



# ANNUAL REPORT



(JANUARY, 2021 - DECEMBER, 2021)

Submitted to

**ICAR- Agricultural Technology Application  
Research Institute, Kolkata (Zone-V)**

**Kolkata, Bhumi Vihar Complex  
Block- GB, Sector- III, Salt Lake City  
Kolkata- 700097, West Bengal**

Submitted By

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On  
February, 2022

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## **PROFORMA FOR ANNUAL REPORT 2021 (January 2021 to December 2021)**

### **1. GENERAL INFORMATION ABOUT THE KVK**

#### **1.1. Name and Address of KVK with Phone Number, Fax Number and E-Mail Address**

Address	Telephone Number		E-Mail
	Office	FAX	
Rathindra Krishi Vigyan Kendra Palli Siksha Bhavana (Institute of Agriculture) Visva-Bharati, Sriniketan, P. O. – Sriniketan, Dist. – Birbhum, Pin. – 731236, West Bengal, India	03463- 264771	-	rathindrakvk@gmail.com rkvk@visva-bharati.ac.in

#### **1.2. Name and Address of Host Organization with Phone Number, Fax Number and E-Mail**

Address	Telephone Number		E-Mail
	Office	FAX	
Visva-Bharati, Santiniketan, P. O. – Santiniketan, Dist. – Birbhum, Pin. – 731235, West Bengal, India.	03463 - 262-751 to 262- 756 (6 lines)	03463- 262- 672	Vice-Chancellor:vice-chancellor@visva-bharati.ac.in  Registrar:registrar@visva-bharati.ac.in  Principal, PalliSiksha Bhavana (Institute of Agriculture) and In-Charge Rathindra KVK: akbarikpsbvb@rediffmail.com

#### **1.3. Name of Senior Scientist and Head with phone & mobile No.**

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr. Subrata Mandal	-	9434431350	<a href="mailto:smkvkb@gmail.com">smkvkb@gmail.com</a>

**1.4. Year of sanction:** F.2 (2)\ 93-AE-1 on 4<sup>th</sup>October, 1994. Actual month of start: April, 1995  
(Reference of Sanction Order)

**1.5. Present Staff Position (as on 1<sup>st</sup> February, 2022)**

Sl. No.	Sanctioned post	Name of the incumbent	Designation	Discipline	Pay Scale with present basic	Date of joining	Permanent /Temporary	Category (SC/ST/OBC/ Others)
1	Senior Scientist & Head	Dr. Subrata Mandal	Senior Scientist and Head	Agronomy	Pay Level -13 A Basic: Rs 1,52,300/-	08.10.2021	Permanent	GC
2	Subject Matter Specialist	Sri Sourav Mondal	Subject Matter Specialist	Plant Protection	Pay Level -13 A Basic: Rs 1,47,900/-	01.08.2004	Permanent	SC
3	Subject Matter Specialist	Dr. Prabuddha Ray	Subject Matter Specialist	Agricultural Extension	Pay Level-10 Basic: Rs. 71,100/-	19.06.2012	Permanent	GC
4	Subject Matter Specialist	Dr. Madhuchhanda Khan	Subject Matter Specialist	Animal Science	Pay Level-11 Basic: Rs. 76,200/- NPA 20%	10.06.2014	Permanent	GC
5	Programme Assistant	Sri Suraj Kumar Bhakta	Programme Assistant (Computer Programmer)	-	Pay Level-6 Basic: Rs.43,600/-	16.06.2014	Permanent	OBC
6	Programme Assistant	Sri Palash Ankure	Programme Assistant (Farm Manager)	-	Pay Level-7 Basic: Rs.47,600/-	18.09.2014	Permanent	SC
7	Driver	Sri Krishna Bansi Chatterjee	Driver-cum-Mechanic	-	Pay Level-7 Basic: Rs.53,600/-	06.05.1997	Permanent	GC
8	Driver	Sri Bikash Chandra Ghosh	Driver-cum-Mechanic	-	Pay Level-7 Basic: Rs.53,600/-	06.05.1997	Permanent	GC
9	Supporting staff	Sri Chowdhury Md. Anwar	Supporting Staff	-	Pay Level-3 Basic: Rs.36,100/-	13.04.1995	Permanent	GC
10	Supporting staff	Sri NaranTudu	Supporting Staff	-	Pay Level-1 Basic: Rs.23,500/-	05.06.2014	Permanent	ST

Note: At present, 6 posts (Subject Matter Specialist-3, Programme Assistant-1, Assistant-1, Stenographer-1) are vacant among the total sanctioned post 16.

**DAMU staff**

Sl. No.	Sanctioned post	Name of the incumbent	Designation	Discipline	Pay Scale with present basic	Date of joining	Permanent /Temporary	Category (SC/ST/OBC/ Others)
1	Subject Matter Specialist	Sri Sayak Mahato	Subject Matter Specialist	Agro Meteorology	Pay Level -10 Basic: Rs 57,800/-	13.8.2020	Temporary	GC
2	Agromet Observer	Sri Swapan Bagdi	Agromet Observer	-	Pay Level -3 Basic: Rs 22,400/-	03.8.2020	Temporary	SC

**1.6. Total land with KVK (in ha)**

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

**1.7. Infrastructure Development:****A) Buildings and others**

Sl. No.	Name of infrastructure	Not yet started	Completed up to plinth level	Completed up to lintel level	Completed up to roof level	Totally completed	Plinth area (sq.m)	Under use or not*	Source of funding
1.	Administrative Building					Totally completed	550.00	Under use	ICAR
2.	Trainees' Hostel					Totally completed	305.00	Under use	ICAR
3.	Staff Quarters (6)	-							
4.	Piggery unit	-							
5.	Fencing	-							
6.	Rainwater harvesting structure	-							
7.	Threshing floor					Totally completed	180.00	Under use	ICAR
8.	Farm go-down					Totally completed	46.25	Under use	ICAR
9.	Dairy unit	-							
10.	Poultry unit					Totally completed	80.00	Under use	ICAR
11.	Goatary unit	-							
12.	Mushroom Lab					Totally completed	10.00	Under use	ICAR
13.	Mushroom production unit					Totally completed	20.00	Under use	ICAR
14.	Low-cost Shade net house					Totally completed	56.00	Under use	ICAR
15.	Soil test Lab					Totally completed	26.00	Under use	ICAR
16.	Portable Carp Hatchery for Fish Breeding					Totally completed	15.00	Under use	ICAR
17.	Duckery unit					Totally completed	80.00	Under use	ICAR
18.	Plant Diagnostic Laboratory					Totally completed	25.00	Under use	ICAR
19.	Micro Irrigation Demonstration					Totally completed	100.00	Under use	ICAR

	Unit								
20	Micro irrigation system in progeny orchard					Totally completed	10000	Under use	PMKSY
21	Vermicompost unit (Swachhta action plan)					Totally completed	8.25	Under use	ICAR
22	Azolla production unit					Totally completed	22.00	Under use	ICAR

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

### B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total km. Run	Present status
Motor Bike (Rajdoot)	1997	32,000.00	-	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	1,62,120	In running condition
Motor Bike (Hero Splendor Pro)	2016	59,223.00	10,562	In running condition
Scooter (Hero Edge LX)	2016	60,323.00	8,358	In running condition

### C) Equipment & AV aids

Name of equipment	Year of purchase	Cost (Rs.)	Present status	Source of fund
<b>a. Lab Equipment</b>				
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>b. Farm machinery</b>				
Tractor Model Mahindra B 275 – DI	1998-99	2,99,496.00	Working condition	ICAR
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
Computer Table and chair	2020-21	17,500.00	Working condition	DAMU
Office Table and chair	2020-21	20,762.00	Working condition	DAMU
Office Almirrah	2020-21	10,169.00	Working condition	DAMU
Computer Table 60"X36"X30"	2020-21	12000.00	Working condition	DAMU
Wooden Chair with Arm	2020-21	5500.00	Working condition	DAMU
Glass Door Al mirah 78"X34"X48"	2020-21	12000.00	Working condition	DAMU
Steel Table 30"X24"X48" (2 Nos.)	2020-21	14000.00	Working condition	DAMU
Revolving Chair 18"X18" (3 Nos.)	2020-21	10500.00	Working condition	DAMU
<b>c. A-V Aids</b>				
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
Multimedia Projector SVGA WB 3300 HP	2019-20	32280.00	Working condition	ICAR
<b>d. Office Equipments</b>				
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
Aqua guard Water Purifier	2019-20	11500.00	Working condition	ICAR
Blue Star Water Cooler	2019-20	24900.00	Working condition	ICAR
HP Laptop with accessories	2020-21	45,217.00	Working condition	DAMU

#### D) Farm implements

Name of equipment	Year of purchase	Cost (Rs.)	Present status	Source of fund
ASPEE Sprayer (10 liters)	1995 - 96	2,050.00	Working condition	ICAR
ASPEE Hand Sprayer	1995 - 96	1,090.00	Working condition	ICAR
Paddy Thresher	1995 - 96	4,000.00	Working condition	ICAR
Hand Rotary Duster	1995 - 96	650.00	Working condition	ICAR
Spray Machine 16 lit. Capacity PVC Burret	2009-10	2,300.00	Working condition	ICAR
Mould Board Plough Model – Bengal Motor Works	2009 - 10	30,000.00	Working condition	ICAR
Mounted Offset 10"X20" Disc Harrow Model – Bengal Motor Works	2009 - 10	35,000.00	Working condition	ICAR
Self Propelled Power Ripper 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
Bush Cutter	2019-20	24643.00	Working condition	ICAR

#### 1.8. Details SAC meeting\* conducted in the year

Sl. No.	Date	Number of Participants	Salient Recommendations	Action taken	If not conducted, state reason
1.	27.02.2021	28 + all the staff members of RKVK	<ul style="list-style-type: none"> <li>Submission of proposal to ATMA, Birbhum for FLD on Ekangi cultivation as crop diversification programme</li> </ul>	Proposal for FLD on Ekangi cultivation as crop diversification programme was submitted to Projector director, ATMA. The programme was conducted successfully after getting approval and fund from ATMA, Birbhum	-
			<ul style="list-style-type: none"> <li>Establishment of small scale poly house or shade house or net house in KVK as demonstration to the farmers to create interest</li> </ul>	A small scale low cost shade-net house has been prepared in KVK as demonstration to the farmers	
			<ul style="list-style-type: none"> <li>Growing of hybrid mustard in the demonstration unit to aware the farmers about hybrid variety of oilseeds</li> </ul>	Hybrid mustard variety- Keshri Gold has been sown in the museum plot of KVK for demonstration to the farmers	
			<ul style="list-style-type: none"> <li>Inclusion of the term insect-pest instead of insect in the title of the OFT</li> </ul>	The term insect-pest has been included	
			<ul style="list-style-type: none"> <li>Starting of programme on Paneer processing</li> </ul>	Due to covid situation, practical classes could not be possible. However, it is planned to conduct the capacity building training programme on value added milk product in this year	
			<ul style="list-style-type: none"> <li>Mentioning the year of repeat in the ongoing OFT</li> </ul>	It has been mentioned in the OFT of action plan	
			<ul style="list-style-type: none"> <li>Modification of OFT on Poultry bird</li> </ul>	It has been modified properly as per suggestion	

\* Salient recommendation of SAC in bullet form

## 2.a. District level data on agriculture, livestock, and farming situation (2021)

### 2.a.1 Major Farming system/enterprise

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

### 2.a.2 Agro-climatic Zone

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

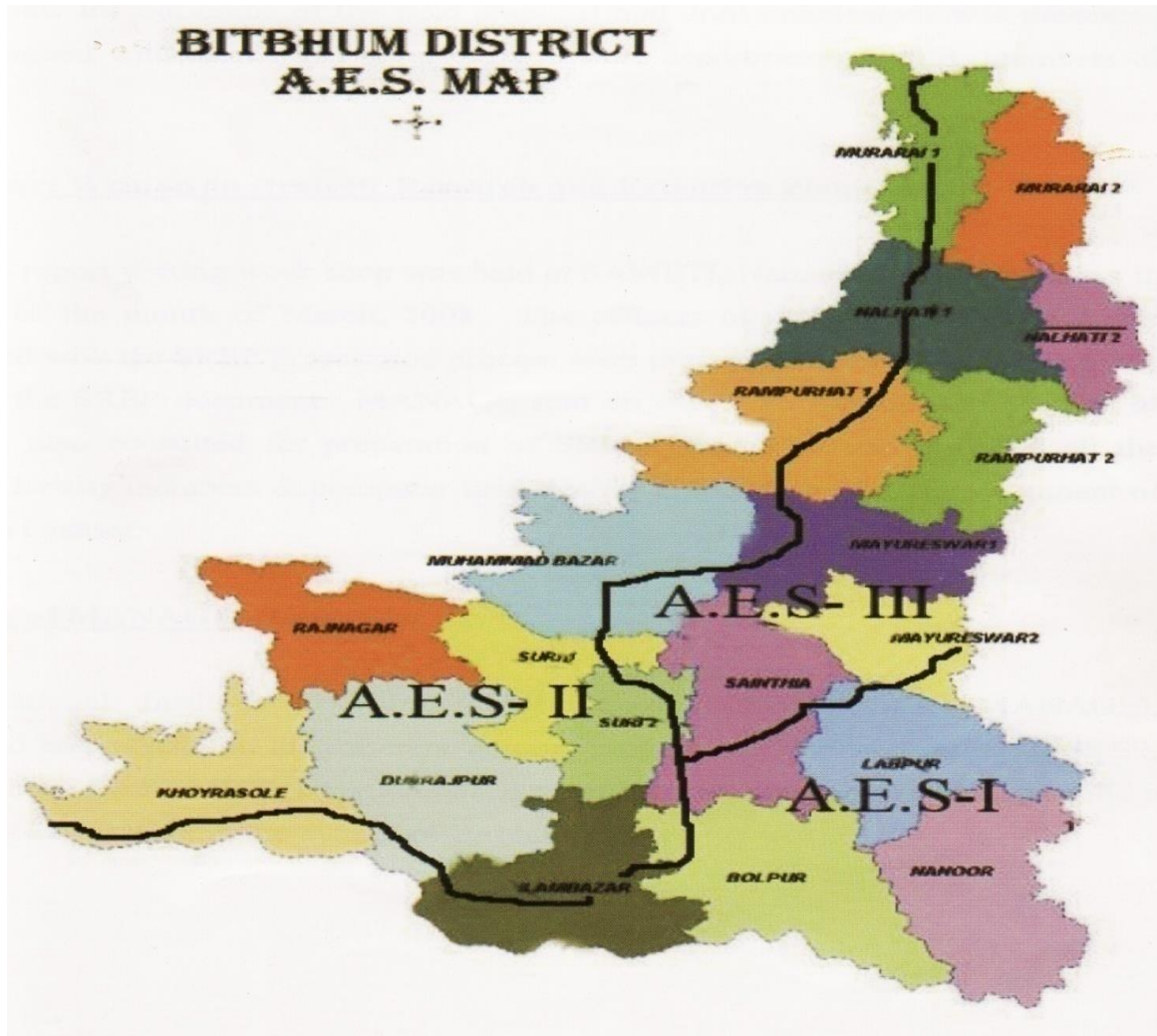
Eastern plateau (Chotanagpur) And Eastern Ghats, Hot Sub-humid Eco-Region (12.3)

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

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

### 2.a.3 Agro-ecological situation

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



Source: - SREP, Birbhum – 2009.

**Agro-ecological Situations of the District of Birbhum**

Characteristics	AES – I	AES – II	AES – III
<b>Blocks covered</b>	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.
<b>Soil Type</b>	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
<b>Irrigation</b>	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.
<b>Important River</b>	Ajoy, Mayurakshi, Dwaraka, Kopai	Hinglow, Bakreswar, Shaal, Ajoy, Chandrabhaga	Dwaraka, Brahmani, Mayurakshi, Pagla, Bansloi
<b>Flood / Draught Proneness</b>	Moderate flood prone area	Moderate draught prone area	Flood prone area
<b>Available Water Area for Fish Cultivation</b>	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.
<b>Animal Resources</b>	20 percent of the total Milch Cows of the District of Birbhum is available under this AES out of which upgraded Breed percentage is only 5 percent. Only 15 percent of the total Goat population of the District of Birbhum and 30 percent of the Poultry Population of the District of Birbhum are available in this AES.	50 percent of the total Milch Cows of the District of Birbhum is available under this AES out of which upgraded Breed percentage is only 5 percent. 60 percent of the total Goat population of the District of Birbhum and 40 percent of the Poultry Population of the District of Birbhum are available in this AES.	30 percent of the total Milch Cows of the District of Birbhum is available under this AES out of which upgraded Breed percentage is only 5 percent. Only 25 percent of the total Goat population of the District of Birbhum and 30 percent of the Poultry Population of the District of Birbhum are available in this AES.
<b>Major Crops:</b> <b>Paddy -</b> <b>Oil Seeds –</b> <b>Pulses –</b>  <b>Vegetables –</b> <b>Fruits -</b>	Pre-Kharif, Kharif and Boro Paddy Mustard, Groundnut and Sesame Black and Green Gram, Lentil, Bengal Gram, Kulthi Seasonal vegetable round the year Mango, Guava, Citrus, Banana, Coconut	Pre-Kharif, Kharif and Boro Paddy Mustard and Groundnut and Sesame in limited areas. Khesari, Black and Green Gram, Lentil, Bengal Gram, Kulthi  Seasonal vegetables round the year Mango, Guava, Citrus, Banana, Coconut	Pre-Kharif, Kharif and Boro Paddy Mustard, Groundnut and Sesame Black Gram and Green Gram  Seasonal vegetables round the year Mango, Guava, Citrus, Banana, Coconut.

**Source: - SREP, Birbhum – 2009.**

#### 2.a.4 Soil Type

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

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

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

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	295115	4790.2	1413660
Aus Paddy	5200	3767	3803	14325901	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
Kharif 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
Lentil	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/Moong	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
Bhadai Kalai	1500	1240	408	505.92	1321	502	663.142	1052	622	654.344	1085	640	694.4	1125	665	748.125
Kulihli & 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	115515.1
S/Cane	1850	1759	77373	1360991	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**

Crops	Major fruits and vegetables					
	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		
<b>Total Vegetables</b>	<b>32370.00</b>	<b>56.00</b>	<b>45100.00</b>	<b>100.60</b>		
<b>Total Vegetables (Rainy)</b>					<b>10350.00</b>	<b>76.62</b>
<b>Total Vegetables (Winter)</b>					<b>15360.00</b>	<b>149.98</b>
<b>Total Vegetables (Spring)</b>					<b>8230.00</b>	<b>136.68</b>
<b>Total Vegetables (Summer)</b>					<b>18737.50</b>	<b>111.93</b>
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
<b>Total Fruits</b>	<b>3210.00</b>	<b>45.00</b>	<b>3997.00</b>	<b>149.50</b>	<b>5635.00</b>	<b>119.20</b>
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		
<b>Total Flower</b>	<b>6500.00</b>	<b>46.20 lakh spikes</b>	<b>95430.00</b>	<b>69.6 lakh spikes</b>	<b>Not Available</b>	<b>Not Available</b>

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

### 2.a.6 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 rule, the wind is from south-east in summer and from the north-west in winter.

