farm go-down					Totally completed	46.25	Under use	ICAR

Instructional Farms

Sl. No.	Item	Area (ha)
1.	Instructional Farms for Demonstration of Field Crops	02.000
2.	Instructional Farms for Orchard/Agro-forestry	01.000
3.	Instructional Farms for Seed Production of Cereals, Pulses, Oilseeds, Fodder Crops etc.	04.000
4.	Stocking and Rearing Pond for Fishery	01.000
5.	Nursery Pond for Fishery	00.013
6.	Total	08.013

Other Infrastructural Facilities of KVK:

A) 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 Mridhaparikshak Solar Operated	2015-16	70,000.00	Working condition	ICAR
Soil Testing Mini-Lab Mridhaparikshak Solar Operated	2016-17	86,000.00	Working condition	ICAR

Bardizzo Castrator	2016-17	1,600.00	Working condition	ICAR
Auto Vaccinator	2016-17	3,400.00	Working condition	ICAR
pH. Meter	2016-17	1,431.00	Working condition	ICAR
Room Thermometer	2016-17	295.00	Working condition	ICAR
Stethoscope	2016-17	500.00	Working condition	ICAR
Dissolved Oxygen Meter	2016-17	12,022.00	Working condition	ICAR
pH. Meter	2016-17	1,431.00	Working condition	ICAR
Digital Electronic Balance (5.0 mili grams – 300.00 grams)	2016-17	13,400.00	Working condition	ICAR
b. Farm machinery				
Power Tiller Model Kamco KMB 200	2001-02	99,672.00	Working condition	ICAR
Rotavator Model 5/540 R	2012-13	59,000.00	Working condition	ICAR
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. A-V 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	Not in working condition	ICAR
Stabilizer 2KVA	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
Canon Photo Copier Image RUNNER 2004 N	2016-17	80,273.00	Working condition	ICAR
Desktop Computer Intel Core I 5 Processor with UPS 600 VA	2017-18	47,700.00	Working condition	ICAR
Laptop HP Intel Core I 3 Processor	2017-18	48,900.00	Working condition	ICAR
HP Colour Desk Jet Printer 5821	2017-18		Working condition	ICAR

B) 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 Model Kumco KB - 120	2010 - 11	81,156.00	Working condition	ICAR
Zero Tillage Machine 11 Tynes	2010 - 11	40,000.00	Working condition	ICAR
ConoWeeder	2012 - 13	Free Supply	Working condition	ICAR
Drum Seeder	2012 – 13	Free Supply	Working condition	ICAR

11 . Budget (Rs. In lakh)

a. ICAR

Head	I (2011-12)	II (2012-13)	III (2013-14)	IV (2014-15)	V (2015-16)	VI (2016-17)	VII (2017-18)	VIII (2018-19)	TOTAL
Recurring	72.25	75.95	84.25	88.69	141.71	156.00	126.08	139.00	883.93
Non- Recurring	15.90	-	-	-	16.50	-	02.50	-	34.90
TA	00.40	01.20	00.70	00.27	01.00	01.50	01.12	00.80	06.99
Others HRD	-	-	00.15	00.09	-	00.50	00.20	-	00.94

b. Other than ICAR:

c. Any other:

ICAR Grant for Soil Testing Kits for Soil Health Cards in 2015-16

Head	Amount
Capital	00.75
General	00.50
Total	01.25

12. Agro climatic zone and jurisdiction (District/State Boundaries):**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)

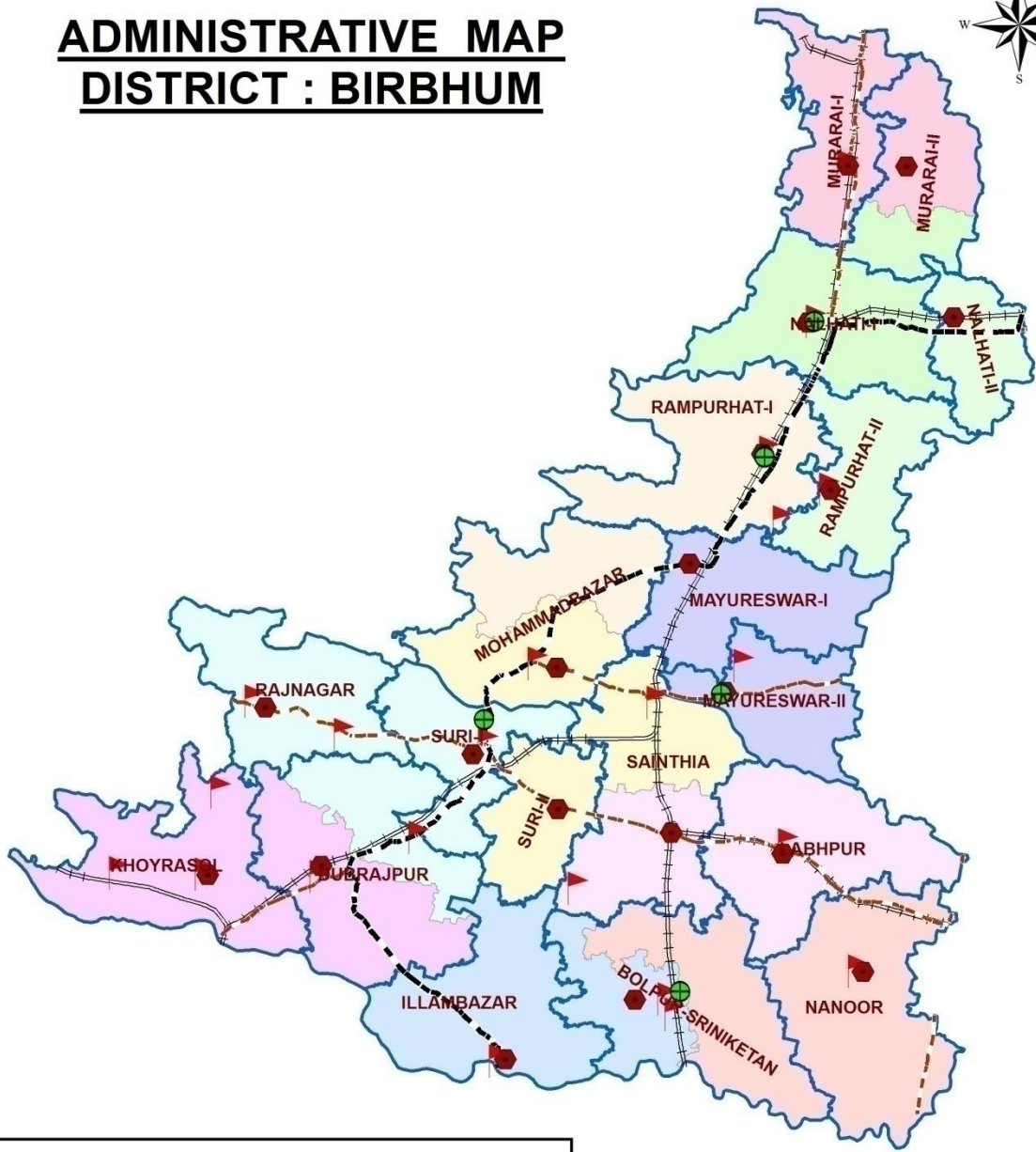
Agro-Climatic Zone (Planning Commission):- Lower Gangetic Plain Region (III)

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

Jurisdiction of Rathindra KVK:

Birbhum District of the State of West Bengal

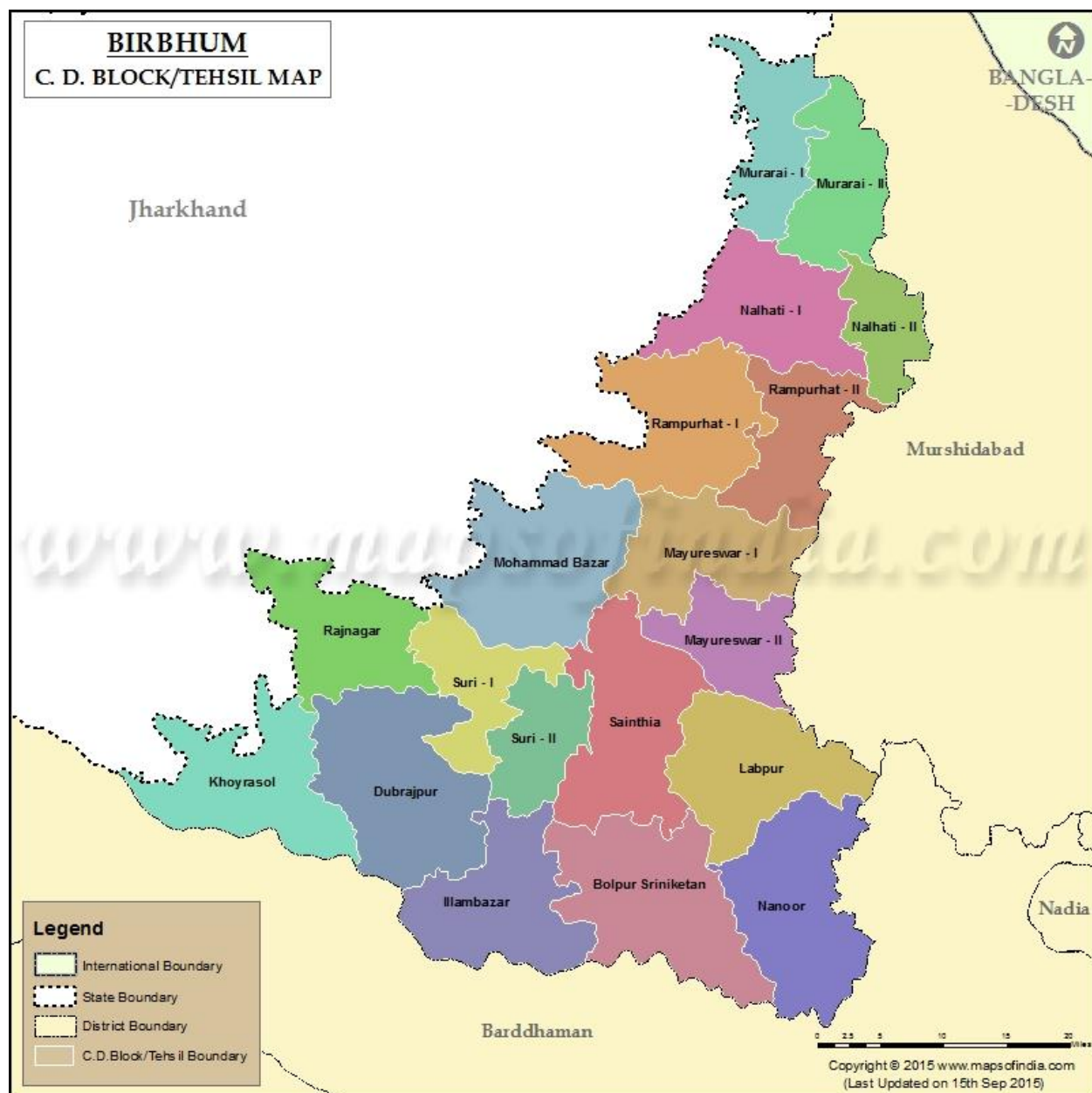
ADMINISTRATIVE MAP DISTRICT : BIRBHUM

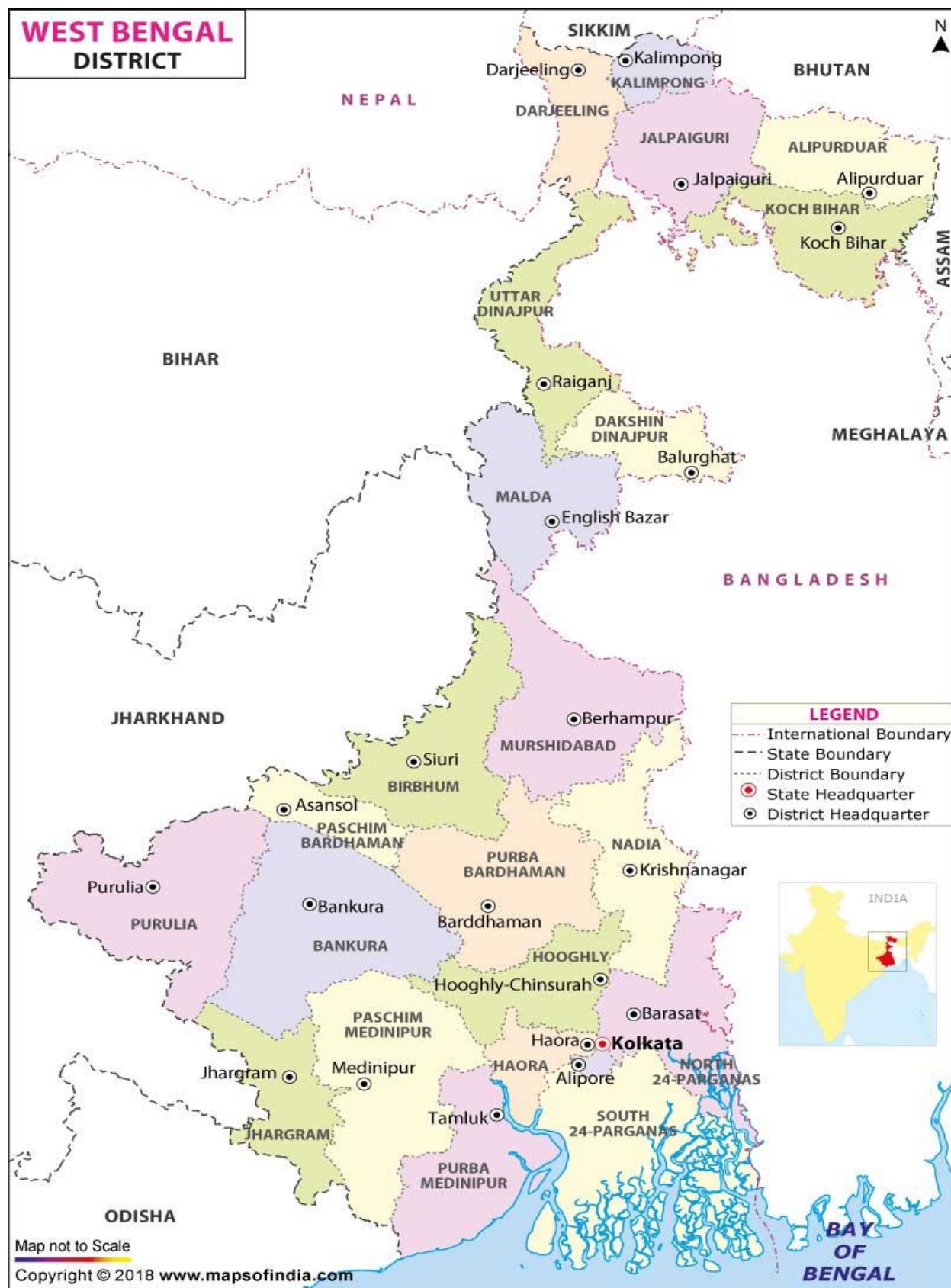


	DCRC, Counting Venue		Dubrajpur AC, 284
	Block Head Quarter		Hansan AC, 292
	Police Head Quarter		Labpur AC, 288
National and State Highway			Mayureswar AC, 290
	Express Way		Murarai AC, 294
	State Highway		Nalhati AC, 293
	Railway		Nanoor AC, 287
	Block Boundary		Rampurhat AC, 291
AC Boundary			Sainthia AC, 289
	Bolpur AC, 286		Suri AC, 285



NRDMS
Planning Section
Office of the District Magistrate
Birbhum





a. Climate:

Mean yearly temperature, rainfall, humidity of the district

The temperature varies from 12.7°C to 28.3°C in winter and from 25.5°C to 41.5°C in summer. The average rainfall is 1430 mm (Source: - <http://www.birbhum.gov.in/DDAgri/ddadmin.htm>).

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 thumb-rule, the wind is generally from south-east in summer and from the north-west in winter.

Summer Temperature: Max: 40^o C

Winter Temperature: Min: 10^o 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

Maximum and Minimum Temperature by Month in the District of Birbhum

Centre : Suri(Degree Celsius)										
Month	Year									
	2008		2009		2010		2011		2012	
	Maxi	Mini	Maxi	Mini	Maxi	Mini	Maxi	Mini	Maxi	Mini
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
January	31	7	29	10	29	7	29	6	28	7
February	32	7	35	11	33	11	35	11	35	8
March	39	16	37	14	42	17	40	12	40	13
April	42	19	43	19	46	20	39	19	41	19
May	42	21	42	20	39	21	38	20	45	22
June	38	23	42	22	43	22	39	24	46	24
July	35	24	37	25	37	25	36	23	38	24
August	35	24	37	24	36	24	37	24	35	24
September	35	24	36	24	35	23	36	23
October	34	19	34	16	35	18	34	16	35	16
November	32	13	34	11	34	14	32	14	32	11
December	31	11	29	8	29	8	30	7	30	7

[Source: - Bureau of Applied Economics and Statistics (BAES), 2011-12, Govt. of West Bengal]

Mean Maximum and Mean Minimum Temperature by Month in the District of Birbhum

Centre : Suri(Degree Celsius)										
Month	Year									
	2008		2009		2010		2011		2012	
	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean
	Maxi	Mini	Maxi	Mini	Maxi	Mini	Maxi	Mini	Maxi	Mini
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
January	25	12	27	13	24	9	24	10	24	12
February	27	13	30	14	29	14	29	14	29	14
March	34	20	34	19	36	20	34	20	34	19
April	37	23	39	24	40	25	35	22	37	23
May	37	25	36	25	35	25	35	24	39	26
June	33	26	38	27	36	26	35	26	39	27
July	33	26	33	26	33	26	34	26	33	26
August	33	26	33	26	33	26	32	26	33	26
September	33	25	33	25	33	25	32	25
October	32	22	32	21	32	23	33	23	32	21
November	30	17	29	17	31	19	30	17	28	16
December	26	14	27	12	26	12	26	12	25	12

[Source: - Bureau of Applied Economics and Statistics (BAES), 2011-12, Govt. of West Bengal]

Birbhum District Weather by Month // Weather Averages

	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temperature (°C)	19	21.5	26.9	30.8	30.7	30.7	28.9	28.8	28.8	27.3	23	19.6
Min. Temperature (°C)	12	14.4	19.4	23.7	25.5	26.2	25.7	25.7	25.4	23	17	12.9
Max. Temperature (°C)	26	28.6	34.4	38	35.9	35.2	32.2	32	32.3	31.7	29.1	26.3
Avg. Temperature (°F)	66.2	70.7	80.4	87.4	87.3	87.3	84.0	83.8	83.8	81.1	73.4	67.3
Min. Temperature (°F)	53.6	57.9	66.9	74.7	77.9	79.2	78.3	78.3	77.7	73.4	62.6	55.2
Max. Temperature (°F)	78.8	83.5	93.9	100.4	96.6	95.4	90.0	89.6	90.1	89.1	84.4	79.3
Precipitation / Rainfall (mm)	12	21	24	41	88	239	295	275	170	105	12	5

The precipitation varies 290 mm between the driest month and the wettest month. The variation in temperatures throughout the year is 11.8 °C.

Source: <https://en.climate-data.org/asia/india/west-bengal/bolpur-767407/>

b. Traditional crops:

Coverage, Productivity and Production of
Major Crops of Birbhum
80

Name of Crop	Normal Target (Ha)	2011-12			2012-13			2013-14			2014-15			2015-16		
		Coverage (Ha)	Yield (Kg/Ha)	Production (MT)	Coverage (Ha)	Yield (Kg/Ha)	Production (MT)	Coverage (Ha)	Yield (Kg/Ha)	Production (MT)	Coverage (Ha)	Yield (Kg/Ha)	Production (MT)	Coverage (Ha)	Yield (Kg/Ha)	Production (MT)
Aman Paddy	305000	302132	4310.6	1302382.3	282951	4369.73	1236419.5	271412	4253.28	1154391	294874	4150.3	1223801	29511.5	4790.2	1413660
Aus Paddy	5200	3767	3803	1432590.1	3500	3592	12572	3540	3666.66	12980	3497	3775.2	13201.7	3305	3735.83	12346.92
Boro Paddy	68650	61224	4750	290814	53473	4867	260253.09	79310	5139.00	407574	67451	5210.8	351474	65120	5139	334651.7
Rabi Maize	390	119	930	110.67	61	945	57.645	9	940	8.46	85	905	76.925	250	975.15	243.7875
Summer Maize	950	75	1600	120	31	1626	50.406	114	1623	185.022	120	1580	189.6	450	1755	789.75
Khanf Maize	450	356	1050	373.8	375	1140	427.5	400	1205.00	482	427	1235	527.345	450	1340	603
R-S Ground Nut	100	73	1038	75.774	47	1035	48.645	46	1037	47.702	190	1050	199.5	254	975.75	247.8405
Mustard	42800	31840	1096	34896.64	32100	1103	35406.3	31690	1141	36158.3	32115	1165	37414	33325	1150	38323.75
Linseed	1490	821	588.5	483.1585	666	592	394.272	582	600	349.2	412	615.25	253.483	393	605.35	237.9026
Sunflower	430	44	950	41.8	75	545	40.875	56	586	32.816	71	595.25	42.2628	60	875	52.5
Sesamum	7150	5120	962	4925.44	5350	952	5093.2	4382	933	4088.41	4670	945.15	4413.85	5025	957.25	4810.181
Ashar	600	576	617	355.392	534	620	331.08	516	622	320.952	388	635	246.38	388	647.25	251.133
Lenil	10000	6570	618	4060.26	10026	623.3	6249.2058	10908	830	9053.64	10530	825	8687.25	13170	785	10338.45
Khesari	4185	1834	617	1131.578	1831	625	1144.375	1815	638	1157.97	1675	645.25	1080.79	2265	635.45	1439.294
Gram	19900	10750	948	10191	13415	973	13052.795	11206	967	10836.2	10145	978	9921.81	12240	985	12056.4
Pea	855	471	625.7	294.7047	538	635	341.63	513	651	333.963	520	660.15	343.278	550	662.18	364.199
S/Mbong	1800	1036	605	626.78	1918	598.3	1147.5394	1947	540	1051.38	1455	575.25	836.989	1970	915	1802.55
S/Kalai	950	375	785	294.375	450	805	362.25	520	865	449.8	660	885.15	584.199	625	955.1	596.9375
Bhadoi Kalai	1500	1240	408	505.92	1321	502	663.142	1052	622	654.344	1085	640	694.4	1125	665	748.125
Kulhi & other Pulse	180	179	403	72.137	138	406.6	56.1108	94	420	39.48	99	475	47.025	100	485	48.5
Potato	23300	17930	27304	489553.5	19120	28432	543619.84	18795	23314.4	438194	19300	25251	487339	19485	27695	53963.71
Wheat	47100	30440	2929	89158.76	30810	2986	91998.66	28720	3044	87423.7	33000	3075	101475	39155	2950.2	11551.51
S/Cane	1850	1759	77373	136099.1	1722	77233	132995.23	1520	77817	118282	1269	76685	97313.5	1250	77612	97015

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.

c. Cropping system/situation:

Major Farming system/enterprise

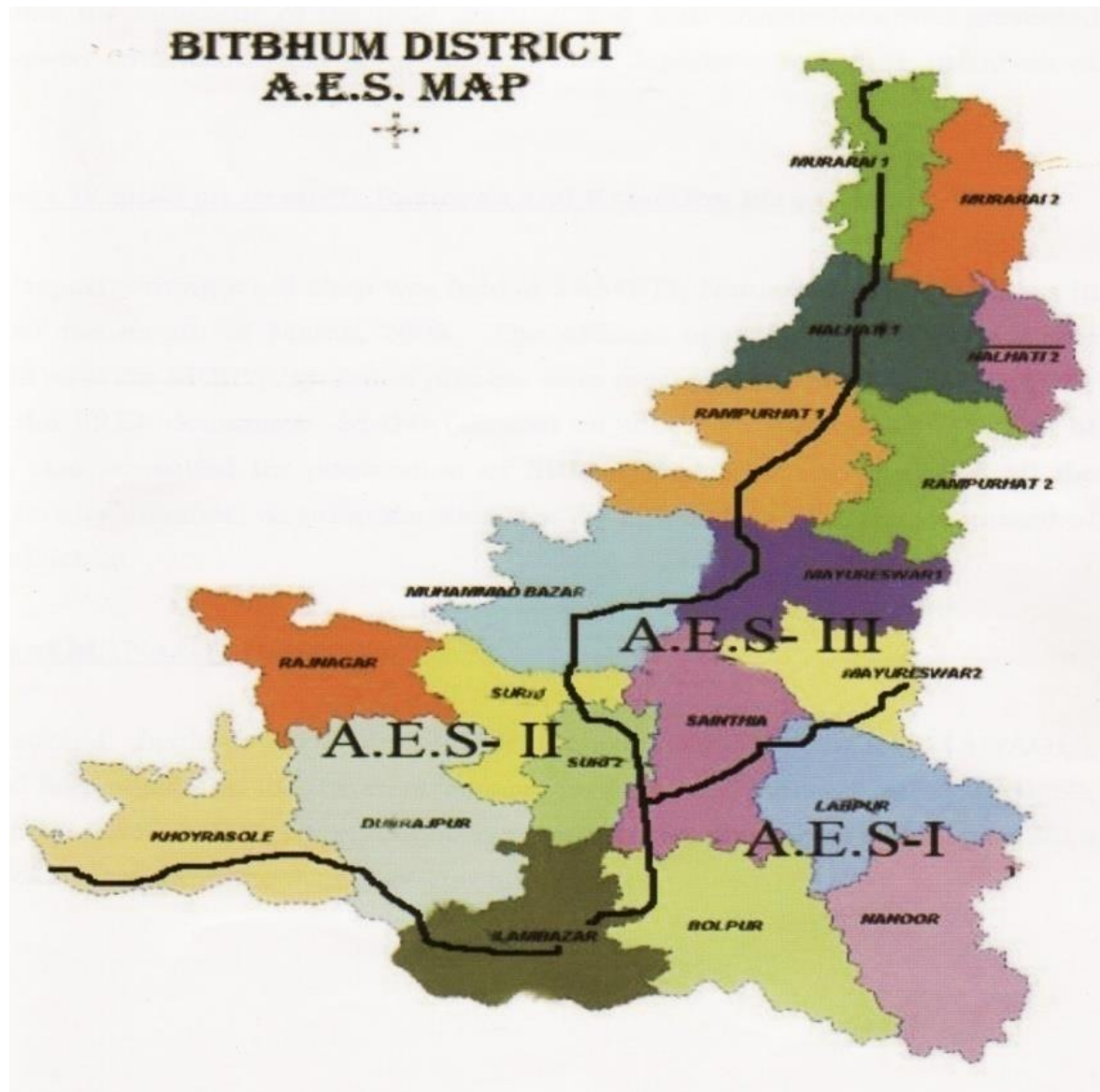
Sl. No.	Farming System/Enterprise
1.	Upland- Paddy, red gram, fruit crops
2.	Medium land- Paddy, mustard, potato, sugarcane, sesame, black gram, vegetables, fruit crops, cow, goat, backyard poultry, fishery
3.	Lowland- Paddy, sugarcane, wheat, potato, vegetables, duckery, fishery

d. Any other:

Agro-ecological situation of Birbhum District: -

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. pH – 4.5 – 6.5	Sandy to sandy clay soil. 80 percent of cultivable area under clay soil and slightly acidity problem soil. pH – 5.2 – 6.5	Clay to clay loam soil. 70 percent clay soil with 30 percent loam to clay loam soil. 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	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	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

	District of Birbhum and 30 percent of the Poultry Population of the District of Birbhum are available in this AES.	and 40 percent of the Poultry Population of the District of Birbhum are available in this AES.	Birbhum and 30 percent of the Poultry Population of the District of Birbhum are 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 Gram 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.

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” soil having colour of 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).

13. Major Activities Undertaken

❖ Summary of Major Activities undertaken by the Rathindra KVK from 2011-12 to 2018-19

Year	OFT				FLD			
	Number of OFTs		Number of farmers		Number of FLDs		Number of farmers	
	Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
2011-12	06	05	49	42	06	05	139	110
2012-13	05	05	45	45	06	06	146	162
2013-14	07	07	56	64	350	571	350	571
2014-15	08	06	66	52	585	589	585	589
2015-16	11	12	140	147	399	420	856	420
2016-17	12	12	152	152	441	448	441	448
2017-18	10	10	127	141	1110	1720	1110	1720
2018-19	08	08	493	493	24	25	1200	1273
Total	67	65	1128	1136	2921	3784	4827	5293

Year	Training				Extension Activities			
	Number of Courses		Number of Participants		Number of Activities		Number of Participants	
	Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
2011-12	67	73	1666	1840	500	586	2200	2779
2012-13	63	75	1992	2427	395	561	2169	9258
2013-14	81	89	2740	2993	395	1874	2169	10776
2014-15	97	95	3450	3467	705	707	6835	146477
2015-16	106	130	3232	3786	463	473	16261	44707
2016-17	128	115	2707	3942	300	368	19000	40907
2017-18	96	131	3112	4054	485	528	21751	60165
2018-19	97	108	2742	3526	300	384	4000	5224
Total	735	816	21641	26035	3543	5481	74385	320293

❖ Summary of Other Major Activities undertaken by the Rathindra KVK in 2011-12

Seed production (q)		Planting materials (Nos.)	
Target	Achievement	Target	Achievement
-	Paddy Var. MTU – 7029 – 12.00	-	Capsicum – 242
	Paddy Var. IR – 36 – 10.00		

Production of Bio-Products

Bio Products	Name of the bio-product	Quantity (q)
Bio Agents	<i>Eisenia foetidae</i>	150 Nos.

Others	Vermin-Compost	60.00
Others	Mushrooms	7.7

Village Seed Production

Crop	Variety	Quantity (qtl.)	Value (Rs.)	Provided to No. of Farmers
Rice	MTU-7029, IR-36	88.00	1,32,000.00	242
Mustard	RW-351, B-9	39.0	97,500.00	638
Black Gram	WBU-108	78.5	2,24,250.00	285
Green Gram	PDM-84-139	25.3	70,500.00	179
Corm of Elephant's Foot Yam	Kavoor	315	1,89,000.00	67
Total		545.8	7,13,250.00	1411

❖ Summary of Other Major Activities undertaken by the Rathindra KVK in 2012-13

Seed production (q)		Fish Production (q)	
Target	Achievement	Target	Achievement
-	Paddy Var. MTU – 7029 – 10.72	-	Indian Major Carps (IMC) – 00.50

Village Seed Production

Crop	Variety	Quantity (qtl.)	Value (Rs.)	Provided to No. of Farmers
Rice	MTU-7029, IR-36	80.00	1,20,000.00	220
Black Gram	WB108	73.4	2,10,500.00	318
Mustard	B-9	29.0	72,500.00	596
Corm of Elephant's Foot Yam	Kavoor	300.00	2,40,000.00	62
Total		482.4	6,43,000.00	1196

❖ Summary of Other Major Activities undertaken by the Rathindra KVK in 2013-14

Seed production (q)		Planting material (Nos.)	
Target	Achievement	Target	Achievement
Black Gram – 1.0	A. Black Gram (Var. – WBU – 108) – 1.58 B. Lentil (Var. – WBL – 58) – 0.36 C. Mustard (Var. – B – 9) – 1.34 D. Mustard (Var. – Pusa Mahek) – 0.92 E. Mustard (Var. – Pusa Bahar) – 0.52 F. Mustard (Var. PT – 303) – 0.35 G. Elephant's Foot Yam (Var. – Bidhan Kusum) – 7.5	Vegetables – 500	A. Vegetables – Drum Sticks (Var. – PKM – 1) – 100 B. Broccoli (Var. – F – 1 Hybrid Fiesta) – 1000 C. Capsicum (Var. – Bharat) – 1000

Production of Bio-Products

Bio Products	Name of the bio-product	Quantity (Kg.)
Bio Fertilizers	<i>Azolla</i>	120.00
Others	Vermin-Compost	145.00

Village Seed Production

Crop	Variety	Quantity of Seed (q)	Value (Rs.)	Provided to No. of Farmers
Paddy	Lalat, MTU-1010, IET-4786, IR-64, Rajendra Masuri, Pratiksha, MTU-7029, ESR-101	108.00	1,62,000.00	322
Wheat	HD 2733, HD 2824, PBW 343, HP 1761, HD 2985, HI 1563, PBW 373, HW 2045	92.67	2,96,544.00	540
Black Gram	WBU - 108	47.5	1,90,000.00	793
Lentil	WBL- 58	41.5	1,66,000.00	637
Sesame	Improved Selection - 5	51.0	1,27,500.00	853
Total		340.67	9,42,044.00	3145

❖ Summary of Other Major Activities undertaken by the Rathindra KVK in 2014-15

Seed production (q)		Planting material (Nos.)	
Target	Achievement	Target	Achievement
A. Black Gram – 0.10 B. Green Gram – 0.10 A. Lentil – 0.21 B. Mustard (Var. – B – 9) – 1.0 C. Mustard (Var. – Pusa Mahek) – 0.50 D. Mustard (Var. – Pusa Bahar) – 0.70 E. Sesame – 0.50 H. Paddy – 5.0	A. Black Gram (Var. – WBU – 108) – 0.25 B. Green Gram (Var. PDM -84-139) – 0.20 C. Lentil (Var. – WBL – 58) – 0.45 D. Mustard (Var. – B – 9) – 1.50 E. Mustard (Var. – Pusa Mahek) – 0.52 F. Mustard (Var. – Pusa Bahar) – 0.92 G. Sesame (Var. – Sabitri) – 0.70 H. Paddy (Var. – MTU – 7029, MTU – 1010, IET – 4786, PNR – 381, Pusa – 44 and Heera) – 6.0 I. Wheat (Var. HD - 2824) – 1.5	A. Vegetables – 2000	A. Vegetables – i. Broccoli (Var. – F – 1 Hybrid Fiesta) – 1000 ii. Capsicum (Var. – Mahabharat, Bharat) – 2000

Livestock strains and fish strains Production

Target	Achievement
-	A. Poultry (Breed – Broiler) – 200 No.s B. IMC and Exotic Carps – 2.0 q

Production of Bio-Products

Bio Products	Name of the bio-product	Quantity (Kg.)
Bio Fertilizers	<i>Azolla</i>	300.00
Bio Agents	Earth-worm (<i>Eisenia foetida</i>)	1400 No.
Others	Vermi-Compost	180.00

Village Seed Production

Crop	Variety	Quantity of Seed (q)	Value (Rs.)	Provided to No. of Farmers
Paddy	PNR – 381, Pusa – 44, Pusa – Sugandh 5, Lalat, MTU-1010, IET-4786, IR-64, Rajendra Masuri, Pratiksha, MTU-7029, ESR-101	276.00	4,14,000.00	822
Wheat	HD 2733, HD 2824, PBW 343, HP 1761, HI 2985, HI 1563, PBW 373, HW 2045	180.00	5,76,000.00	480
Black Gram	WBU – 108	55.00	2,20,000.00	785
Lentil	WBL- 58	17.50	70,000.00	268
Sesame	Improved Selection – 5/ Sabitri	57.00	1,43,500.00	853
Total		585.50	14,23,500.00	3208

❖ Summary of Other Major Activities undertaken by the Rathindra KVK in 2015-16

Seed production (q)		Planting material (Nos.)	
Target	Achievement	Target	Achievement
Green Gram – 0.10	A. Field Pea (Var. Prabhat) – 0.40	Vegetables – 1,500	A. Cauliflower (Var. PAN – 3030) – 1,000
Black Gram – 0.10	B. Green Gram (Var. PDM-84-139) – 0.30		B. Cabbage (Var. Seminis – 111) – 2,000
Mustard (Var. – B – 9) – 1.0	C. Black Gram (Var. WBU – 108) – 0.40		C. Chilli (Var. PAN – 1498) – 1,000
Mustard (Var. – Pusa Mahek) – 0.5	D. Mustard (Var. B – 9) – 0.13		D. Broccoli (Var. F – 1 Hybrid Fiesta) – 1,000
Paddy – 5.0	E. Mustard (Var. Pusa Mahek) – 1.87		E. Capsicum (Var. Bharat, Mahabharat) – 1,000
	F. Paddy (Var. - MTU – 1010, MTU – 7029, PNR – 381, Heera) – 0.825		F. Drum Sticks (Var. PKM – 1) – 100
	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		

Livestock strains and fish strains Production

Target	Achievement
-	A. Poultry Birds [Breed - Rhode Island Red (RIR)] – 20 in numbers B. Poultry Birds (Breed – Vanaraja) – 25 in numbers C. Broiler Birds (Breed – Broiler) – 200 in numbers D. Indian Carps (Specieses - Rohu, Catla and Mrigal) – 1.5 lakh fry + 67.6 kgs. of table Fishes E. Exotic Carp (Specieses - Silver Carp, Cyprinus and Grass Carp) – 0.5 lakh fry F. Small Indigenous Fish Specieses (Punti, Mouralla, Darke etc.) – 110.00 kg.

Production of Bio-Products

Bio Products	Name of the bio-product	Quantity (Kg.)
Bio Fertilizers	<i>Azolla</i>	307.50

Bio Agents	Earth-worm (<i>Eisenia foetida</i>)	3500 No.
Others	Vermi-Compost	275.00

Village Seed Production

Crop	Variety	Quantity of Seed (q)	Value (Rs.)	Provided to No. of Farmers
Paddy	PNR – 381, MTU-1010, IET-4786, IR-64, Rajendra Masuri, Pratiksha, MTU-7029, GB - 1	320.00	4,80,000.00	853
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	29,00,000.00	2340
Sesame	Sabitri	64.00	1,43,500.00	853
Green Gram	Samrat	84.00	3,36,000.00	751
Linseed	Deepika	40.00	2,80,000.00	700
Field Pea	Rachna	77.00	3,46,500.00	828
Total		1576.00	52,49,000.00	7557

❖ Summary of Other Major Activities undertaken by the Rathindra KVK in 2016-17

Seed production (q)		Planting material (Nos.)	
Target	Achievement	Target	Achievement
A. Lentil – 0.21	A. Lentil (Var. – WBL – 58) – 1.15	A.	A. Vegetables
B. Mustard (Var. – B – 9) – 0.04	B. Mustard (Var. – B – 9) – 0.05	Vegetables –	i. Cauliflower (Var. PAN – 1008) –
C. Mustard (Var. – Pusa Mahek) – 0.30	C. Mustard (Var. – Pusa Mahek) – 0.40	5000	2,000 in numbers,
D. Sesame (Var. – Sabitri) – 0.10	D. Sesame (Var. – Sabitri) – 0.40		ii. Cabbage (Var. Seminis – 111) –
E. Wheat (Var. PBW – 343) – 2.0	E. Wheat (Var. – PBW – 343) – 4.0		2,000 in numbers,
F. Linseed (Var. Deepika) – 0.50	F. Linseed (Var. – Deepika) – 1.00		iii. Broccoli (Var. Green Magic) –
	G. Oat (Var. – Kent) – 0.40		1464 in numbers,
	H. Chick Pea (Var. – Anuradha) – 0.25		iv. Capsicum (Var. Bharat, Mahabharat) – 2,000 in numbers
	I. Black Gram (Var. WBU – 108) – 0.60		v. Chilli (Var. PAN – 1498) –
	J. Red Gram (Var. ICPL 87 – 139) – 0.40		1,000 in numbers and
	K. Elephant Foot Yam [Var. Gajendra (Kavoor)] – 1.00		vi. Drum Sticks (Var. PKM – 1) – 600 in numbers.
	L. Paddy (Var. MTU – 7029) – 0.46		

Livestock strains and fish strains Production

Target	Achievement
-	A. Poultry Breed – Rhode Island Red (RIR) – (Advanced Grower) – 40 No.s B. Fish Spawns – Catla (<i>Catla catla</i>) – 4,00,000 Nos. C. Fish Spawns – Mrighel (<i>Cirrhinus mrigala</i>) – 1,00,000 Nos.