#### Maximum and Minimum Temperature by Month in the District of Birbhum from 2008 to 2012

Centre : Suri(Degree Celsius)										
Month	Year									
	2008		2009		2010		2011		2012	
	Max	Mini	Max	Mini	Max	Mini	Max	Mini	Max	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 from 2008 to 2012**

Centre : Suri(Degree Celsius)										
Month	Year									
	2008		2009		2010		2011		2012	
	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean
	Max	Mini	Max	Mini	Max	Mini	Max	Mini	Max	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]

**Month wise weather Data of Bolpur-Sriniketan block of Birbhum District from January, 2021 to November, 2021**

Month	Rainfall (mm.)	Temp. (0 C) Maximum	Temp. (0 C) Minimum	Temp. (0 C) Maximum (Mean)	Temp. (0 C) Minimum (Mean)	Relative Humidity (%)	
						At 8.30 AM	At 5.30 PM
January,2021	0	30.4	8.0	24.7	11.5	86.4	65.2
February,2021	0	36.0	7.0	29.3	13.7	70.5	50.7
March,2021	5.9	40.5	15.0	34.3	20.2	62.9	45.8
April,2021	25.7	41.5	20.2	37.5	23.1	66.2	44.4
May,2021	253.2	39.5	20.3	34.4	23.9	77.2	70.3
June,2021	331.4	39.5	22.6	33.9	25.1	85.7	82.0
July,2021	361.9	35.8	23.4	33.5	25.7	84.7	81.7
August,2021	157	36.8	26.0	34.8	27.5	82.5	71.7
September,2021	266.3	35.4	24.2	32.5	25.3	86.2	84.7
October,2021	207.6	34.4	17.5	31.8	23.2	85.1	83.4
November,2021	63.2	31.4	14.4	26.4	17.0	84.9	77.4
December,2021	11.0	30.2	7.5	25.6	15.2	85.0	47.2
Total	1683.2						

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

- ❖ Highest rainfall observed in the month of July, 2021 i.e. 361.9 mm
- ❖ Lowest rainfall observed in the month of January, 2021 and February, 2021 i.e. 0.0 mm
- ❖ Total rainfall observed from January, 2021 to December, 2021 was 1683.2 mm
- ❖ Highest Maximum temperature observed in the month April, i.e. 41.5<sup>o</sup> C
- ❖ Lowest Minimum temperature observed in the month February, i.e. 7.0<sup>o</sup> C

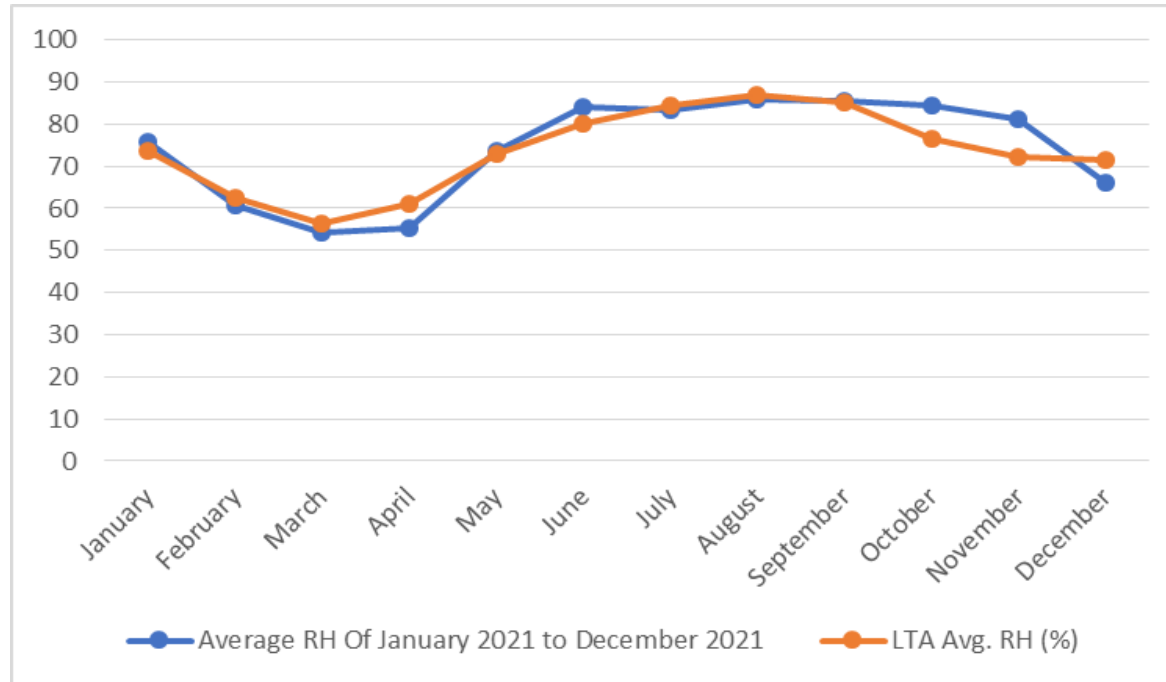
**Comparison between Observed data of 2020 to Long term Average (LTA) data of Birbhum district**

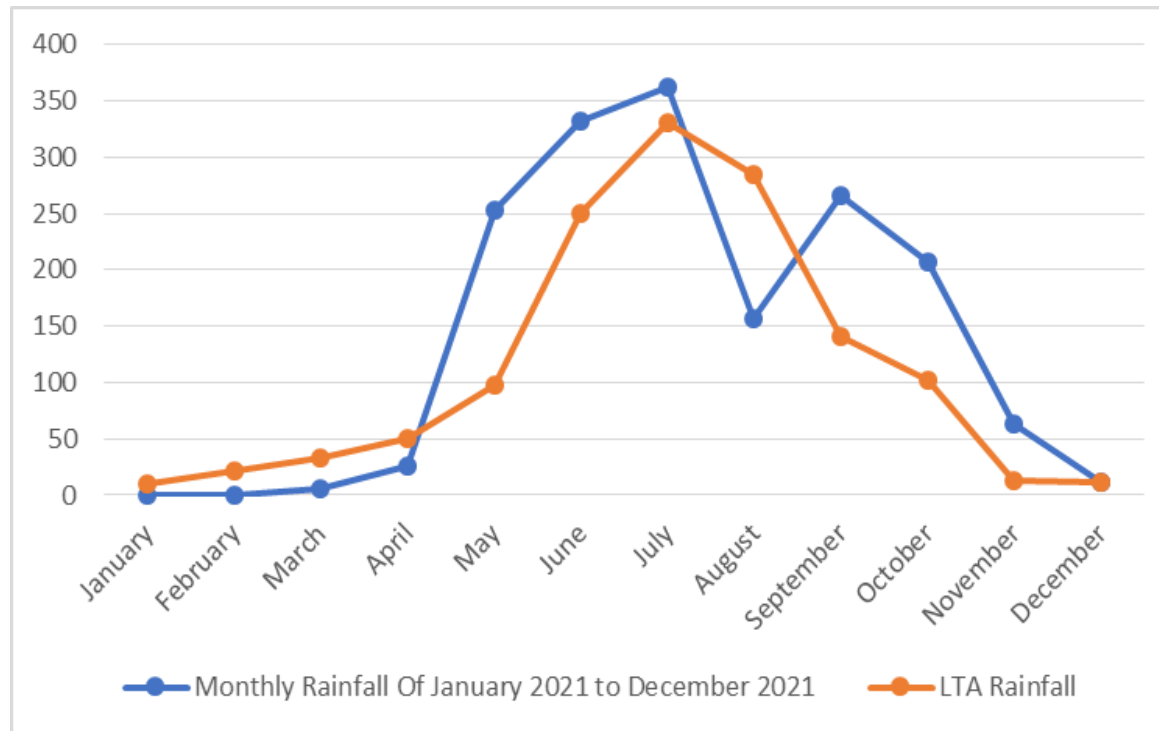
Month	Rainfall (mm.)	LTA Rainfall (mm.)	Temp. (° C) Maximum	LTA Max.Temp.(° C)	Temp. (° C) Minimum	LTA Min. Temp. (° C)	Relative Humidity (%)			LTA Avg. Relative Humidity (%)
							At 8.30 AM	At 5.30 PM	Avg. (%)	
January,2020	25.9	9.61	24.0	25.15	11.5	11.86	89.3	69.0	79.15	73.56
February,2020	2.9	21.25	26.7	28.18	13.0	14.48	74.6	54.7	64.65	62.35
March,2020	49.5	32.96	31.3	33.76	18.6	19.59	67.7	55.9	61.8	56.38
April,2020	14.7	50.52	35.6	37.07	22.4	23.71	53.2	40.2	46.7	61.05
May,2020	147.7	98.09	33.4	36.71	23.5	25.03	79.8	73.7	76.75	73.07
June,2020	266.6	250.09	34.2	34.61	25.7	25.71	83.7	81.9	82.8	80.06
July,2020	288.4	330.47	34.0	32.73	26.3	25.88	86.8	83.5	85.15	84.59
August,2020	304.1	285.13	33.0	32.08	26.5	25.77	87.3	83.5	85.4	87.11
September,2020	207.2	140.80	33.8	32.18	26.2	25.25	86.6	84.3	85.45	85.04
October,2020	57.1	102.29	32.5	31.41	23.9	22.44	83.8	80.9	82.35	76.46
November,2020	0	12.71	29.7	29.17	16.4	17.34	74.6	67.2	70.9	72.19
December,2020	0.2	11.02	32.2	26.07	12.1	12.61	85.2	66.8	76	71.50

LTA = Long Term Average of 26 Years (From 1989-90 to 2016-17)

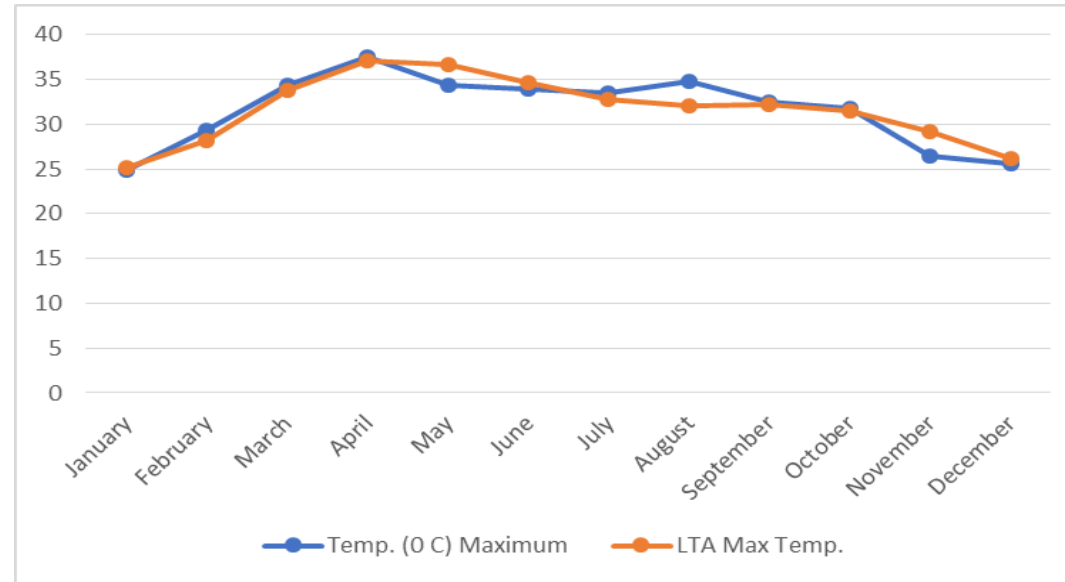
(Source: - Meteorological Observatory Office, Dept. of Meteorology, Govt. of India, Sriniketan, Birbhum, West Bengal)

**Monthly Average Relative Humidity (%) of Birbhum District in January, 2021 to December, 2021 vis-à-vis Long Term Average Monthly Relative Humidity (%) of Birbhum District.**

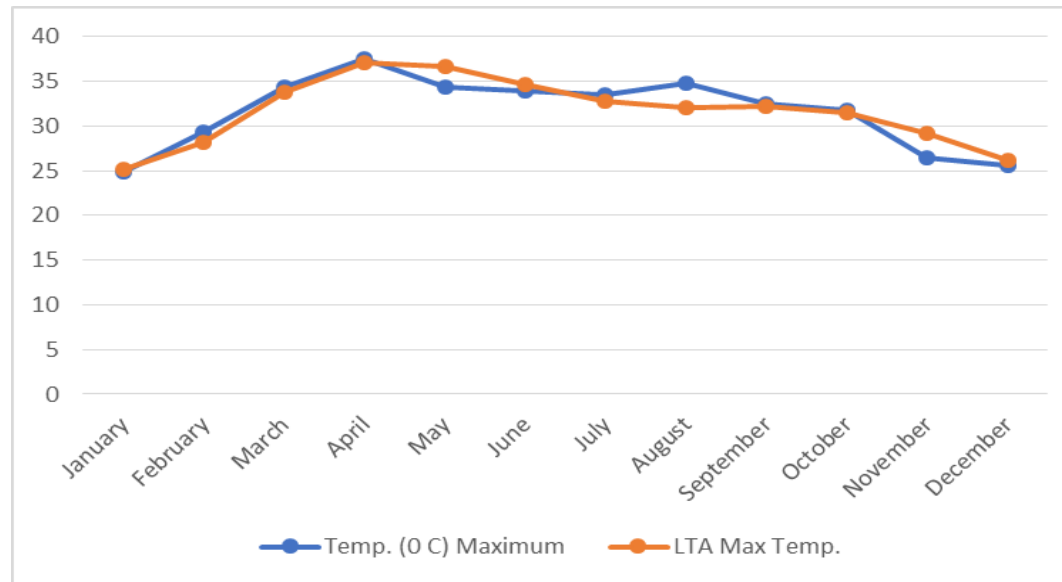


**Monthly Rainfall (mm.) of Birbhum District in January, 2021 to December, 2021 vis-à-vis Long Term Average Monthly Rainfall (mm.) of Birbhum District**

**Monthly Average Maximum Temperature (0 Centigrade) of Birbhum District in January, 2021 to December, 2021 vis-à-vis Long Term Average Monthly Maximum Temperature (0 Centigrade) of Birbhum District**



**Monthly Average Maximum Temperature (0 Centigrade) of Birbhum District in January, 2021 to December, 2021 vis-à-vis Long Term Average Monthly Maximum Temperature (0 Centigrade) of Birbhum District**



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

**Details of Live-Stock and Poultry in the District of Birbhum**  
(Number)

Category		Year - 1989	Year - 1994	Year - 1997	Year - 2003	Year - 2007	Year 09-10	Year 10-11	Year 11-12	Year 19-20
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	Cattle:									
	Cows	255381	266217	274094	282145	372662				
	Bulls and Bullocks	307844	347593	357919	294845	308308				
	Young Stock	328898	381066	392321	421336	452384				
	Total Cattle	892123	994876	1024334	998326	1133354	1163975	1180031	1196623	1185333
2	Buffaloes:									
	Cows	7627	7043	7132	8688	23492				
	Bulls and Bullocks	37258	45182	45753	47100	44088				
	Young Stock	6685	8076	8178	11075	..				
	Total Buffaloes	51570	60301	61063	66863	67580	63120	61002	58955	94938
3	Sheep	163854	189122	189214	186280	216888	229300	235770	242422	163107
4	Goats	598010	736251	816123	728113	941989	1066464	1134740	1207387	1168796
5	Horses and ponies	366	96	96	59	39	30	26	23	
6	Pigs	77437	77572	83653	57680	49177	46814	45676	44565	38374
7	Other Live-stock	..	..	..	87735	93849	98391	100786	103280	
	Total Live-stock	1783360	2058218	2174483	2125056	2502876	2668094	2758031	2853255	
8	Poultry :									
	Fowls	1489187	1506982	1659044	2303418	3071493	3753562	4222424	4805424	
	Ducks	828231	1076333	1218849	1274104	1150029	1165248	1097777	1086352	
	Others	11275	20416	10514	3135	1609	1591	1582	1573	
	Total Poultry	2328693	2603731	2888407	3580657	4223131	4920401	5321783	5893349	

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

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

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

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

**Production of Meat and Wool in the District of Birbhum**

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

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

**Production Details of Fishery Sector in Birbhum District**

**# Impounded Fresh Water Area (Including Beel and Bour) in Birbhum District in 2015-16:** - 21,733.00 ha.

**Source:** - Handbook of Fisheries Statistics, 2015-16, September – 2016, Department of Fisheries, Directorate of Fisheries, Government of West Bengal, Meen Bhawan 31, GN Block, Sector —V Salt Lake City, Kolkata—700 091.

**# Total Impounded Water Area (By Satellite Imagery Analysis) in Birbhum District in 2014-15:** -

- i. **No. of Water Area:** - 91272
- ii. **Total Water Area (In ha.):** - 22822

**Sources:** - Hand Book on GIS Based Mapping of Smaller Water Bodies and creation of Fisheries Database in West Bengal, under the Dept. of Fisheries, Govt. of W.B., 2015.

**Fish Seed Production Details in Birbhum District:** -

Sl. No.	Year	Production (Unit in Million Numbers)
01.	2011-12	135
02.	2012-13	125
03.	2013-14	125
04.	2014-15	127
05.	2015-16	139

**Source:** - Handbook of Fisheries Statistics, 2015-16, September – 2016, Department of Fisheries, Directorate of Fisheries, Government of West Bengal, Meen Bhawan 31, GN Block, Sector —V Salt Lake City, Kolkata—700 091.

**Fish Production Details in Birbhum District:** -

Sl. No.	Year	Fish Production (Unit in Ton)	Prawn Production (Unit in Ton)	Total Production (Unit in Ton)
01.	2011-12	63353	00	63353
02.	2012-13	65913	12	65925
03.	2013-14	70329	16	70345
04.	2014-15	69748	16	69764
05.	2015-16	71840	15	71855

**Source:** - Handbook of Fisheries Statistics, 2015-16, September – 2016, Department of Fisheries, Directorate of Fisheries, Government of West Bengal, Meen Bhawan 31, GN Block, Sector —V Salt Lake City, Kolkata—700 091.