Production of Bio-Products

Bio Products	Name of the bio-product	Quantity (Kg.)
Bio Fertilizers	<i>Azolla</i>	280.00
Bio Agents	Earth-worm (<i>Eisenia foetida</i>)	1200 No.
Others	Vermi-Compost	219.00

Village Seed Production

Crop	Variety	Quantity of seed (q)	Value (Rs.)	Provided to No. of Farmers
Paddy	PNR – 381, Pusa – 44, Pusa – Sugandh 5, Lalat, MTU-1010, IET-4786, IR-64, Rajendra Masuri, Pratiksha, MTU-7029	290.00	4,35,000.00	638
Black Gram	WBU – 108	77.00	3,08,000.00	920
Sesame	Improved Selection – 5/ Sabitri	69.00	1,72,500.00	950
Total		436.00	9,15,500.00	2508

❖ Summary of Other Major Activities undertaken by the Rathindra KVK in 2017-18

Livestock strains and fish fingerlings produced (in lakh)		Soil, water, plant, manures samples tested (in Numbers)	
Target	Achievement	Target	Achievement
A. Ducks Breed Khaki Campbell (Advanced Grower) – 50 Nos.	A. Ducks Breed Khaki Campbell (Advanced Grower) – 60 Nos.	1. Soil Testing – 200 2. Water Testing - 50	1. Soil Testing – 219 2. Water Testing – 83
B. Japanese Quail Sp. <i>Coturnix coturnix Japonica</i> – 175 Nos.	B. Japanese Quail Sp. <i>Coturnix coturnix Japonica</i> – 180 Nos.		
C. Indian Major Carps and Exotic Carps (Table Fishes): - 2.00 q.	C. Indian Major Carps and Exotic Carps (Table Fishes): - 2.25 q.		
D. Small Fishes: - 00.50 q	D. Small Fishes: - 00.68 q		
E. Spawns of Indian Major Carps and Exotic Carps – 10 Lakhs	E. Spawns of Indian Major Carps and Exotic Carps – 12 Lakhs		

Production of Bio-Products

Bio Products	Name of the bio-product	Quantity (Kg.)
Bio Fertilizers	<i>Azolla</i>	417.00
Bio Agents	Earth-worm (<i>Eisenia foetidae</i>)	4700 No.
Others	Vermi-Compost	862.00

Village Seed Production

Crop	Variety	Quantity of seed (q)	Value (Rs.)	Provided to No. of farmers
Paddy	MTU-7029, IR – 36, IET – 4786, GB – 1, MTU - 1010	240.00	7,02,000.00	576
Black Gram	WBU – 109, PU - 31	318.60	17,52,300.00	710
Sesame	Sabitri	410.00	18,86,000.00	920
Green Gram	Samrat, Panna	266.00	15,96,000.00	631
Total		1234.60	59,36,300.00	2837

❖ Summary of Other Major Activities undertaken by the Rathindra KVK in 2018-19

Seed production (q)		Planting material (in Numbers)	
Target	Achievement	Target	Achievement
A. Paddy: - 30.00 B. Linseed: - 00.20 C. Elephant Foot Yam: - 01.00 D. Green Gram: - 00.20 Grand Total: - 31.40	A. Paddy Var. Rani Dhan – 38.35 q B. Paddy Var. Gotra Bidhan – 3 – 02.00 q C. Paddy Var. Radhunipagol – 01.00 q D. Ekangi (<i>K. galanga</i>) – 02.00 q E. Linseed Var. Sekhar – 00.40 q F. Elephant Foot Yam Var. Bidhan Kusum – 01.00 q G. Green Gram Var. Smrat – 00.28 q Grand Total: - 45.03	A. Vegetable Seedlings – 10000 in Numbers	A. Cabbage Var. Sonar – 8989 – 2000 in Numbers B. Tomato Var. PS – 31 – 3000 in Numbers C. Brinjal Var. Blue Master UT – 2000 in Numbers D. Chilli Var. Suryamukhi – 3000 in Numbers E. Broccoli Var. Green Magic – 1000 in Numbers Grand Total: - 11000 in Numbers

Livestock strains and fish fingerlings produced (in Numbers)		Soil, water, plant, manures samples tested (in Numbers)	
Target	Achievement	Target	Achievement
A. Japanese Quail (<i>Coturnix coturnix japonica</i>) – 200 in Numbers B. Indian Majot Carps (Table Fishes) – 01.00 q C. Exotic Carps (Table Fishes) – 01.00 q D. Small Fishes for Table Use – 00.50 q F. Spawns of Indian Major Carps – 5,00,000 in Numbers	A. Japanese Quail (<i>Coturnix coturnix japonica</i>) – 240 in Numbers B. Indian Majot Carps (Table Fishes) – 02.00 q C. Exotic Carps (Table Fishes) – 01.30 q D. Small Fishes for Table Use – 00.68 q F. Spawns of Indian Major Carps – 6,00,000 in Numbers	A. Soil Testing – 75 in Numbers B. Water Testing – 70 in Numbers	A. Soil Testing – 97 in Numbers B. Water Testing – 71 in Numbers

Production of Bio-Products

Bio Products	Name of the bio-product	Quantity (Kg.)
Bio Fertilizers	<i>Azolla</i>	800.00
Bio Agents	Earth-worm (<i>Eisenia foetidae</i>)	3500 No.
Others	Vermi-Compost	1500.00

Village Seed Production

Crop	Variety	Quantity of seed (q)	Value (Rs.)	Provided to No. of Farmers
Paddy	MTU-7029, IR – 36, IET – 4786, GB – 1, MTU - 1010	239.00	7,04,000.00	573
Black Gram	WBU – 109	418.60	20,93,000.00	810
Sesame	Sabitri	349.00	13,96,000.00	820
Green Gram	Samrat, Panna	226.00	11,30,000.00	531
Lentil	WBL - 77	210.00	12,60,000.00	470
Total		1442.60	65,83,000.00	3204

14. SWOT (Strengths, Weakness, Opportunities and threats) Analysis of KVKs

Strength:

i) There are two agro-climatic zones in Birbhum District. The district having two types of soil (Red & Laterite and Old alluvium) have diversified scope on improving the Agriculture and allied aspects.

ii) Rathindra Krishi Vigyan Kendra is situated at Visva-Bharati, the Place of the first non-European Nobel Laureate Rabindra Nath Tagore who was also a great reformer of Rural Areas. He also gave the idea of rural reconstruction in his famous “Sriniketan Experiments” in the year 1921-22. Tagore’s dream of rural reconstruction inspires Rathindra KVK constantly to work more with rural people.

iii) The Kendra is attached with the Institute of Agriculture, Visva-Bharati, Sriniketan. So, communication with Faculty Members of the Institute helps the Kendra for implementing different programmes smoothly.

iv) Rathindra KVK has a good linkage with other Faculties of Visva-Bharati like Siksha Bhavana (Institute of Science), Department of Social Work etc., State Agricultural Universities like Bidhan Chandra Krishi

Viswavidyalaya, West Bengal University of Animal and Fishery Sciences, different Governmental Line Departments of the districts and State, Banks, NABARD, IIT-Kharagpur, IFFCO and different non-Government agencies like R.K.Misson, Narendrapur, Tagore Society, Lutheran World Service, Manab Jamin etc. These linkages provide this KVK a very bright pool of human resources with great potential to supplement the activities of the Kendra.

v) The Rathindra KVK is closely adjacent to the town of Bolpur where All India Radio, Santiniketan Centre and Doordarshan, Santiniketan Centre are functioning with zeal and dedication for the last couple of decades. This Radio Broadcast Facility and Television Transmission Facilities give the Scientists of the Rathindra KVK regular opportunity to disseminate the new Technologies, products, process etc. through Live or Recorded transmission. Prasar Bharati Corporation has a very close tie-up with the Rathindra Krishi Vigyan Kendra. This in turn benefits the farming community of Birbhum and adjoining Districts to get current information related to agriculture and allied Sectors.

Weakness:

i) Rathindra KVK is established in 1994. Till date, it is not an integral part of the University. Therefore the staffs of the Kendra are constantly feeling insecurity of job. Although, the employees of the Kendra are devoted, trained and energetic staff, but the feeling of job insecurity is a major hindrance towards employee's further motivation.

ii) Most of the time, the Kendra do not have all the KVK Scientists/Non-Teaching Staff Posts filled up. At present the Posts of the Programme Coordinator, Subject Matter Specialist (Home Science), Senior Assistant and Programme Assistant (Laboratory Technician) are vacant. Posts like Programme Coordinator and Senior Assistant are vacant for more than two and half years. These vacant posts are putting hurdles in running the day-to-day activity of the Kendra smoothly.

iii) As the Kendra has got no promotional avenues to offer to its Staff, the staffs are frequently leaving the KVK in the search of promotional avenues, job security, pension and other benefits. As a result, multi-disciplinary approach is being hampered from time to time and the activities of a certain Discipline gets completely discontinued in absence of the incumbent scientist who has left.

iv) The Seed Production Farm of Rathindra KVK has got no fencing. The security arrangement at the farm is also very poor. As a result, quality seeds of Cereals, Pulses, Oilseeds, Green Fodders can not be produced and supplied to the farmers of the Birbhum District on a large scale.

v) The situation at the Fishery Pond of the Rathindra Krishi Vigyan Kendra is similar to that of Seed Production Farm. The Pond is without fencing and no security arrangement. So fish fry and fingerling production are heavily hampered as there is a constant threat of theft and anti-social activities.

vi) There is no manpower for Soil Testing Lab. The laboratory cannot be fully utilized due lack of technical manpower.

vii) The Poultry and Duckery Units of the Rathindra KVK are too small for running in a commercial manner. Besides these Units lack several requisite infrastructures.

Opportunities:

i) There is large number of small and marginal farmers who are interested in the KVK activities to get training, demonstration etc on newer and low-cost products and technologies related to Agriculture and Allied Sectors given by Rathindra KVK.

ii) Different Government departments, NABARD, Paschim Banga Gramin Bank, different Voluntary agencies are working with Rathindra KVK for increasing the production of Agricultural and Allied Sectors.

iii) Due lack of proper employment opportunities, the un-employed youths of Birbhum District are coming to Rathindra KVK in search of Entrepreneurship and Skill Development Training Programmes in Agriculture and Allied sectors

Threat

i) Market Sector of Agricultural Commodities like vegetables, pulses, oilseeds and other crops are not well organized. The costs of agricultural inputs are increasing day by day, but the prices of the Agricultural Commodities are stagnating as production is increasing at a rapid pace but not the demand. Even the farmers are not getting the Minimum Support Prices (MSP) of the major agricultural commodities over the years. So, this situation has created a question mark in implementation of

different technologies for increasing production. The small and marginal farmers are raising questions about the meager amount of returns from their labour and investment in increasing crop production and also adoption of new technology. Therefore, they become interested to search other avenues of income rather than agriculture.

ii) Some of the technologies related with Agriculture and Allied Sectors are yet to be assessed and refined.

iii) The change in climate is causing major hurdles in farming. The monsoon is becoming erratic, causing continuous dry spells for most of the 365 days. As a result, the whole cropping sequence has to be adjusted which is sometimes way beyond the knowledge, understanding and skill of the farmers.

15. Brief account of progress made towards modernization of office, equipments, staff amenities, Transport, O & M reforms etc.

Modernization of Office: -

A. The Administrative Building of the Rathindra KVK was thoroughly renovated utilizing the Fund provided by the ICAR in 2011-12 and 2012-13 Financial Years.

B. The Seminar Hall of the Kendra has been refurbished with modern Audio-Visual Aids like LCD Projector and Projector Screen as well modern Public Address Systems.

C. The Departmental Library of the Rathindra KVK was reorganized and provided with Books, Journals, Newsletters, Local Newspapers, Reports of different Organizations and of own Institute.

D. For smooth functioning of Office and systemic Data and Information storing and processing, two numbers new Desktop Computers viz. Desktop All-in-One HP 20 and Desktop Computer Intel Core I 5 Processor with UPS 600 VA along with Printer Laserjet M 126 nw and HP Colour Desk Jet Printer 5821 have been installed with ICAR Fund support. Two new Laptops viz. Laptop HP G 240 and Laptop HP Intel Core I 3 Processor along with Printer HP L3 1020 Plus have also been purchased and operationalized with funds provided by ICAR for smooth running of the Kendra.

E. For 24X7 Power supply, one number of Generator 15 KVA 3 Phase Model CD- 15 of Copper Corporation has been installed in the Administrative Building of the Rathindra KVK with ICAR Fund Support.

F. The old Photo Copier Machine of the Rathindra KVK was replaced in this period by a new Photo Copier Machine Canon Photo Copier Image RUNNER 2004 N with excellent photocopying, scanning and printing qualities as per the Fund Support of ICAR.

G. In this period, *Azolla* Production Unit based on the *Azolla pinnata* species and Vermi-Composting Unit based on the Earth-Worm species *Eisenia foetidae* have been established in the space behind the Administrative Building of the Rathindra KVK for demonstration and organic input production purposes. This initiative is giving impetus to the organic farming practices in the Birbhum District as well as the Vermi-Composting Unit is serving the “SWATCHHA BHARAT ABHIYAN” of the Govt. of India.

H. In this period, Internet Connection of Bharat Sanchar Nigam Limited (BSNL) through Landline has been established in the Administrative Building of the Rathindra KVK with ICAR Fund Support. In this period, Visva-Bharati Wi-Fi was provided through <http://visvabharati.wifi> by MHRD Wi-Fi as a Part of the UGC Gyan Vigyan Network with Service Provider Rail Wire (RLWIRE) of RAILTEL. These have boosted the e-connectivity of the Rathindra KVK and provided better Internet Access to the Staff of the Rathindra KVK for smooth functioning of the Rathindra KVK activities.

Modernization of Equipments: -

A. The Soil and Water Testing Laboratory of the Rathindra Krishi Vigyan has been modernized to the extent where 10 parameters of Soil Testing can be performed here with analysis of pH. and EC of the Soil Samples along with that of Nutrients like Organic Carbon, Avail. N, Avail. P, Avail. K and the soil micro-nutrients like Avail. S, Zn, B, Fe etc. with the installation of the two numbers of Solar Operated Soil Testing Digital Mini-Lab, named “Mridhaparikshak” with funding support from the ICAR.

The Water Testing facility has also been up-dated with introduction of pH. Meter, Dissolved Oxygen Meter and Digital Electronic Balance (5.0 mili grams – 300.00 grams).

B. The Animal Science Discipline has been provided with Bardizzo Castrator, Auto Vaccinator and Stethoscope. Mini Grinder and Palletizer Machines were installed for the preparation of Fish and Animal Feeds by the Fishery and the Animal Science Disciplines with funding support from ICAR.

C. The Instructional Farm of the Rathindra KVK has been provided with Two Numbers of Drum Seeders and Four Numbers of Cono Weeders by ICAR for demonstration as well as for use in the Instructional Farm and these Farm Implements are now fully operational.

Modernization of Staff Amenities: -

A. Individual Staff Members of the Rathindra KVK has been provided with adequate numbers of Office Chairs (both Revolving and Fixed Types), Modular Office Tables, Almirahs, File Organizers, Office Cabinets, Book Shelves etc. of reputed make such as Godrej Interio, Raj and Raj etc. with ICAR Funds.

B. The Office Room for accounts maintainance has been provided with Air Conditioning Machine with ICAR Fund Support.

C. The Staff Toilet both for male and female staffs have been thoroughly renovated with Floor and Wall Tiles of good makes along with the attached toilet of the Programme Coordinator's Room.

Modernization of Transport: -

A. One Motor Bike (Hero Splendor Pro) and one Scooter (Hero Edge LX) have been purchased with ICAR Fund in this period. These two new Two Whellers are now in fully running conditions and these vehicles provide easy accessibility and mobility of the Staff of the Rathindra KVK with the intended stakeholder/s.

Modernization of Operations and Maintenance (O&M) Programmes: -

A. The plots of the lands of the Partner Farmers of the Front Line Demonstration (FLD) Programme being organized by the Rathindra KVK are GPS coordinated with GPS Location being measured by hand-held GPS Measurement Unit purchased by the Rathindra KVK with ICAR Fund.

B. The stakeholders' details are being preserved in the Computer memories as well as in the Pen Drives and in the CDs or DVDs.

C. Details of ten thousands farmers associated and registered with Rathindra KVK has been digitally preserved and being updated time to time.

D. The above mentioned Ten Thousands farmers are being provided with free Short Message Service (SMS) to their Mobile Phones by the Rathindra KVK with relevant information on important issues with adequate fund support from Govt. of India and ICAR.

E. The information sharing along with Training details and evaluation of the Trainees of the Skill Development Training Programmes affiliated with Agriculture Skill Council of India (ASCI) under National Skill Development Corporation (NSDC), Ministry of Skill Development and Entrepreneurship, Govt. of India and being organized by the Rathindra KVK are fully on Digital Platform and evaluation are Tab based On-Line Systems. The Certificates to the successful Trainees of these Courses are with QR Scanner Codes.

16. Efforts and achievements made in the last eight years towards upgradation of knowledge and skills of staff of KVK i.e. Human Resource Development (Training of Staff in Trainers' Training Centres and other Institutes etc).

Details of HRD programmes undergone by Rathindra KVK personnel in the Year of 2011-12:

Sl. No.	Name of Programme	Name of Course	Name of KVK Personnel and Designation	Date and Duration	Organized by
01.	National Conference of Krishi Vigyan Kendras	National Conference of Krishi Vigyan Kendras	Dr. Dulal Chandra Manna, Programme Coordinator	01.12.2011-05.12.2011 (05 Days)	Indian Council of Agricultural Research and Jawhar Lal Nehru Krishi Viswavidyalaya, Jabbalpur, Madhya Pradesh
02.	National Workshop	Dissemination of Horticultural Technologies through KVK Personnel	Dr. Dulal Chandra Manna, Programme Coordinator	18.01.2012-19.01.2012 (02 Days)	ICAR-Indian Institute of Horticultural Research (IIHR), Bangalore, Karnataka
03.	Theoretical and Practical Classes	Post Graduate Diploma in Agricultural Extension Management (PGDAEM)	Dr. Manas Kumar Bhattacharya, Subject Matter Specialist (Animal Science)	23.08.2011-27.08.2011 (05 Days)	State Agricultural Management and Extension Training Institute (SAMETI) and Agricultural Training Centre (ATC), Ramakrishna Mission Ashrama, Narendrapur, Kolkata - 700103
04.	Theoretical and Practical Classes	Post Graduate Diploma in Agricultural Extension Management (PGDAEM)	Dr. Subrata Mandal, Subject Matter Specialist (Agronomy)	23.08.2011-27.08.2011 (05 Days)	State Agricultural Management and Extension Training Institute (SAMETI) and Agricultural Training Centre (ATC), Ramakrishna Mission Ashrama, Narendrapur, Kolkata - 700103
05.	Training-cum-Orientation Programme	Training-cum-Orientation Programmes for all Programme Coordinators, SMS and Farm Managers of the KVKs of South Bengal districts	Dr. Asim Kumar Ghosh, Programme Assistant (Farm Manager)	05.03.2012-07.03.2012 (03 Days)	Directorate of Extension Education, Bidhan Chandra Krishi Viswavidyalaya, Farmers' Academy and Convention Centre (FACC), Lake Hall, Kalyani, Nadia, West Bengal.

Details of HRD programmes undergone by Rathindra KVK personnel in the Year of 2012-13:

Sl. No.	Name of Programme	Name of Course	Name of KVK Personnel and Designation	Date and Duration	Organized by
01.	Zonal Workshop of Krishi Vigyan Kendras of Zone II, ICAR	Zonal Workshop of KVKs	Dr. Dulal Chandra Manna, Programme Coordinator	15.04.2012 - 17.04.2012 (03 Days)	FTC, BCKV, Kalyani, Nadia, West Bengal
02.	Training Programme on Use of Plastics in Agriculture	Use of Plastics in Agriculture	Dr. Dulal Chandra Manna, Programme Coordinator	12.07.2012 (01 Day)	ICAR-CIFRI, Salt Lake City, Kolkata
03.	National Conference of Krishi Vigyan Kendras	National Conference of KVKs	Dr. Dulal Chandra Manna, Programme Coordinator	20.11.2012 - 22.11.2012 (03 Days)	Punjab Agricultural University, Ludhiana, Punjab, India
04.	Training Programme on Use of Plastics in Agriculture	Use of Plastics in Agriculture	Dr. Krishna Mitra, Subject Matter Specialist (Fishery)	12.07.2012 (01 Day)	ICAR-CIFRI, Salt Lake City, Kolkata
05.	Training Programme on Participatory monitoring and evaluation	Participatory monitoring and evaluation	Dr. Krishna Mitra, Subject Matter Specialist (Fishery)	30.01.2013 - 31.01.2013 (02 Days)	DEE, FTC, BCKV, Kalyani, Nadia, West Bengal
06.	Model Training Course on "Production of Particle Board from Agro-residues"	Production of Particle Board from Agro-residues	Dr. Prabuddha Ray, Subject Matter Specialist Agricultural Extension).	15.11.2012 - 22.11.2012 (08 Days)	National Institute of Research on Jute and Allied Fibre Technology (NIRJAFT), 12, Regent Park Kolkata - 700040.
07.	International Conference on Extension Education in the Perspectives of Advances in Natural Resource Management in Agriculture (NaRMA - IV)	Extension Education in the Perspectives of Advances in Natural Resource Management in Agriculture	Dr. Prabuddha Ray, Subject Matter Specialist Agricultural Extension)	19.12.2012 - 21.12.2012 (03 Days)	Swami Keshawananda Rajasthan Agricultural University (SKRAU), Bikaner, Rajasthan, India.
08.	Training Programme on Participatory, monitoring and evaluation	Participatory monitoring and evaluation	Dr. Prabuddha Ray, Subject Matter Specialist Agricultural Extension)	30.01.2013 - 31.01.2013 (02 Days)	DEE, FTC, BCKV, Kalyani, Nadia, West Bengal

09.	Workshop on Training Need Assessment	Training Assessment	Need	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	02.03.2013 - 03.03.2013 (02 Days)	DEE, FTC, BCKV, Nadia, West Bengal
10.	Annual Nematological Workshop	Nematology		Mr. Sourav Mondal, Subject Matter Specialist (Plant Protection)	07.07.2012 (01 Day)	State Agricultural Management and Extension Training Institute (SAMETI) and Agricultural Training Centre (ATC), Ramakrishna Mission Ashrama, Narendrapur, Kolkata - 700103
11.	Training programme on OFT design in Social Science	OFT design in Social Science		Mr. Sourav Mondal, Subject Matter Specialist (Plant Protection)	11.02.2013 (01 Day)	DEE, FTC, BCKV, Kalyani, Nadia, West Bengal
12.	Training programme on Evaluation of Training	Evaluation of Training		Mr. Sourav Mondal, Subject Matter Specialist (Plant Protection)	12.02.2013 (01 Day)	DEE, FTC, BCKV, Kalyani, Nadia, West Bengal
13.	Training programme on OFT design in Social Science	OFT design in Social Science		Smt. Ruma Addy, Subject Matter Specialist (Home science)	11.02.2013 (01 Day)	DEE, FTC, BCKV, Kalyani, Nadia, West Bengal
14.	Training programme on Evaluation of Training	Evaluation of Training		Smt. Ruma Addy, Subject Matter Specialist (Home science)	12.02.2013 (01 Day)	DEE, FTC, BCKV, Kalyani, Nadia, West Bengal

Details of HRD Programmes undergone by KVK Personnel in the Year of 2013-14:

Sl. No.	Name of Programme	Name of KVK Personnel and Designation	Date and Duration	Organized by
01.	"Zonal Workshop on Krishi Vigyan Kendras of Zone II, ICAR"	Dr. Dulal Chandra Manna, Programme Coordinator	20.04.2013 – 22.04.04.2013. (03 Days)	Zonal Project Directorate, ICAR, Zone II, Salt Lake, Kolkata
02.	"Brainstorming Session" on "Improving Research in Agricultural Extension: Issues and Way Forward"	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	26.04.2013. (01 Day)	Zonal Project Directorate, ICAR, Zone II, Salt Lake, Kolkata
03.	"Sensitization Workshop" on "PPV & FR"	Dr. Dulal Chandra Manna, Programme Coordinator	17.12.2013. (01 Day)	Zonal Project Directorate, Zone – II, ICAR, Kolkata
04.	"Sensitization Workshop on PPV & FR"	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	17.12.2013. (01 Day)	Zonal Project Directorate, Zone – II, ICAR, Kolkata
05.	HRD Programme for the KVK personnel on "Convergence of Activities of KVKs"	Sri Sourav Mondal, Subject Matter Specialist (Plant Protection)	21.12.2013 to 23.12.2013	Directorate of Research, Extension and Farms, West

	and ATMA”		(03 Days)	Bengal University of Animal and Fishery Sciences and 68, Kshudiram Bose Sarani, Kolkata – 700037
06.	HRD Programme for the KVK personnel on “Convergence of Activities of KVKs and ATMA”	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	21.12.2013 to 23.12.2013 (03 Days)	Directorate of Research, Extension and Farms, West Bengal University of Animal and Fishery Sciences and 68, Kshudiram Bose Sarani, Kolkata – 700037
07.	“Masters’ Training Programme” on “Revisiting Strategic Research and Extension Plan (SREP)”	Sri Sourav Mondal, Subject Matter Specialist (Plant Protection)	13.01.2014 to 17.01.2014 (05 Days)	State Agricultural Management and Extension Training Institute (SAMETI) and Agricultural Training Centre (ATC), Ramakrishna Mission Aashrama, Narendrapur, Kolkata - 700103
08.	“Workshop-cum-Training Programme” on “Enhancing the Outreach of the KVKs”	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	15.01.2014 (01 Day)	Directorate of Extension Education, Centre for Human Resource Development, Bidhan Chandra Krishi Viswavidyalaya, Lake Hall, Kalyani, Nadia
09.	“Technology Backstopping Workshop”	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	16.01.2014 to 17.01.2014. (02 Days)	Directorate of Extension Education, Centre for Human Resource Development, Bidhan Chandra Krishi Viswavidyalaya, Lake Hall, Kalyani, Nadia
10.	“Training Programme” on “Participatory Monitoring and Evaluation of Agricultural Projects”	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	27.01.2014 to 30.01.2014 (04 Days)	State Agricultural Management and Extension Training Institute (SAMETI) and Agricultural Training Centre (ATC), Ramakrishna Mission Aashrama, Narendrapur, Kolkata - 700103
11.	“National Seminar on Agriculture and Bio-Security in Changing Scenario”	Dr. Dulal Chandra Manna, Programme Coordinator	01.02.2014 to 03.02.2014 (03Days)	The Department of ASEPAN, Palli Siksha Bhavana, Visva-Bharati, Sriniketan, Birbhum
12.	“National Seminar on Agriculture and Bio-Security in Changing Scenario”	Smt. Ruma Addy, Subject Matter Specialist (Home Science)	01.02.2014 to 03.02.2014 (03Days)	The Department of ASEPAN, Palli Siksha Bhavana, Visva-Bharati, Sriniketan, Birbhum
13.	“National Seminar on Agriculture and Bio-Security in Changing Scenario”	Dr. Subrata Mandal, Subject Matter Specialist (Agronomy)	01.02.2014 to 03.02.2014 (03Days)	The Department of ASEPAN, Palli Siksha Bhavana, Visva-Bharati, Sriniketan, Birbhum
14.	“National Seminar on Agriculture and Bio-Security in Changing Scenario”	Sri. Sourav Mondal, Subject Matter Specialist (Plant Protection)	01.02.2014 to 03.02.2014 (03Days)	The Department of ASEPAN, Palli Siksha Bhavana, Visva-Bharati, Sriniketan, Birbhum
15.	“National Seminar on Agriculture and Bio-Security in Changing Scenario”	Dr. Krishns Mitra, Subject Matter Specialist (Fishery)	01.02.2014 to 03.02.2014 (03Days)	The Department of ASEPAN, Palli Siksha Bhavana, Visva-Bharati, Sriniketan, Birbhum

16.	“National Seminar on Agriculture and Bio-Security in Changing Scenario”	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	01.02.2014 to 03.02.2014 (03Days)	The Department of ASEPAN, Palli Siksha Bhavana, Visva-Bharati, Sriniketan, Birbhum
-----	-------------------------------------------------------------------------	-----------------------------------------------------------------------	-----------------------------------	------------------------------------------------------------------------------------

Details of HRD Programmes undergone by KVK Personnel in the Year of 2014-15:

Sl. No.	Name of Programme	Name of KVK Personnel and Designation	Date and Duration	Organized by
01.	“Annual Zonal Workshop on Krishi Vigyan Kendras of Zone II, ICAR”	Dr. Dulal Chandra Manna, Programme Coordinator	02.06.2014 – 03.06.2014. (02 Days)	Zonal Project Directorate, ICAR, Zone II, Salt Lake, Kolkata
02.	World Coconut Day Celebration	Dr. Dulal Chandra Manna, Programme Coordinator	02.09.2014. (01 Day)	Coconut Development Board, Ministry of Agriculture, Govt. of India
03.	Workshop on “Value Education of Professionals”	Dr. Subrata Mandal, Subject Matter Specialist (Agronomy)	05.09.2014 (01 Day)	Ministry of Culture, Govt of India at the B. C. College, Rahara, 24 Parganas (North), Ramakrishna-Vivekananda University.
04.	Training Programme on “Organic Farming and Certification”	Dr. Subrata Mandal, Subject Matter Specialist (Agronomy)	17.11.2014 to 19.09.2014 (03 Days)	State Agricultural Management and Extension Training Institute (SAMETI) and Agricultural Training Centre (ATC), Ramakrishna Mission Ashrama, Narendrapur, Kolkata – 700103.
05.	Programme on “Sustaining Soil Health through Balanced Fertilization – Need for Reforms in Fertilizer Sector”	Dr. Subrata Mandal, Subject Matter Specialist (Agronomy)	09.01.2015 (01 Day)	Fertilizer Association of India, 3 Lake Road, Kolkata – 700029.
06.	National Conference on Indigenous Innovation and Foreign Technology Transfer in Fertilizer Industry: Needs, Constraints and Desired Simplification	Dr. Subrata Mandal, Subject Matter Specialist (Agronomy)	17.01.2015 (01 Day)	Society for Fertilizers and Environment and Raman Centre for Applied and Interdisciplinary Sciences in collaboration with ICAR-Central Research Institute for Jute and Allied Fibres (CRIJAF) and FICCI (-India Innovation Growth Programme) at the ICAR-CRIJAF, Nilgunj, Barrackpore, Kolkata, West Bengal – 700120
07.	“Annual Zonal Workshop on Krishi Vigyan Kendras of Zone II, ICAR”	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	02.06.2014 – 03.06.2014. (02 Days)	Zonal Project Directorate, ICAR, Zone II, Salt Lake, Kolkata

08.	“Training Programme on Planning, Implementation, Monitoring and Evaluation of Micro-enterprises”	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	21.07.2014 to 25.07.2014. (05 Days)	National Institute of Rural Development (NIRD), Ministry of Rural Development, Govt. of India, Rajendranagar, Hyderabad, Andhra Pradesh – 500 030, India, at the State Institute of Panchayat and Rural Development (SIPRD), Benoy Bhawan, Kalyani, Nadia, West Bengal
09.	Master Trainers’ Training on “ICT based Extension through Farmers”	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	25.08.2014 to 27.08.2014 (03 Days)	State Agricultural Management and Extension Training Institute (SAMETI), Narendrapur, Kolkata – 700103 at the State Agricultural Management and Extension Training Institute (SAMETI) and Agricultural Training Centre (ATC), Ramakrishna Mission Ashrama, Narendrapur, Kolkata – 700103.
10.	“Sensitization Workshop on Protection of Plant Varieties and Farmers’ Rights”	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	15.10.2014. (01 Day)	Zonal Project Directorate, Zone – II, ICAR, Kolkata
11.	National Conference on Indigenous Innovation and Foreign Technology Transfer in Fertilizer Industry: Needs, Constraints and Desired Simplification	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	17.01.2015 (01 Day)	Society for Fertilizers and Environment and Raman Centre for Applied and Interdisciplinary Sciences in collaboration with ICAR-Central Research Institute for Jute and Allied Fibres (CRIJAF) and FICCI (-India Innovation Growth Programme) at the ICAR-CRIJAF, Nilgunj, Barrackpore, Kolkata, West Bengal – 700120
12.	10 th . All India People’s Technology Congress	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	06.02.2015 to 07.02.2015 (02 Days)	Forum of Scientists, Engineers and Technologists (FOSET) [15 N Nelli Sengupta Sarani, New CMC Building (5 th floor), Kolkata -700 087.
13.	Master Trainers’ Training on “ICT based Extension through Farmers”	Sri Suraj Bhakta, Programme Assistant (Computer Programmer)	25.08.2014 to 27.08.2014 (03 Days)	State Agricultural Management and Extension Training Institute (SAMETI), Narendrapur, Kolkata – 700103 at the State Agricultural Management and Extension Training Institute (SAMETI) and

				Agricultural Training Centre (ATC), Ramakrishna Mission Aashrama, Narendrapur, Kolkata – 700103.
14.	Training Programme on the Advances in Land Resource Inventory for Enhancing Productivity through Agro-Technology Transfer	Sri Suraj Bhakta, Programme Assistant (Computer Programmer)	07.01.2015 to 27.01.2015 (21 Days)	ICAR – National Bureau of Soil Survey & Land Use Planning, Regional Centre Block-DK, Sector-II, Salt Lake, Kolkata – 700 091, West Bengal
15.	Training Programme of Assistants of KVKs	Sri Madhusudan Chatterjee, Senior Assistant	10.03.2015 to 11.03.2015 (02 Days)	Zonal Project Directorate, Zone – II, ICAR, Salt Lake City, Kolkata
16.	Training Programme on “Organic Farming and Certification”	Sri Palash Ankure, Programme Assistant (Farm Manager)	17.11.2014 to 19.09.2014 (03 Days)	State Agricultural Management and Extension Training Institute (SAMETI) and Agricultural Training Centre (ATC), Ramakrishna Mission Aashrama, Narendrapur, Kolkata – 700103.
17.	Orientation Training Programme on “Commercial Farming with Integrated Approach”	Sri Palash Ankure, Programme Assistant (Farm Manager)	12.03.2015 to 13.03.2015 (02 Days)	Directorate of Extension Education, Bidhan Chandra Krishi Viswavidyalaya

Details of HRD programmes undergone by KVK personnel in the Year of 2015-16:

Sl. No.	Name of programme	Name of course	Name of KVK personnel and designation	Date and Duration	Organized by
01.	“State Level Workshop of Krishi Vigyan Kendras of West Bengal and Andaman and Nicobar Islands to Review the Achievements”	Review the Achievements of the Krishi Vigyan Kendras (KVKs)	Dr. Dulal Chandra Manna, Programme Coordinator	04.04.2015 to 05.04.2015. (02 Days)	Zonal Project Directorate, ICAR, Zone II, Salt Lake, Kolkata
02.	“State Level Workshop of Krishi Vigyan Kendras of West Bengal and Andaman and Nicobar Islands to Review the Achievements”	Review the Achievements of the Krishi Vigyan Kendras (KVKs)	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	04.04.2015 to 05.04.2015. (02 Days)	Zonal Project Directorate, Zone – II, ICAR, Salt Lake, Kolkata
03.	“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

04.	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.
05.	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.
06.	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.
07.	National Conference of Krishi Vigyan Kendras - 2015	Functionings and Strategies for Activities of Krishi Vigyan Kendras	Dr. Dulal Chandra Manna, Programme Coordinator	25.07.2015 to 26.07.2015 (02 Days)	ICAR-RRC, Patna, Bihar
08.	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
09.	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
10.	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
11.	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, Maharashtra
12.	Indian Council of	Multi-pronged Extension	Dr. Prabuddha Ray,	05.08.2015	Department of Agricultural

	Agricultural Research (ICAR) Sponsored Summer School on Multi-pronged Extension Management Strategies for Dryland Agricultural Development with special reference to promoting Climate Resilient Agriculture	Management Strategies for Dryland Agricultural Development with special reference to promoting Climate Resilient Agriculture	Subject Matter Specialist (Agricultural Extension)	to 25.08.2015. (21 Days)	Extension and Rural Sociology, Centre for Agricultural and Rural Development Studies, Tamil Nadu Agricultural University, Coimbatore – 641003, Tamil Nadu
13.	Training Programme on Cluster Front Line Demonstrations (Cluster FLDs)	Cluster 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
14.	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
15.	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
16.	Workshop on Cluster Front Line Demonstrations and Protection of Plant Varieties and Farmers' Rights 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 Centre and Farmers' Academy, Lake Hall, Kalyani, Nadia.
17.	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.
18.	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.

Details of HRD programmes undergone by KVK personnel in the Year of 2016-17:

Sl. No.	Name of Programme	Name of Course	Name of KVK Personnel and Designation	Date and Duration	Organized by
01.	Workshop on "National Fishery Development Board (NFDB) Sponsored Fishery Sector Projects"	"National Fishery Development Board (NFDB) Sponsored Fishery Sector Projects"	Dr. Krishna Mitra, Subject Matter Specialist (Fishery)	08.06.2016 (01 Day)	ICAR-Agricultural Technology Application Research Institute (ATARI), Kolkata, Bhumi Vihar Complex, Block GB, Sector – III, Salt Lake City, Kolkata –700097.

02.	Workshop on “National Fishery Development Board (NFDB) Sponsored Fishery Sector Projects”	“National Fishery Development Board (NFDB) Sponsored Fishery Sector Projects”	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	08.06.2016 (01 Day)	ICAR-Agricultural Technology Application Research Institute (ATARI), Kolkata, Bhumi Vihar Complex, Block GB, Sector – III, Salt Lake City, Kolkata –700097.
03.	Workshop on “Tracking Adoption of Lentil Improved Cultivars in West Bengal”	“Tracking Adoption of Lentil Improved Cultivars in West Bengal”	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	09.06.2016 (01 Day)	International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Indian Council of Agricultural Research – Indian Institute of Pulses Research (ICAR-IIPR) and the Directorate of Research, Bidhan Chandra Krishi Viswavidyalaya, Farmers’ Academy and Convention Centre (FACC), Kalyani.
04.	Training Programme on “Agricultural Innovation Systems (AIS): Looking beyond Agricultural Technology Management Agency – ATMA Convergence”	“Agricultural Innovation Systems (AIS): Looking beyond Agricultural Technology Management Agency – ATMA Convergence”	Dr. Subrata Mandal, Subject Matter Specialist (Agronomy)	27.06.2016 to 02.07.2016 (06 Days)	ICAR-National Institute of Agricultural Extension Management (MANAGE), Hyderabad, Telengana, India.
05.	Training Programme on “Agricultural Innovation Systems (AIS): Looking beyond Agricultural Technology Management Agency – ATMA Convergence”	“Agricultural Innovation Systems (AIS): Looking beyond Agricultural Technology Management Agency – ATMA Convergence”	Sri Sourav Mondal, Subject Matter Specialist (Plant Protection)	27.06.2016 to 02.07.2016 (06 Days)	ICAR-National Institute of Agricultural Extension Management (MANAGE), Hyderabad, Telengana, India.
06.	Training Programme on “Agricultural Innovation Systems (AIS): Looking beyond Agricultural Technology Management Agency – ATMA Convergence”	“Agricultural Innovation Systems (AIS): Looking beyond Agricultural Technology Management Agency – ATMA Convergence”	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	27.06.2016 to 02.07.2016 (06 Days)	ICAR-National Institute of Agricultural Extension Management (MANAGE), Hyderabad, Telengana, India.
07.	Training of Trainers on “Skill Training Job Roles / QPs and Affiliation to ASCI”	“Skill Training Job Roles / QPs and Affiliation to ASCI”	Dr. Madhuchhanda Khan, Subject Matter Specialist (Animal Science)	09.11.2016 to 11.11.2016 (03 Days)	Agricultural Skill Council of India, New Delhi.
08.	Short Course Training on “Empowerment of Farm Women through Livestock and Poultry Intervention”	“Empowerment of Farm Women through Livestock and Poultry Intervention”	Dr. Madhuchhanda Khan, Subject Matter Specialist (Animal Science)	21.11.2016 to 30.11.2016 (10 Days)	ICAR – Central Institute for Women in Agriculture, Bhubaneswar, Odisha, India
09.	Training Programme on “Preparation of Fisheries Project”	“Preparation of Fisheries Project”	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	28.11.2016 to 02.12.2016	National Fisheries Development Board, Department of Animal

				(05 Days)	Husbandry, Dairying & Fisheries, Ministry of Agriculture and Farmers' Welfare, Govt. of India, Hyderabad, Telengana, India.
10.	National Seminar on "Recent Trends in Agriculture and Allied Sciences for better Tomorrow (MSRTAS – 2016)"	"Recent Trends in Agriculture and Allied Sciences for better Tomorrow (MSRTAS – 2016)"	Dr. Madhuchhanda Khan, Subject Matter Specialist (Animal Science)	04.12.2016 (01 Day)	Palli Siksha Bhavana, Visva-Bharati, Sriniketan and Society of Bio-Resources, Environment and Agricultural Resources, Santiniketan, Birbhum.
11.	Training Programme on "Skill Development of Laboratory Work"	"Skill Development of Laboratory Work"	Sri Suraj Bhakta, Programme Assistant (Computer Programmer)	19.12.2016 to 21.12.2016 (03 Days)	Directorate of Extension Education, Bidhan Chandra Krishi Viswavidyalaya, Farmers' Academy and Convention Centre (FACC), Lake Hall, Kalyani, Nadia, West Bengal.
12.	Training Programme on "Strengthening of Production System for Sustainable Animal Husbandry and Farming Practices"	"Strengthening of Production System for Sustainable Animal Husbandry and Farming Practices"	Dr. Madhuchhanda Khan, Subject Matter Specialist (Animal Science)	04.01.2017 to 06.01.2017 (3 Days)	Directorate Research, Extension and Farms, West Bengal University of Animal Fishery Sciences, Kshudiram Basu Sarani, Kolkata
13.	National Workshop on "Skill Development"	"Skill Development"	Dr. Krishna Mitra, Subject Matter Specialist (Fishery)	05.01.2017 (1 Day)	ICAR-ATARI, Kanpur at National Agricultural Science Complex (NASC), Pusa, New Delhi
14.	National Workshop on "Skill Development"	"Skill Development"	Dr. Subrata Mandal, Subject Matter Specialist (Agronomy)	05.01.2017 (1 Day)	ICAR-ATARI, Kanpur at National Agricultural Science Complex (NASC), Pusa, New Delhi
15.	Training of Trainers on "Skill Training Job Roles / QPs and Affiliation to ASCI"	"Skill Training Job Roles / QPs and Affiliation to ASCI"	Dr. Krishna Mitra, Subject Matter Specialist (Fishery)	06.01.2017 to 08.01.2017 (03 Days)	Agricultural Skill Council of India, New Delhi at GB Pant University of Agriculture and Technology
16.	Training of Trainers on "Skill Training Job Roles / QPs and Affiliation to ASCI"	"Skill Training Job Roles / QPs and Affiliation to ASCI"	Dr. Subrata Mandal, Subject Matter Specialist (Agronomy)	06.01.2017 to 08.01.2017 (03 Days)	Agricultural Skill Council of India, New Delhi at GB Pant University of Agriculture and Technology
17.	Training Programme on "Advances in Training Method and Training Management"	"Advances in Training Method and Training Management"	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	14.02.2017 to 17.02.2017 (4 Days)	SAMETI, West Bengal, Ramakrishna Mission Ashram Complex, Narendrapur, Kolkata and Extension Education Institute, Jorhat, Assam
18.	Training Programme on "Recent Development in Organic Farming for Sustainable Agriculture and Its Allied Sectors"	"Recent Development in Organic Farming for Sustainable Agriculture and Its Allied Sectors"	Sri Palash Ankure, Programme assistant (Farm Manager)	27.02.2017 to 01.03.2017 (3 Days)	Directorate Research, Extension and Farms, West Bengal University of Animal Fishery Sciences, Kshudiram Basu Sarani,

					Kolkata
19.	Workshop on “Technology Application in Animal and Fishery Sciences”	“Technology Application in Animal and Fishery Sciences”	Dr. Krishna Mitra, Subject Matter Specialist (Fishery)	16.03.2017 to 17.03.2017 (2 Days)	ICAR-Agricultural Technology Application Research Institute (ATARI), Kolkata, Bhumi Vihar Complex, Block GB, Sector – III, Salt Lake City, Kolkata –700097.
20.	Workshop on “Technology Application in Animal and Fishery Sciences”	“Technology Application in Animal and Fishery Sciences”	Dr. Madhuchhanda Khan, Subject Matter Specialist (Animal Science)	16.03.2017 to 17.03.2017 (2 Days)	ICAR-Agricultural Technology Application Research Institute (ATARI), Kolkata, Bhumi Vihar Complex, Block GB, Sector – III, Salt Lake City, Kolkata –700097.