## 2.b. Details of operational area / villages (2020)

Sl. No.	Name of Taluk	Name of the block	Name of the village	Major crops & enterprises	Major problem identified (Crop wise)	Identified Thrust Areas
1.	Illambazar	Illambazar	Daranda	Rice, Wheat, Mustard, Potato, Red Gram, Black Gram etc.; Vegetable like	<p><b>Bio physical:</b></p> <p><b>Low productivity of all major crops</b></p> <ul style="list-style-type: none"> <li>Poor and Marginal soil</li> <li>Low yielding seeds and plants</li> <li>Limited water resource for irrigation</li> <li>Imbalanced use of manures and fertilizer</li> <li>Inappropriate agronomic practices</li> <li>Inappropriate horticultural practices</li> <li>Indiscriminate use of chemical pesticide</li> </ul> <p><b>Poor productivity of livestock</b></p> <ul style="list-style-type: none"> <li>Inadequate, descriptive and prolific breed</li> <li>Poor health and management practices</li> <li>Low quality feed</li> </ul> <p><b>Poor fish productivity:</b></p> <ul style="list-style-type: none"> <li>Poor pond management</li> <li>Poor quality fingerlings</li> </ul> <p><b>Low income generation of rural women</b></p> <ul style="list-style-type: none"> <li>Lack of skill on income generating rural crafts</li> <li>Lack of skill on fruits and vegetable preservation</li> <li>Lack of skill on establishment of backyard nutrition garden</li> </ul> <p><b>Poor health condition of women and child</b></p> <ul style="list-style-type: none"> <li>Lack of nutritious food resources</li> <li>Lack of skill on establishment of backyard nutrition garden</li> </ul> <p><b>Socio Economic:</b></p> <ul style="list-style-type: none"> <li>Lack of knowledge about soil testing based fertilizer application</li> <li>Lack of knowledge on good agronomic and horticultural practices</li> <li>Lack of knowledge on care handling of plant protection equipments</li> <li>Lack of knowledge on good dairy, goatery, poultry management practices</li> <li>Multi ownership of ponds</li> <li>Tendency to lease out ponds</li> <li>Lack of knowledge on different income generating programme for women</li> <li>Lack of knowledge on low cost nutritious food for women and child</li> <li>Lack of credit facilities</li> <li>Lack of Insurance facilities for Crops</li> <li>Lack of Market Information of the produced products</li> <li>Lack of Backward and Forward Linkages for the farmers and farm women</li> <li>Lack of well established producers' Groups.</li> </ul>	<ul style="list-style-type: none"> <li>Soil health management</li> <li>Quality seeds/seedlings and saplings</li> <li>Balanced crop nutrition</li> <li>Good agronomic practices</li> <li>Good horticultural practices</li> <li>Appropriate Pest Management</li> <li>Formation of Self Help Groups</li> <li>Formation of Producers' Groups</li> <li>Formation of Farmers Club</li> <li>Organization of Exposure visits of Practicing Farmers, Farm Women and Rural Youths</li> <li>Improved Extension Activities like Kissan Mobile Message Services</li> <li>Improvement of livestock productivity</li> <li>Enhancement of fish productivity</li> <li>Improvement of women led vocation</li> <li>Women and child care</li> <li>Market led Extension</li> </ul>
2.	Sattore	Bolpur – Sriniketan	Bishnubati	Brinjal, Chilli, Tomato, Elephant Foot Yam, Cucurbits; Fruit plants like		
3.	Sattore	Bolpur – Sriniketan	Asadullapur	Mango, Guava, Papaya, Coconut, Banana etc. and Dairy, Goatery, Poultry, Duckery, Fishery, Batique work, Decorative Candle, Post Harvest Technology of fruits and vegetables, Health and Nutrition of Rural Women and Children; Crop Insurance, Group Formation, Market Led Extension, Marketing Mechanisms of Farm produces.		
4.	Illambazar	Illambazar	Sahebdang a			
5.	Panrui	Sainthia	Digha			

## 2. c. Details of village adoption programme:

### Name of the villages adopted by PC and SMS (2021) for its development and action plan

Name of village	Block	Action taken for development
Digha (Dr. S. Mandal)	Sainhia	<p><b>A. Skill development Training Programmes</b> on Horticultural Crop diversification.</p> <p><b>B. Skill development Training Programme</b> on Culture and Use of <i>Dhaincha</i> and <i>Azolla</i>.</p> <p><b>C. Skill development Training Programme</b> on Nursery Pond Preparation, Composite Fish Culture, Fish Feed Management and Fish Disease Management.</p> <p><b>D. Skill development Training Programmes</b> on Integrated Pest, Disease and Weed Management in Cereals, Pulses and Oilseeds and Vegetables.</p> <p><b>E. Women Empowerment</b> through Skill Development Training on Rural Crafts, Preservation and Value Addition of Fruits and Vegetables, Homestead Kitchen Gardening.</p> <p><b>F. Knowledge development Training Programmes</b> on Crop Insurance, Kisan Credit Card, Farmers' Clubs, Formation of Self Help Groups (SHGs), Formation of Commodity Interest Groups (CIGs), Marketing Mechanisms and Marketing Channels of Farm Products and Protection of Plant Varieties and Farmers' Rights Act, 2001.</p> <p><b>G. Front Line Demonstrations (FLDs)</b> on (i) Mustard Var. PusaBahar and PusaMahek and (ii) Wheat Var. HD – 2824.</p> <p><b>H. Cluster Front Line Demonstrations (Cluster FLDs) on Mustard Var. PusaMahek.</b></p> <p><b>I. On Farm Testing (OFT)</b> on Assessment of Balanced N-P-K Management for Increasing Yield of Yellow Sarson</p> <p><b>J. Awareness Generation</b> of rural women on Health and Hygiene Issues.</p> <p><b>K. Analysis of Soil Samples and preparation and distribution of Soil Health Cards.</b></p>
Daranda (Sri S. Mondal)	Illambazar	<p><b>A. Skill development Training Programmes</b> on Horticultural Crop diversification, Cultivation of Cucurbitaceous Crops, Cultivation of Solanaceous Crops, Lay out and planting of Mango and Guava Orchards, Improved package and practices of Kharif Vegetables, Improved Method of Elephant Foot Yam Cultivation, Improved Production Practices of <i>Barmasia</i> Drum Sticks, Improved Production Practices of Low Volume High Value Crops like Capsicum, Broccoli etc.</p> <p><b>B. Skill development Training Programmes</b> on Collection of Soil Sample for Soil Testing, Sowing and Phosphate Management in <i>Dhaincha</i> and Rice Seed Production Technology in Kharif Season.</p> <p><b>C. Skill development Training Programme</b> on Nursery Pond Preparation, Composite Fish Culture, Portable Carp Hatchery, Fish Feed Management and Fish Disease Management.</p> <p><b>D. Skill development Training Programmes</b> on Integrated Pest, Disease and Weed Management in Cereals, Pulses and Oilseeds and Vegetables.</p> <p><b>E. Women Empowerment</b> through Skill Development Training on Rural Crafts, Preservation and Value Addition of Fruits and Vegetables, Homestead Kitchen Gardening.</p> <p><b>F. Knowledge development Training Programmes</b> on Crop Insurance, Kisan Credit Card, Farmers' Clubs, Formation of Self Help Groups (SHGs), Formation of Commodity Interest Groups (CIGs), Marketing Mechanisms and Marketing Channels of Farm Products and Protection of Plant Varieties and Farmers' Rights Act, 2001.</p> <p><b>G. Front Line Demonstrations (FLDs)</b> on (i) Introduction of <i>Bhetki</i> as a component of Composite Fish Culture; (ii) Area Specific Mineral Mixture Supplementation for Deshi Milch Cows; (iii) <i>Dhaincha</i>; (iv) Mustard Var. PusaBahar and PusaMahek; (v) Breed Replacement of Poultry Birds in Back Yard Farming Situation by introducing Rhode Island Red (RIR); (vi) Wheat Var. HD – 2824; (vii) Elephant Foot Yam Var. Bidhan Kusum; (viii) Drum Sticks Var. PKM – 1; (ix) Capsicum Var. Bharat and Mahabharat and (x) Broccoli Var. Green Magic (F<sub>1</sub> Hybrid).</p> <p><b>H. On Farm Testing (OFT)</b> on (i) Assessment of Various Component Combinations of Fish Feed; (ii) Assessment of location specific Late Kharif or Early Winter Cabbage varieties; (iii) Assessment of location specific Late Kharif or Early Winter Cauliflower varieties and (iv) Fish based Integrated Farming System (IFS).</p>

		<p><b>I. Awareness Generation</b> of rural women on Health and Hygiene Issues.</p> <p><b>J. Analysis of Soil Samples and preparation and distribution of Soil Health Cards.</b></p>
Bishnubati (Dr. P. Ray)	Bolpur- Sriniketan	<p><b>A. Skill development Training Programmes</b> on Horticultural Crop diversification and Improved Production Practices of Low Volume High Value Crops like Capsicum, Broccoli etc.</p> <p><b>B. Skill development Training Programmes</b> on Sowing and Phosphate Management in <i>Dhaincha</i> and Cultivation of Rabi Crops with special Emphasis on Weed Management.</p> <p><b>C. Skill development Training Programme</b> on Nursery Pond Preparation, Composite Fish Culture, Portable Carp Hatchery, Fish Feed Management and Fish Disease Management.</p> <p><b>D. Skill development Training Programmes</b> on Integrated Pest, Disease and Weed Management in Cereals, Pulses and Oilseeds and Vegetables.</p> <p><b>E. Women Empowerment</b> through Skill Development Training on Rural Crafts, Preservation and Value Addition of Fruits and Vegetables, Homestead Kitchen Gardening.</p> <p><b>F. Formation of Two (02) Women led Self Help Groups (SHGs).</b></p> <p><b>G. Knowledge development Training Programmes</b> on Crop Insurance, Kisan Credit Card, Farmers' Clubs, Formation of Self Help Groups (SHGs), Formation of Commodity Interest Groups (CIGs), Marketing Mechanisms and Marketing Channels of Farm Products and Protection of Plant Varieties and Farmers' Rights Act, 2001.</p> <p><b>H. Front Line Demonstrations (FLDs)</b> on (i) Introduction of <i>Bhetki</i> as a Component of Composite Fish Culture; (ii) Area Specific Mineral Mixture Supplementation for DeshiMilch Cows; (iii) Breed up-gradation of Poultry Birds through Introduction of Improved Birds like Rhode Island Red (RIR); (iv) Wheat Var. HD – 2824; (v) Capsicum Var. Bharat and Mahabharat; (ix) Broccoli Var. Green Magic (F<sub>1</sub> Hybrid); (vi) Fodder Oat Var. Kent and (vii) Fodder Rice Bean Var. Bidhan – 2.</p> <p><b>I. On Farm Testing (OFT)</b> on (i) Assessment of Different Components Combination of Fish Feed as Growth Promoters in Carp Spawns and Fry Feed to Increase their Survival Rate to A Profitable Extent, (ii) Fish based Integrated Farming System and (iii) Evaluation of Performance of Different Components of Micro-Nutrients as Feed Supplementation for Goats.</p> <p><b>J. Awareness Generation</b> of rural women on Health and Hygiene Issues.</p> <p><b>K. Vaccination Camp</b> for Cattles and Birds.</p> <p><b>L. Animal Health Camp.</b></p> <p><b>M. Analysis of Soil Samples and preparation and distribution of Soil Health Cards.</b></p>

Sahebdanga (Dr. M. Khan)	Bolpur- Sriniketan	<p><b>A. Skill development Training Programme</b> on Nursery Pond Preparation, Composite Fish Culture, Portable Carp Hatchery, Fish Feed Management and Fish Disease Management.</p> <p><b>B. Skill development Training Programmes</b> on Integrated Pest, Disease and Weed Management in Cereals, Pulses and Oilseeds and Vegetables.</p> <p><b>C. Women Empowerment</b> through Skill Development Training on Rural Crafts, Preservation and Value Addition of Fruits and Vegetables, Homestead Kitchen Gardening.</p> <p><b>D. Knowledge development Training Programmes</b> on Crop Insurance, Kisan Credit Card, Farmers’ Clubs, Formation of Self Help Groups (SHGs), Formation of Commodity Interest Groups (CIGs), Marketing Mechanisms and Marketing Channels of Farm Products and Protection of Plant Varieties and Farmers’ Rights Act, 2001.</p> <p><b>E. Front Line Demonstrations (FLDs)</b> on (i) Mustard Var. PusaBahar and PusaMahek; (ii) Wheat Var. HD – 2824; (iii) Fodder Oat Var. Kent; (iv) Fodder Rice Bean Var. Bidhan – 2 and (v) Breed up-gradation of Poultry Birds through Introduction of Improved Birds like Rhode Island Red (RIR) .</p> <p><b>F. Cluster Front Line Demonstrations (Cluster FLDs) on Sesame Var. Sabitri.</b></p> <p><b>G. Awareness Generation</b> of rural women on Health and Hygiene Issues.</p> <p><b>H. Vaccination Camp</b> for Cattles and Birds.</p> <p><b>I. Analysis of Soil Samples and preparation and distribution of Soil Health Cards.</b></p>
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## 2.1

### Priority thrust areas

Sl. No.	Thrust Areas
1.	Crop diversification through introduction of Pulses, Oilseeds, major Millets, horticultural crops like Elephant Foot Yam, Drum Stick and high value low volume horticultural products like Capsicum, Broccoli etc.
2.	Popularization of High Yielding Varieties (HYVs) of major crops like Rice, Wheat, Mustard, Potato etc. as well as traditional varieties of those Crop also.
3.	Cultivation of field crops which require least water in the Arid and Semi-Arid regions of the district and cultivation of suitable horticultural crops in those regions.
4.	Popularization of improved management practices of Animals and Fishes
5.	Women empowerment through Rural Crafts and Nutritional Management of Rural Women and Children
6.	Market led extension, crop insurance and institutional rural credit flow mechanism

**3.13. TECHNICAL ACHIEVEMENTS**

## 3.A. Details of target and achievement of mandatory activities by KVK during the year

OFT												FLD											
No. of technologies tested:												No. of technologies demonstrated:											
Number of OFTs		Number of farmers										Number of FLDs		Number of farmers									
Target	Achievement	Target	Achievement									Target	Achievement	Target	Achievement								
			SC		ST		Others		Total						SC		ST		Others		Total		
			M	F	M	F	M	F	M	F	T				M	F	M	F	M	F	M	F	T
05	05	35	18	4	2	1	10	3	30	8	38	890	1592	890	545	345	120	45	290	247	955	637	1592

Training											Extension activities												
Number of Courses		Number of Participants									Number of activities		Number of participants										
Target	Achievement	Target	Achievement						Target	Achievement	Target	Achievement											
			SC		ST		Others		Total						SC		ST		Others		Total		
			M	F	M	F	M	F	M	F	T				M	F	M	F	M	F	M	F	T
145	188	4350	4502	565	956	175	1043	220	6201	960	7161	24	33	720	420	182	89	42	241	26	750	350	1100

Impact of capacity building											Impact of Extension activities										
Number of Participants trained		Number of Trainees got employment (self/ wage/ entrepreneur/ engaged as skilled manpower)									Number of Participants attended		Number of participants got employment (self/ wage/ entrepreneur/ engaged as skilled manpower)								
Target	Achievement	SC		ST		Others		Total			Target	Achievement	SC		ST		Others		Total		
		M	F	M	F	M	F	M	F	T			M	F	M	F	M	F	M	F	T
125	131	12	7	3	2	7	2	22	11	33	60	118	18	6	5	2	10	3	38	11	49

Seed production (q)				Planting material (in Lakh)			
Target		Achievement		Target		Achievement	
25		34.42		0.15		0.24	

Livestock strains and fish fingerlings produced (in lakh)*				Soil, water, plant, manures samples tested (in lakh)			
Target		Achievement		Target		Achievement	
0.25		0.32		72		116	

\* Give no. only in case of fish fingerlings

Publication by KVKs							
Item	Number	No. circulated	No. of Research papers in NAAS rated Journals	Highest NAAS rating of any publication	Average NAAS rating of the publications	Details of awarded publication, if any	Details of Award given to the publication
Research paper	02	Not Assessed	02	4.63	4.5	-	-
Seminar/conference/ symposia papers	02	Not Assessed					
Books	04	Not Assessed					
Bulletins	03	688					
Newsletter	-	Not Assessed					
Popular Articles	07	Not Assessed					
Book Chapter	-	Not Assessed					
Extension Pamphlets/ literature	06	6000					
Technical reports	16	Not Assessed					
Electronic Publication (CD/DVD etc)	01	3000					
<b>TOTAL</b>	<b>41</b>	<b>9688</b>					

**Achievements on technologies assessed and refined**

Summer 2021

**OFT – 1**

1.	<b>Title of On farm Trial</b>	Assessment of liming dose in profitable manners in increasing productivity of Black Gram
2.	<b>Problem diagnosed</b>	Due to lower soil pH (higher acidity), less flower and pod formation of black gram is being noticed. According to farmers' practice, application of lime is not being performed. So, yield of black gram is low.
3.	<b>Details of technologies selected for assessment / refinement</b>	<u>Assessment</u> Farmers' Practice : No liming Technology Option – I : Lime as per soil testing Technology Option – II: Lime @ 10% of the Lime requirement as per soil testing Technology Option – III: Lime @ 20% of the Lime requirement as per soil testing (N. B.: - Recommended fertilizer dose will be applied in all the Technology Options including the Farmers' Practice.)
4.	<b>Source of Technology (ICAR / AICRP / SAU / other, please specify)</b>	ICAR [Managing Acid Soils for enhancing Productivity, P. D. Sharma and A. K. Sarkar (2005), Division of Natural Resource Management (NRM), Indian Council of Agricultural Research (ICAR), Krishi Anusandhan Bhawan – II, Pusa, New Delhi and published by the Director, ICAR-NBSS&LUP, Nagpur, Maharashtra.]
5.	<b>Production system and thematic area</b>	Paddy – Mustard- Pulse; Soil Health Management
6.	<b>Performance of the Technology with performance indicators</b>	Technology Option-II i.e., Lime @ 10% of the lime requirement as per soil testing produced significantly better growth, yield components, yield, and B:C ratio than other Technology Options and farmers practice in Summer Blackgram Cultivation managing acid soil economically.
7.	<b>Final recommendation for micro level situation</b>	Soil Test Based Lime application @ 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 Black gram Cultivation through management of acid soil economically.
8.	<b>Constraints identified and feedback for research</b>	Collection of soil sample sometimes found difficult for heavy rain before the sowing time.
9.	<b>Process of farmers' participation and their reaction</b>	Farmers actively participated in the day-to-day monitoring of the crop and data collection with KVK scientists. Farmers also incurred all the labour cost for cultivation

**Thematic area: Soil Health Management (Summer, 2021)**

**Problem definition:** Due to lower soil pH (higher acidity), less flower and pod formation of black gram is being noticed. According to farmers' practice, application of lime is not being performed. So, yield of black gram is low.

**Technology assessed:** Assessment of liming dose in profitable manners in increasing productivity of Black Gram

**Table 1: Effect of liming on growth, yield attributes, yield and economics of black gram at red and lateritic soil of Birbhum**

Technology option	No. of trials	Yield Component			Yield (q/ha)	Cost of cultivation (Rs. / ha)	Gross return (Rs. / ha)	Net Return (Rs. / ha)	BC Ratio
		No. of Branches per Plant	No. of pods per plant	No. of Seeds per capsules					
<b>Farmers' Practice</b> : No liming	5	12	62	5.2	8.2	19800	49200	29400	2.48
<b>Technology Option-I:</b> Lime as per soil testing		14	66	5.8	12.4	57300	74400	17400	1.30
<b>Technology Option -II:</b> Lime @ 10% of the Lime requirement as per soil testing		19	76	6.9	13.1	23575	78600	55025	3.33
<b>Technology Option - III:</b> Lime @ 20% of the Lime requirement as per soil testing		18	74	6.2	12.8	27325	76800	49475	2.81
SEM±		0.80	0.49	0.094	0.02		296.70	182.15	0.02
CD(P=0.05)		2.41	1.49	0.29	0.05		896.03	553.74	0.05

(N. B.: - Recommended fertilizer dose was applied in all the Technology Options including the Farmers' Practice.)

	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5	average
<b>Initial soil pH</b>	6.2	6.1	6.4	6.2	6.2	6.22
<b>Soil pH after harvest</b>	6.7	6.8	6.8	6.7	6.6	6.72

**Result:** As a result, TO II, i.e. Lime @ 10% of the Lime requirement as per soil testing produced significantly better growth, yield components, yield (13.1 q/ha), and B:C ratio (3.33) than the TO I (Yield- 12.4 q/ha and B:C ratio- 1.30) and the TO III (Yield-12.8 q/ha and B:C ratio- 2.81) and also significantly higher than the Farmers' Practice (with respect to all the indicating Parameters) in Black Gram cultivation thus managing acid soil economically. Average Initial Soil pH were 6.22 however average Soil pH just after harvest became 6.72. So, it can be concluded that TO-I i.e.,10% of recommended dose of lime was significantly more beneficial than any other treatments in respect of productivity and profitability.

**OFT-2**

1.	<b>Title of On farm Trial</b>	Evaluation of performance of coloured broiler chicken in semi-intensive system of rearing
2.	<b>Problem diagnosed</b>	Poor growth and survivability of Kuroiler
3.	<b>Details of technologies selected for assessment / refinement</b>	Assessment  Control: Farmers' Practice: Coloured Broiler: Kuroiler Technology Option — I: Krishibro Technology Option — II: Caribro
4.	<b>Source of Technology (ICAR / AICRP / SAU / other, please specify)</b>	ICAR-CARI, Project Directorate of Poultry, Govt. of India
5.	<b>Production system and thematic area</b>	Semi intensive farming system; Poultry management
6.	<b>Performance of the Technology with performance indicators</b>	Technology Option-II i.e., Rearing of Caribro produced significantly better growth and gave higher benefit cost ratio than other Technology option and farmers practice
7.	<b>Final recommendation for micro level situation</b>	Caribro may be reared economically in semi-intensive system of poultry rearing in Birbhum District
8.	<b>Constraints identified and feedback for research</b>	No regular supply of Chicks (i.e., Krishibro and Caribro).  Infrastructure development for supply of Chicks Chicks (i.e., Krishibro and Caribro).
9.	<b>Process of farmers' participation and their reaction</b>	Farmers actively participated in the day-to-day monitoring and data collection with KVK scientists. Farmers incurred all the cost of feed and other infrastructure

**Thematic area:** Poultry Management (Summer 2021)

**Problem definition:** Poor growth and survivability of Kuroiler

**Technology assessed:** Assessment of performance of coloured broiler chicken in semi-intensive system of rearing.

**Table 2: Performance of different breeds of coloured broiler chicken in semi-intensive system of rearing**

Technology Option	No. of trials	Body Weight (gm)						Gross cost (Rs. / unit)	Gross return (Rs/unit)	Net Return (Rs/unit)	B/C Ratio
		Day 7	Day 14	Day 21	Day 28	Day 42	Day 56				
Control: Farmers' Practice: Coloured Broiler: Kuroiler	7	51.37 <sup>a</sup> +0.85	125.83 <sup>a</sup> +1.81	347.57 <sup>a</sup> +2.88	504.27 <sup>a</sup> +3.82	848.71 <sup>a</sup> +9.71	1105.88 <sup>a</sup> +11.43	4235	8320	4285	1.96
Technology Option — I: Krishibro		61.34 <sup>b</sup> +0.72	162.28 <sup>b</sup> +1.79	393.07 <sup>b</sup> +3.87	585.35 <sup>b</sup> +4.04	1018.72 <sup>b</sup> +10.78	1302.84 <sup>b</sup> +13.89	4235	9815	5580	2.31
Technology Option — II: Caribro		77.12 <sup>b</sup> +0.74	192.87 <sup>b</sup> +1.63	458.52 <sup>c</sup> +3.78	652.85 <sup>c</sup> +4.18	1085.43 <sup>c</sup> +10.82	1421.32 <sup>c</sup> +14.46	4235	10530	6295	2.48

**Result:** The data from this table indicates that Technology option II i.e. Caribro produced significant weight changes and better B/C ratio (2.48) than Technology option-I i.e., Krishibro and farmer's practice (Coloured broiler: Kuroiler).

Kharif 2021

## OFT – 3

1.	<b>Title of On farm Trial</b>	Assessment of insecticide efficiency to control thrips in <i>kharif</i> green gram
2.	<b>Problem diagnosed</b>	Flower drop is a common phenomenon in kharif pulse in Birbhum District. Spraying of 'B' is not effective in most of the cases. Proper insecticide is also not tested in the farmer's field. So, yield is low due to low flower set and pod formation
3.	<b>Details of technologies selected for assessment/refinement</b>	<b>Assessment</b>  <b>Farmers' Practice</b> –Farmer's Practice – No insecticide application Technology Option-I - Thiomethoxam 25% WG 0.2 gm/lit Technology Option-II- Thiomethoxam 25% WG (0.2gm/lit) + Lamda cyhalothrin 5% SC (0.5 ml/lit) Technology Option-III - Fipronil + Acetamiprid @ 1.6 ml/lit of water (800ml/ha)
4.	<b>Source of Technology (ICAR / AICRP / SAU / other, please specify)</b>	ICAR [Package of Practices for Pulse Cultivation, ICAR-IIPR, Kanpur, Uttar Pradesh, India.]
5.	<b>Production System</b>  <b>Thematic Area</b>	Paddy – Mustard/ Potato – green gram  Pest Management
6.	<b>Performance of the Technology with performance indicators</b>	The programme is going on.
7.	<b>Final recommendation for micro level situation</b>	Thiamethoxam 25% WG (0.2 g./ lit.) + Lambda cyhalothrin 5% SC (0.5 ml per lt.) produced significantly higher yield (12.2 q/ha), lower pest attack intensity (15%), and higher B:C ratio (3.62) of summer green gram
8.	<b>Constraints identified</b>  <b>feedback for research</b>	Collection of data was found difficult due to rain before the sowing time.
9.	<b>Process of farmers participation and their reaction</b>	Farmers actively participated in the day-to-day monitoring of the crop and data collection with KVK scientists. Farmers also incurred all the labour cost for cultivation

**Thematic area: Pest Management (Kharif, 2021)**

**Problem definition:** Flower drop is a common phenomenon in *kharif* pulse in Birbhum District. Spraying of 'B' is not effective in most of the cases. Proper insecticide is also not tested in the farmer's field. So, yield is low due to low flower set and pod formation.

**Technology assessed:** Assessment of insecticide efficiency to control thrips in summer green gram variety PU-31.

**Table 3 : Effect of insecticide efficiency to control thrips of summer green gram at red and lateritic soil of Birbhum**

Treatment	No of trials	Thrips attack intensity (%)	Yield (q/ha)	Gross cost (₹)	Gross return (₹)	Net Return (₹)	B:C ratio
Farmer's Practice: No insecticide application	5	39	7.8	18000	46800	28800	2.6
Technology Option I: Thiamethoxam 25% WG (0.2 g./lit.).		20	11.3	20000	67800	47800	3.39
Technology Option II: Thiamethoxam 25% WG 0.2g./lit. + Lambda cyhalothrin 5% SC (0.5 ml per lit.)		11	12.5	20200	75000	54800	3.71
Technology Option III: Fipronil + Acidamiprid @ 1.6 ml/lit of water		22	10.2	19750	61200	41450	3.09
Sem +		0.65	0.42		467.55	340.19	0.22
CD ( $p=0.05$ )		1.97	1.27		1416.67	1025.63	0.67

**Results:**

TO-II i.e. Thiamethoxam 25% WG (0.2 g./ lit.) + Lambda cyhalothrin 5% SC (0.5 ml per lit.) produced significantly higher yield (12.5 q/ha), lower pest attack intensity (11%), and higher B:C ratio(3.71) than the TO-I (yield 11.3 q/ha), pest attack intensity(20%), and B:C ratio(3.39)) and the TO-III (yield , pest attack intensity, and B:C ratio) and also significantly higher than the Farmers' Practice (pest attack intensity39%, yield 7.8 q/ha and B:C ratio 2.6) in Green Gram

**Rabi, 2021****OFT – 4**

1.	<b>Title of On farm Trial</b>	<b>Assessment of micronutrient boron in quality and production of Broccoli (<i>Brassica oleracea</i> var. 42talic) in lateritic soil of Birbhum</b>
2.	<b>Problem diagnosed</b>	In lateritic acid soil of Birbhum district B deficiency is very prominent. Hollow stem of Broccoli is quite common. Due to hollow stem, curd size and yield of broccoli is reduced which leads to lower market price.
3.	<b>Micro farming situation</b>	Black Gram is cultivated in irrigated medium land situation in sandy loam soil with lower pH.
4.	<b>Farmers' practice</b>	Farmers are cultivating Broccoli without using any micronutrient.
5.	<b>Details of technologies selected for assessment / refinement</b>	Technology Assessment  Farmers' Practice : No application of Boron Technology Option (TO)- I: Soil application of Boron (@ 4kg/ha at final land preparation) Technology Option (TO)- II: Foliar spray of Boron (@ 2g/l. of water at 35 and 50 DAP) (N.B.: - Recommended fertilizer dose was applied in all the Technology Options including the Farmers' Practice.) Farmers' Practice: No application of Boron
6.	<b>Source of Technology (ICAR / AICRP / SAU / other, please specify)</b>	Source of Technology: Bulletin, ICAR-NBSS & LUP, Nagpur
7.	<b>Production system and thematic area</b>	Paddy – vegetables; Soil Health Management

8.	<b>Performance of the Technology with performance indicators</b>	TO-II i.e., Foliar spray of Boron (@ 2g/l. of water at 35 and 50 DAP) produced significantly better growth (no. of leaves- 18), yield components (Curd size- 21 cm.), yield (30 t/ha), and B:C ratio (3.27) than the TO-I i.e. Soil application of Boron (@ 4kg/ha at final land preparation) (Number of leaves- 15, Curd size- 19 cm., Yield- 27.5 t/ha and B:C ratio- 3.19)
9.	<b>Final recommendation for micro level situation</b>	Foliar spray of Boron (@ 2g/l. of water at 35 and 50 DAP) produced significantly better growth, yield components, yield and B:C ratio
10.	<b>Constraints identified and feedback for research</b>	Maintenance of spraying for Boron and for pesticides separately is found difficult.
11.	<b>Process of farmers' participation and their reaction</b>	Farmers actively participated in the day-to-day monitoring of the crop and data collection with KVK scientists. Farmers also incurred all the labour cost for cultivation

**Table 4: Effect of micronutrient boron in quality and production of Broccoli in lateritic soil of Birbhum**

Technology option	No. of trials	Yield Component		Yield (t/ha)	Cost of cultivation (Rs. / ha)	Gross return (Rs. / ha)	Net Return (Rs. / ha)	BC Ratio
		Number of leaves per plant	Curd Size (cm.)					
Farmers' practice (No boron application)	7	12	16	20.3	113000	312620	199620	2.76
Technology Option I: Soil Applied Boron(@ 2g/l. of water at 35 and 50 DAP)		17	20	28.1	125000	432740	307740	3.46
Technology Option II: Foliar spray of Boron(@ 4kg/ha at final land preparation)		20	22	31.2	133000	480480	347480	3.61
Sem ±		0.90	0.16	0.54	-	14980.15	258.20	0.29
CD (p=0.05)		2.48	0.44	1.49	-	41195.41	709.55	0.79

(N. B.: - Recommended fertilizer dose was applied in all the Technology Options including the Farmers' Practice.)

TO-II i.e. Foliar spray of Boron (@ 2g/l. of water at 35 and 50 DAP) produced significantly better growth (no. of leaves- 20), yield components (Curd size- 22 cm.), yield (31.2 t/ha), and B:C ratio (3.61) than the TO-I i.e. Soil application of Boron (@ 4kg/ha at final land preparation) (Number of leaves- 17, Curd size- 20 cm., Yield- 28.1 t/ha and B:C ratio- 3.46) and also significantly higher than the Farmers' Practice (Number of leaves- 12, Curd size- 16 cm., Yield- 20.3 t/ha and B:C ratio- 2.76) in Broccoli cultivation.

## OFT – 5

January to December, 2021

<b>Season</b>	<b>2021</b>
<b>Title of On Farm Trial</b>	<b>Assessing performance of different group sizes of SHG on annual savings</b>
<b>Problem diagnosed</b>	The selection of appropriate group size of Self Help Groups (SHGs) is important for efficient group dynamics as well as group performances. The selection of a suitable size of group members of a SHG is largely influenced by various socio-economic and situational factors which in turn affect the economic performances such as annual savings from the group activities.
<b>Details of technologies selected for assessment/refinement</b>	<b>Assessment</b> <b>Farmers' Practice = T<sub>1</sub>= 10 members (Small Group)</b> <b>T<sub>2</sub>= 11-15 members (Medium Group)</b> <b>T<sub>3</sub>= &gt;15 members (Large Group)</b>
<b>Source of Technology</b>	Overview of Frontline Extension Tools and Designing OFTs in Extension, R. Roy Burman, ICAR-IARI, New Delhi
<b>Production system and thematic area</b>	<b>Present Situation:</b> -Generally in West Bengal situation, the majority of SHGs are having 10 numbers of members. <b>Prevalent Practice:</b> - The Govt. Encourages formation of SHGs with 10 to 15 members though the lower ceiling of numbers of members is 10 [Ref: - Memo No.925/W. B. S. R. L. M / Prog / 6P – 176 / 2015, Dated: - 15.09.2015 issued by “Anandadhara”, West Bengal State Rural Livelihoods Mission (WBSRLM), Panchayatas and Rural Development Department, Govt. Of West Bengal]. <b>Group Formation System:</b> - Generally 10 – 20 numbers of persons of a locality or nearby localities can form a Self Help Group. <b>Thematic Area:</b> - Group dynamics.
<b>Present Situation</b>	
<b>Prevalent Practice</b>	The Govt. Encourages formation of SHGs with 10 to 15 members though the lower ceiling of numbers of members is 10 [Ref: - Memo No.925/W. B. S. R. L. M / Prog / 6P – 176 / 2015, Dated: - 15.09.2015 issued by “Anandadhara”, West Bengal State Rural Livelihoods Mission (WBSRLM), Panchayatas and Rural Development Department, Govt. Of West Bengal].
<b>Performance of the Technology with performance indicators</b>	Technology Option – II i.e. V i.e. T <sub>2</sub> = 11-15 members (Medium Group) – SHG has the highest average yearly savings as well as highest Average Yearly Savings of SHG from interest of loan to its member and outsider; Average Yearly Savings of the SHG from different economic activities of the group and Average Yearly Savings of the SHG from other sources of income – Income from lottery, Harvesting of crops, organizing stall in fairs, social festivals etc. Closely followed by the T <sub>3</sub> = >15 members (Large Group) – SHG (though T <sub>3</sub> has highest Average Yearly Savings of SHG from own contribution of members; highest Average Yearly Revolving Fund received by the SHG from Block and highest Average Yearly Savings of the SHG from donation and distantly followed by the T <sub>1</sub> = 10 members (Small Group) – SHG (Farmers' Practice) regarding all the performance indicators.  <b>Performance Indicators:</b> - Yearly Savings of the SHG from own contribution of members <ul style="list-style-type: none"> <li>• Yearly Saving of the SHG from interest of loan to its member and outsider</li> <li>• Yearly Savings of the SHG from different economic activities of the group</li> <li>• Yearly Revolving fund received by the SHG from the Block Office</li> <li>• Yearly Savings of the SHG from donation</li> <li>• Yearly Income of the SHG from other sources of income – Income from lottery, harvesting of crops, organizing stall in fairs, social festivals etc.</li> </ul>
<b>Final recommendation for micro level situation</b>	Self Help Groups (SHGs) should be formed with 11 – 15 members i.e., Medium Sized Group for better socio-economic cohesion, smoother Group Dynamics and better Economic Performances.

<b>Constraints identified and feedback for research</b>	<p><b>Constraints Identified:</b> - Lack of skill of the SHG members on income generating activities, Lack of motivation of the members to recycle the profit in other small enterprises and Lack of knowledge of the SHG Members about the process of enabling themselves to be beneficiary of employment and income generating Government schemes.</p> <p><b>Feedback for Research:</b> - Future Research should focus on methodology to make the illiterate members functionally and financially literate. More research work needed in the areas of leadership trainings, leadership skills, social capital formation, group confidence building, development of group savings habits and group communication skills.</p>
<b>Process of farmers' participation and their reaction</b>	Farmers actively participated in the day-to-day monitoring and data collection with KVK scientists. Farmers incurred all the cost of maintenance and management of the SHGs concerned.

**Thematic area:** Group Dynamics (2021)

**Problem definition:** The selection of appropriate group size of Self-Help Groups (SHGs) is important for efficient group dynamics as well as group performances. The selection of a suitable size of group members of a SHG is largely influenced by various socio-economic and situational factors which in turn affect the economic performances such as annual savings from the group activities.

**Technology assessed:** Assessing performance of different group sizes of SHG viz. 10 members (Small Group); 11-15 members (Medium Group) and >15 members (Large Group) on annual savings.

**Table 5: Comparative Performance of different Group Sizes of SHG on Annual Savings**

SHG Size (Nos. of Members)	Nos. of Selected SHGs	Average Yearly Savings of SHG from own contribution of members (In Rs.)	Average Yearly Savings of SHG from interest of loan to its member and outsider (In Rs.)	Average Yearly Savings of the SHG from different economic activities of the group (In Rs.)	Average Yearly Revolving Fund received by the SHG from Block Office (In Rs.)	Average Yearly Savings of the SHG from donation (In Rs.)	Average Yearly Savings of the SHG from other sources of income-Income from lottery, Harvesting of crops, organizing stall in fairs, social festivals etc. (In Rs.)	Average Yearly Total Savings of the SHG (In Rs.)	Rank
<b>Farmers' Practice =</b> T <sub>1</sub> = 10 members (Small Group)	10	71,994.00	1,10,200.00	57,605.00	32,703.00	13,413.00	70,203	3,56,118.00	III
T <sub>2</sub> = 11-15 members (Medium Group)	10	1,21,300.00	2,04,506.00	2,04,505.00	60,507.00	40,503.00	2,23,623.00	8,54,944.00	I
T <sub>3</sub> = >15 members (Large Group)	10	2,02,903.00	1,90,603.00	2,01,904.00	81,506.00	70,507.00	1,05,600.00	8,53,023.00	II

**Result:** Technology Option – II i.e. V i.e. T<sub>2</sub>= 11-15 members (Medium Group) – SHG has the highest average yearly savings closely followed by the T<sub>3</sub>= >15 members (Large Group) – SHG and distantly followed by the T<sub>1</sub>= 10 members (Small Group) – SHG (**Farmers' Practice**).