Details of HRD programmes undergone by KVK personnel in the Year of 2017-18:

Sl. No.	Name of Programme	Name of Course	Name of KVK Personnel and Designation	Date and Duration	Organized by
01.	Zonal Workshop of Krishi Vigyan Kendras of Bihar, West Bengal, Jharkhand and Andaman and Nicobar Islands	Zonal Workshop of Krishi Vigyan Kendras of Bihar, West Bengal, Jharkhand and Andaman and Nicobar Islands	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	14.04.2017 to 16.04.2017 (03 Days)	ICAR-Agricultural Technology Application Research Institute (ATARI), Kolkata, Bhumi Vihar Complex, Block GB, Sector – III, Salt Lake City, Kolkata –700097 and ICAR-Central Island Agricultural Research Institute (CIARI), Garacharama, Port Blair, Andaman and Nicobar Islands – 744101.
02.	Review and Planning Meeting-cum-Workshop of IFAD-ICARDA Regional Project in South Asia	Review and Planning Meeting-cum-Workshop of IFAD-ICARDA Regional Project in South Asia	Dr. Subrata Mandal, Subject Matter Specialist (Agronomy)	07.06.2017 to 09.06.2017 (03 Days)	IFAD, ICARDA and Nepal Agricultural Research Council at Kathmandu, Nepal.
03.	ICAR Sponsored CAFT Training on Use of ICT in Agricultural Education for Accelerated Learning	CAFT Training on Use of ICT in Agricultural Education for Accelerated Learning	Sri Sourav Mondal, Subject Matter Specialist (Plant Protection)	04.07.2017 to 24.07.2017 (21 Days)	Department of Extension Education, Bihar Agricultural College, Bihar Agricultural University (BAU), Sabour, Bhagalpur, Bihar – 813210, India.
04.	National Seminar on “Nutrients and pollutants in soil-plant-animal-human Continuum for sustaining soil, food and nutritional security – way forward”	National Seminar on “Nutrients and pollutants in soil-plant-animal-human Continuum for sustaining soil, food and nutritional security – way forward”	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	09.06.2017 to 10.06.2017 (02 Days)	Bidhan Chandra Krishi Viswavidyalaya (BCKV), Mohanpur, Nadia and National Academy of Agricultural Sciences (NAAS), New Delhi held at Lake Hall, BCKV, Kalyani, Nadia, West Bengal.
05.	Short Course Training	Short Course Training on	Dr. Madhuchhanda Khan,	18.07.2017 to	ICAR and West Bengal

	on “Conservation of Indigenous Breeds of Small Ruminants in their respective Tracts”	“Conservation of Indigenous Breeds of Small Ruminants in their respective Tracts”	Subject Matter Specialist (Animal Science)	27.07.2017 (10 Days)	University of Animal and Fishery Sciences at West Bengal University of Animal and Fishery Sciences, Belgachia, Kolkata.
06.	Write Shop on “Agriculture Skill Council of India (ASCI) Certified Courses on Animal Husbandry”	Write Shop on “Agriculture Skill Council of India (ASCI) Certified Courses on Animal Husbandry”	Dr. Madhuchhanda Khan, Subject Matter Specialist (Animal Science)	19.09.2017 to 22.09.2017 (04 Days)	Welthungerlife, Germany; Krishi Gramin Vikash Kendra (KGVK), Ranchi and Lok Shiksha Parishadat KGVK Campus, Ranchi
07.	15 Days Rigorous Training on both Theoretical and Practical Aspects of “Seed Technology” as the Module – II of the Certified Farm Adviser (CFA) Course on Specialization “Seed Technology”	15 Days Rigorous Training on both Theoretical and Practical Aspects of “Seed Technology” as the Module – II of the Certified Farm Adviser (CFA) Course on Specialization “Seed Technology”	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	23.10.2017 to 06.11.2017 (15 Days)	National Institute of Agricultural Extension Management (MANAGE), Ministry of Agriculture and Farmers’ Welfare, Govt. of India, Rajendranagar, Hyderabad – 500030, Telengana, India at the Indian Council of Agricultural Research (ICAR) – Indian Institute of Seed Science (IISS), Kushmaur, Mau – 275103, Uttar Pradesh, India.
08.	National Symposium on Role of Veterinarian in improving Food Safety through “One World One Health and One Medicine” Approach in India	National Symposium on Role of Veterinarian in improving Food Safety through “One World One Health and One Medicine” Approach in India	Dr. Madhuchhanda Khan, Subject Matter Specialist (Animal Science)	03.01.2018 (01 Day)	West Bengal University of Animal and Fishery Science, 68 K. B. sarani, Belgachia, Kolkata – 700037.
09.	Agriculture Skill Council of India (ASCI) Training of Trainers (ToT) on “Job Role – Agriculture Extension Service Provider”	Agriculture Skill Council of India (ASCI) Training of Trainers (ToT) on “Job Role – Agriculture Extension Service Provider”	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	04.01.2018 to 06.01.2018 (03 Days)	Indira Gandhi Krishi Viswavidyalaya, Raipur, Chhattisgarh and ICAR – Agricultural Technology Application Research Institute (ATARI), Jabalpur, Madhya Pradesh at Directorate of Extension Services, Indira Gandhi Krishi Viswavidyalaya, Raipur, Chhattisgarh, India.
10.	National Conference on Improving Income of Farmers through Agriculture and Aquaculture through Development Interventions, organized	National Conference on Improving Income of Farmers through Agriculture and Aquaculture through Development Interventions, organized by	Dr. Subrata Mandal, Subject Matter Specialist (Agronomy)	05.01.2018 to 07.01.2018 (03 Days)	Society of Krishi Vigyan, Association of Aquaculturists and ICAR-CIFA, Bhubaneswar, Odisha

	by the Society of Krishi Vigyan, Association of Aquaculturists and ICAR-CIFA, Bhubaneswar, Odisha at ICAR-CIFA, Bhubaneswar, Odisha.	the Society of Krishi Vigyan, Association of Aquaculturists and ICAR-CIFA, Bhubaneswar, Odisha at ICAR-CIFA, Bhubaneswar, Odisha.			
11.	National Conference on Improving Income of Farmers through Agriculture and Aquaculture through Development Interventions, organized by the Society of Krishi Vigyan, Association of Aquaculturists and ICAR-CIFA, Bhubaneswar, Odisha at ICAR-CIFA, Bhubaneswar, Odisha.	National Conference on Improving Income of Farmers through Agriculture and Aquaculture through Development Interventions, organized by the Society of Krishi Vigyan, Association of Aquaculturists and ICAR-CIFA, Bhubaneswar, Odisha at ICAR-CIFA, Bhubaneswar, Odisha.	Sri Sourav Mondal, Subject Matter Specialist (Plant Protection)	05.01.2018 to 07.01.2018 (03 Days)	Society of Krishi Vigyan, Association of Aquaculturists and ICAR-CIFA, Bhubaneswar, Odisha
12.	One Day National Seminar-cum-Panel Discussion on "Doubling Farmers' Income: Role of Agricultural Mechanization"	One Day National Seminar-cum-Panel Discussion on "Doubling Farmers' Income: Role of Agricultural Mechanization"	Smt. Ruma Addy, Programme Coordinator (Officiating)	29.01.2018 (01 Day)	Department of Agricultural Engineering, PalliSiksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum, West Bengal
13.	One Day National Seminar-cum-Panel Discussion on "Doubling Farmers' Income: Role of Agricultural Mechanization"	One Day National Seminar-cum-Panel Discussion on "Doubling Farmers' Income: Role of Agricultural Mechanization"	Dr. Krishna Mitra, Subject Matter Specialist (Fishery)	29.01.2018 (01 Day)	Department of Agricultural Engineering, PalliSiksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum, West Bengal
14.	One Day National Seminar-cum-Panel Discussion on "Doubling Farmers' Income: Role of Agricultural Mechanization"	One Day National Seminar-cum-Panel Discussion on "Doubling Farmers' Income: Role of Agricultural Mechanization"	Dr. Subrata Mandal, Subject Matter Specialist (Agronomy)	29.01.2018 (01 Day)	Department of Agricultural Engineering, PalliSiksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum, West Bengal
15.	One Day National Seminar-cum-Panel Discussion on "Doubling Farmers' Income: Role of Agricultural Mechanization"	One Day National Seminar-cum-Panel Discussion on "Doubling Farmers' Income: Role of Agricultural Mechanization"	Sri Sourav Mondal, Subject Matter Specialist (Plant Protection)	29.01.2018 (01 Day)	Department of Agricultural Engineering, PalliSiksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum, West Bengal
16.	One Day National Seminar-cum-Panel Discussion on "Doubling Farmers' Income: Role of Agricultural Mechanization"	One Day National Seminar-cum-Panel Discussion on "Doubling Farmers' Income: Role of Agricultural Mechanization"	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	29.01.2018 (01 Day)	Department of Agricultural Engineering, PalliSiksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum, West Bengal

17.	One Day National Seminar-cum-Panel Discussion on "Doubling Farmers' Income: Role of Agricultural Mechanization"	One Day National Seminar-cum-Panel Discussion on "Doubling Farmers' Income: Role of Agricultural Mechanization"	Dr. Madhuchhanda Khan, Subject Matter Specialist (Animal Science)	29.01.2018 (01 Day)	Department of Agricultural Engineering, PalliSiksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum, West Bengal
18.	One Day National Seminar-cum-Panel Discussion on "Doubling Farmers' Income: Role of Agricultural Mechanization"	One Day National Seminar-cum-Panel Discussion on "Doubling Farmers' Income: Role of Agricultural Mechanization"	Sri Palash Ankure, Programme Assistant (Farm Manager)	29.01.2018 (01 Day)	Department of Agricultural Engineering, PalliSiksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum, West Bengal
19.	Refresher Course for KVK Personnel	Refresher Course for KVK Personnel on Agronomy	Dr. Subrata Mandal, Subject Matter Specialist (Agronomy)	30.01.2018 (01 Day)	ICAR-Agricultural Technology Application Research Institute (ATARI), Kolkata, Bhumi Vihar Complex, Block GB, Sector – III, Salt Lake City, Kolkata –700097
20.	Refresher Course for KVK Personnel	Refresher Course for KVK Personnel on Plant Protection	Sri Sourav Mondal, Subject Matter Specialist (Plant Protection)	01.02.2018 (01 Day)	ICAR-Agricultural Technology Application Research Institute (ATARI), Kolkata, Bhumi Vihar Complex, Block GB, Sector – III, Salt Lake City, Kolkata –700097
21.	Refresher Course for KVK Personnel	Refresher Course for KVK Personnel on Horticulture	Sri Palash Ankure, Programme Assistant (Farm Manager)	01.02.2018 (01 Day)	ICAR-Agricultural Technology Application Research Institute (ATARI), Kolkata, Bhumi Vihar Complex, Block GB, Sector – III, Salt Lake City, Kolkata –700097
22.	Refresher Course for KVK Personnel	Refresher Course for KVK Personnel on Fishery Science	Dr. Krishna Mitra, Subject Matter Specialist (Fishery)	03.02.2018 (01 Day)	ICAR-Agricultural Technology Application Research Institute (ATARI), Kolkata, Bhumi Vihar Complex, Block GB, Sector – III, Salt Lake City, Kolkata –700097
23.	Refresher Course for KVK Personnel	Refresher Course for KVK Personnel on Animal Science	Dr. Madhuchhanda Khan, Subject Matter Specialist (Animal Science)	03.02.2018 (01 Day)	ICAR-Agricultural Technology Application Research Institute (ATARI), Kolkata, Bhumi Vihar Complex, Block GB, Sector – III, Salt Lake City, Kolkata –700097
24.	Refresher Course for KVK Personnel	Refresher Course for KVK Personnel on Home Science	Smt. Ruma Addy, Programme Coordinator (Officiating) and Subject Matter Specialist (Home Science)	06.02.2018 (01 Day)	ICAR-Agricultural Technology Application Research Institute (ATARI), Kolkata, Bhumi Vihar Complex, Block GB, Sector – III, Salt Lake City,

					Kolkata –700097
25.	Refresher Course for KVK Personnel	Refresher Course for KVK Personnel on Agricultural Extension	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	06.02.2018 (01 Day)	ICAR-Agricultural Technology Application Research Institute (ATARI), Kolkata, Bhumi Vihar Complex, Block GB, Sector – III, Salt Lake City, Kolkata –700097
26.	2-Day Workshop on Collaborative Programme like DAESI	Collaborative Programme like DAESI	Sri Sourav Mondal, Subject Matter Specialist (Plant Protection)	19.02.2018 to 20.02.2018. (02 Days)	State Agricultural Management and Extension Training Institute & Agricultural Training Centre, Ramakrishna Mission Ashrama, Narendrapur, Kolkata - 700103
27.	National Seminar on Mixed Farming -A Traditional Practice to Enhance the Income of Farmers Giving Emphasis More in Livestock Keeping	National Seminar On Mixed Farming -A Traditional Practice to Enhance The Income of Farmers Giving Emphasis More in Livestock Keeping	Dr. Madhuchhanda Khan, Subject Matter Specialist (Animal Science)	24.03.2018 to 25.03.2018. (03 Days)	Department of Animal Science, Palli Shiksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum, West Bengal and the Society of Bio-Resource, Environment and Agricultural Research (SBEAR), Santiniketan, Birbhum, West Bengal.
28.	Farmer-Scientist Meet with 7days'Workshop On: Livestock Management and Organic Farming	Farmer-Scientist Meet with 7days'Workshop On: Livestock Management and Organic Farming	Dr. Madhuchhanda Khan, Subject Matter Specialist (Animal Science)	24.03.2018 to 30.03.2018. (07 Days)	Department of Animal Science, Palli Shiksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum, West Bengal and the Society of Bio-Resource, Environment and Agricultural Research (SBEAR), Santiniketan, Birbhum, West Bengal.
29.	National Seminar on "Agri-chemicals for a benign environment" and the 5 th . Annual Convention of the Society of Fertilizers and Environment	National Seminar on "Agri-chemicals for a benign environment"	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	29.03.2018. (01 Day)	Society of Fertilizers and Environment in collaboration with Bidhan Chandra Krishi Viswavidyalaya at the Farmers' Academy and Convention Centre (FACC) (Lake Hall), Bidhan Chandra Krishi Viswavidyalaya, Kalyani.

Details of HRD programmes undergone by KVK personnel in the Year of 2018-19:

Sl. No.	Name of Programme	Name of course	Name of KVK Personnel and Designation	Date and Duration	Organized by
01.	Zonal Workshop of Krishi Vigyan Kendras of West Bengal, Odisha and Andaman and Nicobar Islands	Zonal Workshop of Krishi Vigyan Kendras of West Bengal, Odisha and Andaman and Nicobar Islands	Smt. Ruma Addy, Programme Coordinator (Officiating) and Subject Matter Specialist (Home Science)	26.05.2018 to 27.05.2018 (02 Days)	ICAR-Agricultural Technology Application Research Institute (ATARI), Kolkata, Bhumi Vihar Complex, Block GB, Sector – III, Salt Lake City, Kolkata –700097 at Orissa University of Agriculture and Technology (OUAT), Bhubaneswar – 751003, Odisha.
02.	Zonal Workshop of Krishi Vigyan Kendras of West Bengal, Odisha and Andaman and Nicobar Islands	Zonal Workshop of Krishi Vigyan Kendras of West Bengal, Odisha and Andaman and Nicobar Islands	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	26.05.2018 to 27.05.2018 (02 Days)	ICAR-Agricultural Technology Application Research Institute (ATARI), Kolkata, Bhumi Vihar Complex, Block GB, Sector – III, Salt Lake City, Kolkata –700097 at Orissa University of Agriculture and Technology (OUAT), Bhubaneswar – 751003, Odisha.
03.	“Write-Workshop on Preparation of Study Material of Diploma in Agricultural Extension Services for Input Dealers (DAESI) Course”	“Write-Workshop on Preparation of Study Material of Diploma in Agricultural Extension Services for Input Dealers (DAESI) Course”	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	25.06.2018 to 28.06.2018 (04 Days)	State Agricultural Management and Extension Training Institute (SAMETI) and Agricultural Training Centre (ATC), Ramakrishna Mission Ashrama, Narendrapur, Kolkata – 700103 at the SAMETI Campus, Narendrapur, Kolkata
04.	“Write-Workshop on Preparation of Study Material of Diploma in Agricultural Extension Services for Input Dealers (DAESI) Course”	“Write-Workshop on Preparation of Study Material of Diploma in Agricultural Extension Services for Input Dealers (DAESI) Course”	Sri Sourav Mondal, Subject Matter Specialist (Plant Protection)	25.06.2018 to 28.06.2018 (04 Days)	State Agricultural Management and Extension Training Institute (SAMETI) and Agricultural Training Centre (ATC), Ramakrishna Mission Ashrama, Narendrapur, Kolkata – 700103 at the SAMETI Campus, Narendrapur, Kolkata
05.	Training for KVK Sandesh under Digital Farming Initiative in Agriculture	Training for KVK Sandesh under Digital Farming Initiative in Agriculture	Sri Suraj Kumar Bhakta, Programme Assistant (Computer Programmer)	07.08.2018 (01 Day)	ICAR-Agricultural Technology Application Research Institute (ATARI), Kolkata, Bhumi Vihar Complex, Block GB, Sector

					– III, Salt Lake City, Kolkata –700097 at Krishi Vigyan Kendra, Kalyan, Purulia, West Bengal
06.	Workshop on DAMU Project	Workshop on DAMU Project	Dr. Subrata Mandal, Subject Matter Specialist (Agronomy)	08.08.2018 to 10.08.2018 (03 Days)	ICAR-Agricultural Technology Application Research Institute (ATARI), Kolkata, Bhumi Vihar Complex, Block GB, Sector – III, Salt Lake City, Kolkata –700097
07.	Premium 21 Days ICAR Sponsored Centre of Advanced Faculty Training (CAFT) on “Extension led Nutritional Security”	Premium 21 Days ICAR Sponsored Centre of Advanced Faculty Training (CAFT) on “Extension led Nutritional Security”	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	04.09.2018 to 24.09.2018 (21 Days)	Division of Agricultural Extension, ICAR – Indian Agricultural Research Institute (IARI), Pusa, New Delhi – 110012
08.	Train the Trainer (ToT) Training Programme on the Job Role “Hatchery Production Worker” (AGR/Q 4901) of the Agriculture Skill Council of India (ASCI) Skill Training	Train the Trainer (ToT) Training Programme on the Job Role “Hatchery Production Worker” (AGR/Q 4901) of the Agriculture Skill Council of India (ASCI) Skill Training	Dr. Krishna Mitra, Subject Matter Specialist (Fishery)	18.09.2018 to 21.09.2018 (04 Days)	ICAR-Agricultural Technology Application Research Institute (ATARI), Kolkata, Bhumi Vihar Complex, Block GB, Sector – III, Salt Lake City, Kolkata –700097 at the Bidhan Chandra Krishi Viswavidyalaya (BCKV), Lake Hall, Kalyani, Nadia, West Bengal
09.	Orientation Course on IPM in Important Crops of West Bengal, Odisha and Andaman and Nicobar Islands	Orientation Course on IPM in Important Crops of West Bengal, Odisha and Andaman and Nicobar Islands	Sri Sourav Mondal, Subject Matter Specialist (Plant Protection)	13.12.2018 to 15.12.2018 (03 Days)	ICAR-Agricultural Technology Application Research Institute (ATARI), Kolkata, Bhumi Vihar Complex, Block GB, Sector – III, Salt Lake City, Kolkata –700097
10.	Orientation Course on IPM in Important Crops of West Bengal, Odisha and Andaman and Nicobar Islands	Orientation Course on IPM in Important Crops of West Bengal, Odisha and Andaman and Nicobar Islands	Sri Palash Ankure, Programme Assistant (Farm Manager)	13.12.2018 to 15.12.2018 (03 Days)	ICAR-Agricultural Technology Application Research Institute (ATARI), Kolkata, Bhumi Vihar Complex, Block GB, Sector – III, Salt Lake City, Kolkata –700097
11.	Training Programme on “On-farm Water Management Technologies for Improving Water Productivity”	Training Programme on “On-farm Water Management Technologies for Improving Water Productivity”	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	21.01.2019 to 24.01.2019 (04 Days)	ICAR-Agricultural Technology Application Research Institute (ATARI), Kolkata, Bhumi Vihar Complex, Block GB, Sector – III, Salt Lake City, Kolkata –700097 at the ICAR – Indian Institute of Water Management (IIWM), Bhubaneswar, Odisha, India

12.	National Seminar on Sustainable Resource Management for enhancing Farm Income, Nutritional Security and Livelihood Improvement	National Seminar on Sustainable Resource Management for enhancing Farm Income, Nutritional Security and Livelihood Improvement	Dr. Madhuchanda Khan, Subject Matter Specialist (Animal Science)	01.02.2019 to 03.02.2019 (03 Days)	Department of Agronomy, Palli Siksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum in collaboration with NABARD, Kolkata and in association with Indian Society of Agronomy – Sriniketan Chapter, Visva-Bharati at the Palli Siksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum
13.	Regional Level Workshop on PPV&FRA	Regional Level Workshop on PPV&FRA	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	15.03.2019 (01 Day)	PPV&FR Authority, Ministry of Agriculture and Farmers' Welfare, Govt. of India, New Delhi and ICAR-Agricultural Technology Application Research Institute (ATARI), Kolkata, Bhumi Vihar Complex, Block GB, Sector – III, Salt Lake City, Kolkata –700097 at the West Bengal University of Animal and Fishery Sciences, Khsudiram Bose Sarani, Belgachia, Kolkata.

17. Details of technology assessed / refined / generated during the period under review

a) Agriculture, b) Horticulture, c) Livestock, d) Poultry, e) Fishery, f) Any other

Technology	Relevance	Status of transfer	
(A) Agriculture			
i) Transplanting of one seedling /hill at 2-leaf stage (15-18 days old) with spacing of 30 cm X 30 cm and organic manure 10 ton/ha and fertilizer dose as per soil testing report produced higher paddy yield and return without use of much water in summer seasons.	In Birbhum District <i>boro</i> paddy is generally cultivated depending on underground water causing depletion of water table. Beside that minimum temperature goes down very low within a short period at the time of seedling raising and initial growth period of <i>boro</i> paddy. Random use of water, improper plant spacing and more seedlings per hill causes poor yield and net return.	-	To Line Department
ii) Seed treatment (<i>Tricoderma viridi</i> 6 g./kg of seed) + Mancozeb (2.5g/lit at 20 DAS) + Metalaxyl - Mancozeb (2.5g/lit at 3 5DAS) + Dimethomorph - Metera (1g+3g/lit at 45 DAS) may be recommended for higher production of Potato.	In Birbhum District Potato is cultivated in the sandy loam soil, medium land situation. Sometimes, no seed treatment is done by the farmers. But, mostly the farmers use traditional pesticides for seed treatment. They are very reluctant to use recent Third Generation pesticides for Late Blight of potato.	To FLD	To Line Department

iii) Among the herbicides the Technology Option-II i. e. Metsulfuron-methyl + chlorimuron-ethyl (Sathi) @ 4 g a.i. /ha at 7-12 DAT fetched the higher BC ratio (1.52) than other technology options and farmers practice (1.29). This might be due to higher price of labour engaged in farmers practice. Beside that, the Technology Option- II helped the farmers to come out from the problem of labour scarcity.	Only hand weeding cannot control the weeds of transplanted kharif rice. Due to scarcity of labour, hand weeding in proper time is not possible. Control of algal weeds, ferns, broad leaves is more laborious. Beside this, hand weeding is expensive which ultimately increase the cost of cultivation.	To FLD	To Line Department
iv) Soil Testing Based NPK management using the source of Urea, SSP and MOP produced higher yield and net return.	Imbalanced use of NPK particularly higher dose of nitrogen causes poor yield of yellow sarsoon under irrigated lateritic soil.	To FLD	To Line Department
v) Technology option –II i.e. Fenoxaprop-P-ethyl @ 60 ml a.i./ ha as early post emergence (15-20 DAS) significantly reduced the weed population and increased yield of black gram Var. WBU 108 .	The farmers sow pulse seeds by broadcasting. After a few days weeds compete with the crop. No mechanical weeding is possible in broadcasted field.	To FLD	To Line Department
vi) Technology option- II i.e. Oat + lentil (1:1) food fodder intercropping system produced higher productivity of green fodder and fetched higher profit	Farmers are not willing to afford land for green fodder cultivation due to low crop productivity and profitability under sole fodder cultivation	To FLD	-
vii) Soil Test Based NPK application (Basal and topdressing) and Spraying of Micronutrient Zn, B and Mo as per requirement may be recommended for Sesame cultivation in post rainy season for lower flower drop, better pod filling and yield.	Low crop productivity due to low flower set and low pod filling of sesame in post rainy season	To FLD	To Line Department
(B) Horticulture			
i) Technology opt-II i.e. 75:50:25 NPK Kg/ha + Vermicompost 75 qui/ha produced higher yield of broccoli.	Broccoli is a high value vegetable and farmers are day by day interested for cultivation of broccoli during rabi season for good economic return. They use mainly chemical fertilisers for its cultivation. As a result the growth and yield performance are not up to the mark.	To FLD	-
ii) Technology opt-II i.e. Indam-902 (bacterial wilt tolerant hybrid) produced higher yield of brinjal.	Brinjal is very popular vegetable in Birbhum District during <i>rabi</i> season for good economic return. The farmers now incur heavy loss due to infestation of bacterial wilt of brinjal	-	To Line Department
iii) Technology opt-I i.e. Snow white (powdery mildew tolerant hybrid) produced higher yield of cucumber.	Cucumber cultivation in Birbhum District is very economical. But presently the farmers now incur heavy loss due to infestation of powdery mildew of cucumber	-	To Line Department
iv) 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.	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.	-	To Line Department

v) Technology Option –II i.e.Suminis-4151 (Early cauliflower hybrid) variety exhibited significantly higher yield than those of farmer's practice (Pan-1008).	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	-	To Line Department
vi) Soil Test Based Limeapplication @ 10% of the lime requirement will produce significantly better growth, yield components, yield and B:C ratio than other Technology Options and farmers practice in Garden Pea Cultivation through management of acid soil economically.	Due to lower soil pH (higher acidity), less flower and pod formation of Garden Pea is being noticed. According to farmers' practice, application of lime is not being performed. So yield of Garden Pea is low.	-	To Line Department
(C) Live Stock			
i) Nano form of micro nutrient may be used for better performance of Black Bengal Goat.	No existing practice of supplementation of mineral for goat at farmers door step	To FLD	-
ii) The Technology Option – II i.e. Farmer's Practice + Homemade feed Supplement (1.5 Kg /cow/day) may be used for better production performance of Cross Breed Milch Cattle in Birbhum District.	Poor feeding practices and the low availability of quality feeds in unorganized dairy farming by small and marginal farmer.	To FLD	-
(D) Poultry			
i) 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.	The poor body weight, poor egg production and poor egg weight of rural poultry birds	To FLD	To Line Department
ii) 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.	Potential of antibiotic resistant strains of bacteria and transfer of antibiotic resistance genes from animal to human	To FLD	-
iii) Technology option II i.e. Chlorine di oxide may be used for better performance in broiler chicken in the district	Poor drinking water quality of commercial broiler farm negatively affected performance	To FLD	-
(E) Fishery			
i) Proper and scientific Management of the Ponds along with the regular feed application of Rice bran (50 %) + M. O. C. (30 %) + Azolla (20 %) is being recommended for micro level fish farming situation.	To enhance the growth of fish, it has been found that aquatic weeds such as azolla, <i>Wolffia salvinia</i> or pistia, if added to rice bran and mustard oil cake can increase the quality of feed as these aquatic weeds supply a lot of protein and mineral to the simple feed.	-	To Line Department
ii) Technology Option –I i.e. application of Yeast (2%) + Cobalt Chloride (0.1%) + Scientific feed in the nursery pond increased significantly the survival rate (95%) of fish spawn after 20 days of release and also increased the early growth (fry stage) at 30 days (1710 kg/ha). In those ponds the achieved fry were disease free and healthy.	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.	To FLD	-

iii) Lime (@10 kg / 0.13 ha) + Terramycin (@ 5 – 7 gm. / 100 kg. of Fish Feed) significantly reduced the spread of alserative disease of Fish	Rapid spread of ulcerative disease due to absence of right selection of medicine for the disease	To FLD	-
(F) Intregrated Farming System			
i) Tech. Opt.I i.e composite fish culture (IMC, prawn) + Poultry farming (RIR and Black Australorp 150 nos) + Pulses (Redgram- Blackgram) exhibited higher profit	Lack of knowledge in integration of components in proper way for maximum profit	-	To Line Department
ii) Tech. Opt.II.e composite fish culture (IMC) + Duck farming (Khaki Campbell 21 nos) + <i>Azolla</i> + Pulses (Redgram- Blackgram) exhibited higher profit	Lack of knowledge in integration of components in proper way for maximum profit	-	To Line Department
(G) Agril Extension			
i) Experiential Learning should be used as Training Method for Skill Development trainings as far as possible.	<p>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.</p> <p>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.</p> <p>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.</p>	-	To Line Department
(H) Women Empowerment			
i) Technology Option –II i.e. Vegetables Stored in Modified Earthen Pot Cool Chambers performed significantly better in minimum loss of weight during all the date of observation for all the vegetables	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.	-	To Line Department

18. DETAILS OF TRAINING PROGRAMMES CONDUCTED

I. Training programmes conducted for farmers / farm women (last 8 years)

S. N	Discipline	I (2011-12)			II (2012-13)			III (2013-14)			IV (2014-15)			V (2015-16)			VI (2016-17)			VII (2017-18)			VIII (2018-19)			TOTAL		
		T	C	P	T	C	P	T	C	P	T	C	P	T	C	P	T	C	P	T	C	P	T	C	P	T	C	P
1.	Crop Production	18	19	552	16	13	460	15	21	681	17	19	633	15	34	923	14	31	812	14	31	853	09	28	685	118	196	5599
2.	Horticulture	05	03	88	05	15	418	11	22	625	14	17	599	09	11	270	09	18	497	05	03	95	05	00	00	63	89	2592
3.	Livestock	15	10	238	08	04	122	10	02	96	10	16	492	18	19	683	18	18	540	18	21	581	18	13	437	115	103	3189
4.	Fisheries	06	08	222	07	11	366	07	06	215	10	06	232	11	08	251	11	12	317	12	13	439	12	08	316	76	72	2358
5.	Home Science	07	04	89	08	05	193	07	07	234	09	09	334	09	11	360	08	12	377	09	11	417	07	05	193	64	64	2197
6.	Agri Engg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.	Agroforestry	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.	Plant Protection	11	13	354	10	10	380	12	12	485	17	11	492	11	10	359	11	09	331	15	08	218	10	03	121	97	76	2740
9.	Agricultural Extension	00	00	00	06	08	271	11	11	437	11	08	450	13	11	390	10	18	793	13	14	445	17	12	481	81	82	3267
	Total	62	57	1543	60	66	2210	73	81	2773	88	86	3232	86	104	3236	81	118	3667	86	101	3048	78	69	2233	614	682	21942

T=Target; C=Conducted; P=Participants

(Pl add row if required) *

II. Training programme conducted vs targets fixed (discipline-wise) for extension functionaries (last 8 years)

S. N	Discipline	I (2011-12)			II (2012-13)			III (2013-14)			IV (2014-15)			V (2015-16)			VI (2016-17)			VII (2017-18)			VIII (2018-19)			TOTAL		
		T	C	P	T	C	P	T	C	P	T	C	P	T	C	P	T	C	P	T	C	P	T	C	P	T	C	P
1.	Crop Production	01	03	77	01	01	25	01	02	44	02	01	27	02	02	61	02	02	30	02	07	246	02	15	496	13	33	1006
2.	Horticulture	00	00	00	00	01	16	00	02	69	00	02	89	01	03	73	00	00	00	00	00	00	00	02	78	01	10	325
3.	Livestock	01	00	00	01	00	00	01	00	00	01	00	00	03	03	82	02	00	00	02	00	00	02	01	37	13	04	119
4.	Fisheries	00	00	00	00	00	00	00	00	00	00	00	00	01	02	53	00	00	00	00	04	136	00	01	27	01	07	216
5.	Home Science	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
6.	Agri Engg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.	Agroforestry	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.	Plant Protection	01	02	52	01	01	25	01	01	30	01	00	00	01	02	52	01	00	00	01	12	438	01	14	499	08	32	1096
9.	Agricultural Extension	00	00	00	00	00	00	00	00	00	00	00	00	01	04	101	00	00	00	00	02	71	00	02	66	01	08	238
	Total	03	05	129	03	03	66	03	05	143	04	03	116	09	16	422	05	02	30	05	25	891	05	35	1203	37	94	3000

T=Target; C=Conducted; P=Participants

(Pl add row if required) *

III. Training programmes conducted for rural youths (last 8 years)

S. N	Discipline	I (2011-12)			II (2012-13)			III (2013-14)			IV (2014-15)			V (2015-16)			VI (2016-17)			VII (2017-18)			VIII (2018-19)			TOTAL		
		T	C	P	T	C	P	T	C	P	T	C	P	T	C	P	T	C	P	T	C	P	T	C	P	T	C	P
1.	Crop Production	01	01	20	01	01	20	01	02	67	01	01	27	02	02	23	01	03	107	01	02	47	01	01	20	09	13	331
2.	Horticulture	01	01	11	01	01	26	01	02	52	01	02	48	02	02	37	01	01	24	00	00	00	00	00	00	07	09	198
3.	Livestock	01	01	25	00	00	00	00	00	00	00	02	29	02	03	51	01	02	45	01	02	50	01	01	30	06	11	230
4.	Fisheries	01	01	22	01	00	00	01	01	25	01	01	15	02	01	19	01	01	16	01	00	00	01	01	20	09	06	117
5.	Home Science	01	00	00	01	00	00	01	01	21	01	00	00	01	00	00	01	01	19	01	00	00	00	00	00	07	02	40
6.	Agri Engg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.	Agroforestry	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.	Plant Protection	01	02	45	01	01	25	01	01	20	01	00	00	02	01	25	01	01	34	01	00	00	01	00	00	09	06	149
9.	Agricultural Extension	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	01	20	00	01	20	00	02	40
	Total	06	06	123	05	03	71	05	07	185	05	06	119	11	09	155	06	09	245	05	05	117	04	04	90	47	49	1105

T=Target; C=Conducted; P=Participants

(Pl add row if required)

19. Frontline Demonstration Programme

Front-line demonstration in *Rabi* season

Condition: Irrigated

Year wise	Crops	No. of farmer	Area (ha)	Avg. yield (q/ha)	Local check			Improved Variety			Increase		Net loss (Rs.)	Effective gain (Rs.)
					Av. Yield	C (Rs.)	R (Rs.)	Variety	C (Rs.)	R (Rs.)	C (Rs.)	R (Rs.)		
I 2011-12	Wheat	35	5	40.2	32.9	19500.00	39480.00	Hp-1761	20980.00	48240.00	1480.00	8760.00		8760.00
	Capsicum	13	0.58	44	18.2 California Wonder	66900.00	74337.00	Bharat	85500.00	179164.00	18600.00	104827.00		104827.00
I (2012-13)	Wheat	43	5.0	23.9	21.2 (Sonalika)	18950.00	25440.00	HP-1761	19150.00	28680.00	200.00	3240.00		3040.00
	Capsicum	11	0.58	42.8	20.1 (California Wonder)	57750.00	74370.00	Bharat	77440.00	15360.00	19700.00	83990.00		64290.00
	Sesame (Kharif)	37	5.0	9.7	7.1	10300.00	19800.00	IS-5	10750.00	27160.00	450.00	7360.00		6910.00
II (2013-14)	Capsicum	13	0.85	44.5	21.9 (California Wonder)	69200.00	89450.00	Bharat	88056.00	181200	18856.00	91750.00		72894.00
	Brocoli	13	0.85	11.34	New Introduction			Fiesta	131810.00	300950.00	-	-	-	169140.00
III (2014)	Capsicum	15	0.85	45.1	24.9 (California Wonder)	75200.00	99600.00	Bharat	90500.00	180400.00	15300.00	80800.00		65500.00
	Brocoli	15	0.85	12.5	New Introduction			Fiesta	160000.00	312500.00	-	-		152000.00

-15)	Green Fodder Oat	5	0.1	319.8	New Introduction			Kent	11250.00	16955.00	-	-		5705.00
	Green Fodder Berseem	5	0.1	189.8	New Introduction			BL-10	11400.00	22776.00	-	-		11376.00
	Wheat	37	6	40.6	33.3	19800.00	39960.00	HD-2824	21010.00	48720.00	1210.00	8760.00		7550.00
IV (2015-16)	Capsicum	15	0.8	44.8	24.5 (California Wonder)	76220.00	98000.00	Bharat	91550.00	179200.00	15330.00	81200.00		65870.00
	Broccoli	15	0.8	-	-	-	-	F1-Hybride	165500.00	335300.00	-	-		169800.00
	Wheat	5	1	39.4	31.2 (Sonalika)	19800.00	37440.00	HD-2824	21010.00	47280.00	1210.00	9840.00		8630.00
	Wheat	37	10	37.8	31.2 (Sonalika)	19800.00	37440.00	PBW-345	21010.00	45360.00	1210.00	7920.00		6710.00
	Yellow Sarson (application herbicide ,)	40	5	9.09	6.81	15300.00	34050.00	Pendimethalin	16400.00	45450.00	1100.00	11400.00		10300.00
	Chickpea	193	30	9.92	6.54 Mahama ya-1	13850	32700	Anuradha	15125.00	49600.00	1275.00	16900.00		15625.00
	Lentil WBL-77	79	20	9.65	6.85 Asha	13925	41110	WBL-77	15475.00	57900.00	1550.00	16790.00		15240.00
	Fieldpea	107	20	6.94	3.15 local	10900	14175	Pravat	11500.00	31230.00	600.00	17055.00		16455.00
	Mustard	141	51	11.92	9.05 B-9	16516	45250	Pusa Mahek	17277.00	59600	761.00	14350.00		13589.00
Linseed	66	22	6.95	4.24 Local improved	12120	29680	Deepika	13100.00	48650	980.00	18970.00		17990.00	

Summer (2015-16)	Green Gram	81	10	12.25	8.95 Panna	14950	44750	PDM-84-139	15850.00	61250	900.00	16500.00		15600.00	
	Sesame	82	30	11.25	8.80 Tilottoma	13900	39600	SWB- 32-10-1	14750.00	50625	850.00	11025.00		10175.00	
V (2016-17)	Brocoli	21	0.8	14.1	New Introduction			F1, Hybride Fiesta	186600.00	352500.00					165900.00
	Yellow Sarsoon (Weed Management)	40	5	9.35	7.11	16300.00	35550.00	Pendimethalin	17200.00	47750.00	900.00	12200.00		11300.00	
	Oat	14	1.28	308.8	New Introduction			Kent	11250.00	16371.00	-	-	-	5120.00	
	Hybride Napier	20	0.40	1020.2	706.6	19250.00	35330.00	CO-4	21550.00	51010.00	2300.00	15680.00		13380.00	
	Chickpea	93	20	13.85	7.50 Mahama ya-1	15235.00	37500.00	Anuradaha	16637.00	69250.00	1102.00	31750.00		30648.00	
	Lentil	69	20	12.67	7.15 Asha	15317.00	42900.00	WBL-77	17100.00	76020.00	1783.00	33120.00		31337.00	
	Fieldpea	48	20	10.94	3.15 Local	11000.00	14175.00	Rachna	12650	49230.00	1650.00	35055.00		33405.00	
	Mustard	70	30	12.95	9.05 B-9	18167.00	45250.00	. Pusa Mahek	19000.00	60100.00	833.00	14850.00		14017.00	
	Linseed	60	30	7.88	4.14 Local improved	13332.00	28980.00	Deepika	14410.00	50050.00	1078.00	21070		19992.00	

Summer (2016-17)	Greengram	69	20	13.3	9.05 Panna	17100.00	54300.00	PDM-84-139	18200.00	79800.00	1100.00	25500.00		24400.00
	Sesame	65	20	12.20	9.00 Tilottoma.	15300.00	40500.00	SWB- 32-10-1	16500.00	54900.00	1200.00	14400.00		13200.00
VI (2017-18)	Wheat	37	5.0	39.4	30.9 Sonalika	21880.00	43260.00	PBW-343	23111.00	55160.00	1231.00	11900.00		10669.00
	Green Fodder Oat	15	1.1	313.3	72.8 Local Grass in Grazing Land	-	-	Kent	12375.00	23497.00	-	-		11122.00
	ChickPea	115	20	14.25	8.35 Mahama ya-1	16758.00	41750.00	JAKI-9218	17800.00	71250.00	1042.00	29500.00		28458.00
	Lentil	116	20	13.05	7.50 Asha	16848.00	45000.00	HUL-57	18810.00	78300.00	1962.00	33300.00		31338.00
	Green gram	52	10	12.25	4.20 Panna	12100.00	18900.00	PDM-84-139	13915.00	55125.00	1815.00	36225.00		3440.00
	Mustard	62	10	11.75	10.05 B-9	19983.00	50250.00	NC-1	20982.00	58750.00	999.00	8500.00		7501.00
	Linseed	113	40	8.12	4.25 Local Improved	14665.00	29750.00	Sekhar	15851.00	56840.00	1186.00	27090.00		25904.00
Summe (2017-18)	Greengram	93	10	13.15	8.8 Panna	18810.00	52800.00	HUM-16	20020.00	78900.00	1210.00	26100.00		24890.00
	Sesame	182	40	12.90	9.00	15300.00	40500.00	Savitri	16500.00	58050.00	1200.00	17550.00		16350.00

					Tilottoma				0					
VII (2018-19)	Chick pea	74	20	14.95	8.15 Mahamaya-1	16758.00	40750.00	Anuradha	17800.00	74750.00	1042.00	16200.00		15158.00
	Lentil	119	20	13.50	740 Asha	16848.00	44400.00	WBL-77	18810.00	81000.00	1962.00	36600.00		34638.00
	Field Pea	105	20	12.50	4.10 Local Improved	12100.00	18450.00	Rachna	13915.00	56250.00	1815.00	37800.00		35985.00
	Mustard	91	20	13.25	10.25 B-9	19983	51250	NC-1	20982	59500	999.00	8250.00		7251.00
		98	15	10.75	4.50 Local Improved	14665	31500	Sekhar	15851	59500	1186.00	28000.00		26814.00
Summer- (2018-19)	Green gram	119	20	12.90	8.8 Panna	18810	52800	IPM-02-3	20020	77400	1210.00	24600.00		23390.00
	Green Fodder Oat	08	0.63	308.8	New Introduction			Kent	10750.00	15440.00	-	-		4690.00
	Food Fodder (Inter cropping fodder Oat Pulses, Lentil.)	15	2	Oat 230 Lentil 7.6					17100.00	57100.00	-	-		40000.00

(Pl add row if required) *

Front-line demonstration in *kharif* season

Condition: Rainfed/Irrigated

Year wise	Crops	No. of farmer	Area (ha)	Avg. yield (q/ha)	Local check			Improved Variety			Increase		Net loss (Rs.)	Effective gain (Rs.)
					Av. Yield	C (Rs.)	R (Rs.)	Variety	C (Rs.)	R (Rs.)	C (Rs.)	R (Rs.)		
I (2011-12)	Green Fodder (Sorghum)	28	2.8	352.3	218.0 (Goma)	9250.00	10900.00	MP Chari	11300.00	17615.00	400.00	6715.00		6715.00
	Seed treatment in kharif paddy	25	10	69.3	57.4	62250.00	80360.00	Seed treatment	64150.00	97020.00	1900.00	16660.00		16660.00
II (2012-13)	Maize	19	0.1	392	385.25	14525.00	16650.00	J-1006	15335.00	23120.00	810.00	6470.00		5660.00
	Sorghum		0.1	273	222	8625.00	10900.00	PC-23	10125.00	17615.00	1500.00	6715.00		5215.00
	Rice been		0.1	165	318.4			Bidhan-1	19532.00	48034.00		48034.00		48034.00
	Black gram	43	5	9.8	8.0 (B-76)	12980.00	32000.00	WBU-108	13750.00	39200.00	770.00	7200.00		6430.00
II (2013-14)	Sesame	37	5.0	10.2	8.4 (Tilottama)	10860.00	23520.00	IS-5	11520.00	28560.00	660.00	5040.00		4380
	Blackgram	43	5.0	9.5	7.9 (B-76)	13225.00	31600.00	WBU-108	14014.00	38000.00	789.00	6400.00		5611.00
	Blackgram , Post Kharif	30	4.0	7.3	6.2 (B-76)	12135.00	24800.00	WBU-108	12924.00	29200.00	789.00	4400.00		3611.00
	Dhaincha (Green manuring rainy season paddy)	20	25	59.1	51.6	57250.00	67080.00	—	56120.00	76830.00	1130.00	9750.00		8620.00
	IPM (Seed treatment)	75	10	55.6	50.9	57250.00	66170.00	—	55950.00	72280.00	1300.00	6110.00		4810.00

	with Trichodarma viride in Var: MTU-7029)													
	Elepahnt Foot Yam	30	0.14	709.00	196.8 (Deshi)	189000.0 0	236250. 00	Bidhan Kusum	472500.0 0	1417500. 00	283500 .00	1181250. 00		897750.00
III (2014-15)	Sesame	52	4	10.5	8.6 (Tilottam a)	11950.00	25800.0 0	SWB-32- 104	12670.00	31500.00	720.00	5700.00		4980.00
	Green Gram	65	5	11.7	9.4 (B- 105)	18000.00	47000.0 0	PDM-84- 139	19514.00	58500.00	1514.0 0	11500.00		9986.00
	Blackgram	37	4	9.2	7.1 (B- 76)	18225.00	35500.0 0	WBU-108	18514.00	46000.00	289.00	10500.00		10211.00
	Redgram	25	5	15.8	11.9 (Sweta)	18200.00	47600.0 0	ICPL-87- 119	19700.00	63200.00	1500.0 0	15600.00		14100.00
	Drumstick	64	2	37.5	17	27000.00	75000.0 0	PKM-1	24000.00	34000.00	3000.0 0	41000.00		38000.00
	Dhaincha Green manuring rainy season paddy Var: MTU-7029	27	4	59.8	50.9	57250.00	67080.0 0	-	56120.00	76830.00	1130.0 0	9750.00		8620.00
	Paddy (Seed treatment with Trichodarma viride in Var: MTU-7029)	75	10	55.6	50.9	62250.00	71260.0 0	-	60150.00	77840.00	2100.0 0	6580.00		4480.00
	Elephant foot Yam	20	0.14	685	199.1	229000.0 0	39800.0 0	BidhanKu sum	525000.0 0	1370000. 00	296000 .00	446800.0 0		150800.00
	Maize	25	2.5	57.2	39.1	22000.00	35190.0 0	HQPM-1	27500.00	51480.00	5500.0 0	16290.00		11490.00
Paddy (Seed treatment with Trichodarma	75	10	64.1	57.1	45000.00	74230.0 0	-	42000.00	83330.00	3000.0 0	9100.00		6100.00	

	viride in Var: 20-U)													
IV (2015-16)	Blackgram	74	10	7.6	6.4	18325.00	35605.0 0	WBU-109	18612.00	46101.00	287.00	10496.00		10209.00
	Dhaincha Green manuring rainy season paddy Var: MTU-7029	18	6	60.4	51.9	60932.00	72660.0 0	-	61732.00	84560.00	800.00	11900.00		11100.00
	Drumstick	26	1.6	38.75	16.90	24000.00	33800.0 0	PKM-1	29700.00	77500.00	5700.0 0	43700.00		38000.00
	Green Fodder Saghum	22	0.68	633.4	340.5 (Goma)	12250.00	17025.0 0	MP Chari	14250.00	31670.00	2000.0 0	14645.00		12645.00
	Green Fodder Maize	19	0.40	361.51	298.4 (Local improved)	14780.00	17954.0 0	African Tall	15279.00	21690.00	499.00	3736.00		3237.00
	Ricebeen	13	0.2	320.5	-	-	-	Bidhan-1	19560.00	48075.00	-	-		28515.00
	Ricebeen	5	0.5	341.4	-	-	-	Bidhan-2	19560.00	31650.00	-	-		12090.00
	Hybride nepier	20	0.4	1020.2	706.6 (Local)	19250.00	35350.0 0	CO-4	21550.00	51010.00	2300.0 0	15680.00		13380.00
	Blackgram ,	99	20	9.15	5.2 Kali-50	13700	28600.0 0	WBU - 109	14550.00	44825.00	14550. 00	44825.00		30275.00
Sesame	69	20	11.8	7.95 Tilottom a	13000.00	35775.0 0	SWB- 32- 10-1	13850.00	47115.00	850.00	11340.00		10490.00	
VI (2016-17)	BlackGram	99	20	8.15	5.2	13700.00	28600.0 0	WBU-109	14550.00	44825.00	850.00	16225.00		15375.00
	Dhaincha (Pre-Kharif)	29	6	59.4	50.5	60932.00	65650.0 0	Paddy, MTU- 7029	59450.00	77220.00	1482.0 0	11570.00		10088.00
	Drumstick	68	3.2	39.5	147.4	245000.0 0	351000. 00	PKM-I	30200.00	79000.00	5700.0 0	44200.00		38500.00

	Elephant Yam	24	0.14	680.5	175.5	225000.0 0	351000. 00	Bidhan kusum	514000.0 0	1361000. 00	289000 .00	1010000. 00		721000.00
	Green Fodder (Sorghum)	20	1.11	634.3	398.7	15975.00	23922.0 0	MP Chari	18250.00	38058.00	2275.0 0	14136.00		11861.00
		22	0.2	745.3	398.7	15975.00	23922.0 0	MFSH-4	19360.00	44718.00	3385.0 0	20796.00		17411.00
		22	0.2	688.8	398.7	15975.00	23922.0 0	Jumbo Gold	19778.00	41328.00	3803.0 0	17406.00		13603.00
	Green Fodder (Maize)	22	0.71	415.2	298.4	14950.00	17904.0 0	African Tall	17550.00	24912.00	2600.0 0	7008.00		4408.00
	Black Gram	129	30	10.62	5.1 Kali-50	15070.00	28050.0 0	. PU-31	16005.00	58410.00	935.00	30660.00		29425.00
	Sesame	131	40	10.25	7.80 Tilottoma	13250.00	35880.0 0	SWB- 32- 10-1	14000.00	47150.00	750.00	11270.00		10520.00
VII (2017-18)	Azolla Green Manuring in rainy paddy, MTU- 7029	24	6	62.4		60932.00	72660.0 0	A-Pinnata	59450.00	87360.00	1482.0 0	26428.00		24946.00
	Ekangi	15	0.26	135	New Introduction					165000.0 0	108000.0 0			915000.00
	Drum Stick	141	5.0	40.2	18.0	25000.00	39600.0 0	PKM-1	31200.00	88440.00	6200.0 0	48840.00		42640.00
	Elephant yam	22	0.14	692.4	195.5	230000.0 0	391000. 00	Bidhan Kusum	527000.0 0	1384800. 00	297000 .00	466800.0 0		169800.00
	Green Fodder (Sorghum)	38	1.06	782.83	398.3 (Goma)	15975.00	23922.0 0	Sudancha ri	18250.00	46998.00	2275.0 0	23076.00		20801.00
	Green fodder Maize	5	0.4	367.62	298.4 (Local improved)	14950.00	17904.0 0	African Tall	15538.00	22057.00	588.00	4153.00		3565.00
	Green Ricebeen	10	0.16	346.4	New Introducti on			Bidhan-2	20510.00	55600.00				34890.00

	Fodder (Cow Pea)	1	0.08	New Introduction	325			Bunddilibia	43200.00	69350.00				26150.00	
	Black Gram	129	20	11.25	5.9 Kali-50	15750.00	32450.00	WBU-109	16800.00	61875.00	1050.00	29425.00		28375.00	
	Sesame	145	20	10.10	7.20 Tilotomma	13400.00	34560.00	SWB-32-10-1	14200.00	48480.00	800.00	13920.00		13120.00	
VII (2018-19)	Sorgham Green fodder	28	1.00	785.50	398.3	15975.00	23748.00	PC-23	18250.00	47130.00	2275.00	23382.00		21107.00	
	Fodder Maize	28	1.00	397.25	292.5	14950.00	17550.00	J-1006	15538.00	23538.00	588.00	5985.00		5397.00	
	Fodder Ricebeen	28	1.00	350.5				Bidhan-2	20510.00	56080.00	-	-		35570.00	
	Ekangi (Planting materials and method of Cultivation)	20	0.26	137						180000.00	1096000.00	-	-		916000.00
	Paddy (Metsulburan methyl + Chlorimuron Ethyl @ 4 gm / ha. At 7-12 DAT)	60	20	63.9	57.2	64540.00	80000.00	Weed Management	58620.00	89460.00	5920.00	9460.00		3540.00	
	Drumstick	60		Crop now in flowering stage				PKM-1							
	Elephant Yam	20	0.14	694.5	200	230000.00	400000.00	Bidhan kusum	527000.00	389000.00	297300.00	989000.00		959270.00	
	Sesame)	145	20	10.1	7.2	13400.00	34560.00	SWB-32-10-1	14200.00	48480.00	800.00	13920.00		13120.00	
	Blackgram	129	20	11.25	5.9	1570.00	32450.00	WBU-109	16800.00	61875.00	1050.00	29425.00		28375.00	

	Azolla Green Manuring in rainy Season Paddy, MTU- 7029	35	10	63 (Paddy)	51.9	60932.00	72660.0 0		59450.00	88200.00	1482.0 0	15540.00		14058.00
--	-----------------------------------------------------------------------	----	----	---------------	------	----------	--------------	--	----------	----------	-------------	----------	--	----------

Front-line demonstration on Enterprise in year round

Year wise	Animal/ Bird/Fish	Breed	No. of Raisers	Total no of animals/ birds/Unit	Avg. Prodn.	Local Check		Improved breed / tech.		Increase		Net loss (Rs.)	Effct. Gain (Rs)
						C	R	C	R	C	R		
I (2011-12)	Prawn	M.Rosenberghi	9	9 (1000 Prawns per 0.13 ha.)	87.5 (Prawn)+267 Carp	30270.00	39410.00	73500.00	164940.00	43230.00	125530.00		125530.00
II (2012-13)	Prawn	M.rosenberghi	9	1000 juveniles/ farmers	Prwan 49kg – 267kg	56438.00	150675.00	75180.00	310500.00	18750.00	159825.00		141075.00
III (2013-14)	Giant Prawn in CFC (2012-13)	M.rosenberghi	9	9 (1000 juveniles in 1.17 ha	473.13 (Prawn) + 3070 kg/ha Cernp	247500.00	370230.00	267700.00	476700.00	19500.00	106470.00		86970.00
IV (2014-15)	Cow (Area Specific Mineral Mixture Supplement)	Deshi	10	20	23.88 ± 1.11 Kg/ Week/Cow	5950.00	10632.00	6310.00	14737.00	360.00	4105.00		3745.00
V (2015-16)	Cow (2015-16)	Deshi	10	20	22.98 ± 1.21 Kg/Weak/Cow	5902.00	10218.00	6250.00	14638.00	348.00	4420.00		4072.00
	Goat (Low cost constratio nSupplement)	Black bengal	10	20	1.38 ± 0.08 Litter Size	15575.00	27400.00	16600.00	36400.00	1025.00	9400.00		8375.00

	Bhetki (CFC)	—	9	90.0 (Fingerling)	Bhetki- 330 kg/ha. IMC+E.C-1920 kg/ha.	121700.00	238500.00	132000.00	372900.00	10300.00	134400.00		124100.00
	Cow Specifics Mineral Mixture Supplementation	Crossbred	10	20	55.23 ± 16 /kg/wk/Cow	27080.00	60060.00	28440.00	66570.00	1360.00	6516.00		5156.00
	Goat (Low cost Concentration Supplementation for Pushing of Does)	Black Bengal	10	20	1.84 ± 0.11 Litter size	15825.00	42400.00	16875.00	52450.00	1150.00	10450.00		9300.00
	Poultry	RIR			2.94± 17.82 (Male)+ 2.29 ± 12.57 (Female)	8541.00	10079.00	12675.00	21168.00	4134.00	11089.00		6955.00
VI (2017-18)	Goat Low cost Concentration Supplementation	Black Bengal (Goat)	10	20	2.4 ± 0.17 Litter size	17730.00	49551.00	20380.00	63551.00	2550.00	14000.00		11450.00
	Duck	White Pekin	30	355	1851.42±22.65 (Male)+1614.38 ±10.535 (Female) Av.Body wt.			3073.00	5196.00	2123.00			2123.00
	Carp IMC	use of yeast +cocl ₂	10	10 Unit	10.64	46900.00	48490.00	56037.00	111720.00	9137.00	63230.00		54093.00
	Bhetki Cultivation of Bhetki		9	9	Bhetki 338 kg/ha.(IMC+Ex ofic carp 1875 kg/ha.)	115500.00	225300.00	126100.00	356250.00	10600.00	131250.00		120650.00

	with CFC												
VII (2018-19)	Fish (Dry Yeast +Cobalt Chloride)	IMC+Exotic Caps	10 Unit	14 kg	10.95 q/ha.	47200.00	49900.00	57670.00	114975.00	10470.00	65075.00		54605.00
	Fish in CFC (2017-18)	Bhetki	9	70 Fish / Farmers	338 kg/ha.+ IMC 1875 kg/ha.	115500.00	225000.00	126100.00	356250.00	10600.00	131250.00		120650.00
	Goat Supplementation of Low cost Concentrate of Third Party	Black Bengal	10	20	2.4 ± 0.17 (Litter Size)	17730.00	49551.00	20380.00	63554.00	2650.00	14400.00		11750.00
	Duck	White Pekin	30	355	1851.92+22.65 (Male), 1614.38+10.535 (Female) Avg. Body wait.	-	-	-	3073.00	5196.00	-		2123.00

(Pl add row if required)

Year 2013-14**Performance of FLDs in Farm Implements and Machinery**

Name of the implement	Crop	Name of the technology demonstrated	No. of farmers	Area (ha)	Field Observation (Output/ man hour)		% change in the major parameter	Labour Reduction (Mandays)	Cost reduction (Rs./ha)
					Demon.	Local check			
Rotavator	Paddy, Kharif 2013	Use of Rotavator in land preparation for Paddy cultivation	29	4.0	0.25 ha	0.13 ha (Tractor Drawn Cultivator)	92	1 (One) Manday per hectare	3075.00

Year 2014-15

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		Demonstration	Check	Demonstration	Check
Drum Seeder	Kharif Paddy Var. MTU – 1010	Direct Seeding of Rice in Lines	7	4.53	6.15	4.13	48.91	60	-	12,000.00	-

Year 2015-16

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		Demonstration	Check	Demonstration	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							

Year 2016-17

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)		% change in major parameter	Labor reduction (man days)		Cost reduction (Rs./ha or Rs./Unit)	
					Demonstration	Check		Demonstration	Check	Demonstration	Check
Drum Seeder	Kharif Paddy Var. IET 4786	Direct Seeding of Rice in Lines	6	4.2				58		11,600.00	
Cono Weeder	Kharif Paddy Var. MTU 1010	Mechanical weeding in SRI	9	5.24				21		4200.00	

Year 2017 -18

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)		% change in major parameter	Labor reduction (man days / ha)		Cost reduction (Rs./ha or Rs./Unit)	
					Demonstration	Check		Demonstration	Check	Demonstration	Check
Drum Seeder	Kharif Paddy Var. IET 4786 and MTU 7029	Direct Seeding of Rice in Lines	9	6.0		New Introduction	New Introduction	58	New Introduction	11,600.00	New Introduction
Disc Harrow	Potato	Pulverized Land Preparation	19	10.22		New Introduction	New Introduction	45	New Introduction	9000.00	New Introduction

Year 2018-19

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)		% change in major parameter	Labor reduction (man days / ha)		Cost reduction (Rs./ha or Rs./Unit)	
					Demonstration	Check		Demonstration	Check	Demonstration	Check
Drum Seeder	Summer paddy var. IET 4786	Direct Seeding of Rice in Lines	6	6.5				60		12,000.00	

Year 2015-16

Performance of FLDs in Group Dynamics

Category	Name of technology	No. of demonstrations	Observations		Remarks
			Demonstration	Check	
Farm Women	Group Formation for Accumulating Social Capital and Increasing Family Incomes (Formation and functioning of Self Help Groups)	03 [60 numbers of members of 3 Self Help Groups (20 members from each group)]	03 [60 numbers of members of 3 Self Help Groups (20 members from each group)] Self Help Groups were formed and their functioning were monitored for the First Years with emphasis on activities for production and marketing of Organic Vegetables, fish, vermin-compost and processed fruits and vegetables in the forms of pickles, jam, jelly, squash, chips, "Baris", spices etc.	Average Monthly Income of Rs. 689.00 per Person not belonging to any Group	The Groups' functionings and their economic activities were continuously monitored so that the Average Monthly Income per Person of the Group can be measured after a period of 02 (Two) Years after initial formation of a Self Help Group.

Year 2016-17

Performance of FLDs in Group Dynamics

Category	Name of technology	No. of demonstrations	Observations		Remarks
			Demonstration	Check	
Farm Women	Group Formation for Accumulating Social Capital and Increasing Family Incomes (Formation and functioning of Self Help Groups)	03 [60 numbers of members of 3 Self Help Groups (20 members from each group)]	Average Monthly Income of Rs. 1413.00 per Member has been achieved after formation of the Group and functioning of the Group for consecutive Two (02) Years with emphasis on activities for production and marketing of Organic Vegetables, fish, vermin-compost and processed fruits and vegetables in the forms of pickles, jam, jelly, squash, chips, "Baris", spices etc.	Average Monthly Income of Rs. 689.00 per Person not belonging to any Group	Average Monthly Income per Person has increased up to 105.08 per cent over a period of 02 (Two) Years after initial formation of a Self Help Group.

Year 2017-18

Performance of FLDs in Group Dynamics

Category	Name of technology	No. of demonstrations	Observations	Remarks
Farm Women	Group Formation for Accumulating Social Capital and Increasing Family Incomes (Formation and functioning of Self Help Groups)	03 [60 numbers of members of 3 Self Help Groups (20 members from each group)]	Average Monthly Income of Rs. 1520.00 per Member has been achieved after formation of the Group and functioning of the Group for consecutive Three (03) Years with emphasis on activities for production and marketing of Organic Vegetables, fish, vermin-compost and processed fruits and vegetables in the forms of pickles, jam, jelly, squash, chips, "Baris", spices etc.	Average Monthly Income is Rs. 716.00 per Person not belonging to any Group. Average Monthly Income per Person has increased up to 112.29 per cent over a period of 03 (Three) Years after initial formation of a Self Help Group.

20. Critical input supplied during the period under review:**a) Agri-inputs (Total Quantity Provided in Quintols and No. of Farmers Provided in Parentheses)**

Inputs	I (2011-12)	II (2012-13)	III (2013-14)	IV (2014-15)	V (2015-16)	VI (2016-17)	VII (2017-18)	VIII (2018-19)	Total
i) Seed - Crop-wise & \ variety-wise									
Paddy; Var. MTU- 7029	23.00 (95)	10.72 (52)	6.00 (75)	12.00 (150)	0.50 (10)	00.46 (10)	3.60 (20)	18.00 (95)	74.28 (507)
Paddy; Var. IR-36	10.00 (122)								10.00 (122)
Paddy, Var. Rani Dhan							32.00 (55)	38.35 (46)	70.35 (101)
Paddy, Var. Gotra Bidhan - 3							22.00 (52)	02.00 (10)	24.00 (62)
Paddy, Var. Radhunipagol								01.00 (20)	01.00 (20)
Paddy, Vars. Heera, MTU - 1010, MTU - 7029, IET - 4786, Pusa - 44, PNR - 381				06.00 (60)					06.00 (60)
Paddy, Vars. MTU - 7029, GB- 1, Pratiksha, Heera					07.00 (110)				07.00 (110)
Wheat Var.- HP-1761		5.00 (43)							5.00 (43)
Wheat, Var. - HD - 2824				6.00 (37)	05.00 (25)				11.00 (62)
Wheat, Var. PBW - 343					10.00 (42)	04.00 (30)	5.00 (37)		19.00 (109)
Maize Var.-HQPM-1				2.00 (25)					2.00 (25)
Black Gram, Var. WBU - 108		1.50 (43)	2.70 (73)	3.15 (175)	00.40 (10)	00.60 (22)			8.35 (323)
Black Gram, Var. WBU - 109					9.00 (174)	6.00 (99)	6.00 (129)	6.00 (120)	27.00 (522)
Black Gram, Var. PU-31						9.00 (129)			9.00 (129)
Green Gram Var.-HUM-16							3.00 (93)		3.00 (93)
Green Gram Var.-IPM-02-3								6.00 (119)	6.00 (119)
Green Gram, Var. PDM-84-139				3.20 (135)	3.30 (91)	6.00 (69)	01.00 (25)	00.28 (07)	13.78 (327)
Lentil							6.00		6.00

Fodder Sorghum Var.- Jumbo gold						0.06 (22)			0.06 (22)
Fodder Sorghum Var.- Sudanchari							0.32 (38)	0.30 (28)	0.62 (66)
Ricebeen Var.- Bidhan-1	0.03 (19)				0.06 (13)				0.09 (32)
Ricebeen Var.- Bidhan-2					0.15 (5)		0.50 (10)	0.30 (28)	0.95 (43)
Fodder Cow Pea Var.- Bundle lobia							0.24 (1)		0.24 (1)
Dhaincha, Var. Local Improved			5.00 (45)	0.80 (27)	2.22 (38)	1.20 (29)			9.22 (139)
Ekangi, Var. <i>K. galanga</i>							02.00 (15)	02.00 (40)	4.00 (55)
ii) Biofertiliser (Vermi-Compost)	00.60 (10)		01.45 (08)	01.80 (12)	02.75 (72)	02.19 (69)	08.62 (115)	15.00 (50)	32.41 (326)
iii) Earth-Worms (<i>Eisenia foetidae</i>)	1500 Nos. (30)			1400 Nos. (05)	3500 Nos. (35)	1200 Nos. (12)	4700 Nos. (45)	3500 Nos. (35)	15800 Nos. (132)
iv) Mushroom	00.07 (10)								00.07 (10)
v) <i>Azolla</i>			01.20 (15)	03.00 (20)	03.06 (20)	02.80 (98)	6.17 (52)	08.00 (48)	24.23 (253)

b) Horti-inputs (Total Quantity Provided in Numbers and No. of Farmers provided in Parentheses)

Inputs	I (2011- 12)	II (2012- 13)	III (2013- 14)	IV (2014- 15)	V (2015- 16)	VI (2016- 17)	VII (2017- 18)	VIII (2018- 19)	Total
i) Seed									
ii) Saplings/seedlings									
Crop – Capsicum, Var. - Bharat&Mahabharat	32464 (24)	32222 (11)	33000 (28)	49221 (50)	45444 (52)	2000 (68)	3000 (70)		165351 (303)
Crop – Tomato, Var. PS - 31							3000 (70)	3000 (60)	6000 (130)
Crop – Drumstick, Var. – PKM-1			100 (10)	2325 (74)	1876 (33)	4150 (89)	5655 (151)	2778 (60)	16884 (417)
Crop – Broccoli, Var. F – 1 Hybrid Fiesta			42975 (28)	43000 (30)	40505 (30)	39500 (21)			165980 (109)
Crop – Broccoli, Var. Green Magic						1464 (29)	3000 (60)	1000 (40)	5464 (129)
Crop – Cauliflower, Var. PAN - 3030					1000 (06)				1000 (6)
Crop – Cauliflower, Var. PAN - 1008						2000 (12)			2000 (12)
Crop – Cabbage, Var. Seminis - 111					2000 (12)	2000 (14)			4000 (26)

Crop – Cabbage, Var. Shonar - 8989							2000 (40)	2000 (40)	4000 (80)
Crop – Brinjal, Var. Blue Master							2000 (40)	2000 (80)	4000 (120)
Crop – Chilli, Var. PAN - 1498					1000 (08)	1000 (18)			2000 (26)
Crop – Papaya, Var. Pusa Dwarf							500 (40)		500 (40)
Crop – Chilli, Var. Suryamukhi							3000 (50)	3000 (60)	6000 (110)
iii) Root / tubers Elephant Foot Yam Var. Bidhan Kusum			2025 (30)	1728 (20)	-	1850 (24)	1728 (22)	1998 (30)	9329 (126)
iv) Elephan Foot Yam, Var. Gajendra (Kavoor)						270 (10)	550 (22)		820 (32)
v) Any other									

c) Livestock/ Poultry/ Fishery –inputs (Total Quantity Provided in Nos. and No. of Farmers provided in Parentheses)

Inputs	I (2011- 12)	II (2012- 13)	III (2013- 14)	IV (2014- 15)	V (2015- 16)	VI (2016-17)	VII (2017-18)	VIII (2018-19)	Total
Type-wise									
Fish - IMC		2000 (25)		5000 (60)	1,50,000 (110)	5,00,000 Spawns (100)	12,00,000 Spawns (200)	6,05,000 Spawns (60)	24,62,000 (655)
Small Fishes								1360 (20)	1360 (20)
Fish – Exotic Carps				2000 (25)	5,00,000 (30)				5,02,000 (55)
Prawn Juveniles	9000 (9)	9000 (9)	9000 (9)						27000 (27)
Bhetki fingerlings					810 (9)		810 (9)	630 (9)	2250 (27)
Poultry Birds - Broiler				200 (200)	200 (200)				400 (400)
Poultry Birds – Japanese Quail							180 (15)	240 (10)	420 (25)
Poultry Birds, Breeds Rhode Island Red (RIR),					160 (31)	1080 (65)			1240 (96)

Vanaraja					165 (28)	140 (21)			305 (49)
Duck, Breed Khaki Campbell; White Pekin					1195 (72)	60 (10)	60 (10)		1315 (92)
							635 (44)	420 (74)	1055 (118)

21. Soil Testing and Soil Health Cards Issued

Inputs	I (2011-12)	II (2012-13)	III (2013-14)	IV (2014- 15)	V (2015-16)	VI (2016-17)	VII (2017-18)	VIII (2018-19)	Total
Soil Samples tested	57	51	53	332	666	81	219	97	1556
Soil Health Card issued	57	51	53	332	666	81	219	97	1556
No. of Farmers benefitted	57	51	53	332	666	81	219	97	1556

22. Entrepreneur development during the period of QRT:

Year	No. of Training Programmes	Total Duration (days)	Target Group – Rural Youths			Impact			
			Male	Female	Total	Type of units	No. of units	No of persons employed	No. of persons employed else where
2011-12	06	141	123	00	123	Small scale Goatery Units, Vegetable nursery, fruit nursery, flower and Ornamental nursery, Portable/glass jar hatchery, Home based Mushroom Unit	19	32	27
2012-13	06	119	125	17	142	Mobile Soil Testing Units using Kits, Vegetable nursery, fruit nursery, flower and Ornamental nursery, Portable/glass jar hatchery, Home based Mushroom Unit, Home based Preservation and Value Addition Unit for Fruits and Vegetables	23	30	02
2013-14	05	108	126	00	126	Mobile Soil Testing Units using Kits, Vegetable Nursery, Fruit Nursery, Flower and Ornamental Nursery etc., Master Trainer on Use of Coconut Climbing Machine, Hapa and Chinese Hatchery Breeding, Home based Mushroom Units	14	18	03

2014-15	05	95	100	00	100	Mobile Soil Testing Unit using Kits, Vegetable Nursery, Fruit Nursery, Flower and Ornamental Nursery etc., Master Trainer on Use of Coconut Climbing Machine, Hapa and Chinese Hatchery Breeding, Broiler Units	16	36	05
2015-16	07	126	106	00	106	Large Scale Vermi-compost Unit, Horticultural Nursery, Para-Extension Service Provider, Soil Analysis and Soil Health Card Preparation Unit, Rural Poultry Units, Private Para-Vets, Fish Hatchery	30	60	46
2016-17	08	177	138	40	178	Horticultural Nursery, Soil Analysis and Soil Health Card Preparation Unit, Para-Vets, Jute based Handi-Crafts, Fish Hatchery, Fish Hatchery, Mushroom Production Units, Animal Health Service Provider	52	72	74
2017-18	04	81	62	25	87	Mobile Soil Testing Units using Kits, Quail Farm, Piggery, Para Extension Worker	35	35	08
2018-19	04	101	67	23	90	Units for preparing Organic Inputs like Vermin-Compost, Azolla, Earth Worms etc.; Fish Hatcheries; Goat Farms; Para Extension Worker	46	46	34
Total	45	948	847	105	952		235	329	199

Year – 2011-12

Area / Field			Target Group – Rural Youths			Impact			
Crop / Enterprise	Training title	Duration (days)	No. of Participants			Self employed after training			No. of persons employed else where
			Male	Female	Total	Type of units	No. of units	No of persons employed	
Mobile Soil Testing	Routine Analysis of Soil	21	20	0	20	Mobile Soil Testing Kit	3	3	0
Goat Farming	Scientific Goat Farming	30	25	0	25	Small scale Goatery Unit	6	12	0
Nursery of Vegetable, Flowers and Fruits and Ornamental	Nursery and its Management	20	11	0	11	Vegetable nursery, fruit nursery, flower and Ornamental nursery	3	3	2

Plants									
Fishery	Carp breeding and Hatchery Management	30	22	0	22	Portable/glass jar hatchery	5	12	0
Mushroom Unit	Mushroom production and processing	15	20	0	20	Home based Mushroom Unit	2	2	0
Para Extension Service Providers regarding Agricultural Inputs	Tata Rallis Agri Input Training Scheme (TRAITS)	25	25	0	25	-	0	0	25
Total		141	123	00	123		19	32	27

Year – 2012-13

Area / Field			Target Group – Rural Youths			Impact			
Crop / Enterprise	Training title	Duration (days)	No. of Participants			Self employed after training			No. of persons employed else where
			Male	Female	Total	Type of units	No. of units	No of persons employed	
Mobile Soil Testing	Routine analysis of soil	21	20	0	20	Mobile Soil Testing Kit	3	3	-
Nursery of Vegetable, Flowers and Fruits and Ornamental Plants	Nursery and its management	28	26	0	26	Vegetable nursery, fruit nursery, flower and Ornamental nursery	3	3	2
Fishery	Carp breeding and hatchery management	30	24	0	24	Portable/glass jar hatchery	5	12	0
Mushroom Unit	Mushroom production and processing	24	23	02	25	Home based Mushroom Unit	2	2	0
Fruits and Vegetables Preservation and Value Addition	Preservation and value addition of Fruits and Vegetables	15	00	15	15	Home based Preservation and Value Addition Unit for Fruits and Vegetables	8	8	0
Orchard Management	Improved cultivation practices of fruit trees	01	32	00	32	Orchard	2	2	0
Total		119	125	17	142		23	30	02

2013-14

Area / Field			Target Group – Rural Youths			Impact			
Crop / Enterprise	Training title	Duration (days)	No. of Participants			Self employed after training			No. of persons employed else where
			Male	Female	Total	Type of units	No. of units	No of persons employed	
Mobile Soil Testing	Routine analysis of soil	21	29	00	29	Mobile Soil Testing Kit	03	03	00
Nursery of Vegetables, Flower and Fruit Crops and Ornamental Plants	Nursery and its management	30	30	00	30	Vegetable Nursery, Fruit Nursery, Flower and Ornamental Nursery etc.	03	03	02
Coconut Trees	Training programme on “Friends of Coconut Trees (FOCT)”	06	22	00	22	Master Trainer on Use of Coconut Climbing Machine	02	02	01
Fishery	Breeding of IMC and hatchery management with feed preparation	30	25	00	25	Hapa and Chinese Hatchery Breeding	04	08	00
Mushroom Units	Mushroom cultivation and seed production	21	20	00	20	Home based Mushroom Units	02	02	00
Total		108	126	00	126		14	18	03

2014-15

Area / Field			Target Group – Rural Youths			Impact			
Crop / Enterprise	Training title	Duration (days)	No. of Participants			Self employed after training			No. of persons employed else where
			Male	Female	Total	Type of units	No. of units	No of persons employed	
Mobile Soil Testing	Routine analysis of soil using Soil Testing Kits	22	27	00	27	Mobile Soil Testing Kit	05	05	00
Nursery of Vegetables, Flower and Fruit Crops and Ornamental	Nursery and its management	30	28	00	28	Vegetable Nursery, Fruit Nursery, Flower and Ornamental	03	03	02

Plants						Nursery etc.			
Coconut Trees	Training programme on "Friends of Coconut Trees (FOCT)"	06	20	00	20	Master Trainer on Use of Coconut Climbing Machine	02	18	01
Fishery	Breeding of IMC and hatchery management	30	15	00	15	Hapa and Chinese Hatchery Breeding	02	02	00
Broiler Units	Broiler Management	07	10	00	10	Broiler Units	04	08	02
Total		95	100	00	100		16	36	05

2015-16

Area / Field			Target Group – Rural Youths			Impact			
Crop / Enterprise	Training title	Duration (days)	No. of Participants			Self employed after training			No. of persons employed else where
			Male	Female	Total	Type of units	No. of units	No of persons employed	
Vermi-composting Units	Preparation of Vermicompost in large Scale for Entrepreneurship Development	20	03	00	03	Large Scale Vermi-compost Unit	01	01	02
Horticultural Nursery	Nursery and Its Management	15	13	00	13	Horticultural Nursery	09	09	04
Para Extension Service Providers regarding Agricultural Inputs	Tata Rallis Agri Input Training Scheme (TRAITS) Phase - I	10	25	00	25	Para-Extension Service Provider	00	25	00
Analysis of Soil Sample and Preparation of Soil Health Cards	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	Broiler Management	15	10	00	10	Rural Poultry Units	06	06	04
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 in Hatchery	15	14	00	14	Fish Hatchery	03	06	08
Total		126	106	00	106		30	60	46

2016-17

Area / Field			Target Group – Rural Youths			Impact			
Crop / Enterprise	Training title	Duration (days)	No. of Participants			Self employed after training			No. of persons employed else where
			Male	Female	Total	Type of units	No. of units	No of persons employed	
Horticultural Nursery	Nursery and Its Management	21	24	00	24	Horticultural Nursery	09	09	04
Analysis of Soil Sample and Preparation of Soil Health Cards	Analysis of Soil and preparation of Soil Health Card	21	20	00	20	Soil Analysis and Soil Health Card Preparation Unit	00	00	00
Para-Vet	Capacity Building up of RY as Para-Vets	30	19	08	27	Para-Vets	11	11	15
Jute Crafts	Jute Crafts	10	00	19	19	Jute based Handi-Crafts	09	11	08
Carp Breeding	Carp breeding and Hatchery Management	30	16	00	16	Fish Hatchery	03	06	10
Carp Breeding	Hatchery Production Worker	25	19	01	20	Fish Hatchery	01	12	08
Mushroom Production	Mushroom Cultivation	15	23	11	34	Mushroom Production Units	11	15	19
Animal Health Service Provider	Animal Health Worker	25	17	01	18	Animal Health Service Provider	08	08	10
Total		177	138	40	178		52	72	74

2017-18

Area / Field			Target Group – Rural Youths			Impact			
Crop / Enterprise	Training title	Duration (days)	No. of Participants			Self employed after training			No. of persons employed else where
			Male	Female	Total	Type of units	No. of units	No of persons employed	
Mobile Soil Testing Units	Soil Testing and Soil Health Card Preparation	21	17	00	17	Mobile Soil Testing	07	07	03
Quail Farm	Quail Farming	07	14	06	20	Quail Farm	06	06	01
Piggery	Pig Farming	30	15	15	30	Piggery	08	08	02
Para Extension Worker	Agriculture Extension Service Provider	23	16	04	20	Para Extension Worker	14	14	02
Total		81	62	25	87		35	35	08

2018-19

Area / Field			Target Group – Rural Youths			Impact			
Crop / Enterprise	Training title	Duration (days)	No. of Participants			Self employed after training			No. of persons employed else where
			Male	Female	Total	Type of units	No. of units	No of persons employed	
Preparation of Organic Inputs	Prparation and Use of Organic Inputs	21	19	01	20	Units for preparing Organic Inputs like Vermin-Compost, Azolla, Earth Worms etc.	12	12	08
Hatchery Production Worker	Hatchery Production Worker - Fishery	25	20	00	20	Fish Hatcheries	00	00	10
Goatery	Goatery	30	08	22	30	Goat Farms	30	30	00

Agriculture Extension Worker	Agriculture Extension Service Provider	25	20	00	20	Para Extension Worker	04	04	16
Total		101	67	23	90		46	46	34

23. Capacity building of KVK Staff / Trainers:

- Number of staff trained:** 12 (Twelve)
- Area of training:** In-Service Training focusing on up-gradation of knowledge and skill in line of the job mandates as well as cutting edge technologies of the relevant disciplines.
- Utilization of updated knowledge:** Modernization and streamlining of the Rathindra KVK activities and way of functioning resulting in more efficient service delivery to the clients of this KVK in a sustainable manner.
- Number of Workshops / Seminars attended:** 132 (One Hundred Thirty Two)

24. Linkage establishment with other Govt. Department / NGOs

Name of Organization / Establishment	Area of collaboration / interaction
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.
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 sources 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, Mohanpur, Nadia, 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.
West Bengal University of Animal and Fishery Sciences, Belgachia, Kolkata, 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 mineral mixture, vaccines, medicines, seeds of Improved Varieties of Green Fodder Crops.
ICAR-Indian Agricultural Research Institute (IARI), Regional Station, Samastipur, Bihar	The linkage is mainly based on Collaborative Demonstration Programme on newer Wheat and Paddy varieties. As a result of this linkage, the farmers of Birbhum District are being exposed to newer varieties of Wheat and scented as well as non-scented Paddy varieties. Some varieties have shown very good potential for future introduction in the District.