### 3.2 Achievements of Frontline Demonstrations

(1 Details of FLDs conducted during the year

#### Cereals

Sl. No.	Crop	Thematic area	Technology Demonstrated with detailed treatments	Area (ha)		No. of farmers/ demonstration									Reasons for shortfall in achievement
				Proposed	Actual	SC		ST		Others		Total			
						M	F	M	F	M	F	M	F	T	
1.	Paddy	Varietalreplacement	Ranidhan (IET 19418)	-	45	69	34	41	26	38	44	14 8	10 4	252	

#### Details of farming situation

Crop	Season	Farming situation (RF/Irrigated)	Soil type	Status of soil (Kg/ha)			Previous crop	Sowing date	Harvest date	Seasonal rainfall (mm)	No. of rainy days
				N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O					
Paddy var Ranidhan	Kharif, 2021	Monocropped upland	Sandy loam soil with lower pH	Medium	Low	High	Fallow	1-15 <sup>th</sup> Aug., 2021	Nov.25 <sup>th</sup> - Dec.10 <sup>th</sup> , 2021	-	-

#### Performance of FLD

##### Cereals

Crop	Thematic Area	Name of the technology demonstrated	No. of Farmers	Area (ha)	Yield (q/ha)		% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
					Demo	Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Paddy	Crop Diversification	Improved variety Ranidhan	252	45	67.1	55.2 (Lal swarna)	21.3	60950	1,27,300	66,350	2.09	60500	1,04,880	44380	1.73

**Oilseeds:****Frontline demonstrations on oilseed crops****Oilseeds: Under SCSP**

## Frontline demonstrations on oilseed crops

Crop	Thematic Area	Name of the technology demonstrated	No. of Farmers	Area (ha)	Yield (q/ha)		% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
					Demo	Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Mustard	Crop	NRCHB-101	46	15	12.90	10.20	26.5	20900	64500	43600	3.09	19985	51000	31015	2.55
	Diversification	YSH-0401	41	15	11.92	10.20	16.9	20920	59600	38700	2.85	19985	51000	31015	2.55
Total			87	30											

\*Besides that CFLD on Oilseeds are given below in details.

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

\*\* BCR= GROSS RETURN/GROSS COST

**Pulses****Frontline Demonstratoion on different Pulse crops**

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

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

Crop	Thematic Area	Name of the technology demonstrated	No. of Farmers	Area (ha)	Yield (q/ha)		% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
					Demo	Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Lentil	Crop Diversification	Improved variety PUSA AGETI	58	10	Crop is now in growing stage										
Total			58	10											

\*\* BCR= GROSS RETURN/GROSS COST

\*Besides that CFLD on Pulses are given below in details.

## Other crops

Crop	Thematic area	Name of the technology demonstrated	No. of Farmer	Area (ha)	Yield (q/ha)		% change in yield	Other parameters			*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
					Demonstration	Check			De mo	Check	Gross Cost	Gross Return	Net Return	** BC R	Gross Cost	Gross Return	Net Return	** BC R
Azolla Kharif 2021	Soil Health Management	Green manuring in rainy season paddy var.Ranidhan(IET19418)	63	33.6	67.2(Paddy Yield)	56.1 (Paddy Yield)	19.8	No. of panicles/m <sup>2</sup>	395	378	58100	127680	69580	2.19	6093	106590	45660	1.75
Ekangi Pre kharif 2021	Crop diversification	Planting Materials and Methods of Cultivation	30	1	133	New Introduction	-	Rhizome Size (cm)	3.4	-	1,00,000	10,64,000	9,04,000	6.65	6.7	--	-	-
Drumstick Kharif, 2021	Varietal Replacement	PKM-1	148	2	42	17	147.1	Pod length (Cm)	46	31	24800	63800.00	39000	2,57	1800	30000	1200	1.67
Elephant Foot Yam Kharif,2021	Varietal replacement	Bidhan Kusum	81	0.2	690	249 (Local)	177	Corn size (Cm)	30.50	10.00	50500	184700	134200	3.66	2900.	52000	2300	1.79
Kharif Paddy, 2021	Weed Management	Application of Post emergence herbicide Almix	67	20	66.9	58.5	14.4	Weed population/s q.m. at 25 DAS	11	27	59000	1,29,010	70,010	2.19	61,100	1,11,150	50,050	1.82
Tomato	IPM	Use of pheromone trap against <i>Spodoptera litura</i> of tomato as mechanical control	25	5	480	370	29.7	No of larvae/plant	0.2	3.8	112000	480000	368000	4.29	130000	370000	240000	2.85
								% of plant infested	1.2	65								
Green Fodder Maize ,Kharif 2021	Varietal replacement	J-1006	15	3	392.25	292.5 (Local improved)	34.1	CP%	8.82	7.95	15538	23535	7997	1.51	14950	17550	2600	1.17
Green Fodder Rice bean,Kharif 2021	New Introduction	Bidhan - 2	15	2	350.5	-	-	CP (%)	27.1	20510	35570	56080	2.73	-	-	-	-	-



Others (pl.specify)																	
Total			40														

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

\*\* BCR= GROSS RETURN/GROSS COST

### Fisheries

Category	Thematic area	Name of the technology demonstrated	No. of Farmer	No. of units	Major parameters		% change in major parameter	Other parameter		*Economics of demonstration (Rs.)				*Economics of check (Rs.)			
					Demons Ration	Check		Demons Ration	Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Common carps																	
Mussels																	
Oramental fishes																	
Others (pl. specify)																	
		Total															

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

\*\* BCR= GROSS RETURN/GROSS COST

**Other enterprises**

Category	Name of the technology demonstrated	No. of Farmer	No. of units	Major parameters		% change in major parameter	Other parameter		*Economics of demonstration (Rs.) or Rs./unit				*Economics of check (Rs.) or Rs./unit				
				Demonstration	Check		Demonstration	Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR	
Oyster mushroom																	
Button mushroom																	
Vermicompost																	
Sericulture																	
Apiculture																	
Others (pl. specify) Participatory video making	Participatory video making on establishment and management of seed production units of cereals and pulses	100	10	Participatory Identification of Content		% change in major parameter	Training on Local Production of Videos		Other Parameters								
				Demo	Check				Video Dissemination			Percentage of Population Adopted New Technology			Videos as Sources of New Technologies		
									Demo.	Check	% Change	Demo.	Check	% Change	Demo	Check	% Change
71	22	227.27 (+)	03	00	94	10	840 (+)	78	18	333.33 (+)	94	34	176.47 (+)				
<b>Total</b>		<b>100</b>	<b>10</b>														

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

\*\* BCR= GROSS RETURN/GROSS COST

**Women empowerment**

Category	Name of technology	No. of demonstrations	Observations		Remarks
			Demonstration	Check	
Farm Women	Back Yard Kitchen Garden	118	1700.00	1000.00	All the vegetables were grown by compost materials available in their home stead. Therefore, keeping quality was good.
Pregnant women	Nutrition Garden (2021-22)	182	-	-	Crops are now in fruiting stage
Adolescent Girl					
Other women					
Children					
Neonatal					
Infants					



Groundnut										
Soybean										
Others (Pl.specify)										
Total										
Pulses										
Greengram										
Blackgram										
Bengalgram										
Redgram										
Others (Pl.specify)										
Total										
Vegetable crops										
Bottle gourd										
Capsicum										
Cucumber										
Tomato										
Brinjal										
Okra										
Onion										
Potato										
Field bean										
Others (Pl.specify)										
Total										
Commercial crops										
Cotton										
Coconut										
Others (Pl.specify)										
Total										
Fodder crops										
Napier (Fodder)										
Maize (Fodder)	J1006	15	3	392.25	292.5	34.1	15538	23535	7997	1.51
Sorghum (Fodder)										
Others (Pl.specify)										
<b>Total</b>		<b>15</b>	<b>03</b>	<b>392.25</b>	<b>292.5</b>	<b>34.1</b>	<b>15538</b>	<b>23535</b>	<b>7997</b>	<b>1.51</b>

**Technical Feedback on the demonstrated technologies**

Sl. No.	Crop	Feed Back
1.	Rice var. Rani Dhan (IET - 19418)	The Rice var. Rani Dhan (IET - 19418) with an average yield of 67.1 q / ha may be cultivated instead of MTU - 7029. The percentage yield of the Rice var. Rani Dhan (IET - 19418) increased over 21.3 percent over the local check MTU - 7029.
2.	<i>Azolla</i>	After multiplication of <i>Azolla</i> and incorporation in Paddy field before transplanting, application of Nitrogenous fertilizers was reduced up to 21.4 per cent for the next Paddy cultivation in the same field.
3.	Crop Diversification through introduction of Ekangi	Ekangi ( <i>K. galanga</i> ) was introduced in mono cropped up and medium land situation replacing Kharif Paddy as crop diversification gave an increased yield of 133 q. / ha which fetched a higher B: C ratio of 6.7.
4.	Drumstick Var. PKM – 1	The <i>Baramasia</i> Drumstick Var. – PKM -1 increase the economic benefits by 53.9%.
5.	Varietal Replacement of Elephant Foot Yam with Var. Bidhan Kusum	The Elephant Foot Yam was cultivated in up-land mono cropped area in rainfed condition as crop diversification satisfactorily with an average yield of 690 q. / ha with 104.5 per cent increase in yield over local check along with B : C Ratio of 3.66 over 1.79 in Local Check.
6.	Post emergence Herbicide Almix in Kharif Paddy	Application of Herbicide Almixat 15 DAT increased Kharif Paddy yield 14.4% by reducing early weed population.
7.	Use of Pheromone trap against <i>spodopteralitura</i> of tomato as mechanical control	Use of Pheromone trap in tomato increased the yield by 29.7%
8	Varietal replacement of green fodder Maize Var J1006	Green Fodder Maize was cultivated in Kharif with an average yield of 392.25q. / ha with 34.1 per cent increase in yield over local check along with B:C ratio of 1.51 over 1.17 in local check
9.	New introduction of Green Fodder Rice Bean Var Bidhan 2	Green Fodder Rice Bean was cultivated in Kharif with an average yield of 350.5 q. / ha with B:C ratio 2.73
10.	Calcium supplementation in Black Bengal Does after kidding	Calcium supplementation in Black Bengal Does after kidding increased survivality by 17.5% and also increased body weight with B:C Ratio 2.35 in comparison of 1.86 of traditional practice
11.	Participatory video making on establishment and management of seed production units of cereals and pulses	Participatory video making on establishment and management of seed production units of cereals and pulses points out that it increases Participatory Identification of Content by 71 %, Video Dissemination by 94 %, Percentage of Population Adopted New Technology increases by 78 % and Videos as Sources of New Technologies increases by 94 %.
12.	Back Yard Kitchen Garden	It increases the availability of veg to farm family and got 70% more income.
13.	Use of Drum Seeder for direct seeding of rice in lines	It is essential and cost effective as it reduces the labour requirement. The Cost reduction by using Drum Seeder is Rs. 14000 per hectare with an average cost reduction of 56 per cent. But found difficult in rainy season if heavy rain comes within 3 days of sowing
14.	Introduction of Aseel birds	Aseel bird, male attains 1602.31 gm weight and female attains 1238.85 gm weight at 20 wks of age . The programme is going on

**Cluster Front Line Demonstration on Oilseed (2021)****CFLD Oilseeds, Summer, 2021****Performance of the demonstration:****Technical Parameters:**

Sl. No.	Crop demonstrated	Existing (Farmer's) variety name	Existing yield (q/ha)	Yield gap (Kg/ha) w.r.to			Name of Variety + Technology demonstrated	Number of farmers	Area in ha	Yield obtained (q/ha)			Yield gap minimized (%)		
				District yield (D)	State yield (S)	Potential yield (P)				Max.	Min.	Av.	D	S	P
1	Summer-Sesame	Tilottoma	8.8	53	35	720	Var: Savitri+ Herbicides pendimethalin as pre-emergences @ 3lt/ha+ Micronutrient spray Zinc EDTA @1gm/lt water in 25 and 45 DAS	205	60	14.5	9.7	12.90	756	1144	55

Seeds of Improved Variety Savitri @ 6 Kg. /ha, Method of seed sowing: - Broadcasting, Application of herbicides. Pendimethalin @ 3 lit. / ha at 1- 3 DAS, Foliar Spray of Micro-Nutrients: - ZN EDTA @ 1 gm. / lit. of water at 25 and 45 DAS.

**Economic parameters**

Sl. No.	Variety demonstrated & Technology demonstrated	Farmers' Existing plot				Demonstration plot				Farmers' feedback
		Gross Cost (Rs. /ha)	Gross return (Rs. /ha)	Net Return (Rs. /ha)	B:C ratio	Gross Cost (Rs. /ha)	Gross return (Rs. /ha)	Net Return (Rs. /ha)	B:C ratio	
1	Sesame, Var-Savitri+ Herbicide, Micronutrient Spray	16400	44000	27800	2.68	17600	64500	46900	3.66	Additional net return is Rs.19100/ha

**Socio-economic impact parameters**

Sl. No.	Crop and variety Demonstrated	Total Produce Obtained	Produce sold (Kg. /household)	Selling Rate (Rs. /Kg.)	Produce used for own sowing (Kg.)	Produce distributed to other farmers	Purpose for which income gained was utilized	Employment Generated (Man days / house hold)
1.	Sesame, Var- Savitri + Herbicide, Micronutrient Spray	85140 kg	170.00	50.00	Rest is kept for extracting Oil and sowing seeds in the next season.	–	Payment for Labor bill, payment for irrigation, fertilizer and pesticide expenditures.	18

**Pulse Farmer's perception of the intervention demonstrated**

Sl. No.	Technologies demonstrated (with name)	Farmers' Perception parameters					
		Suitability to their farming system	Likings (Preference)	Affordability	Any negative effect	Is Technology acceptable to all in the group/village	Suggestions, for change/improvement, if any
1.	Sesame, Var- Savitri + Herbicide, Micronutrient Spray	Suitable to a large extent	Farmers prefer the new improved variety of sesame i.e. Savitri as the existing variety of local check Tilottoma gives a yield and takes more time than new variety Savitri.	New improved variety seeds are affordable. However other components of package of practices like herbicides, plant protection chemicals, micro-nutrients, chemical fertilizers, irrigations etc. are not at all affordable except a very few from the beneficiaries when the programme support would be withdrawn.	None	No, the improved variety and the technological supportive package of practices are acceptable to the partner farmers of the Cluster FLD; but other farmers are still apprehensive about the availability of seeds of the improved varieties and the market acceptance of these new improved varieties. The farmers are greatly concerned about the rising prices of inputs like herbicides, micro-nutrients etc. But a good demand of the crop in the market is found.	Availability of seeds should be ensured in time. Low-cost quality herbicides and micro-nutrients should be encouraged for dissemination among the farming community. Proper irrigation facilities should be created by the Governmental agencies.

## E) Specific Characteristics of Technology and Performance

Specific Characteristic	Performance	Performance of New Technology vis-a vis Local Check	Farmers Feedback
1. Duration	Satisfactory	New Technology: 90 days, Local check: 110 days	46.6% increase in yield was obtained through the new technology than local check. The new variety fetched more benefit in shorter duration i.e. additional net return Rs.19100/ha than local check which is very much encouraging for sesame cultivation in summer season instead of Boro rice.
2. No. of silique/plant	High	New Technology: 46 days Local Check: 35 days	
3. Colour of the seed	Attractive	New Technology: Whitish brown Local Check: Brown	

## Extension activities under FLD conducted till dates:

Sl. No.	Extension Activities organized	Date and place of activity	Number of farmers attended
1.	Popular Article : Rarh Banger Matite Tiler falanBhalo (Yield of Summers sesame is good in the soil of Rarh Bengal) written by Dr. Subrata Mandal	:AnandabazarPatrika	NA
2	Field days on Land preparation & Sowing of improved seeds.	09.03.2021	12
3	Field days on Weed Management & Water Management	22.03.2021	11
4	Field days on Branching flowering.	26.04.2021	10
5	Field days on Micronutrient Spray	30.04.2021	12
6	Field days on Harvesting stage	31.05.2021	8

**Vegetative Stage of Sesame sent by farmers through their mobile during pandemic situation**



**Flowering Stage of Sesame sent by farmers through their mobile during pandemic situation**



**CFLD Oilseeds, Kharif, 2021****Performance of the demonstration:****Technical Parameters:**

Sl. No.	Crop demonstrated	Existing (Farmer's) variety name	Existing yield (q/ha)	Yield gap (Kg/ha) w.r.to			Name of Variety + Technology demonstrated	Number of farmers	Area in ha	Yield obtained (q/ha)			Yield gap minimized (%)		
				District yield (D)	State yield (S)	Potential yield (P)				Max.	Min.	Av.	D	S	P
1	Kharif Sesame	Tilottoma	7.4	9.33	9.15	16	Var. Suprava  +Herbicides pendimethalin as pre emergence @ 3lt/ha+ Micronutrient spray Zinc EDTA @ 1g/lt water in 25 and 45 DAS	55	10	12.3	9.5	10.75	2.44+	1.90+	3.35

**Economic parameters**

Sl. No.	Variety demonstrated & Technology demonstrated	Farmer's Existing plot				Demonstration plot			
		Gross Cost (Rs/ha)	Gross return (Rs/ha)	Net Return (Rs/ha)	B:C ratio	Gross Cost (Rs/ha)	Gross return (Rs/ha)	Net Return (Rs/ha)	B:C ratio
1	Var. Suprava +Herbicides pendimethalin as pre emergence @ 3lt/ha+ Micronutrient spray Zinc EDTA @ 1g/lt water in 25 and 45 DAS	16200	40700	24500	2.5	16900	59125	42225	3.5

**Socio-economic impact parameters**

Sl. No.	Crop and variety Demonstrated	Total Produce Obtained (kg)	Produce sold (Kg/household)	Selling Rate (Rs/Kg)	Produce used for own sowing (Kg)	Produce distributed to other farmers (Kg)	Purpose for which income gained was utilized	Employment Generated (Mandays/house hold)
1	Sesame Var. SWB-32-10-1	10750	125	55.00	Rest is kept for extracting oil and sowing seeds in the next season	-	Payment of labour bill, Fertilizer and pesticide cost and family need	11

**Oilseed Farmers' perception of the intervention demonstrated**

Sl. No.	Technologies demonstrated (with name)	Farmers' Perception parameters					
		Suitability to their farming system	Likings (Preference)	Affordability	Any negative effect	Is Technology acceptable to all in the group/village	Suggestions, for change/improvement, if any
1	Var. Suprava  +Herbicides pendimethalin as pre emergence @ 3lt/ha+ Micronutrient spray Zinc EDTA @ 1g/ltr water in 25 and 45 DAS	Suitable to a large extent	Farmers prefer the new improved variety of sesame i.e. Savitri as the existing variety of local check tillotoma gives a yield and takes more time than new variety Savitri.	New improved variety seeds are affordable. However other components of package of practices like herbicides, plant protection chemicals, micro-nutrients, chemical fertilizers, irrigations etc. are not at all affordable except a very few from the beneficiaries when the programme support would be withdrawn.	None	No, the improved variety and the technological supportive package of practices are acceptable to the partner farmers of the Cluster FLD; but other farmers are still apprehensive about the availability of seeds of the improved varieties and the market acceptance of these new improved varieties. The farmers are greatly concerned about the rising prices of inputs like herbicides, micro-nutrients etc. But a good demand of the crop in the market is found.	Availability of seeds should be ensured in time. Low cost quality herbicides and micro-nutrients should be encouraged for dissemination among the farming community. Proper irrigation facilities should be created by the Governmental agencies.