	- Provide Weather related Information for Crop based Action Plan Development.
ICAR-National Dairy Research Institute (NDRI), Eastern Regional Station (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.
Regional Fodder Station, Kalyani, Ministry of Agriculture and Farmers' Welfare, Govt. of India, Nadia, West Bengal	This Linkage is basically for organizing the Front Line Demonstration (FLD) Programmes on various Improved Varieties of Green Fodder.
ICAR-Indian Grassland and Fodder research Institute (IGFRI), Jhansi, Uttar Pradesh	This Linkage is basically for organizing the Front Line Demonstration (FLD) Programmes on various Improved Varieties of Green Fodder.
Agriculture Skill Council of India (ASCI), National Skill Development Corporation (NSDC), Ministry of Skill Development and Entrepreneurship, Govt. of India, New Delhi	This linkage is for Training of Trainers, formulation of Training Courses, assessment and providing Skill Training Certificates to the Trainees of ASCI Skill Training Courses like Hatchery Production Worker, Animal Health Worker, Agriculture Extension Service Provider etc.
National Fisheries Development Board (NFDB), Ministry of Agriculture and Farmers' Welfare, Govt. of India, Hyderabad, Telengana	This linkage is for providing Human Resource Development Training to KVK Scientists as well as for organizing Long Duration Skill and Entrepreneurship Development Training Programmes to fish farmers and interested Rural Youths on different aspects of Fish Production and for hand-holding the Fish Growers for different Governmental Schemes in Fishery Sector.
National Institute of Agricultural Extension Management (MANAGE), Ministry of Agriculture and Farmers' Welfare, Govt. of India, Hyderabad, Telengana	This linkage is for providing Human Resource Development Training to KVK Scientists as well as for organizing Diploma in Agricultural Extension Services for Input Dealers (DAESI), a Long Duration Skill and Entrepreneurship Development Training Programmes for the Agricultural Input Dealers for developing them as grass-root level Extension Functionaries.
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 of the Extension and developmental activities of various developmental departments of the Govt. of West Bengal.
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 <i>Parthenium</i> . The farmers of this District get immense benefit as they get exposure on <i>Parthenium</i> and other weeds through participating in " <i>Parthenium</i> Control Week Programme".
Agricultural Technology Management Agency (ATMA), Birbhum, Suri, Birbhum, West Bengal	The linkage is now focusing on Orientation Farmers' training and Programme Training for Head Master / Achiever Farmer. Various Short Term Researches on Topics related with Fishery, Agronomy etc. are also being performed utilizing these linkages Programme.
Agricultural Technology Management Agency (ATMA), Various Districts of West Bengal	The linkage is now focusing on organizing Exposure Visits of the members of the various Block Farm Information and Advisory Centre (FIAC) Teams at the Rathindra KVK for a firsthand experience on cutting edge technologies and products related to agriculture and related sectors as well as for undergoing relevant knowledge and skill development training programmes at the Rathindra KVK, Birbhum.
National Bank for Agriculture and Rural Development (NABARD), Birbhum, Suri, 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 and Technology Week - 2016, organized by the Rathindra KVK in its Campus. The NABARD has also sponsored Skill Development Trainings in the Farm Sectors in the Financial Year of 2015 – 2016.
State Agricultural Management, Extension and Training Institute	This linkage is mainly on the following aspects - Conducting regular basis Human Resource Development Training Programme in different

(SAMETI), Narendrapur, 24 Parganas (South), West Bengal.	discipline for Scientists of the Rathindra KVK. - All the linkage activities profoundly help the Rathindra KVK clientele in updating their knowledge, skill and attitude.
Lok Kalyan Parishad, Bolpur, Birbhum	This linkage gives importance as well as focuses on Training and Demonstration for stakeholders for far flung areas of Birbhum District where Institutional Linkages with villagers of those areas are very weak.
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 Institutional Linkages 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 Institutional Linkages 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 Institutional Linkages 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.
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.
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 Rathindra KVK and exchange ideas and experiences with farmers of the District of Birbhum and Scientists of the Rathindra KVK.

25. Revolving Fund Status (Rs. in lakh):

Activity	I (2011-12)	II (2012-13)	III (2013-14)	IV (2014-15)	V (2015-16)	VI (2016-17)	VII (2017-18)	VIII (2018-19)	Total
i) Revolving Fund (From sale of Farm Produce like Seeds, Seedlings, Planting Materials, Fruits from Progeny Orchards of Mango, Guava, Mosambi, Water Apple etc., Sale of Bio-Products like Live Earth-Worms, Vermi-Compost, Azolla etc. at the Instructional Farms and Demonstration Units of the Rathindra KVK)	00.06908	00.16092	00.22090	00.60850	01.08430	00.83480	01.73903	01.98250	06.70003
ii) Revolving Fund (From sale of Broiler Poultry Birds, Ducks Breed Khaki Campbell (Advanced Growers), Poultry Breed Rhode Island Red (Chicks), Quail Birds of the Demonstration Poultry and	00.00	00.00	00.00	00.04467	00.25058	00.00	00.15230	00.04900	00.49625

Duckery Units of the Rathindra KVK)									
iii) Revolving Fund (From sale of Fish from the Instructional Pond of the Rathindra KVK)	00.00	00.04034	00.00	00.00	00.24894	00.22876	00.30000	00.00	00.818804

26. Resource generation (Rs. in '000):

Activity	I (2011-12)	II (2012-13)	III (2013-14)	IV (2014-15)	V (2015-16)	VI (2016-17)	VII (2017-18)	VIII (2018-19)	Total
Training Programme on Creation of Awareness among Farmers and Other Stakeholders about the Provisions of Protection of Plant Varieties and Farmers' Rights Act – 2001				80.00					80.00
Govt. of West Bengal Fund for Installation of Micro-Irrigation Systems						1100.00			1100.00
Prime Minister Relief Fund			17.348						17.348
Skill Development Training Programme of Rural Youths on Friends of Coconut Trees (FoCT) Programme Sponsored by the Coconut Development Board, Govt. of India				33.00					33.00
Trials under Fertilizer Association of India (FAI)			13.00						13.00
Preparation of Strategic Research and Extension Plan (SREP) of Birbhum District under ATMA					250.00				250.00
Short Term Research, titled, "Assessment of the performance of different sources of vermin-composting" sponsored by ATMA, Birbhum			124.00						124.00
Farm Sector Training Programme Sponsored by NABARD, Birbhum					162.00				162.00
Training for Head Master / Achiever Farmer sponsored by ATMA, Birbhum	42.50	62.50					30.00		135.00
Farmers' Fair on						185.497			185.497

Pradhan Mantri Fasal Beema Yojana									
Capacity Building Training Programme in Fishery Sector Sponsored by National Fisheries Development Board (NFDB), Govt. of India						82.00			82.00
Sankalp Se Siddhi – New India Manthan Programme							80.00		80.00
Farmers – Scientists Interaction under ATMA						20.00	20.00		40.00
FLD Programme in Summer Oilseeds under ATMA							160.00		160.00
Pre Rabi Kisan Campaign Activities in 2018-19								200.00	200.00
Establishment of Demonstration Unit on Micro-Irrigation system								100.00	100.00
Cluster Front Line Demonstrations (Cluster FLDs) on Rabi and Summer Pulses					600.00	600.00	70.00	780.00	2050.00
Cluster Front Line Demonstrations (Cluster FLDs) on Kharif Pulses						150.00	150.60	180.00	480.00
Cluster Front Line Demonstrations (Cluster FLDs) on Kharif and Rabi Oilseed					430.00	240.00	437.70	295.00	1402.70
Skill Training for Rural Youth (STRY)								42.00	42.00
NABARD Grant for Technology Week				115.50	104.00				219.50
SWACCHA Action Plan in 2018-19								25.00	25.00
Skill Development Training Programmes affiliated with Agriculture Skill Council of India (ASCI) under National Skill Development Corporation (NSDC) of Ministry of Skill Development and Entrepreneurship,						363.20	165.20	354.80	883.20

Govt. of India									
Diploma in Agricultural Extension Service for Input Dealers							400.00	340.00	740.00
District Kisan Mela in 2018-19								400.00	400.00
District Agromet Unit (DAMU)								480.00	480.00
Pre-Rabi Kisan Sammelan					80.00	80.00			160.00
Distribution of Free Soil Health Cards and Installation of Mridhaparikshak and Kits					125.00	86.00			211.00
Grand Total									9855.245

27. Number of new crop varieties evaluated by the KVK scientists and identification of most suited one or two:

Crop/variety	Year of testing	Best suited varieties
Crop - Paddy Var. – a.Lalat b.MTU1010 c.Pratiksha	2013-14	MTU1010
Crop - Mustard Var. – a. PUSA MAHEK b.PUSA BAHAR c.PT- 303	2013-14	PUSA MAHEK
Crop – Paddy Var. - a. Pusa-44 b. Pusa Sugandh- 5 c. PNR-381 d. Pusa-1176	2013-14	Pusa - 1176
Crop – Paddy Var. - a. Pusa-44 b. Pusa Sugandh- 5 c. PNR-381	2014-15	Pusa - 44
Crop - Paddy Var. – a. MTU7029 b.HEERA c.RAJENDRA MASURI	2014-15	MTU 7029
Crop - Wheat Var. – a. HD 2733 b. HD 2824 c. PBW 343	2012-13	HD 2824

d. HP1761 e. HD 2985 f. HI 1563 g. PBW 373 h. HW 2045		
Crop - Wheat Var. - a. HD 2733 b. HD 2824 c. HD 2985 d. HI 1563 e. HD 2967 f. HW 2045 g. HI 1544	2013-14	HD 2824
Crop - Wheat Var. - a. HD 2733 b. HD 2824 c. HD 2967 d. HI 1544 e. HI 1563 f. HD 2985 g. HW 2045 h. HD 2888	2014-15	HD 2824
Crop - Paddy Var. - a. GB-1 b. IR-64 c. MTU 1010	2015-16	MTU-1010
Crop - Black Gram Var. - a. WBU-108 b. WBU-109 c. PU-31	2015-16	WBU-109
Crop - Wheat Var. - a. HD 2824 b. HD 2733 c. HD 3118 d. HI 1563 e. HD 2967	2016-17	HD 2967
Crop - Wheat Var. - a. HD 2733 b. HD 2967 c. HD 2985 d. HD 3118 e. HD 3171	2017-18	HD 2967
Crop - Paddy Var. - a. GB-3 B. RANI DHAN C. MTU-7029	2018-19	RANIDHAN

Others – Crop – Cabbage (Early Winter Season), Varieties – a. M-111 (Farmers' Practice); b. Indam-1299 (Technology Option – I); c. Super Helmate (Technology Option – II)	2015-16 and 2016-17	Super Helmate
Others – Crop – Cauliflower (Early Winter Season), Varieties – a. Pan - 1008 (Farmers' Practice); b. Don - 175 (Technology Option – I); c. Seminis – 4151 (Technology Option – II)	2015-16 and 2016-17	Seminis - 4151
Others – Crop – Brinjal (Summer Season), Varieties – a. Local Improved (Farmers' Practice); b. Indam-504 (Technology Option – I); c. Indam-902 (Technology Option – II)	2013-14 and 2014-15	Indam-902
Others – Crop – Cucumber (Summer Season), Varieties – a. Local Improved (Farmers' Practice); b. Snow White (Technology Option – I); c. Swadisht (Technology Option – II)	2013-14 and 2014-15	Snow White

28. Supply of seed of new varieties (crop-wise) as sample pack, if any (Provide variety-wise list and name of beneficiaries):

Crop	Variety	Year	Name of Beneficiaries
Maize	J 1006	2012-13	19 Nos Farmers
Sorghum	PC 23	2012-13	
Rice Bean	Bidhan 1	2012-13	
Wheat	HD 2733, HD 2824, PBW 343, HP 1761, HD 2985, HI 1563, PBW 373, HW 2045	2012-13	43 Nos Farmers
Capsicum	Bharat	2012-13	11 Nos Farmers
Black gram	WBU-108	2012-13	43 Nos Farmers
Sesame	Improved Selection 5	2012-13	37 Nos Farmers
Wheat	HD 2824	2013-14	13 Nos Farmers

Capsicum	Bharat	2013-14	13 Nos Farmers
Paddy	MTU-7029	2013-14	75 Nos Farmers
Elephant's Foot Yam	Bidhan Kusum	2013-14	30 Nos Farmers
Drumstick	PKM-1	2013-14	26 Nos Farmers
Broccoli	F1 Hybrid Fiesta	2013-14	13 Nos Farmers
Lentil	WBL-58	2013-14	32 Nos Farmers
Green Gram	PDM-84-139	2013-14	65 Nos Farmers
Black Gram	WBU-108	2013-14	43 Nos Farmers
Black Gram	WBU-108	2013-14	30 Nos Farmers
Sesame	Improved Selection 5	2013-14	52 Nos Farmers
Dhaincha		2013-14	20 Nos Farmers
Maize	HQPM-1	2014-15	25 Nos Farmers
Green Fodder, Oat	Kent	2014-15	5 Nos Farmers
Green Fodder, Berseem	BL-10	2014-15	5 Nos Farmers
Wheat	HD – 2824	2014-15	37 Nos Farmers
Capsicum	Bharat	2014-15	15 Nos Farmers
Paddy	MTU-7029	2014-15	75 Nos Farmers
Elephant's Foot Yam	Bidhan Kusum	2014-15	20 Nos Farmers
Drumstick	PKM – 1	2014-15	64 Nos Farmers
Broccoli	Fiesta	2014-15	15 Nos Farmers
Green gram	PDM 84-139	2014-15	65 Nos Farmers
Black gram	WBU-108	2014-15	37 Nos Farmers
Redgram	ICPL-87-119	2014-15	25 Nos Farmers
Mustard	Pusa Bahar	2014-15	30 Nos Farmers
Sesame	SWB-32-10-1	2014-15	52 Nos Farmers
Dhaincha		2014-15	27 Nos Farmers
Green Fodder, Sorghum	MP Chari/Jumbo	2015-16	22 Nos Farmers
Green Fodder, Maize	African Tall	2015-16	19 Nos Farmers
Green Fodder, Rice Bean	Bidhan-1	2015-16	13 Nos Farmers
Green Fodder, Rice Bean	Bidhan-2	2015-16	5 Nos Farmers
Green fodder,	Co-4	2015-16	20 Nos Farmers
Wheat	HD – 2824	2015-16	5 Nos Farmers
Wheat	PBW-343	2015-16	37 Nos Farmers
Capsicum	Bharat	2015-16	15 Nos Farmers
Drumstick	PKM-1	2015-16	26 Nos Farmers
Broccoli	F1 hybrid	2015-16	15 Nos Farmers
Chickpea	Anuradha	2015-16	193 Nos Farmers
Lentil	WBL-77	2015-16	79 Nos Farmers
Field pea	Pravat	2015-16	107 Nos Farmers
Black gram	WBL: 109	2015-16	74 Nos Farmers
Mustard	Pusa Mahek	2015-16	141 Nos Farmers
Linseed	Deepika	2015-16	66 Nos Farmers
Sesame	SWB- 32-10-1	2015-16	82 Nos Farmers
Dhaincha		2015-16	18 Nos Farmers
Green Fodder, Oat	Kent	2016-17	14 Nos Farmers
Green Fodder, Maize	African Tall	2016-17	22 Nos Farmers

Green Fodder, Rice Bean	Bidhan-2	2016-17	5 Nos Farmers
Green fodder,	Co-4	2016-17	20 Nos Farmers
Green Fodder, Sorghum	MP Chari	2016-17	20 Nos Farmers
Green Fodder, Sorghum	MFSH-4	2016-17	22 Nos Farmers
Green Fodder, Sorghum	Jumbo Gold	2016-17	22 Nos Farmers
Wheat	PBW-343	2016-17	35 Nos Farmers
Elephant's Foot Yam	Bidhan Kusum	2016-17	24 Nos Farmers
Drumstick	PKM-1	2016-17	68 Nos Farmers
Broccoli	F1 hybrid Fiesta	2016-17	21 Nos Farmers
Chickpea	Anuradha	2016-17	93 Nos Farmers
Lentil	WBL-77	2016-17	93 Nos Farmers
Fielpea	Rachna	2016-17	48 Nos Farmers
Green gram	PDM-84-139	2016-17	79 Nos Farmers
Black gram	WBU 109	2016-17	99 Nos Farmers
Mustard	Pusa Mahek	2016-17	70 Nos Farmers
Linseed	Deepika	2016-17	60 Nos Farmers
Sesame	SWB- 32-10-1	2016-17	65 Nos Farmers
Dhaincha		2016-17	29 Nos Farmers
Green Fodder, Oat	Kent	2017-18	15 Nos Farmers
Green Fodder, Maize	African Tall	2017-18	5 Nos Farmers
Green Fodder, Rice Bean	Bidhan-2	2017-18	10 Nos Farmers
Green Fodder, Cowpea	Bundel Lobia- 2	2017-18	1 Nos Farmers
Green Fodder, Sorghum	Sudan Chari	2017-18	38 Nos Farmers
Elephant's Foot Yam	Bidhan Kusum	2017-18	22 Nos Farmers
Drumstick	PKM-1	2017-18	141 Nos Farmers
Chickpea	JAKI-9218	2017-18	115 Nos Farmers
Lentil	HUL-57	2017-18	116 Nos Farmers
Fielpea	Rachna	2017-18	52 Nos Farmers
Green gram	HUM-16	2017-18	93 Nos Farmers
Black gram	WBU-108	2012-13	43 Nos Farmers
Black gram	PU-31	2017-18	129 Nos Farmers
Mustard	NC-1	2017-18	62 Nos Farmers
Linseed	Sekhar	2017-18	113 Nos Farmers
Sesame	Improved Selection 5	2012-13	37 Nos Farmers
Sesame	Savitri	2017-18	182 Nos Farmers
Green Fodder, Oat	Kent	2018-19	8 Nos Farmers
Green Fodder, Maize	J-1006	2018-19	28 Nos Farmers
Green Fodder, Rice Bean	Bidhan-2	2018-19	28 Nos Farmers
Green Fodder, Sorghum	PC 23	2018-19	28 Nos Farmers
Elephant's Foot Yam	Bidhan Kusum	2018-19	20 Nos Farmers
Drumstick	PKM-1	2018-19	60 Nos Farmers
Chickpea	Anuradha	2018-19	74 Nos Farmers
Lentil	WBL-77	2018-19	119 Nos Farmers
Field pea	Rachna	2018-19	105 Nos Farmers
Green gram	IPM-02-3	2018-19	119 Nos Farmers
Black gram	WBU-109	2018-19	129 Nos Farmers
Mustard	NC-1	2018-19	91 Nos Farmers
Linseed	Sekhar	2018-19	98 Nos Farmers

29. Name 3 / 4 technologies (or more) that have created impact in sizable areas & made KVK credible

Sl. No.	Name of the Technology	Brief Details of Technology	Net Return to the farmer (Rs.) per ha per year due to the technology	No. of farmers adopted the technology in the district
1	Cultivation of Kharif Oilseed Crop Sesame, Var. - SWB-32-10-1 (Sabitri)	Variety: - Seeds of Improved Variety SWB-32-10-1 (Sabitri) @ 6 kg. / ha Herbicide application: - Application of herbicides Pendimethalin @ 3 lit. / ha at 1 – 3 DAS. Sulphur application Micro-Nutrient Spray: -Foliar Spray of Micro-Nutrients: - Zn EDTA @ 1 gm. / lit. of water at 25 and 45 DAS.	Rs. 33,265.00 / ha. / Annum	216
2.	Crop Diversification through Cultivation of High Value Low Volume Vegetable viz. Broccoli	Spacing: 2.0 feet x 2.0 feet Time of Planting - August – October Seed Treatment – Treated with 2 - 2.5 gm Thiram / litre of water. Application of Manure per hectare – Compost- 20-25 ton; 160 (100 + 60) kg Urea; 550 kg SSP; 170 kg MoP Application of Micro-nutrients - 1 - 1.5 kg Molybdenum and 20 kg. Sodium borate per hectare before planting	Rs. 1,52,500.00 / ha. / Annum	107
3.	Jute based Rural Handicrafts	Improved Techniques: - Decorative Use of Jute for producing Pen Stand, Decorative Horses, Statues of Lord Buddha, Flower Vases, many other customized products as per the needs and creative demands of the customers. Materials: - Jute, Gums, Hard Boards, Coloured Beads, Coloured Jutes etc. Designs: - As per the requisite product. Plan of Works: - At first design drawing is done, then a Mould is made with Paper based on that drawing, then Jute or Jute Threads are attached on the Paper mould with adhesive and finally it is decorated with Coloured jutes and or Coloured Beads.	Rs. 72,000.00 / Annum	29
4	Modern Kantha Stitch Works	Improved Techniques: - Traditionally “Kantha Stitch” Design was used on wrappers but now its shape, size are modified with Coloured Threads so that it can be used on dress designing and accessories like Side Bags, Bags, Sharee, Shirts, Pujabees, Blouse Piece, Top, Kurti etc. giving it a further value addition. Materials: - Cloth, Thread, Tracing Paper, Carbon Paper, Different Sized Frames, Different Sized Needles etc. Designs: - As per the requisite product and Consumer’s preference. Plan of Works: - At first the design is drawn on a Plain Paper, then the impression of the Design is put on the Clothe with the help of Tracing Paper or Carbon Paper and then according to the design, the “Kantha Stitch” Work is carried out on the Clothe by different coloured Threads.	Rs. 96,000.00 / Annum	1000
5.	Introduction of Giant Prawn (<i>Macrobrachium rosenbergii</i>) as A New Component of Composite Fish Culture	Pond Preparation: - Bottom pond muck is to be removed and liming @ 10 – 15 kg. / 0.13 ha. Manuring is to be done with Cowdung @ 2 – 3 Quintals / 0.13 ha. SSP is to be given @ 10 kg. / 0.13 ha. Water Quality Management: -pH. is to be maintained within a range of 7.5 to 8.0 through liming. Fish Feed Management: - Rice Bran, Groundnut Oil Cake, Fish Meal and Dry Yeast Powder in the ratio of 50: 30:10:10 respectively @ 3 – 5 per cent of Total Body Weight of the stocked Fish and Prawn. Aeration Technique: - Through using 0.5 HP – 1.0 HP Pump daily @ 2 hours / day. Fish Health Management: - Use of Potassium Per Manganate (KMnO ₄) @ 150 grams / 0.13 ha / month and Aquahealth @ 100 ml. / 0.13 ha. / 3 Months Interval.	Rs. 3,40,000.00 / ha. / Annum	35

6.	Proper blending of Technologies and Products for Scientific Dairy farming	<p>Crossbreeding and Breed up-gradation through Artificial Insemination (A. I.) in cattle is the most suitable and economical technique for generating higher genetic and production potential.</p> <p>Conscientious heat detection, detection of oestrous by fern pattern of cervical mucus and proper timing of insemination is ensured.</p> <p>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.</p> <p>All the female calves have to be fed properly from the beginning of the birth so that they attain desired body weight and maturity at an early age.</p> <p>Cultivation of green fodder and feeding the Cattles with area specific mineral mixture are ensured.</p> <p>The traditional feeding practice is to be modified by providing mineral mixture, concentrate and green forages and formulation of low cost feed.</p> <p>After parturition animals usually always come to heat up to 2- 2 1/2 months.</p> <p>Proper vaccination and medical check-up schedules and medicine regimes are to be followed.</p>	Rs. 4,88,400.00 / A Dairy Unit consisting of 25cows (15 crossbreed and 10 upgraded deshi Cows) + 20 Calves / Annum	25
7.	Production enhancement through improved back yard farming utilizing Improved Poultry Breeds viz. Vanaraja and Rhode Island Red (RIR)	<p>Backyard poultry farming with rural improved breeds.</p> <p>Breed up gradation by crossing these two breeds viz. Vanaraja and Rhode Island Red with local birds.</p> <p>Hatching of eggs of both Vanaraja and Rhode Island Red by using local hen.</p> <p>Supply chicks and fertile eggs of improved rural poultry breed.</p> <p>Construction of a low-cost poultry house made of locally available materials, such as bamboo and wood as night shelter and to protect the birds from predators.</p> <p>Birds are to be let loose as free-range scavenging for utilizing the feed base, i.e., fallen grain, insect, earthworm, kitchen waste, green grass etc. with supplementary feeding of concentrate mixture prepared by the locally available feed resources.</p> <p>Almost one fourth of the amount of concentrate mixture may be replaced by Azolla (<i>Azolla pinnata</i>) and vegetables like Kalmi (<i>Ipomoea aquatica</i>) and Spinach (<i>Spinacia oleracea</i>) etc. as per suggestion of the Scientists.</p> <p>De-worming and vaccination of birds are to be done as per the standard protocol with technological backstopping by the Scientists.</p> <p>On the advice of the Animal Science Scientists administration of the F₁ LaSota and R₂B Vaccines against Ranikhet Disease and IBDV Intermediate Strain Vaccine against Gumboro disease are to be done.</p>	Rs. 63,265.50 / Batch / Unit of 20 Numbers of Deshi Birds + 20 Numbers of Rhode Island Red Birds + 20 Numbers of Vanaraja Birds / Annum	65
8.	Low Cost Commercial Vermin-Composting Unit	<p>Earth-Worms (<i>Eisenia foetidae</i>) are being used.</p> <p>Low cost pits built-up with mainly bare bricks covered Polythene Sheets are to be used.</p> <p>Organic farm and domestic wastes along with cow dung are to be used as compost culture media.</p> <p>Regular optimum watering of compost media is to be ensured.</p> <p>Sieving and packaging of usable Vermin-Compost is done as and when necessary.</p>	Rs. 85,714.00 / Annum	51
9.	Feeding of Quality Green Fodder both Leguminous and Non-Leguminous to Milch Cattles	<p>Recommended Package of Practices for Fodder Cultivation such as Land Preparation, Fertilizer Application, Timely Sowing, Fertilizer Application, Irrigation Scheduling, Integrated Pest Management Practices and Harvesting Schedules.</p> <p>Short Duration Varieties of Fodder Crops viz. Maize, Cow Pea etc. between two seasonal crops.</p> <p>Cultivation of Cereal Fodder Crops like Maize, Sorghum, Oat etc. with Fodder Legumes like Cow Pea, Berseem etc.</p> <p>Cultivation of Multi-Cut Varieties of Fodder Crops at regular intervals to get optimum production.</p> <p>Legume and Non-Legume Fodders should be mixed in 1: 3 ratio.</p> <p>For lactating Crossbred Milch Cows, the production ration contains 1.25 + 1 kg</p>	Rs. 54,850.00 / Cow / Lactation	169

<p>concentrate per 2.5 kg Milk Production and requires 25 to 30 kgs. Green Grasses when Green Grass is plenty. For lactating Deshi Milch Cows, the feed schedule consists of 1 + 1 kg. Concentrate per 2.5 to 3.0 kg Milk Production with up to 20 kg. Fodder feeding. Every 10 kgs. Fodder feeding will reduce 1 kg. Concentrate feeding and thus reducing the cost of inputs.</p>		
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--

30. Impact assessment made so far by any dependable agency:

National Institute of Labour Economics Research and Development (NIELRD) (An Autonomous Institution under NITI Aayog, Government of India), A-7, Institutional Area, Narela, Delhi – 110040 has conducted a Research Study sponsored by Agricultural Extension Division of Indian Council of Agricultural Research (ICAR) on the “Evaluation of Krishi Vigyan Kendras (KVK) for Categorization into A, B, C & D Categories”. They have published their Report in December, 2017.

According to that Study, **the Over-all Ranking on Performance during the five years (2012-13 to 2016-17) of the Rathindra KVK was in Category “A”** in A, B, C and D Continuum Range of “0” to “1” where the ranges of ranks were ‘A’= 0.76 to 1.0, ‘B’= 0.51 to 0.75, ‘C’= 0.26 to 0.50, and ‘D’= 0.0 to 0.25 for the Period of 2012-13 to 2016-17 (Source: - Page No. – 83 of “Evaluation of Krishi Vigyan Kendras (KVK) for Categorization into A, B, C & D Categories”, National Institute of Labour Economics Research and Development, NITI Aayog, Government of India, New Delhi, 2017). **The Rathindra KVK as judged as “A” Category KVK s as per the Ranking on Performance of Core* Activities during the five years (2012-13 to 2016-17)** (*Summation of Mandated Activities + Effect/Impact/Outcome of Mandated Activities + Allied Activities) (Source: - Page No. – 95 of “Evaluation of Krishi Vigyan Kendras (KVK) for Categorization into A, B, C & D Categories”, National Institute of Labour Economics Research and Development, NITI Aayog, Government of India, New Delhi, 2017). The Rathindra KVK was awarded Category “C” as per the KVKs as per the Ranking on Infrastructure during the last five years (2012-13 to 2016-17) (Source: - Page No. 106 of “Evaluation of Krishi Vigyan Kendras (KVK) for Categorization into A, B, C & D Categories”, National Institute of Labour Economics Research and Development, NITI Aayog, Government of India, New Delhi, 2017).

Internet Source: - <https://icarrcer.in/wp-content/uploads/KVK-Final-2017-print.pdf>

31. New Initiative, if any

- ❖ **New Initiatives undertaken by the Rathindra KVK in 2012-13**

Minikit Demonstrations of different Varieties of Wheat and Paddy under ICAR-IARI Outreach Programme, PUSA, Samastipur, Bihar

Crop	Thematic Area	Name of the varieties	No. of farmers	Area (ha)	Yield (q/ha)		% increase in yield
					Demo	Check	
Wheat Rabi, 2012-13	Varietal replacement	1.HD 2733	43	5.0	25.8	21.2 (Sonalika)	21.7
		2.HD2824			32.3		35.6
		3.PBW 343			24.8		17.0
		4.HP1761			23.9		12.7
		5.HD 2985			21.9		3.3
		6.HI 1563			27.3		28.8
		7.PBW373			29.1		37.3
		8.HW 2045			25.7		21.2

❖ **New Initiatives undertaken by the Rathindra KVK in 2013-14**

Minikit Demonstrations of different Varieties of Wheat and Paddy under ICAR-IARI Outreach Programme, PUSA, Samastipur, Bihar

Crop	Thematic Area	Name of the varieties	No. of farmers	Area (ha)	Yield (q/ha)		% increase in yield
					Demo	Check	
Wheat Rabi, 2013-14	Varietal replacement	1.HD 2733	20	4.0	31.1	24.4 (Sonalika)	27.5
		2.HD2824			38.1		56.0
		3. HD 2985			26.9		10.2
		4. HI 1563			26.3		10.1
		5. HD 2967			26.9		10.2
		6. HW 2045			28.4		33.9
		7. HI 1544			26.6		10.1
Paddy Kharif, 2013	Varietal replacement	1. Pusa-44 (130 days)	18	1.3	34.0	30.1 (IR36)	13.0
		2. Pusa Sugandh- 5 (120 days)			31.3	30.1 (IR36)	4.0
		3. PNR-381 (110 days)			26.5	25.5 (Annada)	3.9
		4. Pusa-1176 (140 days)			53.2	51.6 (MTU 7029)	3.1

❖ **New Initiatives undertaken by the Rathindra KVK in 2014-15**

Minikit Demonstrations of different Varieties of Paddy and Wheat under ICAR-IARI Outreach Programme, PUSA, Samastipur, Bihar

Crop	Thematic	Name of the varieties	No. of	Area	Yield (q/ha)	% increase
------	----------	-----------------------	--------	------	--------------	------------

	Area		farmers	(ha)	Demo	Check	in yield
Paddy Kharif, 2014	Varietal replacement	1. Pusa - 44 (130 days)	30	2.4	43.98	42.1 (MTU 7029)	4.4
		2. Pusa Sugandh - 5 (110 days)			38.91	30.1 (IR36)	29.2
		3. PNR - 381 (120 days)			32.52	30.1 (IR 36)	8.0
Wheat Rabi, 2014-15	Varietal replacement	1. HD2733	14	4.0	36.2	33.3 (Sonalika)	8.7
		2.HD2824			41.0		23.1
		3.HD2967			35.7		7.2
		4. HI1544			35.2		5.7
		5.HI1563			34.8		4.5
		6.HD2985			35.9		7.8
		7.HW2045			35.8		7.5
		8.HD2888			34.7		4.2
Wheat Rabi, 2015-16	Varietal replacement	1. HD 2824	05	1.0	39.4	31.2 (Sonalika)	26.3

❖ **New Initiatives undertaken by the Rathindra KVK in 2015-16**

A. Minikit Demonstrations of different Varieties of Wheat under ICAR-IARI Outreach Programme, PUSA, Samastipur, Bihar

Crop	Thematic Area	Name of the varieties	No. of farmers	Area (ha)	Yield (q/ha)		% increase in yield
					Demo	Check	
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	13	00.20	320.5	-	-
		2. Bidhan - 2	06	00.58			
Sorghum Kharif, 2015	New Crop Introduction	1. MP – Chari	16	00.60	633.4	340.5	86
		2. Jumbo	06	00.08			
Oat Rabi, 2015-16	New Crop Introduction	1. JHO - 822	05	00.50	09.16	-	-

❖ New Initiatives undertaken by the Rathindra KVK in 2016-17

A. Minikit Demonstration of Improved Wheat Varieties through Outreach Programme of ICAR-IARI, Pusa, Samastipur, Bihar in 2016-17

Sl. No.	Thematic area	Technology Demonstrated with detailed treatments	Area (ha)		No. of farmers	Yield (q / ha)		% increase in yield
			Proposed	Actual		Demo.	Check (Var. Sonalika)	
1.	Varietal replacement of Wheat	Var. HD - 2733	02	02	11	37.85	31.00	22.00
		Var. HD - 2824				39.33		26.90
		Var. HD - 2967				40.81		31.70
		Var. HI - 1563				36.15		16.60
		Var. HD - 3118				38.25		23.40

B. Minikit Demonstration of Improved Green Fodder Varieties through Outreach Programme of ICAR-NDRI, ERS, Kalyani, West Bengal in 2016-17

Crop	Thematic Area	Name of the varieties	No. of farmers	Area (ha)	Yield (q/ha)		% increase in yield
					Demo	Check	
Green Fodder, Sorghum , Pre kharif 2016	Varietal replacement	MP Chari	20	1.11	634.3	398.7 (Goma)	59
		MFSH-4	22	0.2	745.3	Do	87
		Jumbo Gold	22	0.2	688.8	Do	73
Green Fodder, Maize Kharif, 2016	Varietal replacement	African Tall	22	0.71	415.2	298.4 (Local Improved)	39
Green Fodder, Rice bean Kharif, 2016	New introduction	Bidhan-2	5	0.5	347.5	--	-
Green Fodder, Oat Rabi, 2016-17	New Introduction	Kent	14	1.28	308.8	73.7 (Local grass in grazing land)	318.9
Green fodder, Hybrid Napier, Post Kharif, 2016-17	Varietal replacement	Co-4	20	0.40	1020.2	706.6 (Local Improved)	44.4

❖ New Initiatives undertaken by the Rathindra KVK in 2017-18

a) Minikit Demonstration of different varieties of Wheat under Outreach Programme, ICAR-IARI, Pusa, Samastipur, Bihar

Crop	Thematic	Name of	No.of	Area	Yield(q/ha)	%
------	----------	---------	-------	------	-------------	---

	area	the varieties	farmers		Demo	Check	increase in yield
Wheat Rabi, 2017-18	Varietal replacement	HD 2733	19	3.85 ha	37.3	30.9 (Sonalika)	21
		HD 2967			39.0		26
		HD 2985			35.1		12
		HD 3118			36.4		18
		HD3171			34.9		11

b) Sponsored Demonstration programme on pulses and oilseeds of ATMA, Birbhum, West Bengal

Crop	Thematic area	Name of the varieties	No. of farmers	Area	Yield(q/ha)		% increase in yield
					Demo	Check	
Blackgram Kharif, 2017	Crop Diversification	PU-31	63	5 ha	10.62	5.9 (Kali-50)	80.00
Greengram Summer, 2017-18	Crop Diversification	HUM-16	82	10 ha	13.15	8.8 (Panna)	49.00
Ground Nut, Summer, 2017-18	Crop Diversification	TAG-24	18	3 ha	25.00	18.00 (JL – 24)	39.00

c) Demonstration of Green Fodder under outreach programme, ICAR-NDRI, ERS, Kalyani, Nadia, West Bengal

Crop	Thematic area	Name of the varieties	No. of farmers	Area	Yield(q/ha)		% increase in yield
					Demo	Check	
Sorghum , Pre kharif 2017	Varietal replacement	Sudan Chari	38	1.06	782.83	398.3 (Goma)	96.54
Maize Kharif, 2017	Varietal replacement	African Tall	5	0.4	367.62	(298.4) Local improved	23.19
Rice bean Kharif, 2017	New introduction	Bidhan-2	10	0.16	346.4	-	-
Cowpea, Kharif, 2017	New Introduction	Bundel Lobia-2	1	0.08	325	-	-
Oat, Rabi, 2017-18	Varietal replacement	Kent	15	1.1	313.3	-	New introduction