**Specific Characteristics of Technology and Performance**

Specific Characteristic	Performance	Performance of Technology vis-a vis Local Check	Farmers Feedback
i) Duration	Satisfactory	Technology: 85 days Local Check: 95 days	45 % increase in yield was obtained through the new technology than local check. The new variety fetched more benefit in shorter duration i.e. additional net return Rs. 13120/ha than local check which is very much encouraging for sesame cultivation in kharif season instead of rice.
ii) No. of siliqua/plant	High	Technology: 38 Local Check: 26	
iii) Colour of the seed	Attractive	Technology: White Local Check: Brown	

**Extension activities under FLD conducted till dates:**

Sl. No.	Extension Activities organized	Date and place of activity	Number of farmer attended
1	Land preparation and sowing of improved seeds	10/08/2021	-
2	Fertilizer application	11/08/2021	-
3	Improved variety and sowing of kharif sesame	13/08/2021	-
4	Land preparation, sowing and herbicide application in kharif sesame	14/08/2021	-
5	Sowing and fertilizer management of sesame in post kharif season	08/09/2021	-
6	Vegetative growth stage	24/09/2021	-
7	Cropping system and crop diversification using kharif oilseed	13/10/2021	-
8	Harvesting Stage	05/11/2021	-

Sequential good quality photographs (as per crop stages i.e. growth & development)

Seed distribution.



Photographs of Flowering stage and technology demonstrated.



**CFLD Oilseeds, Rabi, 2021**

Name of the KVK	Crop	Allocation		Achievements		Tech. demonstrated	Yield (kg/ha)		Yield gap		Problem/ Suggestion/ Remarks (if any)
		Area (ha)	No. of FLD	Area (ha)	No. of FLDs		CFLDs	Check variety	Kg/ha	%	
Rathindra KVK, Birbhum	Mustard	40	—	30	67	Var. NRCHB- 101 + Herbicides Pendimethalin as pre emergence @ 3lt/ha+ Micronutrient spray Zinc EDTA @ 1g/ltr water in 25 and 45 DAS					Crop is now at Flowering and fruiting stage
			—	10	28	Var. PM-30 + Herbicides Pendimethalin as pre emergence @ 3lt/ha+ Micronutrient spray Zinc EDTA @ 1g/ltr water in 25 and 45 DAS					
<b>Total</b>				<b>40</b>	<b>95</b>						



**CLUSTER FRONT LINE DEMONSTRATION OF PULSES, (2021)****CFLD on Pulses , Summer, 2021**

Performance of the demonstration:

Technical Parameters:

Sl. No.	Crop demonstrated	Existing (Farmer's) variety name	Existing yield (q/ha)	Yield gap (Kg/ha) w.r.to			Name of Variety + Technology demonstrated	Number of farmers	Area in ha	Yield obtained (q/ha)			Yield gap minimized (%)		
				District yield (D)	State yield (S)	Potential yield (P)				Max.	Min.	Av.	D	S	P
1	Summer-Green gram	Panna	8.0	250	+11	700	Var: IPM-205-07 (Virat)+ Herbicides pendimethalin as pre emergences @ 3lt/ha+ Micronutrient spray Boron-20 @2gm/lit water at 25 and 45 DAS	84	10	13.10	8.95	12.4	30	538	60
2	Summer-Black gram	Kali-50	6.2	2	56	780	Var: PU-01+ Herbicides pendimethalin as pre emergences @ 3lt/ha+ Micronutrient spray Boron-20 @2gm/lit water at 25 and 45 DAS	76	10	12.85	9.2	12.25	3000	1071	77

Seeds of Improved Variety IPM-205-07 (Virat) of Green gram and PU-01 of Black gram @ 30 kg/, Method of seed sowing: - Broadcasting, Application of herbicides; Pendimethalin @ 3 lit. / ha at 1- 3 DAS, Foliar Spray of Micro- Nutrients: - B- 20 @ 2 gm. / lit. of water at 25 and 45 DAS.

**Economic parameters**

Sl. No.	Variety demonstrated & Technology demonstrated	Farmers' Existing plot				Demonstration plot				Farmers' feedback
		Gross Cost (Rs. /ha)	Gross return (Rs. /ha)	Net Return (Rs. /ha)	B:C ratio	Gross Cost (Rs. /ha)	Gross return (Rs. /ha)	Net Return (Rs. /ha)	B:C ratio	
1	Green gram, Var IPM-205-07 (Virat) Herbicides, Micronutrient spray	19700	48000	28300	2.44	20900	74400	53500	3.56	Additional net return is Rs.25200/ha
2	Black gram Var, PU_01, Herbicides, Micronutrient	16450	34100	17650	2.07	17500	67375	49875	3.85	Additional net return is Rs.32225/ha

**Socio-economic impact parameters**

Sl. No.	Crop and variety Demonstrated	Total Produce Obtained	Produce sold (Kg. /household)	Selling Rate (Rs. /Kg.)	Produce used for own sowing (Kg.)	Produce distributed to other farmers	Purpose for which income gained was utilized	Employment Generated (Man days / house hold)
1.	Summer- Green Gram Var: IPM-205-07 (Virat) + Herbicides, Micronutrient spray	12400 kg	100	60.00	Rest is kept for Dal processing and sowing seeds in the next season.	–	Payment for Labor bill, payment for irrigation, fertilizer and pesticide expenditures.	11
2	Summer- Black gram Var: PU-01 + Herbicides, Micronutrient spray	12250 Kg	100	55.00	Rest is kept for Dal processing and sowing seeds in the next season	–	Payment for Labor bill, payment for irrigation, fertilizer and pesticide expenditures.	08

## Pulse Farmer's perception of the intervention demonstrated

Sl. No.	Technologies demonstrated (with name)	Farmers' Perception parameters					
		Suitability to their farming system	Likings (Preference)	Affordability	Any negative effect	Is Technology acceptable to all in the group/village	Suggestions, for change/improvement, if any
1.	Crop: - Green Gram Var- IPM-205-07 (Virat) + Herbicides, Micronutrient spray	Suitable to a large extent.	Farmers prefer medium size of seeds and luxurious shiny colour of the seeds of the variety.	New improved variety seeds are affordable. However other components of package of practices like herbicides, plant protection chemicals, micro-nutrients, chemical fertilizers, irrigations etc. are not at all affordable except a very few from the beneficiaries when the programme support would be withdrawn.	None	No, the improved variety and the technological supportive package of practices are acceptable to the partner farmers of the Cluster FLD; but other farmers are still apprehensive about the availability of seeds of the improved varieties and the market acceptance of these new improved varieties. The farmers are greatly concerned about the rising prices of inputs like herbicides, micro-nutrients, plant protection chemicals, irrigation water, labour etc.	Availability of seeds should be ensured in time. Appropriate good quality <i>Rhizobium</i> culture should be ensured for supply among the farmers. Low cost quality herbicides and micro-nutrients should be encouraged for dissemination among the farming community. Proper irrigation facilities should be created by the Governmental agencies.
2	Summer- Black gram Var: PU-01 + Herbicides, Micronutrient spray	Suitable to a large extent.	Farmers prefer medium size of seeds and luxurious shiny colour of the seeds of the variety.	New improved variety seeds are affordable. However other components of package of practices like herbicides, plant protection chemicals, micro-nutrients, chemical fertilizers, irrigations etc. are not at all affordable except a very few from the beneficiaries when the programme support would be withdrawn.	None	No, the improved variety and the technological supportive package of practices are acceptable to the partner farmers of the Cluster FLD; but other farmers are still apprehensive about the availability of seeds of the improved varieties and the market acceptance of these new improved varieties. The farmers are greatly concerned about the rising prices of inputs like herbicides, micro-nutrients, plant protection chemicals, irrigation water, labour etc.	Availability of seeds should be ensured in time. Appropriate good quality <i>Rhizobium</i> culture should be ensured for supply among the farmers. Low cost quality herbicides and micro-nutrients should be encouraged for dissemination among the farming community. Proper irrigation facilities should be created by the Governmental agencies.

**Specific Characteristics of Technology and Performance****Green gram**

Specific Characteristic	Performance	Performance of Technology vis-a vis Local Check	Farmers Feedback
1. Duration	Shorter	New variety: 80 days Local check: 90 days	55 % increase in yield was obtained through the new technology than local check. The new variety fetched more benefit in shorter duration i.e. additional net return Rs. 25200/ha than local check which is very much encouraging for summer green gram cultivation instead of summer rice.
2. No. of branches/ plant	Highly branched	New technology: 18 Local check: 11	
3. No. of pods /plant	Higher	New technology: 34 Local check: 21	
4. No. of Seeds/Pod	More	New technology: 12 Local check: 7	

**Black gram**

Specific Characteristic	Performance	Performance of Technology vis-a vis Local Check	Farmers Feedback
1. Duration	Shorter	New variety: 70 days Local check: 95days	97% increase in yield was obtained through the new technology than local check. The new variety fetched more benefit in shorter duration i.e. additional net return Rs. 32225/ha than local check which is very much encouraging for summer green gram cultivation instead of summer rice.
2. No. of branches/ plant	Highly branched	New technology: 16 Local check: 8	
3. No. of pods /plant	Higher	New technology: 48 Local check: 26	

**Extension activities under FLD conducted till dates:**

Sl. No.	Extension Activities organized	Date and place of activity	Number of farmers attended
1.	Training programme on improved Green gram cultivation in summer	15.2.2021, Rathindra KVK	13
2	Training programme on improved Black gram cultivation in summer	22.2.2021, Rathindra KVK	11
3	Field days on land preparation and sowing of improved varieties of green gram	4.2.2021, Bejuri	7
4	Field days on Weed Management & Water Management of green gram	16.02.2021, Bejuri	9
5	Field days on Branching flowering of green gram	19.03.2020, Bejuri	6
6	Field days on Micronutrient spray of green gram	22.03.2021, Bejuri	8
7	Field days on Harvesting stage of green gram	18.05.2021, Bejuri	6
8	Field days on Land preparation & Sowing of improved seeds of Black gram	06.02.2021, Alalchak	10
9	Field days on Weed Management & Water Management of Black gram	17.02.2021, Alalchak	6
10	Field days on Branching flowering of Black gram	15.03.2021, Alalchak	8
11	Field days on Micronutrient spray of Black gram	19.03.2021, Alalchak	7
12	Field days on Harvesting stage of Black gram	20.05.2021, Alalchak	9

**Sequential good quality photographs (as per crop stages i.e. growth & development)**

**Rathindra KVK Scientists at the Off-Campus Training Programme on the Cluster FLD Programme on Summer Pulse**



**Photographs of Seed Distribution**



### Rathindra KVK Scientist Collecting for Data at the Vegetative Stage of Green Gram



### Rathindra KVK Scientist collecting for Data at the Flowering Stage of Black Gram



### Rathindra KVK Scientist collecting Data at the Maturity Stage of Green Gram



### Harvesting Stage of Blackgram



**CFLD on Pulses, Kharif, 2021**

Performance of the demonstration:

Technical Parameters:

Sl. No.	Crop demonstrated	Existing (Farmer's) variety name	Existing yield (q/ha)	Yield gap (Kg/ha) w.r.to			Name of Variety + Technology demonstrated	Number of farmers	Area in ha	Yield obtained (q/ha)			Yield gap minimized (%)		
				District yield (D)	State yield (S)	Potential yield (P)				Max.	Min.	Av.	D	S	P
1	Kharif Black gram	Kali-50	6.2	2	56	780	Crop: - Kharif Black Gram Var. PU-31 + Herbicides pendimethalin as pre emergence @ 3lt/ha+ Micronutrient spray Boron-20 @ 2g/lt water in 25 and 45 DAS	73	20	13.05	8.7	10.9	860	459	63

**Economic parameters**

Sl. No.	Variety demonstrated & Technology demonstrated	Farmer's Existing plot				Demonstration plot			
		Gross Cost (Rs/ha)	Gross return (Rs/ha)	Net Return (Rs/ha)	B:C ratio	Gross Cost (Rs/ha)	Gross return (Rs/ha)	Net Return (Rs/ha)	B:C ratio
1	Crop: - Kharif Black Gram Var. PU-31 + Herbicides pendimethalin as pre emergence @ 3lt/ha+ Micronutrient spray Boron-20 @ 2g/lt water in 25 and 45 DAS	17925	37200	19275	2.07	18875	65400	46525	3.46

**Socio-economic impact parameters**

Sl. No.	Crop and variety Demonstrated	Total Produce Obtained (kg)	Produce sold (Kg/household)	Selling Rate (Rs/Kg)	Produce used for own sowing (Kg)	Produce distributed to other farmers (Kg)	Purpose for which income gained was utilized	Employment Generated (Mondays/household)
1	Black Gram Var: PU-31	21800	200	60.00	Rest is kept for Dal processing and sowing seeds in the next season.	-	Payment for Labour bill, payment for fertilizer, pesticide expenditures and also family need	09

**Farmers' perception of the intervention demonstrated**

Sl. No.	Technologies demonstrated (with name)	Farmers' Perception parameters					
		Suitability to their farming system	Likings (Preference)	Affordability	Any negative effect	Is Technology acceptable to all in the group/village	Suggestions, for change/improvement, if any
1	Crop: - Kharif Black Gram Var. PU-31 + Herbicides pendimethalin as pre emergence @ 3lt/ha+ Micronutrient spray Boron-20 @ 2g/lt water in 25 and 45 DAS	Suitable to a large extent.	Farmers prefer medium size of seeds and shiny black colour of the seeds of the variety.	New improved variety seeds are affordable. However other components of package of practices like herbicides, plant protection chemicals, micro-nutrients, chemical fertilizers, irrigations etc. are not at all affordable except a very few from the beneficiaries when the programme support would be withdrawn.	None	No, the improved variety and the technological supportive package of practices are acceptable to the partner farmers of the Cluster FLD; but other farmers are still apprehensive about the availability of seeds of the improved varieties and the market acceptance of these new improved varieties. The farmers are greatly concerned about the rising prices of inputs like herbicides, micro-nutrients, plant protection chemicals, irrigation water, labour etc.	Availability of seeds should be ensured in time. Appropriate good quality <i>Rhizobium</i> culture should be ensured for supply among the farmers. Low cost quality herbicides and micro-nutrients should be encouraged for dissemination among the farming community. Availability of Dal mill to the farmers end will be most encouraging enterprise.

**Specific Characteristics of Technology and Performance**

Specific Characteristic	Performance	Performance of Technology vis-a vis Local Check	Farmers Feedback
Duration	Shorter	New variety: 72 days Local check: 95 days	76% increase in yield was obtained through the new technology than local check. The new variety fetched more benefit in shorter duration i.e. additional net return Rs. 27250.00/ha than local check which is very much encouraging for black gram cultivation in mono cropped upland and medium land in Kharif season instead of rice.
No. of branches/ plant	Highly branched	New technology: 16 Local check: 7	
No. of pods /plant	Higher	New technology: 40 Local check: 20	

**Extension activities under FLD conducted till dates:**

Sl. No.	Extension Activities organized	Date and place of activity	Number of farmers attended
1	Training programme of Improved variety in Black gram	28.07.2021	29
2.	Field day on Sowing of Black gram in mono cropped upland	13. 08.2021	26
3.	Training on Weed and micronutrient management in Kharif Black gram as crop diversification.	23.09.2021	16
4.	Training on Harvesting as seed of Black gram Kharif season	26.11.2021	19
5.	Field day on Harvesting and Threshing of Kharif Black gram	09.12.2021	13

**CFLD on Pulses, Kharif, 2021****Performance under demonstration:****Technical Parameters:**

Sl. No.	Crop demonstrated	Existing (Farmer's) variety name	Existing yield (q/ha)	Yield gap (Kg/ha) w.r.to			Name of Variety + Technology demonstrated	Number of farmers	Area in ha	Yield obtained (q/ha)			Yield gap minimized (%)		
				District yield (D)	State yield (S)	Potential yield (P)				Max.	Min.	Av.	D	S	P
1	Kharif Black gram	Kali-50	6.2	2	56	780	Crop: - Kharif Black Gram Var. PU-31 + Herbicides pendimethalin as pre emergence @ 3lt/ha+ Micronutrient spray Boron-20 @ 2g/lt water in 25 and 45 DAS	73	20	13.05	8.7	10.9	860	459	63

**Economic parameters**

Sl. No.	Variety demonstrated & Technology demonstrated	Farmer's Existing plot				Demonstration plot			
		Gross Cost (Rs/ha)	Gross return (Rs/ha)	Net Return (Rs/ha)	B:C ratio	Gross Cost (Rs/ha)	Gross return (Rs/ha)	Net Return (Rs/ha)	B:C ratio
1	Crop: - Kharif Black Gram Var. PU-31 + Herbicides pendimethalin as pre emergence @ 3lt/ha+ Micronutrient spray Boron-20 @ 2g/lt water in 25 and 45 DAS	17925	37200	19275	2.07	18875	65400	46525	3.46

**Socio-economic impact parameters**

Sl. No.	Crop and variety Demonstrated	Total Produce Obtained (kg)	Produce sold (Kg/household)	Selling Rate (Rs/Kg)	Produce used for own sowing (Kg)	Produce distributed to other farmers (Kg)	Purpose for which income gained was utilized	Employment Generated (Mondays/household)
1	Black Gram Var: PU-31	21800	200	60.00	Rest is kept for Dal processing and sowing seeds in the next season.	-	Payment for Labour bill, payment for fertilizer, pesticide expenditures and also family need	09

**Farmers' perception of the intervention demonstrated**

Sl. No.	Technologies demonstrated (with name)	Farmers' Perception parameters					
		Suitability to their farming system	Likings (Preference)	Affordability	Any negative effect	Is Technology acceptable to all in the group/village	Suggestions, for change/improvement, if any
1	Crop: - Kharif Black Gram Var. PU-31 + Herbicides pendimethalin as pre emergence @ 3lt/ha+ Micronutrient spray Boron-20 @ 2g/lt water in 25 and 45 DAS	Suitable to a large extent.	Farmers prefer medium size of seeds and shiny black colour of the seeds of the variety.	New improved variety seeds are affordable. However other components of package of practices like herbicides, plant protection chemicals, micro-nutrients, chemical fertilizers, irrigations etc. are not at all affordable except a very few from the beneficiaries when the programme support would be withdrawn.	None	No, the improved variety and the technological supportive package of practices are acceptable to the partner farmers of the Cluster FLD; but other farmers are still apprehensive about the availability of seeds of the improved varieties and the market acceptance of these new improved varieties. The farmers are greatly concerned about the rising prices of inputs like herbicides, micro-nutrients, plant protection chemicals, irrigation water, labour etc.	Availability of seeds should be ensured in time. Appropriate good quality <i>Rhizobium</i> culture should be ensured for supply among the farmers. Low cost quality herbicides and micro-nutrients should be encouraged for dissemination among the farming community. Availability of Dal mill to the farmers end will be most encouraging enterprise.