❖ **New Initiatives undertaken by the Rathindra KVK in 2018-19**

A. Minikit Demonstration of different varieties of Wheat under Outreach Programme, ICAR-IARI, Pusa, Samastipur, Bihar

Crop	Thematic area	Name of the varieties	No. of farmers	Area	Yield (q /ha)		% increase in yield
					Demo	Check	
Wheat Rabi, 2018-19	Varietal replacement	HD 2967	14	3.00 ha	40.50	30.20 (Sonalika)	31.00

B. Demonstration of Green Fodder under outreach programme, Regional Fodder Station, Kalyani, Ministry of Agriculture and Farmers' Welfare, Govt. of India, Nadia, West Bengal

Crop	Thematic area	Name of the varieties	No. of farmers	Area (ha)	Yield(q/ha)		% increase in yield
					Demo	Check	
Sorghum , Pre Kharif 2018	Varietal replacement	PC 23	28	1.00	785.50	398.3 (Goma)	97.21
Maize Pre Kharif, 2018	Varietal replacement	J - 1006	28	1.00	392.25	292.5 (Local improved)	34.10
Rice bean Pre Kharif, 2018	New introduction	Bidhan - 2	28	1.00	350.5	-	-
Oat, Rabi, 2018- 19	Varietal replacement	Kent	08	00.63	308.8	73.7 (Local Grass in Grazing Land)	319.00

32. Other Programmes (not covered in the format) conducted

Sl. No.	Year	Name of the Programme	Date of the Programme	No. of Participants	Brief Details of the Programme
01.	2014-15	Training Programme on "Creation of Awareness among the Farmers and Other Stakeholders about the Provisions of PPV & FR Act – 2001"	22.01.2015	100	05 Numbers of Technical Sessions on different Aspects of PPV & FR Act – 2001; 03 Numbers Publications inaugurated and distributed among the participants
02.	2014-15	Technology Week - 2015	23.02.2015-27.02.2015	1660	13 Numbers of Technical Sessions on different relevant Technologies; 04 Numbers of Farmers-Scientists Interactions; 08 Numbers of Video Shows; 03 Numbers of Live Demonstration of Methods of Fruit Processing: Jam, Jelly, Sauce etc. Preparation and 01 Number of Agricultural Fair.
03.	2015-16	International Soil Day - 2015	05.12.2015.	296	1. Distribution of 266 Numbers of free Soil Health Cards to the Farmers of different Blocks of Birbhum District; 2. Technical Session on Soil Health Management and improvement.
04.	2015-16	Pre-Rabi Kisan Sammelan	05.12.2015.	296	1. Inauguration and distribution of seventeen (17) numbers of items of 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

					<p>performed.</p> <p>4. Method Demonstrations on the newly acquired Solar Powered Mini-Digital Soil Analyzer “Mriddhaparikshak” were performed.</p> <p>5. A Vegetable and Crop Show was organized.</p> <p>6. Handing over the Soil Health Cards to the farmers were performed.</p> <p>7. An interactive lecture on Soil Health Management in the Context of Recent Agricultural Practices was delivered.</p> <p>8. A special lecture on the importance on the awareness about the need for the soil conservation practices was delivered.</p>
05.	2015-16	Technology Week - 2016	14.03.2016 – 18.03.2016	2973	25 Numbers of Technical Sessions on different relevant Technologies; 11 Numbers of Publications of Extension Literatures on different Technologies; 02 Numbers of Visits of Farmers’ Groups to Rathindra KVK and Technology Week – 2016; 01 Number of Distribution of Organic Inputs; 04 Numbers of Video Shows; 01 Number of Method Demonstration on the process of establishment and maintenance of Medicinal Plants Garden in Back Yard and Homestead Farming Situations and 01 Number of Agricultural Fair.
06.	2016-17	One Day Farmers’ Fair and Agricultural Exhibition in relation to Pradhan Mantri Fasal Beema Yojona	01.04.2016	127	The main focus was on the “Awareness Generation” of the the participant farmers, farm women and rural youths who were made aware of Pradhan Mantri Fasal Bema Yojona (PMFBY), Pradhan Mantri Krishi Sinchai Yojona (PMKSY), Pradhan Mantri Koushal Yojona (PMKY) etc. As part of the event, creating awareness on different agricultural schemes of Govt. of India including benefits of soil health cards, production of organic inputs, water use efficiency were organized. Besides, distribution of literatures on the relevant issues, farmer-scientist interaction and distribution of soil health cards were also done.
07.	2016-17	One Day Farmers’ Fair and Agricultural Exhibition in relation to Pradhan Mantri Fasal Beema Yojona	07.06.2016	193	The main focus was on the “Awareness Generation” of the the participant farmers, farm women and rural youths who were made aware of Pradhan Mantri Fasal Bema Yojona (PMFBY), Pradhan Mantri Krishi Sinchai Yojona (PMKSY), Pradhan Mantri Koushal Yojona (PMKY) etc. As part of the event, creating awareness on different agricultural schemes including benefits of soil health cards, production of organic inputs, water use efficiency besides conducting live demonstrations on application of various improved technologies and best practices were arranged. Besides, distribution of literatures on the relevant issues, farmer-scientist interaction and distribution of soil health cards were done.
08.	2016-17	Workshop-cum-Farmers-Scientists Interaction	20.11.2016	62	Workshop-cum-Farmers-Scientists Interaction on Improved Cultivation Practices for Pulse Crops on 20.11.2016 was organized by the Rathindra KVK. Prof. Kajal Sengupta, Dean, Faculty of Agriculture, Bidhan Chandra Krishi Viswavidyalaya was present and he answered the Questions of the farmers in this relevant subject of Pulse cultivation.
09.	2016-17	Intenational Soil Day –	05.12.2016	50	Workshop on Importance of Soil Sample Collection, Analysis

		2016			and Interpretation on 05.12.2016 was organized by the Rathindra KVK. Prof. Ashish Chatterjee, Head, Dept.of Soil Science, Palli-Siksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum gave the Key Note Address and chaired the Session.40 Numbers of free Soil Health Cards were distributed among the farmers of the different Blocks of the Birbhum District.
10.	2016-17	Pre-Rabi Kisan Sammelan – 2016	09.12.2016	213	The Practicing Farmers, Farm Women and Rural Youths were exposed 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 especially on following Topics:- 1. More efficient use of irrigation water; 2. More efficient use of Fertilizers; 3. More emphasis on use of Bio-Fertilizers; 4. More use of Bio-Pesticides; 5. Organic Production Practices; 6. Crop diversification through cultivation of Pulse, oilseed, low volume high value vegetables; 7. More emphasis on rearing of Black Bengal goat and Garole Sheep; 8. Revival of production of Small Fishes like Punti, Mouralla, Dwarkey etc. Besides, these technologies, the participant farmers, farm women and rural youths were made aware of Pradhan Mantri Fasa Bema Yojona (PMFBY), Pradhan Mantri Krishi Sinchai Yojona (PMKSY), Pradhan Mantri Koushal Yojona (PMKY) etc.
11.	2016-17	Dairy-cum-Krishi Mela	28.01.2017	115	1. The Rathindra KVK has organized a One Day Dairy-cum-Krishi Mela at the Village: - Ghoshasldanga, Dist.:- Birbhum on 28.01.2017 in collaboration with ICAR-NDRI, ERS, Kalyani. At this Mela various Stalls were put up for exhibiting modern products, technologies and practices regarding agriculture, dairy, fishery and allied sectors by different developmental organizations like KVK, Dept. of Animal Resource Development, West Bengal University of Animal and Fishery Sciences, ICAR-NDRI, ICAR-IVRI, ICAR-NIRJAFT, different Self Help Groups from Anandadhara [groups constituted under Mahila Kisan Sashaktikaran Pariyojona (MKSP)], reputed Non-Governmental Voluntary Organizations like Loka Kalyan Parishad, Birbhum; Kabiguru Prakalpa, Birbhum etc. 2. In this Mela, 115 numbers of participant practicing farmers, farm women and rural youths attended various programmes of which 47 numbers were from disadvantageous Scheduled Caste community, 24 were from disadvantageous Scheduled Tribe community and rest 44 persons were from other communities. Animal Exhibition of various animals of economic importance like Heifer, Goat, Duck, Hen and Cock were organized and the best animals were judged by the experts and given prizes. A Vegetable and crop show was also organized on this occasion. In this Mela, Farmers – Scientists Interface and a Quiz Contest on various aspects of Animal especially dairy animals rearing were organized and the participant farmers were very much delighted after participating in these types of scientific platform.
12.	2016-17	National Science Day – 2017	28.02.2017	56	National Science Day was celebrated with great enthusiasm on 28 th . February to commemorate the discovery of Raman

					Effect on the same day in 1928 by Indian physicist and Nobel Laureate Sir Chandrasekhara Venkata Raman in Rathindra KVK, Birbhum. On this day Prof. Sarthak Chowdhury, Principal, Palli-Siksha Bhavana and In-charge, Rathindra KVK, Visva-Bharati, Sriniketan, Birbhum addressed the gathering consisting of 39 rural youths on the importance of inculcating scientific spirit and logic in every day life. Dr. Jayanta Chattopadhyaya, Vice-Principal, Palli-Siksha Bhavana, Visva-Bharati, Sriniketan, Birbhum emphasized on the continued and enhanced use of science and technology in agriculture and related sector. Smt. Ruma Addy, Programme Co-ordinator (Officiating) urged the participant rural youths to spread the message of science and technology to the farthest corners of rural areas so that the darkness of ignorance, superstition and illiteracy could be overcome with. The programme was ended with a Short Film Show on life and work of Dr. C. V. Raman, the great Indian scientist par excellence, with whom this day is associated with.
13.	2017-18	Sankalp Se Siddhi	30.08.2017	701	<p>1. Taking the pledge of making the farmers' income double by the year 2022 A. D. through exposing 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.</p> <p>2. Exposing the participant practicing farmers, farm women, rural youths and grassroot level extension functionaries to the cutting edge technologies in Agriculture and related Sectors through 4 Numbers of Technical Sessions, 01 Number of Video Show, 04 Numbers of publication of Extension Literatures on new Technologies and exhibition of Technologies and Products in the organized Stalls at the Farmers' Fair.</p>
14.	2017-18	Mahila Kisan Divas	15.10.2017	57	<p>1. One-day programme on "Mahila Kisan Divas" was organized on 15.10.2017 at Rathindra KVK Campus, Palli Siksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum-731236, West Bengal.</p> <p>2. Fifty One numbers of farm women participated in the whole day programme. Principal, Palli Siksha Bhavana, Visva-Bharati graced the occasion as chairperson.</p> <p>3. In this programme four farm women were felicitated in agriculture and allied field.</p> <p>4. In the Technical session, discussion on Women empowerment in Animal Science and Nutritional Security.</p> <p>5. After a day long discussion farm women returned their home with satisfaction. The programme was ended with vote of thanks.</p>
15.	2017-18	International Soil Day – 2017	05.12.2017	137	<p>1. Key Note Lecture by the eminent Soil Scientist and Former Pro-Vice Chancellor, Bidhan Chandra Krishi Viswavidyalaya, Prof. Biswapati Mandal on "Soil Health Management".</p> <p>2. Detailed discussion on methods for Soil Health Management with Farmers.</p> <p>3. Detailed Presentations on the adverse effects of Soil Health</p>

					deterioration. 4. Theoretical Classes on Soil Sample collection and Analysis. 5. Universal Soil Health Cards were distributed among 104 numbers of farmers.
16.	2017-18	Web Casting of Honourable Prime Minister's Inaugural Speech of Biennial National Conference of KVKs – 2018	17.03.2018	379	1. Web Casting of Honourable Prime Minister's Inaugural Speech of Biennial National Conference of KVKs – 2018 2. "Awareness Generation" of the the participant farmers, farm women and rural youths on the Pradhan Mantri Fasal Bema Yojona (PMFBY), Pradhan Mantri Krishi Sinchai Yojona (PMKSY), Pradhan Mantri Koushal Yojona (PMKY) etc. through Video Shows and distribution of literatures on the relevant issues and farmer-scientist interaction.
17.	2018-19	Mahila Kisan Divas - 2018	15.10.2018	68	Training Programme, Film Show and Method Demonstration on Farm Women related Technologies in Agriculture and Related Sectors.
18.	2018-19	International Soil Day - 2018	05.12.2018	75	1. 52 numbers of Soil Health Card Distribution among the farmers of the different Blocks of the Birbhum District. 2. Publication of Various Extension Literature on different aspects of Soil Health Management. 3. Lectures by Eminent Professors of Soil Science on the issues related with Soil Health and its Management. 4. Training for Practicing Farmers and Farm Women on maintenance of Soil Health and related topics. 5. Distribution of Extension Literature among the participants on various aspects of Soil Health Management. 6. Total Nos. of Practicing Farmers and Farm Women present: - 61
19.	2018-19	Pre-Rabi Kisan Campaign	07.02.2019	231	The main focus was on the "Awareness Generation" of the the participant farmers, farm women and rural youths who were made aware of Pradhan Mantri Kisan Samman Nidhi (PM-KISAN), Pradhan Mantri Fasal Bema Yojona (PMFBY), Pradhan Mantri Krishi Sinchai Yojona (PMKSY), Pradhan Mantri Koushal Yojona (PMKY) etc. As part of the event, creating awareness on different agricultural schemes including benefits of soil health cards, Integrated Water Harvesting and Water Management practices, production of organic inputs, water use efficiency besides conducting live demonstrations on application of various improved technologies and best practices were arranged. Besides, distribution of literatures on the relevant issues, farmer-scientist interaction and distribution of soil health cards were done.
20.	2018-19	Web Casting of Inauguration of PM Kisan Samman Nidhi Scheme	24.02.2019	261	1. Web Casting of Honourable Prime Minister's Inauguration of PM Kisan Samman Nidhi (PM-KISAN) Scheme – 2019 2. "Awareness Generation" of the the participant farmers, farm women and rural youths on the various aspects of the PM-KISAN Scheme as well other flagship programmes of Govt. of India for the welfare of the farmers viz. Pradhan Mantri Fasal Bema Yojona (PMFBY), Pradhan Mantri Krishi Sinchai Yojona (PMKSY), Pradhan Mantri Koushal Yojona (PMKY) etc. through Video Shows and distribution of literatures on the relevant issues and farmer-scientist interaction.

21.	2018-19	Birbhum District Kisan Mela - 2019	24.02.2019 to 26.02.2019	261	09 Numbers of Technical Sessions on different relevant Technologies; 03 Numbers of Farmers-Scientists Interactions; 03 Numbers of Video Shows; 10 Numbers of Publications of Extension Literature on Technologies and Products for modernization of Agriculture and Allied Sectors.
-----	---------	------------------------------------	--------------------------	-----	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

33. Details of awards / prize received by the KVK, if any

The Rathindra KVK was awarded the “Best Prize” regarding the Stall Organization by the ICAR-NDRI, ERS, Kalyani, the organizer of One Day Dairy-cum-Krishi Mela at the Village:- Ghoshasldanga, Dist.:- Birbhum on 28.01.2017. The Stall of the Rathindra KVK was adjudged “Best” among the Stalls put up by different developmental organizations like KVK, Dept. of Animal Resource Development, Govt. of West Bengal; West Bengal University of Animal and Fishery Sciences, Kolkata; ICAR-NDRI, Kalyani; ICAR-IVRI, Kolkata; ICAR-NIRJAFT, Kolkata; different Self Help Groups from Anandadhara [groups constituted under Mahila Kisan Sashaktikaran Pariyojana (MKSP)], reputed Non-Governmental Voluntary Organizations like Loka Kalyan Parishad, Birbhum; Kabiguru Prakalpa, Birbhum etc. exhibiting modern products, technologies and practices regarding agriculture, dairy, fishery and allied sectors.

34. BROAD BASING OF FRONT LINE EXTENSION (2011-12 to 2018-19)

Sl.	Item									(Nos.)
		I (2011-12)	II (2012-13)	III (2013-14)	IV (2014-15)	V (2015-16)	VI (2016-17)	VII (2017-18)	VIII (2018-19)	Total
1	A.I. cases									
2	Animal health care provided									
a.	Animals	35	00	00	1559	1303	1943	1266	1217	7323
b.	Birds	00	00	00	1016	100	267	451	760	2544
3	Poulties introduction	400	150	300	420	420	420	1120	1120	4365
4	Piggery/ rabbitory introduction									
5	Planting material /seedlings produced and distributed	700	1200	23500	5000	6100	7064	16600	11000	69164
6	Fodder and grass introduction, ha	0.8	0.4	00	0.2	2.18	3.8	5.63	5.63	18.64
7	Trees introduction(no.)									
8	Wasteland development plan prepared									
9	Watershed development									
10	Consultancy on soil analysis and topographic survey	30	51	67	53	244	287	219	180	1131
11	Consultancy on land use planning and cropping pattern									
12	Improved hand tools and implements introduced	15	00	51	07	12	15	28	20	148
13	Fishery demonstrations	09	15	09	06	14	14	21	30	118
14	Any other (Animal health camp.)	21	00	00	04	09	12	10	06	69

(Pl add row if required)

*

35. Extension Activities Undertaken (Last 8 years) (Numbers)

S.N.	Activity	I (2011-12)	II (2012-13)	III (2013-14)	IV (2014- 15)	V (2015- 16)	VI (2016 17)	VII (2017- 18)	VIII (2018- 19)	Total
1.	Field Days	14	18	20	13	17	22	27	17	148
2.	Agril. Exhibition	01	01	01	02	05	03	02	02	17
3.	Farmers' Fairs	01	01	01	02	01	03	02	02	13
4.	Radio Talk	15	06	08	21	13	15	19	13	110
5.	TV show	14	03	07	33	16	18	13	05	109
6.	Film show	08	06	00	15	16	27	06	08	102
7.	Training materials produced (a) Pamphlets (b) Video-cassette/ CD (c) Slides	10	24	10	15	16	27	06	08	116
8.	Farm Science Club	00	00	00	00	03	00	00	00	03
9.	Mahila Mandals Organized	02	00	00	00	00	00	00	00	02
10.	Extension Training meetings	00	00	02	00	00	00	00	00	02
11.	i.Kisan Ghosthi	00	00	01	05	00	00	00	00	06
	ii.Farmers Seminar	00	00	00	05	02	01	01	00	09
	iii.Lectures delivered as resource persons	04	04	00	06	32	21	30	21	118
	iv.Newspaper coverage	00	00	00	08	04	11	07	00	30
	v.Popular articles	04	06	12	00	00	12	00	00	34
	vi.Advisory Services	264	275	1338	291	32	31	204	209	2644
	vii.Scientific visit to farmers field	42	69	83	132	151	129	137	153	896
	viii.Farmers visit to KVK	82	151	164	126	164	109	124	151	1071
	ix.Diagnostic visits	108	220	150	131	150	120	130	151	1160
	x.Exposure visits	00	00	00	00	03	00	13	19	35
	xi.Animal Health Camp	21	00	00	11	09	12	10	06	70
	xii.Soil test campaigns	00	00	00	06	10	00	01	01	18
	xiii.Self Help Group Conveners meetings	02	00	00	00	04	00	00	00	06
	xiv.Celebration of important days (specify)	00	00	01	00	03	00	03	04	11
	xv.Farmers' - Scientists' Interaction	00	00	00	04	00	01	00	00	05
	xvi.Technology week	00	00	00	01	01	00	00	00	02
	Others, if any (Awareness Generation)	01	02	01	21	03	04	04	13	49

36. Publications made during the QRT period:

Year	Technical Reports	Popular Articles	Research Papers	Extension Literature	CD / DVD	Seminar / Conference / Symposia Papers	Books	Bulletins	News Letters	Reports Published in ICAR Reporters	Book Chapters
------	-------------------	------------------	-----------------	----------------------	----------	----------------------------------------	-------	-----------	--------------	-------------------------------------	---------------

2011 - 12	06	02	02	10	06	00	00	00	00	00	00
2012 - 13	03	00	06	24	00	00	00	00	00	00	00
2013 - 14	12	00	02	11	06	02	00	00	00	00	02
2014-15	17	00	04	15	01	05	00	00	00	01	04
2015 - 16	27	05	08	16	06	06	00	00	00	00	03
2016-17	16	12	01	27	00	08	00	00	00	00	06
2017 - 18	78	00	08	06	02	08	02	00	00	01	09
2018-19	94	00	03	08	00	01	00	00	00	00	05
Total	253	19	34	117	21	30	02	00	00	02	29

❖ **Publications by the Rathindra KVK Scientists in 2011-12**

A. Literature developed/published

Title	Authors' Names	Number
Technical reports		
1. Report on State Level Workshop for KVKs during 25 th Feb, 2012	Rathindra KVK	6
2. Annual Action Plan (April, 12 – March, 13) (Feb, 2012)		
3. Annual Progress Report (April,2011-March,2012)(March, 2012)		
4. Five years progressive report on Animal Husbandry (November, 2011)		
5. Report related to work done with Lime department submitted to Narendrapur, Dec,2011		
6. Report for QRT, June, 2011		
Popular articles		
1. <i>Contingency cropping practices in kharif. Bhumiputra</i>	A. K. Ghosh	2
2. <i>Prospects of sweet potato and grain amaranthus . Bhumiputra. IXth annual edition</i>		
Research Papers		
Phosphate Solubilisation of Rock Phosphate by Organic Waste-Dairy Waste and Cattle Urine. <i>Journal of Interacademia</i> . 15(4) : 576-579,2011	Subrata Mandal and A. K. Ghosh	2
Effect of fertilizer management and spacing on growth and yield of kharif cotton (<i>Gossypium hirsutum</i> L) under lateritic belt of West Bengal. <i>Journal of Crop and Weed</i> . 7(2):238-240, 2011	S. Hensh, G.C. Malik, M. Banerjee and S. Mandal	
Extension literature		
1. Macher Prajanan (Carp Breeding)	K. Mitra	10
2. Chingri Chas (Culture of Giant Prawn)		
3. SRI padhatite Dhan chas (Brief cultivation practice of SRI Paddy)	Subrata Mandal	
4. Tiler Chas (Cultivation of sesame)		
5. Tiler madhyabortikalin paricharja (Intercultural operation of sesame)		
6. Grishmakalin Chinabadam chas (Cultivation of summer groundnut)		
7. Azolla Chas (Multiplication of Azolla)	Ruma Addy	
8. Dhup tairi (Preparation of agarbati)		
9. Aam Chas (Cultivation of mango)	D. C. Manna	
10. Chhatur chas (Mushroom cultivation)	Sourav Mondal	
TOTAL		20

B. Details of Electronic Media Produced

Sl. No.	Type of media (CD / VCD / DVD / Audio-Cassette)	Title of the programme	Number
1.		Control of Parthenium	

2.	CD	Efficient use of water in agriculture	6
3.		Hybrid rice seed production	
4.		Quality protein maize	
5.		Integrated Pest Management	
6.		KVK Birbhum- at a glance	

❖ Publications by the Rathindra KVK Scientists in 2012-13

A. Literature Developed/Published

Title	Authors name	Number
Technical reports		
1. Annual Action Plan (April, 13 – March, 14)	Rathindra KVK	3
2. Annual Progress Report (April, 2012 - March, 2013)	Rathindra KVK	
3. SAC Report (April, 2012 – December, 2012.)	Rathindra KVK	
Research Papers		
<i>Pharmaco-Anatomical and Histochemical Studies on Stems of Some Medicinal Plants. Journal of Interacademia. 16 (3): 592 – 597, 2012.</i>	Sudipa Mandal and Subrata Mandal	6
<i>Approaches in Integrated Pest Management (IPM) Practices: An Extension Point of View, Theme: Agribusiness Policies and transfer of Technology in the Golden Jubilee Seminar on Advances in Agricultural Research towards Food Security and Environmental Sustenance, organized by the Institute of Agriculture, Palli Shiksha Bhavana, Visva-Bharati, Sriniketan in the Palli Shiksha Bhavana, Visva-Bharati, Sriniketan, West Bengal India, held from 1st. September to 3rd. September, 2012, Page No. T5-P004.</i>	Prabuddha Ray and Sarthak Chowdhury	
<i>Transfer of Agricultural Technologies for Information Have Nots: A New Approach, Theme: Agribusiness Policies and transfer of Technology in the Golden Jubilee Seminar on Advances in Agricultural Research towards Food Security and Environmental Sustenance, organized by the Institute of Agriculture, Palli Shiksha Bhavana, Visva-Bharati, Sriniketan in the Palli Shiksha Bhavana, Visva-Bharati, Sriniketan, West Bengal India, held from 1st. September to 3rd. September, 2012, Page No. T5-P007.</i>	Sarthak Chowdhury and Prabuddha Ray	
<i>Facilitating Sustainable Agriculture from Extension Perspective in the National Seminar on “Challenges of Livelihood and Inclusive Rural Development in the Era of Globalization”, organized by the A. K. Dasgupta Centre for the Planning and Development, Department of Economics and Politics, Visva-Bharati, Santiniketan in the Department of Economics and Politics, Visva-Bharati, Santiniketan held on 23rd. November, 2012, Sl. No. – 14.</i>	Prabuddha Ray and Sarthak Chowdhury	
<i>“Facilitating Sustainable Agriculture from Extension Perspective”, Chapter (No. 14) in the Book titled, “Challenges of Livelihood and Inclusive Rural Development in the Era of Globalization” [ISBN No. 978-93-81274-25-5], edited by Pranab Kumar Chattopadhyay and Sudipta Bhattacharya, published by New Delhi Publishers, New Delhi, in the year 2012, Page No. 263 - 278.</i>	Prabuddha Ray and Sarthak Chowdhury	
<i>Field Level Constraints as Experienced by the Vegetable Growers regarding the Proper Use of Pesticides in French Bean Cultivation in the International Conference on Extension Education in the Perspectives of Advances in Natural Resource Management in Agriculture (NaRMA – IV) Swami Keshawananda Rajasthan Agricultural University (SKRAU), Bikaner, Rajasthan, India held in Swami Keshawananda Rajasthan Agricultural University (SKRAU), Bikaner, Rajasthan, India from 19.12.2012 to 21.12.2012, Published in the Proceedings Sl. No. C - 287.</i>	Prabuddha Ray and Dulal Chandra Manna	

Extension literature		
1. Breeding of Galda in Fresh Water (<i>Mitha Jaley Galda Chingri</i>)	K. Mitra	24
2. Breeding and Cultivation Practices of Magur (<i>Magur Projanan and Chash Paddhati</i>)		
3. Utilization of Waste Materials (<i>Abarzana Samsaya Noi Upakari Sampad</i>)	Subrata Mandal	
4. Cultivation Of Paddy through SRI in brief (<i>SRI paddhatite Dhaner Sankhipstha Chas Paddhati</i>)		
5. Soil Sample Collection for Soil Testing (<i>Mati Parikshar janya Matir Namuna Sangraher Paddhati</i>)		
6. Preparation of Vermicompost (<i>Kencho Sar Prastuti</i>)		
7. Production of Paddy Seeds (<i>Dhan Beej Utpadan</i>)		
8. Intermediate Cropping of Sesame (<i>Tiler Madhyabartikalin Chash</i>)		
9. Summer Cultivation of Ground Nuts (<i>Grishmakalin China Badam Chash</i>)		
10. Cultivation of Sesame (<i>Til Chash</i>)		
11. Primary stage of wheat cultivation (<i>Gam Chaser Prathomik Parjay</i>)		
12. Cultivation of Isabgool (<i>Isabgool Chas Paddhati</i>)		
13. Intercultivation of wheat (<i>Gamer Antarborti kalin paricharya</i>)	D. C. Manna	
14. Banana Cultivation (<i>Kala Chash</i>)		
15. Cultivation of Elephant's Footyam (<i>Oler Chash</i>)		
16. Cultivation of Papaya (<i>Peper Chash</i>)		
17. Conversion of Sour and Wild Ber to Sweet Ber (<i>Tak Jangli Kool Gachke Mishthi Kool Gache Rupantar</i>)		
18. Scented Lemon (Gandharaj), Lime and Lemon (Kagji) Cultivation (<i>Gandharaj Lebu, Pati Lebu oo Kagji Lebu Chash</i>)		
19. Summer Vegetables Cultivation (<i>Grishmakalin Shak Sabji Chash</i>)		
20. Integrated Pest Management on Rice (<i>Sushanhata Upaye Dhaner Rogpoka Niyantaran</i>)		
21. Prashikhan Karmasuchir Mulyana (Evaluation of Training Programmes)	Sourav Mondal	
22. Domestic Animals rearing (<i>Gharoa Prani Palan</i>)	Prabuddha Ray	
23. Rearing of Cows (<i>Garu Palan</i>)		
24. Herbal Treatment of Animal Diseases (<i>Pashur Veshaj Chikitsa</i>)		
TOTAL		33

❖ Publications by the Rathindra KVK Scientists in 2013-14

Item	Title	Authors' Names	Number	Circulation
Research paper	1. "Food fodder intercropping and phosphorus management in Oat (<i>Avena sativa</i> L.), Chickpea (<i>Cicer arietinum</i> L.), Lentil (<i>Lens culinaris</i> Medikus), Greengram (<i>Vigna radiate</i> L. Wilczek), Rice (<i>Oryza sativa</i> L.) cropping sequence under lateritic soil", <i>Journal of Biological and Scientific Opinion</i> , Vol.1(3), 2013, pp. 205-208.	1. Subrata Mandal, A.K. Ghosh and D.C. Ghosh	02 (Two)	-
	2. "Studies on Screening and Histo-Chemical Localization of Phyto-chemicals in the Medicinal Plant <i>Barleria lupulupulina</i> Lindl.", International journal of Pharmaceutical development and Technology, Vol. – 4, No. – 2, pp. 95 – 97.	2. Sudipa Mandal and Subrata Mandal		-
Seminar/conference/	1. "Assessment of Profitability within	1. Dr. Subrata	02 (Two)	-

<p>symposia papers</p>	<p>Components of Integrated Farming Systems (IFSS) under Fish based Production System in Lateritic Belt of West Bengal”, published and presented in the 5th. Indian Youth Science Congress organized by Visva-Bharati and M. S. Swaminathan Research Foundation at the Visva-Bharati, Santiniketan, Birbhum on 6th. To 9th. December, 2013, Book of Abstracts, 5th. Indian Youth Science Congress, Page No. – 164.</p> <p>2. “Summer Paddy (IR – 36) Cultivation through SRI Method using Different Plant Spacing in Lateritic Belt of West Bengal”, published and presented in the National Seminar on Agriculture and Bio-Security in Changing Scenario, organized by the Department of ASEPAN, Palli Siksha Bhavana, Visva-Bharati, Sriniketan, Birbhum held on 1st. to 3rd. February, 2014 at the Department of ASEPAN, Palli Siksha Bhavana, Visva-Bharati, Sriniketan, Birbhum, Book of Abstracts of the National Seminar on Agriculture and Bio-Security in Changing Scenario, Page No. - 22.</p>	<p>Mandal, Dr. Prabuddha Ray, Dr. Krishna Mitra and Dr. Dulal Chandra Manna</p> <p>2. Dr. Subrata Mandal and Dr. Prabuddha Ray</p>		
Books	-	-	-	-
Bulletins	-	-	-	-
News letter	-	-	-	-
Popular Articles	-	-	-	-
Book Chapter	<p>1. “Dissemination of Farm Technologies for Poor Farmers”; In Prof. Pranab Kumar Chattopadhyaya edited “Some Empirical Aspects of Economic Growth and Diversification In India’s Emerging Economy”, 2014, ISBN No. 978-93-81274-54-5, New Delhi Publishers, pp. 149 – 154.</p> <p>2. “Field level Constraints as Experienced by the Vegetable Growers Regarding the Proper Use of Pesticides in Vegetable Cultivation”; In Prof. Pranab Kumar Chattopadhyaya edited “Some Empirical Aspects of Economic Growth and Diversification In India’s Emerging Economy”, 2014, ISBN No. 978-93-81274-54-5, New Delhi Publishers, pp. 331 - 342.</p>	<p>1. Prof. Sarthak Chowdhury and Dr. Prabuddha Ray</p> <p>2. Dr. Prabuddha Ray and Prof. Sarthak Chowdhury</p>	02 (Two)	-

Extension Pamphlets/ literature	<p>1. Preliminary Phase of Sugarcane Cultivation (<i>Aakh Chasher Prathomik Parjay</i>)</p> <p>2. Cultivation of Various Oilseeds (<i>Bibhinna Taila Bijer Chash</i>)</p> <p>3. Modern Potato Cultivation Practices (<i>Adhunik Padhatitey Aloo Chash</i>)</p> <p>4. Potato Seed Preparation (<i>Beej Aloo Tairir Padhati</i>)</p> <p>5. Integrated Pest Management Practices of Oilseed Crops (<i>Sushanghata Upaye Taila Bijer Rog Poka Niyantran</i>)</p> <p>6. Integrated pest Management Practices of Potato Crops (<i>Sushanghata Upaye Aloor Rog Poka Niyantran</i>)</p> <p>7. Self Help Groups – Build Up Your Own Future (<i>Swasayahak Goshthi Gathan Karun – Nijer Bhabisath Nijey Garey Tulun</i>)</p> <p>8. Kisan Credit Card – A Farmer’s Weapon (<i>Kisan Credit Card – Krishaker Hatiyar</i>)</p> <p>9. Farmers’ Clubs – A New Approach for Development of the Farmers [<i>Krishak Club (Farmers’ Club) – Krishaker Unnanayaner Natun Path</i>]</p> <p>10. Crop Insurance – Save from Insecurity (<i>Sashya Bimar Sujog Nin – Anischayatar Hath Theke Bachun</i>)</p> <p>11. Question Schedule on Training Need Assessment of the Trainees (<i>Krishak abong Gramin Yubak Yubatider Prashikshan Prayojaniyater Mulyan</i>)</p>	Dr. Subrata Mandal	11 (Eleven)	1810 (One thousand eight hundred ten)
Technical reports	<p>1. Half Yearly Progress Report (April, 2013 – September, 2013)</p> <p>2. Information pertaining Skill Development Training for Farmers and Rural Youth</p> <p>3. Report on Celebration of the World Environment Day – 2013</p> <p>4. Filled Up Pro-forma for Base-line Information concerning IPM</p> <p>5. Report on the Observance of <i>Parthenium</i> Week – 2013</p> <p>6. NAAC Evaluative Report on Rathindra KVK</p> <p>7. Mid Term Review Report of Rathindra KVK</p> <p>8. Progress Report of Rathindra KVK from</p>	Rathindra KVK	Twelve (12)	Among all the concerned.

	April, 2013 to September, 2013 9. Role of Rathindra KVK in the Development of Agriculture and allied Sectors of Birbhum District, West Bengal 10. List of One Thousand One Hundred Farmers of Rathindra KVK 11. 20 Years Consolidated Report on Rathindra KVK 12. Annual Report April, 2013 to March, 2014 on Rathindra KVK			
Electronic Publication (CD/DVD etc)	1. Control of <i>Parthenium</i> 2. Efficient Use of Water in Agriculture 3. Hybrid Paddy Seed Production 4. Quality Protein Maize 5. Integrated Pest Management 6. Rathindra KVK, Birbhum- at A Glance	Rathindra KVK	06 (Six) [01 Copy for each Title]	-
TOTAL			34	

❖ **Publications by the Rathindra KVK Scientists in 2014-15**

Item	Title	Authors' Names	Number	Circulation
Research paper	<p>1. <i>Studies on Screening and Histochemical Localisation of Phytochemicals in the Medicinal Plant Barleria lupulina Lindl.</i>, Published in the International Journal of Pharmaceutical Development & Technology (e ISSN – 2248 – 910X; Print ISSN – 2248), Vol. – 4, No. – 2, 2014, Page No. – 95 – 97.</p> <p>2. <i>A Review Work on Origin and History, Botanical Description and Agro-Technology of the Medicinal Plant Sinduri (Bixa orellana L.)</i>, published in the International Research Journal of Natural and Applied Sciences (ISSN – 2349 – 4077), Vol. – 1, Issue – 6, November, 2014, Page No. 27 – 32.</p> <p>3. <i>Efficacy evaluation of Baulinia variegata L. stem bark powder as adjunct therapy in chronic Staphylococcus aureus mastitis in goat</i>, published in Pharmacognosy Magazine, Vol. – 10, Issue – 39, 2014, Page No. – S 12 – S 18.</p> <p>4. <i>Disposition kinetics of Sparfloxacin under different pathological condition in Black Bengal Goat following single intravenous administration, Indian Journal of Animal Sciences</i>, Vol. – 84, No. 8, August, 2014, Page No. 833 – 838.</p>	<p>1. Sudipa Mandal and Subrata Mandal</p> <p>2. Dr. Sudipa Nag and Dr. Subrata Mandal</p> <p>3. Jeevan Ranjan Dash, Tapas Kumar Sar, Indranil Samanta, Subodh Pal, Madhuchanda Khan, Nimai Charan Patra, Uttam Sarkar, Asit Kumar Maji and Tapan Kumar Mandal</p> <p>4. Abul Hasan Md. Abidur Rahaman, Madhuchanda Khan and Tapan Kumar Mandal</p>	04 (Four)	-
Seminar/conference / symposia papers	1. <i>Imbalance in Fertilizer Application in India and the Role to be Played by the Indian Agricultural Extension Agencies; published and presented in the National Conference on Indigenous Innovation and Foreign Technology Transfer in Fertilizer Industry: Needs, Constraints and Desired Simplification</i> , organized by the Society for Fertilizers and Environment and Raman Centre for Applied and	1. Prabuddha Ray, Subrata Mandal and Dulal Chandra Manna	05 (Five)	-

	<p>Interdisciplinary Sciences in collaboration with ICAR-Central Research Institute for Jute and Allied Fibres (CRIJAF) and FICCI (-India Innovation Growth Programme) at the ICAR-CRIJAF, Nilgunj, Barrackpore, Kolkata, West Bengal – 700120 on 17.01.2015, Paper Code P – 13, Page No. – 45 – 46 of Book of Abstracts.</p> <p>2. <i>Simplification of Balanced Fertilization in Summer Paddy Cultivation under Lateritic Soil</i>; published and presented in <i>the National Conference on Indigenous Innovation and Foreign Technology Transfer in Fertilizer Industry: Needs, Constraints and Desired Simplification</i>, organized by the Society for Fertilizers and Environment and Raman Centre for Applied and Interdisciplinary Sciences in collaboration with ICAR-Central Research Institute for Jute and Allied Fibres (CRIJAF) and FICCI (-India Innovation Growth Programme) at the ICAR-CRIJAF, Nilgunj, Barrackpore, Kolkata, West Bengal – 700120 on 17.01.2015, Paper Code P – 18, Page No. – 48 – 49 of Book of Abstracts.</p> <p>3. <i>Communication and Knowledge Sharing in Watershed Management – Some Thoughts</i>, published in the <i>Electronic Full Proceedings of the 10th. All India People’s Technology Congress</i> organized by the Forum of Scientists, Engineers & Technologists (FOSET) at the Rajabazar Science College Campus, Calcutta University, Kolkata from 6th. February, 2015 to 7th. February, 2015, Serial No. 10, Paper Code No. – 010-AGB-03 of Sub-congress: Agriculture & Bio-Technology.</p> <p>4. <i>MGNREGS – The Road Ahead</i>, published in the <i>Electronic Full Proceedings of the 10th. All India People’s Technology Congress</i> organized by the Forum of Scientists, Engineers & Technologists (FOSET) at the Rajabazar Science College Campus, Calcutta University, Kolkata from 6th. February, 2015 to 7th. February, 2015, Serial No. 14, Paper Code No. – 014-AGB-05 of Sub-congress: Agriculture & Bio-Technology.</p> <p>5. <i>Popularizing Grape Cultivation and Wine Production in India- Some Relevant Issues</i>, published in <i>National Symposium on “Food and Nutrition: Need for the Future”</i> organized by the THE AGRICULTURAL SOCIETY OF INDIA, Department of Agronomy, Institute of Agricultural Science, University of Calcutta, 35 Ballygaunge Circular Road, Kolkata-700019 during 25-27 February, 2015 at the Institute of Agricultural Science, 51/2, Hazra Road, Kolkata-700019 in the Session – IV Horticulture and nutrient impact, post-harvest technology and value addition on February 26, 2015 at 12 noon.</p>	<p>2. Subrata Mandal, Prabuddha Ray and Dulal Chandra Manna</p> <p>3. Dr. Prabuddha Ray and Prof. Sarthak Chowdhury</p> <p>4. Dr. Prabuddha Ray and Prof. Sarthak Chowdhury</p> <p>5. Dr. Prabuddha Ray and Prof. Sarthak Chowdhury</p>		
Books	-	-	-	-
Bulletins	-	-	-	-
News letter	-	-	-	-
Popular Articles	-	-	-	-

Book Chapter	<p>1. Chapter (No. 17) titled, <i>“Fish Based Integrated Farming System – A New Approach to Farming in the Red Lateritic Zone of Birbhum District;</i>; In Prof. Pranab Kumar Chattopadhyay edited <i>“Growth and Diversification – Aspects of Rural Development”</i>, 2014, ISBN No. 978-93-81274-78-1, New Delhi Publishers, New Delhi, in the Year 2014, Page No. – 219 – 226.</p> <p>2. Chapter (No. 19) titled, <i>“Influence of the Socio-Personal Traits of the Vegetable Growers on their Knowledge Index regarding the Judicious Use of Pesticides in Brinjal Cultivation”</i>; In Prof. Pranab Kumar Chattopadhyay edited <i>“Growth and Diversification – Aspects of Rural Development”</i>, 2014, ISBN No. 978-93-81274-78-1, New Delhi Publishers, New Delhi, in the Year 2014, Page No. – 253 – 265.</p> <p>3. Chapter (No. 23) titled, <i>“Krishi Vigyan Kendras (KVKs) in the context of Agricultural Research and Extension System – An Assessment”</i>; In Prof. Pranab Kumar Chattopadhyay edited <i>“Growth and Diversification – Aspects of Rural Development”</i>, 2014, ISBN No. 978-93-81274-78-1, New Delhi Publishers, New Delhi, in the Year 2014, Page No. – 297 – 313.</p> <p>4. <i>“Phytochemical, diversified application, yield and market trend of medicinal plant, Sinduri (Bixa orellana L.) – a review”</i>; In P. S. Munsu, S. K. Ghosh, N. Bhowmick and P. Dev edited <i>“Innovative Horticulture”</i>, New Delhi Publishers, New Delhi, Page No. – 85 – 92.</p>	<p>1. Prabuddha Ray, Subrata Mandal, Krishna Mitra and Dulal Chandra Manna</p> <p>2. Sarthak Chowdhury and Prabuddha Ray</p> <p>3. Sarthak Chowdhury and Prabuddha Ray</p> <p>4. Sudipa Nag and Subrata Mandal</p>	04 (Four)	-
Extension Pamphlets/ literature	<p>1. Conservation and Revitalization of Traditional Paddy Varieties (<i>Dhaner Deshiya Jater Sangrakshan abong Punarajibbom</i>)</p> <p>2. Easy Technology for Azolla Cultivation (<i>Azolla Chasher Sahaj Prajukti</i>)</p> <p>3. Fish Feed Preparation and Application (<i>Macher Paripurak Khabar Prastuti abong Prayog</i>)</p> <p>4. Important Infectious Diseases of Domestic Animals and Its Prophylactic Vaccination (<i>Grihapalit Pashu Pakhir Guratwapurna Sankkramak Rog abong Tar Pratishedhak Tikakaran</i>)</p> <p>5. Integrated Pest Management Practices of Oilseed Crops (<i>Sushanghata Upaye Taila Bijer Rog Poka Niyantran</i>)</p> <p>6. Integrated pest Management Practices of Potato Crops (<i>Sushanghata Upaye Aloor Rog Poka Niyantran</i>)</p> <p>7. Mushroom Cultivation Technology (<i>Sahaj Paddhatitey Mushroom Chash</i>)</p>	<p>Dr. Subrata Mandal</p> <p>Dr. Krishna Mitra</p> <p>Dr. Madhuchhanda Khan</p> <p>Sri Sourav Mondal</p>	15 (Eleven)	1500 (One thousand five hundred)

	<p>8. Child Nutrition and Health (Up-to 1 Year) [<i>Shishur Pushti abong Sasthya (Janma Thekey 1 Batsar Parjanta)</i>]</p> <p>9. Processing of Vegetables and Fruits (<i>Sabji abong Phaler Prakriyakaran</i>)</p>	Smt. Ruma Addy		
	<p>10. Rathindra Krishi Vigyan Kendra – A Unique Journey Since 1994</p> <p>11. Rathindra Krishi Vigyan Kendra – Glimpses of Activities</p> <p>12. Farmers’ Interest Group – A New Path of Agricultural Development [<i>Krishi Unnayaner Natun Path – Sadharan Sarthabahi Krishak Gosthi – Farmers’ Interest Group (FIG) Gathan</i>]</p> <p>13. Preparation for Fighting Natural Disasters for Saving Lives and Properties (<i>Prakitik Biparjoy Mokabilay Prastut Hon – Jibon abong Sampatti Raksha Karun</i>)</p> <p>14. Enlist Names in Farmers Portal for Inclusion in the New Horizon of Agricultural Development (<i>Krishak Potaley Naam Nathibhukta Karan – Krishi Unnayaner Natun Digantey Samil Hon</i>)</p> <p>15. Protection of Plant Varieties and Farmers’ Rights Act – 2001 (<i>Phasaler Jat oo Krishaker Adhikar Sankrakshan Aain – 2001 abong Krishaker Adhikar</i>)</p>	Dr. Prabuddha Ray		
Reports published in ICAR Reporters	1. “Improved Cultivation Practices of Elephant Foot Yam” [“Zimiikand Ki Kheti Ki Unnat Bidhi: Eak Safal Pahel”], <i>Krishi-Poorbi Kiran, No. 1, 2015, pp. 44 – 49, ICAR-ATARI, Kolkata.</i>	Dulal Chandra Manna and Prabuddha Ray	01 (One)	-
Technical reports	<p>1. Annual Progress Report (April, 2013 – March, 2014) of Rathindra KVK</p> <p>2. A Brief Report for April, 2013 to March, 2014 of Rathindra KVK</p> <p>3. Status of the Rathindra KVK, Palli Siksha Bhavana, Visva-Bharati, Sriniketan, Dist. – Birbhum, Pin. – 731236 (West Bengal)</p> <p>4. Action Taken Report (ATR) regarding Current Weather Situation for the Months of June to September, 2014</p> <p>5. Improved Method of Elephant’s Foot Yam Cultivation: A Successful Initiative taken up by the Rathindra KVK, Birbhum</p> <p>6. Swachh Bharat” Campaign organized by Rathindra Krishi Vigyan Kendra, Palli Siksha Bhavana, Visva-Bharati, Sriniketan Birbhm from 25th Sept,2014 to 2nd Oct,2014</p> <p>7. Report of Organic Farming</p>	Rathindra KVK	17 (Seventeen)	Among all the concerned

	<p>8. Report of Resource Generation and Revenue Generation of Rathindra KVK, Birbhum</p> <p>9. Annual Report on Extension Activities of Rathindra KVK for 2013 – 2014</p> <p>10. Information on 1000 Progressive Farmers for Messaging</p> <p>11. Submission of Report on Training on PPV & FR Act – 2001</p> <p>12. Report on FAI-APP-Soil Health Enhancement Programme through Balanced Fertilisation-2013-14 through A 3 Plot Demonstrations On Summer Paddy 2014</p> <p>13. Report on Approaching Rural Schools for Imparting Elementary Knowledge of Agriculture</p> <p>14. Report on Organizing Campaign for Prevention of Swine Flu</p> <p>15. Report on Visit of Prof. Bromley to Rathindra Krishi Vigyan Kendra</p> <p>16. Report on Visit of Prof. Kasturirangan to Rathindra KVK</p> <p>17. Significant Interventions of Rathindra KVK</p>			
Electronic Publication (CD/DVD etc.)	1. <i>Preservation and Value Addition of Fruits and Vegetables</i>	Rathindra KVK	01 (One)	-
TOTAL			47	

❖ **Publications by the Rathindra KVK Scientists in 2015-16**

Item	Title	Authors' Names	Number	Circulation
Research paper	1. "Importance of Ekangi (<i>Kaempferia galanga</i> L.) as Medicinal Plants – A Review", <i>International Journal of Innovative Research and Review (Online ISSN No. 2347-4424)</i> , 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", <i>Agro Economist - An International Journal (Print ISSN No. 2350-0786 and Online ISSN No. 2394-8159)</i> , 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", <i>International Journal of Social Science (Print ISSN No. 2249-6637 and Online ISSN No. 2321-5771)</i> , Vol. 4, No. 2 & 3, June & September, 2015, pp. 201 – 215.	Prabuddha Ray and Sarthak Chowdhury,		-

	<p>4. "Kisan Call Centre - A New Vista for Indian Agricultural Extension System", <i>International Journal of Social Science (Print ISSN No. 2249-6637 and Online ISSN No. 2321-5771)</i>, Vol. 4, No. 2 & 3, June & September, 2015, pp. 171 – 183.</p> <p>5. "Determination of Transplanting Time of the Capsicum Seedlings for Yield and Profit Maximization", <i>International Journal of Bioresource Science (ISSN No. 2347-9655)</i>, Vol. 2, Issue 2, July, 2015, pp. 71 – 80.</p> <p>6. "Knowledge Gain Profile of the Elephant Foot Yam Growers – A Study among the Trainees of RKV, Birbhum", <i>Indian Agriculturist (ISSN No. 0019-4336)</i>, Vol. 59, No. 1, 2015, pp. 47 – 53.</p> <p>7. "Growth Attributes of Kharif Onion (<i>Allium cepa</i> L.) as Influenced by Combination of Organic and Inorganic Nutrients", <i>Hort Flora Research Spectrum</i>, Vol. 4, No. 3, September, 2015, pp. 289 – 290.</p> <p>8. "Economic Liberalization and Agricultural Policies in the Context of Planning", <i>Economic Affairs (Print ISSN No. 0424-2513 and Online ISSN No. 0976-4666)</i>, Vol. 60, No. 3, September, 2015, pp. 505 – 515.</p>	<p>Dr. Prabuddha Ray and Prof. Sarthak Chowdhury</p> <p>Dulal Chandra Manna and Prabuddha Ray</p> <p>Dr. Prabuddha Ray and Prof. Sarthak Chowdhury</p> <p>Joydip Mandal, Arun Sharma and Subrata Mandal</p> <p>Dr. Prabuddha Ray and Prof. Sarthak Chowdhury</p>		
<p>Seminar/conference / symposia papers</p>	<p>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.</p> <p>2. "Assessment of Nutrient Combination emphasizing Phosphorus on Summer Blackgram Cultivation under Lateritic Soil of Birbhum", <i>Book of Abstracts of the National Seminar on Soil Health: Key to Sustainable Agriculture</i>, 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.</p> <p>3. "Participatory Message Development for Short Text Messaging (SMS) – A New Tool for Reaching the Client", <i>Book of Abstracts of the National Seminar on Health, Education and Women Empowerment</i>, 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.</p> <p>4. "Improved Method of Elephant's Foot Yam Cultivation: A Successful Initiative taken up by the Rathindra KVK for Economic Stabilization of the Farmers", <i>Book of Abstracts of the National Seminar on Family Farming Challenges and Opportunities</i>, organized by the Department of Agricultural Extension, Agricultural Economics and Agricultural Statistics, Palli Siksha</p>	<p>Subrata Mandal, Sourav Mondal and D. C. Manna</p> <p>Subrata Mandal, Sourav Mondal, Prabuddha Ray and D. C. Manna</p> <p>Dr. Prabuddha Ray and Prof. Sarthak Chowdhury</p> <p>Prabuddha Ray, Subrata Mandal and Dulal Chandra Manna</p>	<p>06 (Six)</p>	<p>-</p>

	<p>Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum from 5th. March – 6th. March, 2016.</p> <p>5. “Inclusive Innovation: A Shift in Innovation Paradigms for reaching the Un-reached Farmers”, <i>Book of Abstracts of the National Seminar on Family Farming Challenges and Opportunities</i>, 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.</p> <p>6. “Crop Insurance in India: A Historical Transverse and Issues related to Extension Efforts for Resource Poor Farmers”, <i>Book of Abstracts of the National Seminar on Family Farming Challenges and Opportunities</i>, 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.</p>	<p>Prabuddha Ray and Sarthak Chowdhury</p> <p>Prabuddha Ray and Sarthak Chowdhury</p>		
Books	-	-	-	-
Bulletins	-	-	-	-
News letter	-	-	-	-
Popular Articles	<p>1. “Dhan Chashey Anu-Sar Prayog (Micro-Nutrient Application in Paddy)”, <i>Chasher Disha, South Bengal Edition, Ananda Bazar Patrika</i>, Page No. -18, 1st. July, 2015.</p> <p>2. “Matir Sasthya Card (Soil Health Card)”, <i>Chasher Disha, South Bengal Edition, Ananda Bazar Patrika</i>, Page No. -14, 2nd. December, 2015.</p> <p>3. “Sonalika Cherey Natun Gamer Chash (Replacing Sonalika Wheat Variety with New Varieties)”, <i>Chasher Disha, South Bengal Edition, Ananda Bazar Patrika</i>, Page No. - 20, 30th. December, 2015.</p> <p>4. “Aaloor Nabi Dhasa Abong Gora Pacha (Early Blight and Rot in Potato)”, <i>Chasher Disha, South Bengal Edition, Ananda Bazar Patrika</i>, Page No. -18, 28th. January, 2016.</p> <p>5. “Basantey Moong abong Kalai – er Chash (Cultivation of Green Gram and Black Gram in Spring)”, <i>Chasher Disha, South Bengal Edition, Ananda Bazar Patrika</i>, Page No. -18, 30th. January, 2016.</p>	<p>Subrata Mandal</p> <p>Subrata Mandal</p> <p>Subrata Mandal</p> <p>Subrata Mandal</p> <p>Subrata Mandal</p>	05 (Five)	-

Book Chapter	<p>1. "Improved Method of Elephant's Foot Yam Cultivation: A Successful Initiative taken up by the Rathindra KVK for Economic Stabilization of the Farmers", <i>Family Farming Challenges and Opportunities [ISBN No. 978-93-85502-22-4]</i>, 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.</p> <p>2. "Inclusive Innovation: A Shift in Innovation Paradigms for reaching the Un-reached Farmers", <i>Family Farming Challenges and Opportunities [ISBN No. 978-93-85502-22-4]</i>, 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.</p> <p>3. "Crop Insurance in India: A Historical Transverse and Issues related to Extension Efforts for Resource Poor Farmers", <i>Family Farming Challenges and Opportunities [ISBN No. 978-93-85502-22-4]</i>, 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.</p>	<p>Prabuddha Ray, Subrata Mandal and Dulal Chandra Manna</p> <p>Prabuddha Ray and Sarthak Chowdhury</p> <p>Prabuddha Ray and Sarthak Chowdhury</p>	03 (Three)	-
Extension Pamphlets/ literature	<p>1. Improved Cultivation of Ber (<i>Kuler Chash</i>)</p> <p>2. Improved Package of Practices of Mango (<i>Aam Chash</i>)</p> <p>3. Improved Cultivation Practices of Arum (<i>Kachu Chash</i>)</p> <p>4. Improved Package of Practices of Drum Sticks (Year round) (<i>Barmeshey Sajney Chash</i>)</p> <p>5. Improved Cultivation Practices of Capsicum, Broccoli, Brussels' Sprout (<i>Capsicum, Broccoli, Brussels' Sprout – Er Chash</i>)</p> <p>6. Improved Package of Practices of Coconut (<i>Narkel Chash</i>)</p> <p>7. Processing and Value Addition of Sweet Potato (Misthi Aloor Prakriyajakaran)</p> <p>8. Production of "Mora" through Cottage Industries (Basat Baritey Mora Tairi)</p> <p>9. Improved Cultivation Practices of Pulses: More Profit and Conservation of Soil Health (<i>Unnat Prathay Dal Chash: Adhik Labh Abong Matir Sasthya Raksha</i>)</p> <p>10. Intercultural Operations of Mustard (<i>Sarsher Antartartikalin Paricharya</i>)</p> <p>11. Technology for Improving Productivity of Acid Soils (<i>Amla Matir Utpadanshilata Baranor Prajukti</i>)</p> <p>12. Preliminary Phase of Wheat Cultivation (<i>Gom Chasher Prathamik Parjay</i>)</p>	<p>Dr. Dulal Chandra Manna</p> <p>Smt. Ruma Addy</p> <p>Dr. Subrata Mandal</p>	16 (Sixteen)	4000 (Four thousand)

	13. Phospho-compost for Conservation of Soil Health: A Phosphorus rich Organic Fertilizer (<i>Matir Swasthyarakshay Phospo-compost: Eaikti Phosphorus Samriddha Jaiba</i>)			
	14. Mono Culture of Thailand Koi Fish (Thailand Koi Macher Ekak Chash Prajukti)	Dr. Krishna Mitra		
	15. Good Agricultural Practices (GAP): A Concept Note (<i>Uttam Krishi Paddhati: Eaikti Dharanapatra</i>)	Dr. Prabuddha Ray		
	16. Artificial Insemination (AI) of Cows and Some Relevant Information (<i>Gavir Krittim Projanan Abong Sei Sankranta Kichu Tathya</i>)	Dr. Madhuchhanda Khan		
Technical reports	<p>1. Annual Progress Report (April, 2013 – March, 2014) of Rathindra KVK</p> <p>2. Report on Feedback from Farmers Relating to Technology Implementation by the Rathindra Krishi Vigyan Kendra</p> <p>3. Report on the Training Programme on “Creation of Awareness Among the Farmers and Other Stakeholders about the Provisions of PPV & FR Act – 2001”</p> <p>4. Report on the Participation of the Rathindra Krishi Vigyan Kendra in the Especial Agriculture and Related Sector Campaigns of Govt. of West Bengal</p> <p>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</p> <p>6. Introduction of Giant Prawn (<i>Macrobrachium rosenbergii</i>) as A New Component of Composite Fish Culture in Birbhum District, West Bengal: A Successful Intervention by the Rathindra KVK, Birbhum</p> <p>7. Crop Diversification through Cultivation of Broccoli: A Successful Intervention by the Rathindra KVK, Birbhum</p> <p>8. Crop Diversification through Introduction of Commercial Cultivation of All the Year Round Drumstick: A Successful Intervention by the Rathindra KVK, Birbhum</p> <p>9. Report on the “SWACHH BHARAT ABHIYAN” from 22nd. June, 2015 to 26th. June, 2015</p> <p>10. Report on the “Swachhta Abhiyan (National Cleanliness Campaign)”, organized by Rathindra Krishi Vigyan Kendra from 3rd. October, 2015 to 11th. October, 2015</p> <p>11. Folk Songs related to Agriculture and Allied Sectors Collected by the Rathindra KVK, Birbhum, West Bengal</p>	Rathindra KVK	Twenty seven (27)	Among all the concerned.

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

❖ **Publications by the Rathindra KVK Scientists in 2016-17**

Item	Title	Authors' Names	Number	Circulation
Research paper	1. "Comparative Performance of Vanaraja, RIR and Indigenous Birds under Back Yard System of rearing in Birbhum district of West Bengal", Accepted for Publication in the Indian Journal of Poultry Science, CARI in the December, 2016 issue (Paper ID MSID, 97/2016).	M. Khan, D. C. Manna, S. K. Mondal, J. K. Chatterjee and S. K. Pyne	01 (One)	-
Seminar/conference / symposia papers	1. "Front Line Demonstration on Lentil using Improved Varieties WBL -- 58 and WBL -- 77 for Increasing Productivity under lateritic Soil of Birbhum, West Bengal", at the <i>National Conference on Bringing Self-Sufficiency in Pulses for Eastern India</i> , organized by the Bihar Agricultural University, Sabour, Bhagalpur, Bihar -- 813210, India in collaboration with the Indian Society of Pulses Research and Development (ISPRD), Indian Council of Agricultural Research (ICAR) -- Indian Institute of Pulses Research (IIPR), Kanpur, Uttar Pradesh -- 208024, India at the Bihar Agricultural University Campus, Sabour, Bhagalpur, Bihar from 5 th . August to 6 th . August, 2016. 2. "Extension Paradigm Fine-tuning for Ensuring Higher Production and Productivity of Lentil in Birbhum District, West Bengal", <i>Souvenir and Abstract of the National Conference on Bringing Self-Sufficiency in Pulses for Eastern India (ISBN No. 978-93-85516-73-3)</i> , organized by the Bihar Agricultural University, Sabour, Bhagalpur, Bihar -- 813210, India in collaboration with the Indian Society of Pulses Research and Development (ISPRD), Indian Council of Agricultural Research (ICAR) -- Indian Institute of Pulses Research (IIPR), Kanpur, Uttar Pradesh -- 208024, India at the Bihar Agricultural University Campus, Sabour, Bhagalpur, Bihar from 5 th . August to 6 th . August, 2016, Paper Code -- OP-05, pp. 210 --211. 3. "Importance of Drumstick (moringa olifera L.) as a wonder Tree with Different Medicinal Use -- A Review", Published in the Proceedings of UGC Sponsored National Seminar on Plants, the Natural Wonder: Issues and Concerns, organized by Sonamukhi College, Bankura, 4 th . -- 5 th . October, 2016. 4. "Importance of Roof Top Kitchen Garden for Supply of Fresh Vegetables, Nutrition, Environment and Entertainment to Urban People -- A Review", Published in the Proceedings of UGC Sponsored National Seminar on Food Security and Urbanization Equilibrium: A Sustainable System Approach, organized by Birbhum Mahavidyalaya, Suri, Birbhum, 22 nd . -- 23 rd . November, 2016. 5. "Fishery based Integrated Farming System (IFS) -- An Experience of Rathindra Krishi Vigyan Kendra, Birbhum, West Bengal ", Published and presented at the International Symposium on "ECO -- EFFICIENCY IN AGRICULTURE & ALLIED RESEARCH (EEAAR 17)" organizing by Crop	Subrata Mandal, Prabuddha Ray, Sourav Mondal and D. C. Manna Dr. Prabuddha Ray and Prof. Sarthak Chowdhury Sudipa Nag and Subrata Mandal Subrata Mandal and Sudipa Nag Dr. Prabuddha Ray, Dr. Subrata Mondal , Dr. Krishna Mitra and	08 (Eight)	-

	<p>and Weed Science Society (CWSS), Bidhan Chandra KrishiViswavidyalaya (BCKV) at Farmers' Academy & Convention Centre (FACC), BCKV, Kalyani, Nadia, West Bengal, India during January 20-23, 2017.</p> <p>6. "Digitization of Agriculture and Allied Sectors in the Developing Countries in the Context of Eco-Efficiency", Published and presented at the International Symposium on "ECO – EFFICIENCY IN AGRICULTURE & ALLIED RESEARCH (EEAAR 17)" organizing by Crop and Weed Science Society (CWSS), Bidhan Chandra KrishiViswavidyalaya (BCKV) at Farmers' Academy & Convention Centre (FACC), BCKV, Kalyani, Nadia, West Bengal, India during January 20-23, 2017.</p> <p>7. "Performance of Khaki Campbell Duck and Effect of Duck Manuring in Integrated Fish-cum-Duck farming System Of Birbhum District of west Bengal", Published and presented in the 1st. International Conference on "Bio-Resource, Environment and Agricultural Sciences (ICBEAS)" organized by and held at Palli-Siksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum from 4th February, 2017 to 6th. February, 2017.</p> <p>8. "Performance of Green Gram and Black Gram under FLD Programmes in Lateritic Soil of West Bengal", published and presented in the National Seminar on "Maximizing fertilizer use efficiency and environmental health for posterity" on the occasion of the 4th. Annual Convention of the Society for Fertilizers and Environment held on March 8th., 2017 at the Integrated Rural Development and Management Faculty Centre at Narendrapur in collaboration with our Sasya Shyamala Krishi Vigyan Kendra, Ramakrishna Mission Vivekananda University, Narendrapur and organized by the Society for Fertilizer and Environment.</p>	<p>Dr. Madhuchhanda Khan</p> <p>Dr. Prabuddha Ray</p> <p>M. Khan, K. Mitra, S. K. Mondal, P. Chatterjee, J. K. Chatterjee and S. K. Pyne</p> <p>Subrata Mandal, Prabuddha Ray, Sourav Mondal and Palash Ankure</p>		
Books	-	-	-	-
Bulletins	-	-	-	-
News letter	-	-	-	-
Popular Articles	<p>1. "Jaldi Jawab in Bansh Chash (Question and Answers on Bamboo Cultivation)" in Ananda Bazar Patrika, South Bengal Edition, April 6th., 2016.</p> <p>2. "Jaldi Jawab in Suryamukhir Chash (Question and Answers on Sunflower Cultivation)" in Ananda Bazar Patrika, South Bengal Edition, April 20th., 2016.</p> <p>3. "Jaldi Jawab in Lime and Lemon (Question and Answers on Lime and Lemon)" in Ananda Bazar Patrika, South Bengal Edition, June 1st., 2016.</p> <p>4. "A Report on Krishi Mela and Advantages of Fasal Beema Yojona" in Anandabazar Patrika, South Bengal Edition, 8th. June, 2016.</p> <p>5. "Uchu Jamitey Kalo Kalai (Black Gram Cultivation in Up-Land)" in</p>	<p>Dr. Subrata Mandal</p> <p>Dr. Subrata Mandal</p> <p>Dr. Subrata Mandal</p> <p>Dr. Prabuddha Ray</p> <p>Dr. Subrata</p>	12 (Twelve)	-

	<p>Ananda Bazar Patrika, South Bengal Edition, July 27th.., 2016.</p> <p>6. “Rathindra Krishi Vigyan Kendrer Udoyegey Swadinata Dibas Udjapan (Celebration of Independe Day by Rathindra Krishi Vigyan Kendra)” in Panchayat Ooo Aamra, September 15th.., 2016.</p> <p>7. “Azolla – Sar Ooo Go Khyadya (Azolla as Bio-Fertilizer and Cattle Fodder)” in Ananda Bazar Patrika, South Bengal Edition, October 19th., 2016.</p> <p>8.“Dal Beej Chash Korey Labher Aasha Chasider (Hope of profit from cultivation of Pulses)” in Ananda Bazar Patrika, South Bengal Edition, November 11th.., 2016.</p> <p>9. “Biswa Mrittika Dibas Ooo Mati Pariksha (Internation Soil Day and Analysis of Soil)” in Ananda Bazar Patrika, South Bengal Edition, December 05th.., 2016.</p> <p>10. “Pradhan Mantri fasal Beema Yoajanar upor Prashikshan Shibir (Training Camp on Pradhan Mantri Fasal Beema Yojana)” in Ananda Bazar Patrika, South Bengal Edition, December 6th., 2016.</p> <p>11. “Patit Jami Byabahar Korey Dal Chasher Safalata (Successful Pulse Cultivation in Degraded Lands)” in Panchayat Ooo Aamra, December 15th.., 2016.</p> <p>12. “A Report: Advice in Rabi Pulse and Oilseed Cultivation by RKVK” in Ananda Bazar Patrika, South Bengal Edition, February 28th., 2017.,</p>	<p>Mandal</p> <p>Dr. Prabuddha Ray and Smt. Sumana Majumder</p> <p>Dr. Subrata Mandal</p> <p>Dr. Subrata Mandal</p> <p>Dr. Subrata Mandal</p> <p>Dr. Prabuddha Ray</p> <p>Dr. Subrata Mandal</p> <p>Dr. Subrata Mandal</p>		
Book Chapter	<p>1. “Improved Method of Elephant’s Foot Yam Cultivation: A Successful Initiative taken up by the Rathindra KVK for Economic Stabilization of the Farmers”, <i>Family Farming Challenges and Opportunities [ISBN No. 978-93-85502-22-4]</i>, 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.</p> <p>2. “Inclusive Innovation: A Shift in Innovation Paradigms for reaching the Un-reached Farmers”, <i>Family Farming Challenges and Opportunities [ISBN No. 978-93-85502-22-4]</i>, 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.</p> <p>3. “Crop Insurance in India: A Historical Transverse and Issues related to Extension Efforts for Resource Poor Farmers”, <i>Family Farming Challenges and Opportunities [ISBN No. 978-93-85502-22-4]</i>, 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.</p> <p>4. “Pluralistic extension in new age India – enhancing efficiencies of Krishi Vigyan Kendras (KVKs)”, <i>Development and Diversification – Aspects of Rural Development [ISBN No. 978-93-85502-27-9]</i>, edited by Pranab Kumar Chattopadhyay and Daya Shankar Kushwaha, Renu Publishers, New Delhi, 2016, pp. 49 – 59.</p>	<p>Prabuddha Ray, Subrata Mandal and Dulal Chandra Manna</p> <p>Prabuddha Ray and Sarthak Chowdhury</p> <p>Prabuddha Ray and Sarthak Chowdhury</p> <p>Prabuddha Ray and Sarthak Chowdhury</p>	06 (Six)	-

	<p>5. "Organic farming – the challenges ahead", <i>Development and Diversification – Aspects of Rural Development [ISBN No. 978-93-85502-27-9]</i>, edited by Pranab Kumar Chattopadhyay and Daya Shankar Kushwaha, Renu Publishers, New Delhi, 2016, pp. 61 – 69.</p> <p>6. "Participatory Message Development for Short Text Messaging (SMS): A New Tool for reaching the Client", <i>Rural Health, Women Empowerment and Agriculture – Issues and Challenges [ISBN No. 978-93-85503-40-5]</i>, edited by Pranab Kumar Chattopadhyay and Daya Shankar Kushwaha, New Delhi Publishers, New Delhi, 2016, pp. 317 – 326.</p>	<p>Sarthak Chowdhury and Prabuddha Ray</p> <p>Prabuddha Ray and Sarthak Chowdhury</p>		
Extension Pamphlets / literature	<p>1. Improved Cultivation of Ber (<i>Kuler Chash</i>)</p> <p>2. Improved Package of Practices of Mango (<i>Aam Chash</i>)</p> <p>3. Improved Cultivation Practices of Arum (<i>Kachu Chash</i>)</p> <p>4. Improved Package of Practices of Drum Sticks (Year round) (<i>Barmeshey Sajney Chash</i>)</p> <p>5. Improved Cultivation Practices of Capsicum, Broccoli, Brussels' Sprout (<i>Capsicum, Broccoli, Brussels' Sprout – Er Chash</i>)</p> <p>6. Improved Package of Practices of Coconut (<i>Narkel Chash</i>)</p>	Dr. Dulal Chandra Manna	27 (Twenty Seven)	4000 (Four thousand)
	<p>7. Processing and Value Addition of Sweet Potato (Misthi Aloor Prakriyajatakan)</p> <p>8. Production of "Mora" through Cottage Industries (Basat Baritey Mora Tairi)</p> <p>9. "Fal Sangrakshan" "Fruit Preservation"</p>	Smt. Ruma Addy		
	<p>10. Improved Cultivation Practices of Linseed (<i>Tishi Chasher Bigyansammata Prajukti</i>)</p> <p>11. Summer Green Gram Cultivation (<i>Grishmakalin Moong Chash</i>)</p> <p>12. Kharif Black Gram cultivation</p> <p>13. Preliminary Phase of Wheat Cultivation (<i>Gom Chasher Prathamik Parjay</i>)</p> <p>14. Phospho-compost for Conservation of Soil Health: A Phosphorus rich Organic Fertilizer (<i>Matir Swasthyarakshay Phospo-compost: Eaikti Phosphorus Samridha Jaiba</i>)</p>	Dr. Subrata Mandal		
	<p>15. Mono Culture of Thailand Koi Fish (Thailand Koi Macher Ekak Chash Prajukti)</p> <p>16. Fish Breeding and Allied Work (Macher Prajanan Abong Anushangik Kaaj)</p>	Dr. Krishna Mitra		
	<p>17. "Prakritik Biporjaya Mokabila" "Natural Disaster Management"</p>	Dr. Prabuddha Ray		
	<p>18. "Krishak Utpadak Sangsatha Gathan" "Formation of Farmers'</p>			

	<p>Producers' Organizations"</p> <p>19. "Swanirvar Dal Gathan" "Formation of Self Help Group"</p> <p>20. "Pradhan Mantri Fasal Beema Yojana" "Prime Minister's Crop Insurance Scheme"</p> <p>21. "Bibhinna Upayee Digital Payment" "Digital Payment Procedures"</p> <p>22. "Tathya Prajukti Oo Krishi" "Information and Communication Technologies in Agriculture and Allied Sectors"</p> <p>23. "Digital Bharat" "Digital India"</p> <p>24. "BHIM App Babyahar" "Application of BHIM App"</p>			
	<p>25. Important Infectious Diseases of Animals and their Vaccines (<i>Grihapalita Pashu Pakhir Gurutwapurna Sankramak Rog Abong Taar Pratishedhak Tika</i>)</p> <p>26. Primary Lessons Of Animal Health Management (<i>Prani Chikitsar Pratham Path</i>)</p>	Dr. Madhuchhanda Khan		
	<p>27. Crop Seed Treatment (<i>Beej Shodhon</i>)</p>	Sri Sourav Mondal		
Technical reports	<p>1. Annual Progress Report (April, 2015 – March, 2016) of Rathindra KVK</p> <p>2. Compilation of Five Thousand Farmers' Details of Birbhum District</p> <p>3. Report on the Training Programme on "Creation of Awareness Among the Farmers and Other Stakeholders about the Provisions of PPV & FR Act – 2001"</p> <p>4. Report on the Participation of the Rathindra Krishi Vigyan Kendra in the Especial Agriculture and Related Sector Campaigns of Govt. of West Bengal</p> <p>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</p> <p>6. Introduction of Giant Prawn (<i>Macrobrachium rosenbergii</i>) as A New Component of Composite Fish Culture in Birbhum District, West Bengal: A Successful Intervention by the Rathindra KVK, Birbhum</p> <p>7. Crop Diversification through Cultivation of Broccoli: A Successful Intervention by the Rathindra KVK, Birbhum</p> <p>8. Crop Diversification through Introduction of Commercial Cultivation of All the Year Round Drumstick: A Successful Intervention by the Rathindra KVK, Birbhum</p> <p>9. Successful Farmers and Farm Women attached to Rathindra KVK, Birbhum</p> <p>10. Report on the Cluster FLD of Rabi Pulses in 2015-16 organized by the</p>	Rathindra KVK	Sixteen (16)	Among all the concerned.

	Rathindra KVK			
	11. Report on the Cluster FLD of Rabi Oilseeds in 2015-16 organized by the Rathindra KVK			
	12. Report on the Cluster FLD of Kharif Pulses in 2016-17 organized by the Rathindra KVK			
	13. Report on the Cluster FLD of Kharif Oilseeds in 2016-17 organized by the Rathindra KVK			
	14. Report on the Demonstrations on Wheat Varieties supplied by the IARI, Pusa, Samastipur, Bihar			
	15. Feedback on cost norms of ASCI skill training programme			
	16. NFDB Training details			
Electronic Publication (CD/DVD etc)	-	-	-	-
TOTAL			Seventy (70)	

❖ **Publications by the Rathindra KVK Scientists in 2017-18**

Item	Title	Authors' Names	Number	Circulation
Research paper	1. "Performances of Green Gram and Black Gram under FLD Programmes in lateritic Soil of West Bengal, India", <i>Agricultural Extension Journal (Online ISSN No. 2521-0408), Vol. 1, Issue 3, 2017, pp. 81 – 87.</i>	Subrata Mandal, Prabuddha Ray, Sourav Mondal and Palash Ankure	08 (Eight)	-
	2. "Guiding Role to be played by the Indian Agricultural Extension Agencies to Bridge the Gaps in Fertilizer Application in India", <i>International Journal of Bioresource Science (Print ISSN No. 2347-9655 and Online ISSN No. 2454-9541), Vol. 4, No. 1, June, 2017, pp. 13 – 16.</i>	Prabuddha Ray		
	3. "Front line demonstration on lentil using improved varieties for increasing productivity under lateritic soil of West Bengal", <i>Legume Research (Print ISSN No. 0250-5371 and Online ISSN No. 0976-0571), Accepted for publication.</i>	Subrata Mandal, Prabuddha Ray, Sourav Mondal and Palash Ankure		
	4. "Pharmacokinetics of Amoxicillin in Broiler Chicken following a Single Oral Administration", <i>Indian Journal of Animal Health (Print ISSN No. 0019-5057), Vol. 56, No. 2, 2017, pp. 219 – 224.</i>	M. Khan and T. K. Mandal		
	5. "Effect of Amoxicillin on Haemato-biochemical Parameters in Poultry", <i>International Journal of Livestock Research (Online ISSN No. 2277-1964), Accepted for publication.</i>	M. Khan, V. K. Sarkar and T. K. Mandal		

	<p>6. "Chemical Weed Management in Kharif Black Gram under Lateritic Soil of West Bengal, India", Ecology, Environment and Conservation (Print ISSN No. 0971-765X), Vol. 23, No. 2, pp. 1032 – 1036.</p> <p>7. "Effect of Insecticide Application on Leaf Folder (<i>CnephalocrocismedinalisGuenee</i>) Incidence associated with Summer Paddy in Lateritic Soil", European Journal of Bio-Medical and Pharmaceutical Sciences (Online ISSN No. 2349-8870), Vol. 4, Issue 9, pp. 524 – 526.</p> <p>8. "Effect of Nutrient Sources particularly for Phosphorus in Growth and Productivity of Summer Black Gram under Lateritic Soil", Journal of Krishi Vigyan, Accepted for Publication</p>	<p>K. C. Teja, B. Duary, Subrata Mandal, Subhaprada Das, R. B. Mallick and M. Sudhir Kumar</p> <p>Sourav Mondal and Subrata Mandal</p> <p>Subrata Mandal and Sourav Mondal</p>		
<p>Seminar/conf erence / symposia papers</p>	<p>1."Standardizing the Methodologies for Environmental Impact Assessment: the Increased Need in Globalized Economies", <i>Abstracts of papers, Theme:- 4 (Management of major and secondary nutrients for sustainable soil health and crop production, Symposium – XI (Oral Presentation) of the National Seminar on "Nutrients and pollutants in soil-plant-animal-human Continuum for sustaining soil, food and nutritional security – way forward"</i>, organized by Bidhan Chandra Krishi Viswavidyalaya (BCKV) in collaboration with National Academy of Agricultural Sciences (NAAS), held at Lake Hall, BCKV, Kalyani, Abstracts of papers, Theme:- 4 (Management of major and secondary nutrients for sustainable soil health and crop production, Symposium – XI (Oral Presentation), on June 9th. – 10th., 2017, pp. 29.</p> <p>2. "Effect of Raw Azolla feeding as Feed Supplement of Rhode Island Red Chicken under Back Yard System of rearing in Birbhum District", Scientific Compendium and Souvenir of 125th. Anniversary of Bengal Veterinary College, Belgachia, Kolkata, organized by the West Bengal University of Animal and Fishery Science, Belgachia, Kolkata on January 3rd., 2018, Page No. – 76.</p> <p>3."Effect of Different Herbicides in Weed Management in Summer Black Gram under Lateritic Soil of West Bengal", Book of Abstracts, National Conference on Improving Income of Farmers through Agriculture and Aquaculture through Development Interventions, organized by the Society of Krishi Vigyan, Association of Aquaculturists and ICAR-CIFA, Bhubaneswar, Odisha at ICAR-CIFA, Bhubaneswar, Odisha held on January 5th. to 7th., 2017, Paper Code No. TARD – 28, Page No. 50.</p> <p>4. "Evaluation of Performance of Modified Earthen Pot Cool Chamber in Shelf Life of Vegetables in Lateritic Belt of West Bengal", Book of Abstracts, National Conference on Improving Income of Farmers through Agriculture and Aquaculture through Development Interventions, organized by the Society of Krishi Vigyan, Association of Aquaculturists and ICAR-CIFA, Bhubaneswar, Odisha at ICAR-CIFA, Bhubaneswar, Odisha held on January 5th. to 7th., 2017, Paper Code</p>	<p>Dr. Prabuddha Ray and Prof. Sarthak Chowdhury,</p> <p>Madhuchhanda Khan, Krishna Mitra and Ruma Addy</p> <p>Subrata Mandal, Sourav Mondal, Prabuddha Ray and Ruma Addy</p> <p>Ruma Addy, Subrata Mandal, Prabuddha Ray and Sourav Mondal</p>	<p>08 (Eight)</p>	<p>-</p>