**Specific Characteristics of Technology and Performance**

Specific Characteristic	Performance	Performance of Technology vis-a vis Local Check	Farmers Feedback
Duration	Shorter	New variety: 72 days Local check: 95 days	76% increase in yield was obtained through the new technology than local check. The new variety fetched more benefit in shorter duration i.e. additional net return Rs. 27250.00/ha than local check which is very much encouraging for black gram cultivation in mono cropped upland and medium land in Kharif season instead of rice.
No. of branches/ plant	Highly branched	New technology: 16 Local check: 7	
No. of pods /plant	Higher	New technology: 40 Local check: 20	

**Extension activities under FLD conducted till dates:**

Sl. No.	Extension Activities organized	Date and place of activity	Number of farmers attended
1.	Training programme of Improved variety in Black gram	28.07.2021	29
2.	Field day on Sowing of Black gram in mono cropped upland	13. 08.2021	26
3.	Training on Weed and micronutrient management in Kharif Black gram as crop diversification.	23.09.2021	16
4.	Training on Harvesting as seed of Black gram Kharif season	26.11.2021	19
5.	Field day on Harvesting and Threshing of Kharif Black gram	09.12.2021	13

**Photographs Training programme**

**8. Sequential good quality photographs (as per crop stages i.e. growth & development)**



**Quality Photographs of field visits/harvesting/ field days and technology demonstrated.**



### Harvesting Stage of Black gram



### CFLD on Pulses, Rabi 2021

Date:

Name of the KVK	Crop	Allocation		Achievements		Tech. demonstrated	Yield (kg/ha)		Yield gap		Problem/ Suggestion/ Remarks (if any)
		Area (ha)	No. of FLD	Area (ha)	No. of FLDs		CFLDs	Check variety	Kg/ha	%	
Rathindra KVK, Birbhum	Lentil	10	—	10	58	Pusa Ageti + Herbicide Whip Super (Fenoxaprop-P-ethyl) as early post emergence @ 0.5 lt /ha + Micronutrient spray Boron-20 @ 2 g/lt water in 25 and 45 DAS and need based fungicide spray Carbendazim+ Mancozeb 2 g/lt of water for control of wilt	Crop is now at Flowering stage				
<b>Total</b>				<b>10</b>	<b>58</b>						

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

#### A. Farmers and farm women (on campus)

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST			M	F	T
		M	F	T	M	F	T	M	F	T			
<b>I. Crop Production</b>													
Weed Management													
Resource Conservation Technologies	02	122	30	152	72	35	107	24	10	34	218	75	293
Cropping Systems													
Crop Diversification	02	34	16	50	11	12	23	06	27	33	51	55	106
Integrated Farming													
Water management													
Seed production	01	70	25	95	60	20	80	20	10	30	150	55	205
Nursery management	01	16	00	16	21	06	27	07	01	08	44	07	51
Integrated Crop Management	06	51	10	61	41	06	47	12	05	17	104	21	125
Fodder production													
Production of organic inputs													
Others, (cultivation of crops)													
Others, (Climate Resilience with regards to cultivation of crops)	02	32	15	47	09	11	20	04	18	22	45	44	89
Others, (Harvesting of crops)	01	25	00	25	04	01	05	03	01	04	32	02	34
<b>Total</b>	<b>15</b>	<b>350</b>	<b>96</b>	<b>446</b>	<b>218</b>	<b>91</b>	<b>309</b>	<b>76</b>	<b>72</b>	<b>148</b>	<b>644</b>	<b>259</b>	<b>903</b>
<b>II. Horticulture</b>													
<b>a) Vegetable Crops</b>													
Integrated nutrient management													
Water management													
Enterprise development													
Skill development													
Yield increment													
Production of low volume and high value crops													
Off-season vegetables													
Nursery raising													
Export potential vegetables													
Grading and standardization													
Protective cultivation (Green Houses, Shade Net etc.)													
Others, if any (Cultivation of Vegetable)													
Training and pruning													
Others, if any (Mulching in Cultivation of Vegetable)	01	01	03	04	00	16	16	00	02	02	01	21	22
<b>Total (a)</b>	<b>01</b>	<b>01</b>	<b>03</b>	<b>04</b>	<b>00</b>	<b>16</b>	<b>16</b>	<b>00</b>	<b>02</b>	<b>02</b>	<b>01</b>	<b>21</b>	<b>22</b>
<b>b) Fruits</b>													







Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST			M	F	T
		M	F	T	M	F	T	M	F	T			
Hatchery management and culture of freshwater prawn													
Breeding and culture of ornamental fishes													
Portable plastic carp hatchery													
Pen culture of fish and prawn													
Shrimp farming													
Edible oyster farming													
Pearl culture													
Fish processing and value addition													
Others, if any													
<b>Total</b>													
<b>IX. Production of Inputs at site</b>													
Seed Production													
Planting material production													
Bio-agents production													
Bio-pesticides production													
Bio-fertilizer production													
Vermi-compost production													
Organic manures production													
Production of fry and fingerlings													
Production of Bee-colonies and wax sheets													
Small tools and implements													
Production of livestock feed and fodder													
Production of Fish feed													
Others, if any													
<b>Total</b>													
<b>X. Capacity Building and Group Dynamics</b>													
Leadership development													
Group dynamics	04	101	07	108	09	11	20	01	02	03	111	20	131
Formation and Management of SHGs	02	49	03	52	11	02	13	03	00	03	63	05	68
Mobilization of social capital													
Entrepreneurial development of farmers/youths													
WTO and IPR issues													
Others, if any (Crop Insurance)	02	61	03	64	03	04	07	00	02	02	64	09	73



Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
Shrimp farming													
Pearl culture													
Cold water fisheries													
Fish harvest and processing technology													
Fry and fingerling rearing													
Small scale processing													
Post-Harvest Technology													
Tailoring and Stitching													
Rural Crafts													
Others if any, (Ornamental Bird Rearing)	01	12	00	12	03	00	03	00	00	00	15	00	15
Others if any, (Bio-Flock Fish Farming)	01	23	02	25	12	01	13	02	00	02	37	03	40
<b>TOTAL</b>	<b>06</b>	<b>43</b>	<b>19</b>	<b>62</b>	<b>58</b>	<b>16</b>	<b>74</b>	<b>03</b>	<b>07</b>	<b>10</b>	<b>104</b>	<b>42</b>	<b>146</b>

**C) Extension Personnel (on campus)**

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
Productivity enhancement in field crops	29	872	78	950	118	21	139	00	00	00	990	99	1089
Value addition													
Integrated Pest Management	38	1152	101	1253	164	32	196	00	00	00	1316	133	1449
Integrated Nutrient management	20	595	48	643	90	11	101	00	00	00	685	59	744
Rejuvenation of old orchards	04	120	12	132	18	02	20	00	00	00	138	14	152
Protected cultivation technology													
Formation and Management of SHGs													
Group Dynamics and farmers organization													
Information networking among farmers													
Capacity building for ICT application	01	32	04	36	03	01	04	00	00	00	35	05	40
Care and maintenance of farm machinery and implements	02	62	06	68	08	01	09	00	00	00	70	07	77
WTO and IPR issues													
Management in farm animals													
Livestock feed and fodder production													
Household food security													
Women and Childcare													
Low cost and nutrient efficient diet designing													
Production and use of	05	153	16	169	21	03	24	00	00	00	174	19	193

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST			M	F	T
		M	F	T	M	F	T	M	F	T			
organic inputs													
Gender mainstreaming through SHGs													
Nursery Management of Agronomic Crops	02	59	06	65	08	01	09	00	00	00	67	07	74
Management of Fruit trees	02	62	06	68	09	01	10	00	00	00	71	07	78
Nursery Management of Horticultural Crops	02	58	06	64	08	01	09	00	00	00	66	07	73
Seed Production	03	86	08	94	13	01	14	00	00	00	99	09	108
Different Plant Propagation Techniques	02	64	05	69	09	01	10	00	00	00	73	06	79
Productivity Enhancement in Flower Crops	02	60	00	60	12	04	16	00	00	00	72	04	76
Productivity Enhancement in Medicinal Plants	02	54	00	54	06	04	10	00	00	00	60	04	64
Institutional Rural Credit Flow Mechanism and Crop Insurance	02	58	06	64	08	01	09	00	00	00	66	07	73
Integrated Irrigation Management	01	25	03	28	03	01	04	00	00	00	28	04	32
Marketing Management of Farm Produce	02	63	06	69	09	01	10	00	00	00	72	07	79
Agro-Met Indices	02	53	05	58	08	01	09	00	00	00	61	06	67
Climate Change and Agriculture	04	120	10	130	21	01	22	00	00	00	141	11	152
Extension Reforms	02	63	06	69	08	01	09	00	00	00	71	07	78
Productivity Enhancement in field Vegetables	06	186	12	198	29	06	35	00	00	00	215	18	233
<b>TOTAL</b>	<b>133</b>	<b>3997</b>	<b>344</b>	<b>4341</b>	<b>573</b>	<b>96</b>	<b>669</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4570</b>	<b>440</b>	<b>5010</b>

**D) Farmers and farm women (off campus)**

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST			M	F	T
		M	F	T	M	F	T	M	F	T			
<b>I. Crop Production</b>													
Weed Management													
Resource Conservation Technologies													
Cropping Systems													
Crop Diversification													
Integrated Farming													
Water management													
Seed production													
Nursery management													
Integrated Crop Management													
Fodder production													
Production of organic inputs													
Others, (cultivation of crops)													
Others, (Climate Resilience with regards to cultivation of crops)	04	58	14	72	32	26	58	00	00	00	90	40	130



















Thematic Area	No. of Courses	No. of Participants									Grand Total			
		Other			SC			ST			M	F	T	
		M	F	T	M	F	T	M	F	T				
Pen culture of fish and prawn														
Shrimp farming														
Edible oyster farming														
Pearl culture														
Fish processing and value addition														
Others, if any														
<b>Total</b>														
<b>IX. Production of Inputs at site</b>														
Seed Production														
Planting material production														
Bio-agents production														
Bio-pesticides production														
Bio-fertilizer production														
Vermi-compost production														
Organic manures production														
Production of fry and fingerlings														
Production of Bee-colonies and wax sheets														
Small tools and implements														
Production of livestock feed and fodder														
Production of Fish feed														
Others, if any														
<b>Total</b>														
<b>X. Capacity Building and Group Dynamics</b>														
Leadership development														
Group dynamics	04	101	07	108	09	11	20	01	02	03	111	20	131	
Formation and Management of SHGs	02	49	03	52	11	02	13	03	00	03	63	05	68	
Mobilization of social capital														
Entrepreneurial development of farmers/youths														
WTO and IPR issues														
Others, if any (Crop Insurance)	02	61	03	64	03	04	07	00	02	02	64	09	73	
Others, if any (Disaster Management)	02	32	23	55	16	02	18	01	00	01	49	26	75	
Others, if any (Market Linkages)	01	20	01	21	01	09	10	00	02	02	21	12	33	
<b>Total</b>	<b>11</b>	<b>263</b>	<b>37</b>	<b>300</b>	<b>40</b>	<b>28</b>	<b>68</b>	<b>5</b>	<b>6</b>	<b>11</b>	<b>308</b>	<b>72</b>	<b>380</b>	
<b>XI Agro-forestry</b>														
Production technologies														
Nursery management														
Integrated Farming Systems														
Others														
<b>Total</b>														
<b>XII. Others (Pl. Specify) Natural Farming</b>	01	13	01	14	04	02	06	03	01	04	20	04	24	
<b>GRAND TOTAL</b>	<b>55</b>	<b>1123</b>	<b>211</b>	<b>1334</b>	<b>446</b>	<b>197</b>	<b>643</b>	<b>135</b>	<b>88</b>	<b>223</b>	<b>1704</b>	<b>496</b>	<b>2200</b>	

## ii. RURAL YOUTH (On and Off Campus)

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
Mushroom Production	01	02	07	09	03	01	04	01	01	02	06	09	15
Beekeeping	01	03	02	05	25	00	25	00	00	00	28	02	30
Integrated farming													
Seed production													
Production of organic inputs	01	03	05	08	13	04	17	00	00	00	16	09	25
Integrated Farming													
Planting material production													
Vermi-culture													
Sericulture													
Protected cultivation of vegetable crops													
Commercial fruit production													
Repair and maintenance of farm													
Nursery Management of Horticulture crops													
Training and pruning of orchards													
Value addition													
Production of quality animal products													
Dairying	01	00	03	03	02	10	12	00	06	06	02	19	21
Sheep and goat rearing													
Quail farming													
Piggery													
Rabbit farming													
Poultry production													
Ornamental fisheries													
Enterprise development													
Para vets													
Para extension workers													
Composite fish culture													
Freshwater prawn culture													
Shrimp farming													
Pearl culture													
Cold water fisheries													
Fish harvest and processing technology													
Fry and fingerling rearing													
Small scale processing													
Post-Harvest Technology													
Tailoring and Stitching													
Rural Crafts													
Others if any, (Ornamental Bird Rearing)	01	12	00	12	03	00	03	00	00	00	15	00	15
Others if any, (Bio-Flock Fish Farming)	01	23	02	25	12	01	13	02	00	02	37	03	40
<b>TOTAL</b>	<b>06</b>	<b>43</b>	<b>19</b>	<b>62</b>	<b>58</b>	<b>16</b>	<b>74</b>	<b>03</b>	<b>07</b>	<b>10</b>	<b>104</b>	<b>42</b>	<b>146</b>

## iii. Extension Personnel (On and Off Campus)

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST			M	F	T
		M	F	T	M	F	T	M	F	T			
Productivity enhancement in field crops	29	872	78	950	118	21	139	00	00	00	990	99	1089
Value addition													
Integrated Pest Management	38	1152	101	1253	164	32	196	00	00	00	1316	133	1449
Integrated Nutrient management	20	595	48	643	90	11	101	00	00	00	685	59	744
Rejuvenation of old orchards	04	120	12	132	18	02	20	00	00	00	138	14	152
Protected cultivation technology													
Formation and Management of SHGs													
Group Dynamics and farmers organization													
Information networking among farmers													
Capacity building for ICT application	01	32	04	36	03	01	04	00	00	00	35	05	40
Care and maintenance of farm machinery and implements	02	62	06	68	08	01	09	00	00	00	70	07	77
WTO and IPR issues													
Management in farm animals													
Livestock feed and fodder production													
Household food security													
Women and Childcare													
Low cost and nutrient efficient diet designing													
Production and use of organic inputs	05	153	16	169	21	03	24	00	00	00	174	19	193
Gender mainstreaming through SHGs													
Nursery Management of Agronomic Crops	02	59	06	65	08	01	09	00	00	00	67	07	74
Management of Fruit trees	02	62	06	68	09	01	10	00	00	00	71	07	78
Nursery Management of Horticultural Crops	02	58	06	64	08	01	09	00	00	00	66	07	73
Seed Production	03	86	08	94	13	01	14	00	00	00	99	09	108
Different Plant Propagation Techniques	02	64	05	69	09	01	10	00	00	00	73	06	79
Productivity Enhancement in Flower Crops	02	60	00	60	12	04	16	00	00	00	72	04	76
Productivity Enhancement in Medicinal Plants	02	54	00	54	06	04	10	00	00	00	60	04	64
Institutional Rural Credit Flow Mechanism and Crop	02	58	06	64	08	01	09	00	00	00	66	07	73



<b>Livestock and fisheries</b>													
Dairy farming	01	00	03	03	02	10	12	00	06	06	02	19	21
Composite fish culture													
Sheep and goat rearing													
Piggery													
Poultry farming													
Other (Ornamental Bird Rearing)	01	12	00	12	03	00	03	00	00	00	15	00	15
Others if any, (Bio-Flock Fish Farming)	01	23	02	25	12	01	13	02	00	02	37	03	40
<b>Total</b>	<b>03</b>	<b>35</b>	<b>05</b>	<b>40</b>	<b>17</b>	<b>11</b>	<b>28</b>	<b>02</b>	<b>06</b>	<b>08</b>	<b>54</b>	<b>22</b>	<b>76</b>
<b>Income generation activities</b>													
Vermicomposting													
Production of bioagents, biopesticides, biofertilizers etc.	01	03	05	08	13	04	17	00	00	00	16	09	25
Repair and maintenance of farm machinery & implements													
Rural Crafts													
Seed production													
Sericulture													
Mushroom cultivation	01	02	07	09	03	01	04	01	01	02	06	09	15
Nursery, grafting etc.													
Tailoring, stitching, embroidery, dying etc.													
Agril. Para-workers, para0vet training													
Other													
Beekeeping	01	03	02	05	25	00	25	00	00	00	28	02	30
<b>Total</b>	<b>03</b>	<b>08</b>	<b>14</b>	<b>22</b>	<b>41</b>	<b>05</b>	<b>46</b>	<b>01</b>	<b>01</b>	<b>02</b>	<b>50</b>	<b>20</b>	<b>70</b>
<b>Agricultural Extension</b>													
Capacity building and group dynamics													
Other													
<b>Total</b>													
<b>Grand Total</b>	<b>06</b>	<b>43</b>	<b>19</b>	<b>62</b>	<b>58</b>	<b>16</b>	<b>74</b>	<b>03</b>	<b>07</b>	<b>10</b>	<b>104</b>	<b>42</b>	<b>146</b>

#### Details of training programmes for Rural Youth

Crop / Enterprise	Identified Thrust Area	Training title*	Duration (days)	No. of Participants			Self employed after training			Number of persons employed else where
				Male	Female	Total	Type of units	Number of units	Number of persons employed	
Dairy Farming	Small Scale Dairy Units	Dairy Farming	15	02	19	21	Small Scale	10	10	--
Ornamental Bird Rearing		Ornamental Bird Rearing	01	15	00	15	--	--	--	--
Beekeeping	Beekeeping	Beekeeping	15	28	02	30	Small Scale	04	04	--
Bio-Input Production	Bio-Input Production	Bio-Input Producti	15	16	09	25	Homestead Vermi	07	07	--

		on					Compost			
Bio-Flock Fish Farming	Fishery	Bio-Flock Fish Farming	03	37	03	40	Large Scale Small Scale	01 01	10 02	--
<b>Total</b>			<b>49</b>	<b>98</b>	<b>34</b>	<b>131</b>				