	<p>No. PHMI - 12, Page No. 125.</p> <p>5. "Potentiality of Integration of Different Components under Fish based Farming System for increasing Farmers' Income", Book of Abstracts, National Conference on Improving Income of Farmers through Agriculture and Aquaculture through Development Interventions, organized by the Society of Krishi Vigyan, Association of Aquaculturists and ICAR-CIFA, Bhubaneswar, Odisha at ICAR-CIFA, Bhubaneswar, Odisha held on January 5th. to 7th., 2017, Paper Code No. AQ – 14, Page No. 149.</p> <p>6. "Situation of Farm Machineries in Birbhum District, West Bengal – Gaps To Be Filled-Up", Book of Abstracts of One Day National Seminar-cum-Panel Discussion on "Doubling Farmers' Income: Role of Agricultural Mechanization", organized by the Department of Agricultural Engineering, PalliSiksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, West Bengal, on January 29th., 2018, pp. 20.</p> <p>7. "Performance of Drum Seeder in Front Line Demonstration Programmes in Reducing Cost of Kharif Paddy Cultivation", Book of Abstracts of One Day National Seminar-cum-Panel Discussion on "Doubling Farmers' Income: Role of Agricultural Mechanization", organized by the Department of Agricultural Engineering, PalliSiksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, West Bengal, on January 29th., 2018, pp. 38.</p> <p>8. "Growth, Production and Reproductive Performance of Japanese Quails (<i>Coturnix coturnix Japonica</i>) reared in Deep Litter System", Book of Abstracts of One Day National Seminar-cum-Panel Discussion on "Doubling Farmers' Income: Role of Agricultural Mechanization", organized by the Department of Agricultural Engineering, PalliSiksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, West Bengal, on January 29th., 2018, pp. 43.</p>	<p>Krishna Mitra, Madshuchhanda Khan, Subrata Mandal and Ruma Addy</p> <p>Prabuddha Ray, Subrata Mandal, Sourav Mondal, Palash Ankure and Ganesh Das</p> <p>Subrata Mandal, Prabuddha Ray, Sourav Mondal and Palash Ankure</p> <p>Madhuchhanda Khan, Krishna Mitra, Prabuddha Ray and Ruma Addy</p>		
Books	<p>1. "A Guide Book for Training the Rural Youths", ISBN No. 978-93-85503-81-8, New Delhi Publishers, New Delhi.</p> <p>2. "Krishi Samprasaran Parisheba Pradan – Eakti Sahayak Pustak" (Providing Agriculture Extension Service – A Guide Book), Rathindra Krishi Vigyan Kendra, Palli Siksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum - 731236, West Bengal</p>	<p>Sarthak Chowdhury and Prabuddha Ray</p> <p>Dr. Prabuddha Ray</p>	02 (Two)	-
Bulletins	-	-	-	-
News letter	-	-	-	-
Popular Articles	-	-	-	-
Book Chapter	<p>1. "Extension Framework for Facilitating an Increase in Area, Production and Productivity of Lentil in Birbhum District, West Bengal", <i>Development and Empowerment – Challenges and Prospects [ISBN No. 978-93-86453-03-7]</i>, edited by Anik Institute of Management, Science and Technology, New Delhi Publishers, New Delhi, 2017, pp. 59 – 74.</p> <p>2. "Crop Diversification through Cultivation of Broccoli: A Successful</p>	<p>Prabuddha Ray and Sarthak Chowdhury</p> <p>Prabuddha Ray</p>	09 (Nine)	-

	<p>Intervention by the Rathindra KVK, Birbhum for Nutritional and Economic Security of the Farmers”, <i>Growth and Diversification in India’s Emerging Economy [ISBN No. 978-93-86453-06-8]</i>, edited by Pranab Kumar Chattopadhyay and Daya Shankar Kushwaha, New Delhi Publishers, New Delhi, 2017, pp. 115 – 122.</p> <p>3. “Elephant Foot Yam Cultivation made Profitable”, <i>Symbiosis of Success Pathways to Prosperity [ISBN No. 978-81-7164-175-8]</i>, edited by A. K. Singh, M. J. Chandre Gowda, Sreenath Dixit, Randhir Singh, D. V. Srinivas Reddy and B. T. Rayudu, Division of Agricultural Extension, Indian Council of Agricultural Research, New Delhi, 2017, pp. 51 – 52.</p> <p>4. “Importance of Drumstick (<i>Moringa olifera L.</i>) as a Wonder Tree with differential Medicinal Uses”, <i>Plants, the Natural Wonder: Challenges and Avenues [ISBN No. 978-93-85775-06-2]</i>, edited by Sunita Bandopadhyay, Dipak Kumar Hens and ParthaSarathi Dey, Damodar Group, Burdwan, 2017, pp. 60 – 66.</p> <p>5. “Importance of Roof-Top Kitchen Garden for Supply of Fresh Vegetables, Nutrition, Environment and Entertainment of Urban People – A Review”, <i>Food Security and Urbanization Equilibrium: A Sustainable Man System Approach [ISBN No. 978-93-81245-88-0]</i>, edited by Dr. Mohuya Sen, Ashadeep, Kolkata, 2017, pp. 226 – 236.</p> <p>6. “Introduction of Giant Prawn (<i>Macrobrachium rosenbergii</i>) as A New Component of Composite Fish Culture in Birbhum District, West Bengal: A Successful Intervention by the Rathindra KVK, Birbhum”, <i>Issues in Sustainable Development in India [ISBN No. 978-93-86453-44-0]</i>, edited by Pranab Kumar Chattopadhyay and Daya Shankar Kushwaha, New Delhi Publishers, New Delhi, 2018, pp. 37 – 46.</p> <p>7. “Situation of Farm Machineries in Birbhum District, West Bengal- Gaps to be Filled Up”, <i>Advance Technologies in Agriculture for Doubling Farmers' Income</i>, edited by Dr. P. Kandasamy and Dr. Kishore Chandra Swine, New Delhi Publishers, New Delhi (Accepted for Publication).</p> <p>8. “Drum Seeder Performance in Front Line Demonstration Programmes”, <i>Advance Technologies in Agriculture for Doubling Farmers' Income</i>, edited by Dr. P. Kandasamy and Dr. Kishore Chandra Swine, New Delhi Publishers, New Delhi (Accepted for Publication).</p> <p>9. “Growth, Production and Reproductive Performance of Japanese Quails (<i>Coturnix coturnix japonica</i>) reared in Deep Litter System”, <i>Advance Technologies in Agriculture for Doubling Farmers' Income</i>, edited by Dr. P. Kandasamy and Dr. Kishore Chandra Swine, New Delhi Publishers, New Delhi (Accepted for Publication).</p>	<p>and Dulal Chandra Manna</p> <p>Dulal Chandra Manna and Prabuddha Ray</p> <p>Sudipa Nag and Subrata Mandal</p> <p>Subrata Mandal and Sudipa Nag</p> <p>Prabuddha Ray, Sarthak Chowdhury and Krishna Mitra</p> <p>Prabuddha Ray, Subrata Mandal, Sourav Mondal, Palash Ankure and Ganesh Das</p> <p>Subrata Mandal, Prabuddha Ray, Sourav Mondal and Palash Ankure</p> <p>Madhuchhanda Khan, Krishna Mitra, Prabuddha Ray and Ruma Addy</p>		
--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--

Extension Pamphlets/ literature	1. Improved Cultivation Practices of Pulses: More Profit and Conservation of Soil Health (<i>UnnatPrathay Dal Chash: Adhik Labh Abong Matir Sasthya Raksha</i>)	Dr. Subrata Mandal	06 (Six)	4000 (Four thousand)
	2. Technology for Improving Productivity of Acid Soils (<i>Amla Matir Utpadanshilata Baranor Prajukti</i>)			
	3. Phospho-compost for Conservation of Soil Health: A Phosphorus rich Organic Fertilizer (<i>Matir Swasthyarakshay Phospo-compost: Eaikti Phosphorus Samriddha Jaiba Saar</i>)			
	4. Improved Agro-Technologies for Linseed Cultivation (Tishi Chasher Unnata Projukti)			
	1. Seed treatment (Bij Shodhon)	Sri Sourav Mondal		
	1. Pradhan Mantri Fasal Bima Yojona	Dr. Prabuddha Ray		
Reports published in ICAR Reporters	1. "Elephant Foot Yam Cultivation made Profitable", <i>Symbiosis of Success Pathways to Prosperity [ISBN No. 978-81-7164-175-8]</i> , edited by A. K. Singh, M. J. Chandre Gowda, Sreenath Dixit, Randhir Singh, D. V. Srinivas Reddy and B. T. Rayudu, Division of Agricultural Extension, Indian Council of Agricultural Research, New Delhi, 2017, pp. 51 – 52.	Dulal Chandra Manna and Prabuddha Ray	One (01)	-
Technical reports	1. Annual Progress Report (April, 2016 – March, 2017) of Rathindra KVK 2. Report on TSP organized by RKVK 3. Report on RFD, CCC and Skill Training (12 Reports for 12 Months) 4. Report on the Activities under Swachha Bharat Mission (12 Reports for 12 Months) 4. Monthly Reports of RKVK (12 Reports for 12 Months) 5. Report to PMO on Activities of RKVK (12 Reports for 12 Months) 6. Progress Report on CFLD on Oilseed of Rabi and Summer Season 7. Yield Report on Rabi and Summer Pulse 8. Brief Report on Activities of RKVK 9. Report on Achievement of RKVK in First Quarter of 2017-18 10. Quarterly Progress Report for Soil Sample Testing and Soil Health Cards Issued 11. Report on Activities under Pradhan MamtriFasalBimaYojona (PMFBY) 12. CFLD on Rabi and Summer Oilseed	Rathindra KVK	78 (Seventy Eight)	Among all the concerned.

	<p>13. Report on New India Manthan Sankalp Se Siddhi</p> <p>14. Report on ASCI Skill Training</p> <p>15. Report on Strategic Plan on Doubling Farmers' Income</p> <p>16. Report on Swacchata Hi Seva</p> <p>17. Report on Information and Knowledge Management in KVK System</p> <p>18. Report on MahilaKisan Divas</p> <p>19. Report on Information on Outcome Review of KVK Scheme</p> <p>20. Yield Report on CFLD Kharif Pulse</p> <p>21. Report on Information about FPO</p> <p>22. Report on World Soil Day Programme</p> <p>23. Information on CFLD on Pulse and Oilseed</p> <p>24. Action Taken Report for Seed Hubs and CFLD Pulse</p> <p>25. Report on Expenditure Incurred on SWACCHTA Activities</p> <p>26. Yield Report on CFLD Kharif and Rabi Pulse</p> <p>27. Action Taken Report on Installation of Permanent Hoarding on Soil Health Programme</p> <p>28. Progress Report on Rabi Pulse</p> <p>29. Details of CFLD Pulse and Oilseed</p> <p>30. Action Report on Installation of Permanent Hoarding on Soil Health Card at the Rathindra KVK, Birbhum, West Bengal</p> <p>31. Information of Farmers for Digital Ag. Extension Services for the Birbhum District, West Bengal prepared by the Rathindra KVK, Birbhum, West Bengal</p> <p>32. Progress Report of CFLD Oilseeds along with Expenditure</p> <p>33. Information on Fund for Infrastructure in KVKs from Sources other than ICAR</p> <p>34. Report on the Web Casting of the Inaugural Programme of the Biennial Conference of the Krishi Vigyan Kendras of India by the Honourable Prime Minister of India Sri Narendra Modi Ji at the ICAR-IARI, New Delhi on 17.03.2018.</p>			
--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--

Electronic Publication (CD/DVD etc)	1. Activities of Sri Tapan Kumar Ghosh – A Successful Rural Back Yard Poultry Farmer attached with Rathindra KVK 2. Programme on “New India Manthan Sankalp Se Siddhi for Doubling Farmers’ Income”.	Rathindra KVK	02 (Two)	-
TOTAL			96 (Ninety Six)	

❖ **Publications by the Rathindra KVK Scientists in 2018-19**

Item	Title	Authors’ Names	Number	Circulation
Research paper	1. “Economic Evaluation of Front Line Demonstrations on Black Gram in Birbhum District of West Bengal”, <i>Economic Affairs (Print ISSN No. 0424-2513 and Online ISSN No. 0976-4666)</i> , Vol. 63, No. 2, June, 2018, pp. 521 – 525. 2. “Front line demonstration on lentil using improved varieties for increasing productivity under lateritic soil of West Bengal”, <i>Legume Research (Print ISSN No. 0250-5371 and Online ISSN No. 0976-0571)</i> , Accepted for publication. 3. “Performance of Few New Different Paddy Varieties at Lateritic Soil of West Bengal, India”, <i>International Journal of Science, Environment and Technology (Print ISSN No. 2277-663X and Online ISSN No. 2278-3687)</i> , Vol. 7, No. 5, 2018, pp. 1592-1596.	Prabuddha Ray, Subrata Mandal, Sourav Mondal and Palash Ankure Subrata Mandal, Prabuddha Ray, Sourav Mondal and Palash Ankure Subrata Mandal, Mrinmoy Karmakar and Sourav Mondal	03 (Three)	-
Seminar /conference / symposia papers	1. “A Study on the Front Line Demonstration of White Pekin Duck reared under Farm Condition in Birbhum District of West Bengal”, Presented and Published at the National Seminar on Sustainable Resource Management for enhancing Farm Income, Nutritional Security and Livelihood Improvement, organized by the Department of Agronomy, Palli Siksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum in collaboration with NABARD, Kolkata and in association with Indian Society of Agronomy – Sriniketan Chapter, Visva-Bharati at the Palli Siksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum, held from 01.02.2019 to 03.02.2019.	Madhuchhanda Khan, Krishna Mitra and Ruma Addy	01 (One)	-
Books	-	-	-	-
Bulletins	-	-	-	-
News letter	-	-	-	-
Popular Articles	-	-	-	-
Book Chapter	1. “Introduction of Giant Prawn (<i>Macrobrachium rosenbergii</i>) as A New Component of Composite Fish Culture in Birbhum District, West Bengal: A Successful Intervention by the Rathindra KVK, Birbhum”, In: <i>Issues in Sustainable Development in India – Present Problems and Future Perspective [ISBN No. 978-93-86453-44-0]</i> ,	Prabuddha Ray, Sarthak Chowdhury and Krishna Mitra,	05 (Five)	-

	<p>edited by Pranab Kumar Chattopadhyay and Daya Shankar Kushwaha, New Delhi Publishers, New Delhi, 2018, pp. 37 – 46.</p> <p>2. “Situation of Farm Machineries in Birbhum District, West Bengal-Gaps to be Filled Up”, In: <i>Advance Technologies in Agriculture for Doubling Farmer’s Income [ISBN No. 978-93-86453-61-7]</i>, edited by Kishore Chandra Swain, Ashis Kumar Chatterjee and P. Kandasamy, New Delhi Publishers, New Delhi, 2018, pp. 71 – 84.</p> <p>3. “Drum Seeder Performance in Front Line Demonstration Programmes”, In: <i>Advance Technologies in Agriculture for Doubling Farmer’s Income [ISBN No. 978-93-86453-61-7]</i>, edited by Kishore Chandra Swain, Ashis Kumar Chatterjee and P. Kandasamy, New Delhi Publishers, New Delhi, 2018, pp. 119 – 124.</p> <p>4. “Growth, Production and Reproductive Performance of Japanese Quails (<i>Coturnix coturnix japonica</i>) reared in Deep Litter System”, In: <i>Advance Technologies in Agriculture for Doubling Farmer’s Income [ISBN No. 978-93-86453-61-7]</i>, edited by Kishore Chandra Swain, Ashis Kumar Chatterjee and P. Kandasamy, New Delhi Publishers, New Delhi, 2018, pp. 303 – 308.</p> <p>5. “Fishery based Integrated Farming System (IFS)”, In: <i>Issues in Sustainable Development – Gender and Agrarian Change [ISBN No. 978-81-937260-4-4]</i>, Pranab Kumar Chattopadhyay and Daya Shankar Kushwaha, Renu Publishers, New Delhi, Kolkata, 2018, pp. 85 – 95.</p>	<p>Prabuddha Ray, Subrata Mandal, Sourav Mondal, Palash Ankure and Ganesh Das,</p> <p>Subrata Mandal, Prabuddha Ray, Sourav Mondal and Palash Ankure</p> <p>Madhuchhanda Khan, Shyamal K Mondal, K. Mitra, P. Ray and R. Addy</p> <p>Krishna Mitra, Madhuchhanda Khan, Subrata Mandal and Prabuddha Ray</p>		
Extension Pamphlets/ literature	Booklet on “Banker Wrin Prakalpa” “Bank Loan Schemes”	Dr. Prabuddha Ray	08 (Eight)	4000 (Four thousand)
	Booklet on “Sufal Bangla”			
	Booklet on “Krishibhittick Samgrogulir Joney Eakti Swammanitwaya Bazaar – National Agriculture Market (E-NAM)” “An Integrated Market for Agricultural Produces– National Agriculture Market (E-NAM)”			
	Booklet on “Pradhan Mantri Fasal Bima Yojona – Krishi Abong Krishaker Swarthey Eakti Natun Padakshep” “Pradhan Mantri Fasal Bima Yojona – A New Initiative for the Interests of Farming and Farmers”			
	Booklet on “Ekangi Chash – Sashya Baichitrer Madhyomey Aay Briddhi” “Cultivation of Ekangi – Increasing Farmers’ Income through Crop Diversification”	Dr. Subrata Mandal		
	Booklet on “Swanirvarater Lakshmey Banglar Kalo Chagal Palan” “Rearing of Black Bengal Goats for Self-Sufficiency”	Dr. Madhuchhanda Khan		
	Booklet on “Vetki Chash Paddhati” “Culture Practices of Vetki”	Dr. Krishna Mitra		
	Booklet on “Kom Kharachey Baritey Jaiba Keetnashak Prostuti Abong Taar Prayog Paddhati” “Preparation of Low Cost home Made Bio-Pesticides”	Sri Sourav Mondal		
Technical reports	1. Annual Progress Report (April, 2017 – March, 2018) of Rathindra KVK	Rathindra KVK	94 (Ninety Four)	Among all the concerned.
	2. Report on RFD, CCC and Skill Training (12 Reports for 12 Months)			

	<p>3. Report on Achievement of Mandated Activities of Krishi Vigyan Kendras (12 Reports for 12 Months)</p> <p>4. Report on the Activities under Swachha Bharat Mission (12 Reports for 12 Months)</p> <p>5. Monthly Reports of RKVK (12 Reports for 12 Months)</p> <p>6. Report to PMO on Activities of RKVK (12 Reports for 12 Months)</p> <p>7. Yield Report on CFLD on Oilseed of Rabi Season in 2017-18</p> <p>8. Yield Report on CFLD on Pulses of Rabi Season in 2017-18</p> <p>9. Success Story of CFLD Pulses in 2017-18</p> <p>10. Information on DAESI Programme</p> <p>11. Yield Report on CFLD on Pulses of Rabi and Summer Season in 2017-18</p> <p>12. Farmers' Database regarding Digital Farming Initiatives</p> <p>13. Report on Green Fodder Cultivation Popularization Efforts through FLDs</p> <p>14. Report on Webcasting of Interaction of PM with Farmers on 20.06.2018 by RKVK</p> <p>15. Report on Swacchata Hi Seva – 2018</p> <p>16. Status Report of CFLD Pulses in 2018-19</p> <p>17. Full Report of CFLD Pulses in 2017-18, RKVK</p> <p>18. Action Plan for Doubling Farmers' Income at KVK level by RKVK</p> <p>19. Farmer-wise Yield Report of CFLD Oilseed, Rabi and Summer, 2017-18</p> <p>20. Physical Progress Report of CFLD Pulse</p> <p>21. Report of Inauguration of Krishi Kalyan Abhiyan – II</p> <p>22. Achievement under CFLD Pulses in Kharif in 2018-19</p> <p>23. Report on Summer Oilseed (Sesame) in 2017-18</p> <p>24. Report on RTI Application regarding Soil and Water Testing Laboratory</p> <p>25. Success Story on Kharif Sesame in 2018</p>			
--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--

	<p>26. Report on World Soil Day – 2018</p> <p>27. Information on Neem Coated Urea</p> <p>28. Yield Report of CFLD Pulse in 2018-19</p> <p>29. Yield Report of CFLD Oilseeds in 2018-19</p> <p>30. Status of Rabi Pulses and Oilseeds in 2018-19</p> <p>31. Report on Status of ASCI Skill Training by Rathindra KVK</p> <p>32. Community Radio Service Information</p> <p>33. Report on Impactful Technologies received from NARS of India and implemented by Rathindra KVK</p> <p>34. Farmer-wise Yield Report of CFLD Oilseeds in Kharif, 2018</p> <p>35. Success Story of Kharif Sesame in 2018</p> <p>36. Information on Webcast of Inauguration of Pradhan Mantri Kisan Samman Nidhi Scheme</p> <p>37. Report on area covered under CFLD Pulses</p> <p>38. Action Plan on CFLD Oilseeds in 2019-20</p> <p>39. Yield Report of CFLD Rabi Pulses in 2018-19</p>			
TOTAL			111 (One Hundred Eleven)	

37. Final Considered Views: In your perceived opinion, Please enlist five points in order of merit that your KVK could have performed far better if (within 250 words)

- i)** To give impetus to the women empowerment for the farm women and female rural youths of Birbhum District, a Training Hostel for female Trainees would be an utmost requirement.
- ii)** Increased quality seed production and supply to the stakeholders in Agriculture and Allied Sectors can be enhanced if there is a proper farm fencing and irrigation facility in the Instructional Farm.
- iii)** Job security, promotional avenues and retirement benefits would highly encourage the staff to stick to their KVK jobs.

iv) Well equipped more numbers of Training rooms, separate rooms for SMSs, Information Centre, separate Library Room and Staff Common room are urgent requirement for betterment of KVK activities.

v) The capacity enhancement of the Demonstration Units of KVK would have catered in meeting up increased demands of trainings, demonstrations, production and supply of quality products to the clientele of KVK in a commercial way.

STATUS OF RESEARCH - EXTENSION LINKAGES AT THE DISTRICT LEVEL

i. What kind of mechanism exists for local coordination of the front line extension demonstration between the KVKs and the State Govt.?

A. In order to enable the farmers to draw the full benefit of the scientific and other manpower available within the Birbhum District, besides regular participation in Agricultural Technology Management Agency - Governing Body (ATMA GB) and Management Committee of Birbhum District, the Programme Coordinator of the Rathindra KVK generally has an interface meeting with the Project Director, ATMA, Birbhum once a month during the cropping season to work out a strategy of providing crop advisories to farmers for various stages of crop growth.

B. Scientists available in the Rathindra KVK advise and mentor Block Technology Teams in identifying technological needs in various Blocks in the District and programmatic interventions to meet such needs.

C. Strategic Research and Extension Plan (SREP) for Birbhum District was prepared in 2009 and 2016 by the Rathindra KVK and refined jointly by ATMA, Birbhum and Rathindra KVK from the inputs from the Block level and acted upon for the purpose.

D. Project Director, ATMA, Birbhum and Programme Coordinator and or Subject Matter Specialists of the Rathindra KVK try their level best to jointly visit at least two to five villages every month in the District to guide and supervise the extension related work assigned to scientists and the extension officers, including Block Technology Manager (BTM) and SMSs supported under ATMA.

E. ATMA, Birbhum and the Rathindra KVK regularly coordinate with each other for the organization of Field Days, Kisan Melas, Goshties and setting up of Farm Schools, so that there is no duplication in coverage and they should ensure percolation of appropriate scientific practices down to the field level.

F. Birbhum District ATMA Management Committee having Programme Coordinator, Rathindra KVK as its member generally reviews the progress of technology application - related activities funded by ATMA, Birbhum.

G. The Rathindra KVK provides an Agricultural Technology Update (ATU) on half yearly basis i.e. before the start of Kharif and Rabi crop seasons to the ATMA, Birbhum for its wider dissemination among the farmers of the Birbhum district.

H. Two short term researches viz. (i) Efficacy of different species of Earth Worms on quality of Vermin-Composting and (ii) Performance of different fish feeds on Giant Prawn culture has already been completed successfully by the Rathindra KVK and the results were shared with ATMA, Birbhum.

I. The Rathindra KVK and the Birbhum District ATMA are active engaged in the implementation of Flagship programmes of the Ministry of Agriculture and Farmers' Welfare, Govt. of India namely - Cluster Front Line Demonstrations on Pulse and Oilseeds under NFSM, NHM, RKVY, NAIS etc.

J. The Rathindra KVK Scientists generally give technical advice to the Block Technology Teams (BTTs) through performing as Expert in Training Programmes as well organizing Training for Head Master Farmers as well organizing the Farmers-Scientists Interactions regularly.

K. The members of the FIAC of every Block of the Birbhum District make regular Exposure Visits to the Rathindra KVK for updating their information, knowledge and skills on newer cutting edge Technologies in Agriculture and related Sectors.

ii. What is the frequency of Scientific Advisory Committee Meeting for KVK during last 8 years?

The Rathindra KVK organized Scientific Advisory Committee (SAC) Meetings regularly during the last 8 Years on the following dates viz. (a) 15.03.2012 in the Financial Year of 2011-12; (b) 14.01.2013 in the Financial Year of 2012-13; (c) 30.04.2013 in the Financial Year of 2013-14; (d) 20.03.2015 in the Financial Year of 2014-15; (e) 18.01.2016 in the Financial Year of 2015-16; (f) 30.01.2017 in the Financial Year of 2016-17; (g) 26.02.2018 in the Financial Year of 2017-18 and (h) 26.03.2019 in the Financial Year of 2018-19.

iii. No. of monthly workshops organized

iv. Frequency and no. of staff participated in seminars at Zonal, State and National level.

- **Zonal level workshop/seminar attended:** 07 (Seven) Numbers of Staff attended 10 (Ten) Times

- **National level workshop/seminar** : 08 (Eight) Numbers of Staff attended 27 (Twenty Seven) Times
- **State level workshop/seminar**: 09 (Nine) Numbers of Staff attended 15 (Fifteen) Times
- **International level workshop/seminar** : 02 (Two) Numbers of Staff attended 2 (Two) Times

v. Whether the local NGO's are involved in KVKs programmes?

YES

vi. Whether the FPO are promoted and become visible in their activities?

YES

vii. Whether the local Mahila Mandal or Farm Science clubs are promoted and become visible in their activities?

YES

viii. A brief about the extent of contribution of the officials of various line departments and joint programmes undertaken.

Extent of Joint Activity carried out by the Rathindra KVK with Line Departments and ATMA, Birbhum

2011-12

Sl. No.	Programme	Nature of linkage	Remarks
1	Orientation training programme	Farmers of different blocks of Birbhum under FIAC, ATMA visited KVK for orientation training and visit	Programmes- 2 Farmers – 86
2	Farmers-Scientists Interaction	Sponsored by ATMA, Birbhum	Programmes- 1 Farmers – 30 Scientist – 10
3	Training for farmers	Sponsored by ATMA, Birbhum	Programmes- 3 Farmers – 120 Resource persons – 9

2012-13

Sl. No.	Programme	Nature of linkage	Remarks
1	Orientation training programme	Farmers of different blocks of Birbhum under FIAC, ATMA visited KVK for orientation training and visit	Programmes- 2 Farmers – 185
2	Training for Head Masters / Achiever Farmers	Sponsored by ATMA, Birbhum	Programmes- 1 Farmers – 25
3	Short Term Research	Sponsored by ATMA, Birbhum	One programme on fishery is going on

2013-14

Name of the Programme/Scheme	Purpose of Programme	Date/ Month of Initiation	Funding Agency	Amount (Rs.)
Short Term Research	To find out the performance of different sources of vermin-composting	08.02.2014.	ATMA, Birbhum	1,24,000.00

2014-15

Name of Activity	Season	With Line Department	With ATMA
Farmer to Farmer Technology Dissemination on Performance of SRI in Boro Paddy	Pre-Kharif Season	-	With ATMA
05 (Five) Numbers of Animal Health Camps organized by the Rathindra KVK at different villages of the District of Birbhum	Kharif Season	Dept. of Animal Resource Development, Govt. of West Bengal	-
Training of Extension Functionaries of Suri – I Block, Birbhum District on Diversification of Horticultural Crops	Winter Season	With Line Department	-
Training of Extension Functionaries of Suri – I Block, Birbhum District on Diversification of Horticultural Crops	Winter Season	With Line Department	-
Trainig of Practicing Farmers on Crop Diversification in Birbhum District	Winter Season	-	With ATMA
Training of Practicing Farmers on Poultry Farming	Winter Season	-	With ATMA
Resource Person in Bringing Green Revolution in Eastern India (BGRIE) Training Programme organized by the Assistant Director of Agriculture, Govt. of West Bengal, Suri – I, Birbhum	Winter Season	With Line Department	-
Resource Person in Pulse Crop Training Programme organized by the Assistant Director of Agriculture, Govt. of West Bengal, Nanoor, Birbhum	Winter Season	With Line Department	-
Resource Person in Field Crop Training Programme in the Krishi Mela organized by the Assistant Director of Agriculture, Govt. of West Bengal, Md. Bazar, Birbhum	Winter Season	With Line Department	-
Resource Person in National Mission on Oilseeds and Pulses Training Programme organized by the Assistant Director of Agriculture, Govt. of West Bengal, Bolpur-Sriniketan, Birbhum	Winter Season	With Line Department	-
Farmers-Scientists Interaction on IPM in Summer Crop Cultivation for Practicing Farmers of Birbhum District	Winter Season	-	With ATMA
Farmers-Scientists Interaction on Fish based Integrated Farming System for Practicing Farmers of Birbhum District	Winter Season	-	With ATMA
Training Programme on Mushroom Cultivation for Farmers of Bolpur Sub-Division, Birbhum District	Winter Season	With Line Department	-
06 (Six) Numbers of Animal Health Camps organized by the Rathindra KVK at different Villages of the District of Birbhum	Winter Season	With Line Department	-
Resource Person in the FLD Programme on Green Gram organized by the Assistant Director of Agriculture, Govt. of West Bengal, Nanoor, Birbhum	Summer Season	With Line Department	-
Resource Person in the FLD Programme on Sesame organized by the Assistant Director of Agriculture, Govt. of West Bengal, Nanoor, Birbhum	Summer Season	With Line Department	-

2015-16

Name of Activity	Number of Activity	Season	With Line Department	With ATMA
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., Birbhum	-
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 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 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 Birbhum in Md. Bazar CD Block	01	Kharif Season, 2015	-	With ATMA
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	-

2016-17

Name of Activity	Number of Activity	Season	With Line Department	With ATMA
Exposure Visit of the members of the FIAC, Rampurhat – II CD Block, Birbhum to the Rathindra KVK, Birbhum	01	Pre-Kharif Season	-	ATMA, Birbhum
Exposure Visit of the members of the FIAC, Dubrajpur CD Block, Birbhum to the Rathindra KVK, Birbhum	01	Pre-Kharif Season	-	ATMA, Birbhum
Exposure Visit of the members of the FIAC, Hirapur CD Block, Burdwan to the Rathindra KVK, Birbhum	01	Pre-Kharif Season	-	ATMA, Burdwan

Exposure Visit of the members of the FIAC, Murarai - I CD Block, Birbhum to the Rathindra KVK, Birbhum	01	Pre-Kharif Season	-	ATMA, Birbhum
Exposure Visit of the members of the FIAC, Murarai - II CD Block, Birbhum to the Rathindra KVK, Birbhum	01	Pre-Kharif Season	-	ATMA, Birbhum
Exposure Visit of the members of the FIAC, Suri - I CD Block, Birbhum to the Rathindra KVK, Birbhum	01	Pre-Kharif Season	-	ATMA, Birbhum
Exposure Visit of the members of the FIAC, Md. Bazar CD Block, Birbhum to the Rathindra KVK, Birbhum	01	Pre-Kharif Season	-	ATMA, Birbhum
Training Programme on Poultry and Duckery Management	01	Kharif Season	-	ATMA, Birbhum
Training Programme on Goatery Management	01	Kharif Season	-	ATMA, Birbhum
Farmers-Scientists Interaction on Improved Package of Practices of Different Kharif Crops	01	Kharif Season	-	ATMA, Birbhum
Training Programme on Fishery in Integrated Watershed Management Programme	01	Kharif Season	PIA-IWMP-I, Barua Gopalpur Watershed, DDA (Soil and Water Management), Dept. of Agriculture, Govt. of W. B., Suri, Birbhum	-

2017-18

Name of Activity	Number of Activity	Season	With Line Department	With ATMA
Exposure Visit of the members of the FIAC, ATMA, Nanoor CD Block, Birbhum to the Rathindra KVK, Birbhum	01	Pre-Kharif Season	-	ATMA, Birbhum
Front Line Demonstration on Crop Diversification through Cultivation of Kharif Pulse	01	Kharif Season	-	ATMA, Birbhum
Farmers-Scientists Interaction on Increasing Farmers' Income through Crop Diversification	01	Rabi Season	-	ATMA, Birbhum
Front Line Demonstration on Crop Diversification through Cultivation of Summer Pulses and Oilseeds	01	Summer Season	-	ATMA, Birbhum
Exposure Visit of the members of the FIAC, ATMA, Rampurhat - II CD Block, Birbhum to the Rathindra KVK, Birbhum	01	Summer Season	-	ATMA, Birbhum

2018-19

Name of Activity	Number of Activity	Season	With Line Department	With ATMA
Vaccination Camp	01	Pre-Kharif Season	Dept. of Animal Resource Development, Govt. of West Bengal	-
Vaccination Camp	01	Kharif Season	Dept. of Animal Resource Development, Govt. of West Bengal	-
Vaccination Camp	01	Kharif Season	Dept. of Animal Resource Development, Govt. of West Bengal	-
Exposure Visit of the members of the FIAC, ATMA, Suri – II CD Block, Birbhum to the Rathindra KVK, Birbhum	01	Kharif Season	-	ATMA, Birbhum

Vaccination Camp	01	Rabi Season	Dept. of Animal Resource Development, Govt. of West Bengal	-
Training Programme on Importance of Black Bengal goat rearing	01	Rabi Season	-	ATMA, Birbhum
Training Programme on Rearing of Khaki Campbell ducks	01	Rabi Season	-	ATMA, Birbhum
Vaccination Camp	01	Rabi Season	Dept. of Animal Resource Development, Govt. of West Bengal	-
Animal Health Camp	01	Rabi Season	Dept. of Animal Resource Development, Govt. of West Bengal	-

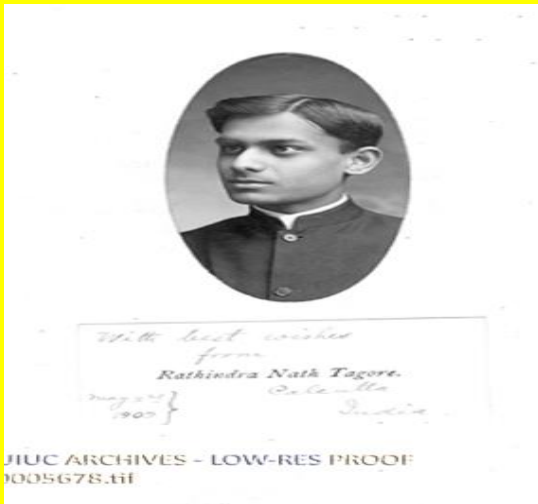
Annexure II

Impact of KVK in Terms of Agricultural and Animal Productivity, Socio-economic Conditions and Employment Generation during the QRT period in the Adopted villages

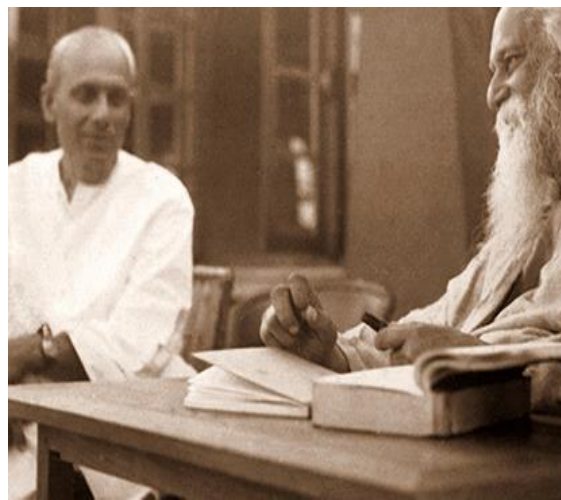
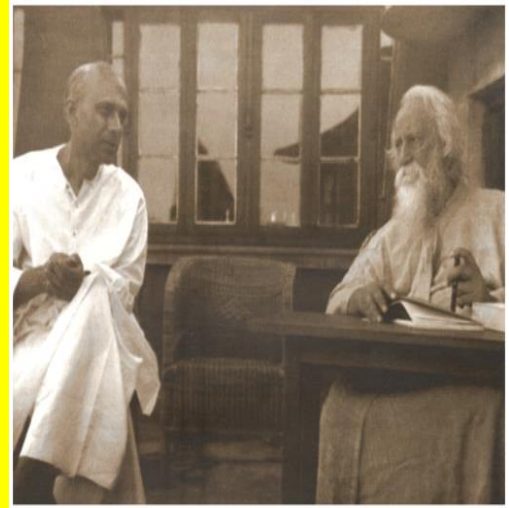
Sl. No.	Item	Unit	Prior to KVK	Post KVK activities
1.	Change in cropping intensity	(%)	139	174
2.	Change in productivity of			
	1. Paddy	(kg/ha)	3128.00	5192.00
	2. Wheat		2958.00	4050.00
	3. Kharif Black Gram		408.00	915.00
	4. Lentil		618.00	1350.00
	5. Chick Pea		948.00	1495.00
	6. Summer Green Gram		605.00	1210.00
	7. Mustard		996.00	1190.00
	8. Sesame		720.00	1010.00
	9. Linseed		588.00	850.00
	10. Field Pea		625.00	1180.00
	11. Elephant Foot Yam		19550.00	69240.00
	12. Tomato		25000.00	60000.00
	13. Cauliflower		13700.00	36060.00
	14. Cabbage		7592.00	22830.00
	15. Brinjal		3050.00	6500.00
	16. Capsicum		21900	44500.00
	12. Common Carp	(kg/ha/year)	27,000.00	57,305.00
	13. Giant Prawn in Composite Fish Culture		8,000.00	50,000.00
	14. Vetki in Composite Fish Culture		7,500.00	35,000.00
	13. Milch Cows	(lt/Cow/year)	770.00	1916.00
	14. Poultry Birds	(No. of Eggs/Poultry Bird/Year)	65	168
	15. Poultry Bird	(Meat in kg/Poultry Bird/Year)	Male – 1.48 kg. Female – 00.92 kg.	Male – 2.95 kg. Female – 2.29 kg.
3.	Use of HYV (high-yielding varieties)	(%)		
	1. Cereals		81.00	92.00
	2. Pulses		58.00	80.00
	3. Oilseeds		65.00	88.00
	4. Vegetables		50.00	70.00
4.	Use of fertilizers (NPK) (nutrient)	(kg/ha)		
	1. Rice		100:30:20	80:40:40
	2. Wheat		120:30:20	100:50:50
	3. Mustard		80:20:10	60:30:30
	4. Sesame		100:30:20	80:40:40
	5. Lentil		20:40:10	20:40:20
	6. Chickpea		20:40:10	20:40:20
	7. Black Gram		20:40:10	20:40:20
	8. Tomato		50:30:20	85:90:45
	9. Brinjal		50:30:20	85:90:45
	10. Cauliflower etc		50:25:25	75:100:75
	Pl Add more if required			
5.	Use of FYM and other biofertilizers			

	a. FYM	(kg/ha)	8000.00	6000.00
	b. Bio-Fertilizer	(gm/ha)	200.00	1500.00
6.	Tractor/machinery	(No.)		
	a. Tractor		40	68
	b. Power Tiller		65	86
	c. Combine Harvester-cum-Thresher		00	07
	d. Power Reaper		01	08
	e. Rotavator		10	56
	f. Zero Tillage Machine		00	04
	g. Thresher		252	394
	h. Drum Seeder		06	23
	i. Potato Planter		01	03
	j. Cono Weeder		00	10
	k. SRI Marker		00	10
7.	Change in economic indicators (in adopted villages)	(No)		
	(a) Net return/ha/yr	(Rs.)		
	(by crop/enterprise)			
	1.Rice		9,285.00	21,680.00
	2. Wheat		20,770.00	41,300.00
	3. Mustard		17,760.00	31,267.00
	4.Sesame		11,500.00	21,160.00
	5.Lentil		12,345.00	27,552.00
	6.Chickpea		11,885.00	23,992.00
	7.Brinjal		2,60,194.00	4,07,055.00
	8.Potato		1,26,500.00	2,18,500.00
	9. Efephant Foot Yam		1,61,000.00	8,57,800.00
	10. Broccoli		65,440.00	1,69,500.00
	11. Cabbage		79,905.00	2,65,720.00
	12. Cauliflower		1,71,250.00	4,50,750.00

Signature of Head of the KVK



**RATHINDRANATH TAGORE -
THE FIRST INDIAN GRADUATE IN
AGRICULTURAL SCIENCE**
(27.11.1888 AD – 03.05.1961 AD)



“I think father must have been amused to hear me prattle and glibly repeat copybook maxims on agronomy, genetics...Most of the times he would listen patiently but when he did talk he told me about the social and economic conditions of our rural folk, the problems of their life...rarely would he talk on literature, probably thinking that my training in the sciences barred me from appreciating the arts. Father and son never came to a more intimate understanding of each other than in this winter of 1910” - **Rathindranath Tagore, 1958.**

“If we could free even one village from the shackles of helplessness and ignorance, an ideal for the whole of India would be established Let a few villages be rebuilt in this way, and I shall say they are my India. That is the way to discover the true India” - **Rabindranath Tagore, 1928.**