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

**I) Sponsored Training Programmes**

Sl. No	Title	Thematic area	Month	Duration (days)	Client	No. of courses	No. of Participants										Sponsoring Agency
					PF/RV/EF		Male			Female			Total				
							Others	SC	ST	Others	SC	ST	Others	SC	ST	Total	
1	Pest and pest management: a brief idea	IPM	01.01.2021	01	EF	01	29	6	0	2	0	0	31	6	0	37	MANAGE, Hyderabad & SAMETI, Narendrapur
2	Introduction and importance of potato cultivation	Crop Production	05.01.2021	01	EF	01	31	3	0	4	1	0	35	4	0	39	MANAGE, Hyderabad & SAMETI, Narendrapur
3	Cultural practices and irrigation management in potato cultivation	Crop Production	05.01.2021	01	EF	01	31	3	0	4	1	0	35	4	0	39	MANAGE, Hyderabad & SAMETI, Narendrapur
4	Package and practices of potato cultivation	Crop Production	08.01.2021	01	EF	01	30	5	0	2	0	0	32	5	0	37	MANAGE, Hyderabad & SAMETI, Narendrapur
5	Diseases and pests of potato and their management	Crop Protection	08.01.2021	01	EF	01	30	5	0	2	0	0	32	5	0	37	MANAGE, Hyderabad & SAMETI, Narendrapur
6	Diseases and pests of potato and their management	Crop Protection	12.01.2021	01	EF	01	32	3	0	4	1	0	36	4	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
7	Package and practices of potato cultivation	Crop Production	12.01.2021	01	EF	01	32	3	0	4	1	0	36	4	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
8	Seed production technology in potato cultivation	Seed production	15.01.2021	01	EF	01	29	4	0	2	0	0	31	4	0	35	MANAGE, Hyderabad & SAMETI, Narendrapur

9	Cultural practices and irrigation management in potato cultivation	Crop Production	15.01.2021	01	EF	01	29	4	0	2	0	0	31	4	0	35	MANAGE, Hyderabad & SAMETI, Narendrapur
10	Nursery management of vegetables	Horticulture	19.01.2021	01	EF	01	31	2	0	4	1	0	35	3	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur
11	Package and practices of mustard cultivation	Crop Production	19.01.2021	01	EF	01	31	2	0	4	1	0	35	3	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur
12	Nursery management of vegetables	Horticulture	22.01.2021	01	EF	01	28	5	0	2	0	0	30	5	0	35	MANAGE, Hyderabad & SAMETI, Narendrapur
13	Package and practices of mustard cultivation	Crop Production	22.01.2021	01	EF	01	28	5	0	2	0	0	30	5	0	35	MANAGE, Hyderabad & SAMETI, Narendrapur
14	Nutrient management in crop plants.	INM	02.02.2021	01	EF	01	32	3	0	4	0	0	36	3	0	39	MANAGE, Hyderabad & SAMETI, Narendrapur
15	General idea about weeds and their management	Weed Management	02.02.2021	01	EF	01	32	3	0	4	0	0	36	3	0	39	MANAGE, Hyderabad & SAMETI, Narendrapur
16	Nutrient management in crop plants.	INM	05.02.2021	01	EF	01	30	6	0	2	0	0	32	6	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur
17	General idea about weeds and their management	Weed Management	05.02.2021	01	EF	01	30	6	0	2	0	0	32	6	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur

18	Role of water management in crop production	Water management	09.02.2021	01	EF	01	30	3	0	4	1	0	34	4	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur
19	Pesticide resistance	Crop Protection	09.02.2021	01	EF	01	30	3	0	4	1	0	34	4	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur
20	Role of water management in crop production	Water management	12.02.2021	01	EF	01	31	5	0	2	0	0	33	5	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur
21	Pesticide resistance	Crop Protection	12.02.2021	01	EF	01	31	5	0	2	0	0	33	5	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur
22	IPM- Introduction & Brief idea	IPM	18.02.2021	01	EF	01	32	3	0	4	1	0	36	4	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
23	IPM- Introduction & Brief idea	IPM	19.02.2021	01	EF	01	32	6	0	2	0	0	34	6	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
24	Dryland Agriculture	Crop Production	23.02.2021	01	EF	01	27	3	0	4	1	0	31	4	0	35	MANAGE, Hyderabad & SAMETI, Narendrapur
25	Package and practices of wheat cultivation	Crop Production	23.02.2021	01	EF	01	27	3	0	4	1	0	31	4	0	35	MANAGE, Hyderabad & SAMETI, Narendrapur
26	Dryland Agriculture	Crop Production	26.02.2021	01	EF	01	31	6	0	1	0	0	32	6	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur

27	Package and practices of wheat cultivation	Crop Production	26.02.2021	01	EF	01	31	6	0	1	0	0	32	6	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur
28	Mango Orchard Management	Horticulture	02.03.2021	01	EF	01	32	3	0	4	1	0	36	4	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
29	Mode of survival of plant pathogens and their management strategies.	IDM	02.03.2021	01	EF	01	32	3	0	4	1	0	36	4	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
30	Mango Orchard Management	Horticulture	05.03.2021	01	EF	01	30	6	0	2	0	0	32	6	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur
31	Mode of survival of plant pathogens and their management strategies.	IDM	05.03.2021	01	EF	01	30	6	0	2	0	0	32	6	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur
32	Nutrient management in Rice	INM	16.03.2021	01	EF	01	32	3	0	4	1	0	36	4	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
33	Package and practices of green gram & black gram cultivation	Crop Production	16.03.2021	01	EF	01	32	3	0	4	1	0	36	4	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
34	Nutrient management in Rice	INM	19.03.2021	01	EF	01	29	6	0	1	0	0	30	6	0	36	MANAGE, Hyderabad & SAMETI, Narendrapur
35	Package and practices of green gram & black gram cultivation	Crop Production	19.03.2021	01	EF	01	29	6	0	1	0	0	30	6	0	36	MANAGE, Hyderabad & SAMETI, Narendrapur

36	Preparation of different botanical pesticides and their application	Crop Protection	23.03.2021	01	EF	01	30	3	0	4	1	0	34	4	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur
37	Package and practices of maize cultivation.	Crop Production	23.03.2021	01	EF	01	30	3	0	4	1	0	34	4	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur
38	Preparation of different botanical pesticides and their application	Crop Protection	26.03.2021	01	EF	01	32	6	0	2	0	0	34	6	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
39	Package and practices of maize cultivation.	Crop Production	26.03.2021	01	EF	01	32	6	0	2	0	0	34	6	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
40	Package and practices of cultivation of solanaceous vegetables	Olericulture	30.03.2021	01	EF	01	32	3	0	4	1	0	36	4	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
41	Weed Management of different field crops	Weed Management	30.03.2021	01	EF	01	32	3	0	4	1	0	36	4	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
42	Agrometeorological indices and its role in crop production	Agrometeorology	02.04.2021	01	EF	01	30	6	0	2	0	0	32	6	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur
43	Climate change and agriculture	Agrometeorology	02.04.2021	01	EF	01	30	6	0	2	0	0	32	6	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur
44	Safe use of pesticides	Crop Protection	06.04.2021	01	EF	01	29	3	0	4	1	0	33	4	0	37	MANAGE, Hyderabad & SAMETI, Narendrapur

45	Kisan Credit Card and Crop Insurance	Crop Insurance	06.04.2021	01	EF	01	29	3	0	4	1	0	33	4	0	37	MANAGE, Hyderabad & SAMETI, Narendrapur
46	Safe use of pesticides	Crop Protection	09.04.2021	01	EF	01	32	6	0	2	0	0	34	6	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
47	Weed Management of different field crops	Weed Management	09.04.2021	01	EF	01	32	6	0	2	0	0	34	6	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
48	Preparatory class & recapitulation of previous classes	Agriculture	04.05.2021	01	EF	01	28	2	0	4	1	0	32	3	0	35	MANAGE, Hyderabad & SAMETI, Narendrapur
49	Integrated Nutrient Management in kharif rice	INM	04.05.2021	01	EF	01	27	2	0	4	1	0	31	3	0	34	MANAGE, Hyderabad & SAMETI, Narendrapur
50	Preparatory class & recapitulation of previous classes	Agriculture	07.05.2021	01	EF	01	30	5	0	2	0	0	32	5	0	37	MANAGE, Hyderabad & SAMETI, Narendrapur
51	Integrated Nutrient Management in kharif rice	INM	07.05.2021	01	EF	01	26	4	0	2	0	0	28	4	0	32	MANAGE, Hyderabad & SAMETI, Narendrapur
52	IPM of brinjal	IPM	11.05.2021	01	EF	01	24	4	0	4	1	0	28	5	0	33	MANAGE, Hyderabad & SAMETI, Narendrapur
53	Critical irrigation stages of different crops for efficient management	Water management	11.05.2021	01	EF	01	24	3	0	4	1	0	28	4	0	32	MANAGE, Hyderabad & SAMETI, Narendrapur

54	Package and practices of cultivation of solanaceous vegetables	Olericulture	17.05.2021	01	EF	01	30	6	0	2	0	0	32	6	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur
55	Kisan Credit Card and Crop Insurance	Crop Insurance	17.05.2021	01	EF	01	29	5	0	2	0	0	31	5	0	36	MANAGE, Hyderabad & SAMETI, Narendrapur
56	Production Technology of Mango	Pomology	18.05.2021	01	EF	01	27	3	0	4	1	0	31	4	0	35	MANAGE, Hyderabad & SAMETI, Narendrapur
57	Agrometeorological indices and its role in crop production	Agrometeorology	18.05.2021	01	EF	01	23	2	0	3	1	0	26	3	0	29	MANAGE, Hyderabad & SAMETI, Narendrapur
58	Production Technology of Mango & Banana	Pomology	21.05.2021	01	EF	01	31	6	0	2	0	0	37	6	0	39	MANAGE, Hyderabad & SAMETI, Narendrapur
59	Climate change & Sustainable agriculture	Agrometeorology	21.05.2021	01	EF	01	31	6	0	2	0	0	37	6	0	39	MANAGE, Hyderabad & SAMETI, Narendrapur
60	Climate change & Sustainable Agriculture	Agrometeorology	25.05.2021	01	EF	01	28	3	0	4	1	0	32	4	0	36	MANAGE, Hyderabad & SAMETI, Narendrapur
61	Basic idea of Soil-Genesis, Components & types	Soil	25.05.2021	01	EF	01	30	3	0	4	1	0	34	4	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur
62	Basic idea of Soil-Genesis, Components & types	Soil	28.05.2021	01	EF	01	30	6	0	2	0	0	32	6	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur

63	IPM of brinjal	IPM	28.05.2020	01	EF	01	30	6	0	2	0	0	32	6	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur
64	Production Technology of Banana & Papaya	Pomology	01.06.2021	01	EF	01	29	3	0	4	1	0	33	5	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur
65	Properties of Soil	Soil	01.06.2021	01	EF	01	29	3	0	4	1	0	33	5	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur
66	Production technology of Guava & Papaya.	Pomology	04.06.2021	01	EF	01	32	6	0	2	0	0	34	6	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
67	Properties of Soil	Soil	04.06.2021	01	EF	01	31	6	0	2	0	0	33	6	0	39	MANAGE, Hyderabad & SAMETI, Narendrapur
68	Different plant propagation techniques of horticultural crops	Plant Propagation	08.06.2021	01	EF	01	31	3	0	4	1	0	34	5	0	39	MANAGE, Hyderabad & SAMETI, Narendrapur
69	Different ongoing Government schemes in Birbhum district and use of POS machine	Extension	08.06.2021	01	EF	01	32	3	0	4	1	0	35	5	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
70	Different plant propagation techniques of horticultural crops	Plant Propagation	11.06.2021	01	EF	01	32	6	0	2	0	0	34	6	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
71	Critical irrigation stages of different crops for efficient management	Water management	11.06.2021	01	EF	01	31	6	0	2	0	0	33	6	0	39	MANAGE, Hyderabad & SAMETI, Narendrapur

72	Marketing management of farm produce	Agril. Marketing	15.06.2021	01	EF	01	31	3	0	4	1	0	35	4	0	39	MANAGE, Hyderabad & SAMETI, Narendrapur
73	Integrated Pest & Disease management of Mango & Guava	Crop Protection	15.06.2021	01	EF	01	31	2	0	3	1	0	34	3	0	37	MANAGE, Hyderabad & SAMETI, Narendrapur
74	Marketing management of farm produce	Agril. Marketing	18.06.2021	01	EF	01	32	6	0	2	0	0	34	6	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
75	Integrated Pest & Disease management of Mango & Guava	Crop Protection	18.06.2021	01	EF	01	31	6	0	2	0	0	33	6	0	39	MANAGE, Hyderabad & SAMETI, Narendrapur
76	Weed problem and use of Herbicide in Agriculture	IWM	22.06.2021	01	EF	01	31	3	0	4	1	0	35	4	0	39	MANAGE, Hyderabad & SAMETI, Narendrapur
77	Nursery Management & Cultivation Practices of kharif Rice	Crop Production	22.06.2021	01	EF	01	30	2	0	4	1	0	34	3	0	37	MANAGE, Hyderabad & SAMETI, Narendrapur
78	Weed problem and use of Herbicide in Agriculture	IWM	25.06.2021	01	EF	01	31	5	0	2	0	0	33	5	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur
79	Nursery Management & Cultivation Practices of kharif Rice	Crop Production	25.06.2021	01	EF	01	30	5	0	2	0	0	32	5	0	37	MANAGE, Hyderabad & SAMETI, Narendrapur
80	Mode of action of herbicides and herbicide resistance	IWM	29.06.2021	01	EF	01	29	3	0	4	1	0	33	4	0	37	MANAGE, Hyderabad & SAMETI, Narendrapur

81	Concept of Cropping Pattern & Cropping System	Cropping System	29.06.2021	01	EF	01	29	2	0	4	1	0	33	3	0	36	MANAGE, Hyderabad & SAMETI, Narendrapur
82	Mode of action of herbicides and herbicide resistance	IWM	02.07.2021	01	EF	01	28	6	0	2	0	0	30	6	0	36	MANAGE, Hyderabad & SAMETI, Narendrapur
83	Concept of Cropping Pattern & Cropping System	Cropping System	02.07.2021	01	EF	01	30	5	0	2	0	0	32	5	0	37	MANAGE, Hyderabad & SAMETI, Narendrapur
84	Production Technology of Seasonal Flowers at Birbhum District	Floriculture	06.07.2021	01	EF	01	32	3	0	4	1	0	35	5	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
85	Production Technology of some Oilseed crops (Sesame, Groundnut & Sunflower)	Crop Production	06.07.2021	01	EF	01	32	3	0	4	1	0	35	5	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
86	Production Technology of Seasonal Flowers at Birbhum District	Floriculture	09.07.2021	01	EF	01	30	6	0	2	0	0	32	6	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur
87	Production Technology of some Oilseed crops (Sesame, Groundnut & Sunflower)	Crop Production	09.07.2021	01	EF	01	30	5	0	2	0	0	32	5	0	37	MANAGE, Hyderabad & SAMETI, Narendrapur
88	Problem soils and their management	Soil	13.07.2021	01	EF	01	31	3	0	4	1	0	35	4	0	39	MANAGE, Hyderabad & SAMETI, Narendrapur
89	Production Technology of Cole Crops (Cabbage, Cauliflower & Broccoli)	Olericulture	13.07.2021	01	EF	01	30	3	0	4	1	0	34	4	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur

90	Problem soils and their management	Soil	16.07.2021	01	EF	01	31	6	0	2	0	0	33	6	0	39	MANAGE, Hyderabad & SAMETI, Narendrapur
91	Production Technology of Cole Crops (Cabbage, Cauliflower & Broccoli)	Olericulture	16.07.2021	01	EF	01	31	6	0	2	0	0	33	6	0	39	MANAGE, Hyderabad & SAMETI, Narendrapur
92	Problem soils (acidic soils) and their management	Soil	20.07.2021	01	EF	01	32	3	0	4	1	0	35	5	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
93	Classification of pesticides and their mode of action	Pesticides	20.07.2021	01	EF	01	32	3	0	4	1	0	35	5	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
94	Problem soils (acidic soils) and their management	Soil	23.07.2021	01	EF	01	30	5	0	2	0	0	32	5	0	37	MANAGE, Hyderabad & SAMETI, Narendrapur
95	Classification of pesticides and their mode of action	Pesticides	23.07.2021	01	EF	01	30	5	0	2	0	0	32	5	0	37	MANAGE, Hyderabad & SAMETI, Narendrapur
96	Pests and diseases of cucurbitaceous vegetables and their management	Crop Protection	27.07.2021	01	EF	01	31	3	0	4	1	0	34	5	0	39	MANAGE, Hyderabad & SAMETI, Narendrapur
97	Production technology of medicinal plants	Horticulture	27.07.2021	01	EF	01	31	3	0	4	1	0	34	5	0	39	MANAGE, Hyderabad & SAMETI, Narendrapur
98	Pests and diseases of cucurbitaceous vegetables and their management	Crop Protection	30.07.2021	01	EF	01	31	6	0	2	0	0	33	6	0	39	MANAGE, Hyderabad & SAMETI, Narendrapur

99	Production technology of medicinal plants	Horticulture	30.07.2021	01	EF	01	27	3	0	2	0	0	29	3	0	32	MANAGE, Hyderabad & SAMETI, Narendrapur
100	Integrated Watershed Management	Water management	03.08.2021	01	EF	01	31	3	0	4	1	0	34	5	0	39	MANAGE, Hyderabad & SAMETI, Narendrapur
101	Production Technology of Cole crops (Knol-khol, Turnip, Brussels sprout, Radish, Chinese Cabbage).	Olericulture	03.08.2021	01	EF	01	31	3	0	4	1	0	34	5	0	39	MANAGE, Hyderabad & SAMETI, Narendrapur
102	Integrated Watershed Management	Water management	06.08.2021	01	EF	01	30	6	2	0	0	32	6	0	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur
103	Production Technology of Cole crops (Knol-khol, Turnip, Brussels sprout, Radish, Chinese Cabbage).	Olericulture	06.08.2021	01	EF	01	30	6	2	0	0	32	6	0	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur
104	Pests of cruciferous vegetables and their management	IPM	10.08.2021	01	EF	01	32	3	0	4	1	0	35	5	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
105	Pests of cruciferous vegetables and their management	IPM	13.08.2021	01	EF	01	31	6	0	2	0	0	33	6	0	39	MANAGE, Hyderabad & SAMETI, Narendrapur
106	Production Technology of Sugarcane & Cotton.	Crop Production	17.08.2021	01	EF	01	31	3	0	4	1	0	34	5	0	39	MANAGE, Hyderabad & SAMETI, Narendrapur

107	Seed Certification	Seed	17.08.2021	01	EF	01	31	3	0	4	1	0	34	5	0	39	MANAGE, Hyderabad & SAMETI, Narendrapur
108	Production Technology of Sugarcane & Cotton.	Crop Production	21.08.2021	01	EF	01	29	6	0	2	0	0	31	6	0	37	MANAGE, Hyderabad & SAMETI, Narendrapur
109	Seed Certification	Seed	21.08.2021	01	EF	01	26	6	0	2	0	0	28	6	0	34	MANAGE, Hyderabad & SAMETI, Narendrapur
110	Extension Reforms: Concept, Organizational Mechanism and role of input dealers in the organizational structure	Extension	24.08.2021	01	EF	01	32	3	0	4	1	0	35	5	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
111	Different machineries and implements and their uses	Engineering	24.08.2021	01	EF	01	32	3	0	4	1	0	35	5	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
112	Extension Reforms: Concept, Organizational Mechanism and role of input dealers in the organizational structure	Extension	27.08.2021	01	EF	01	30	6	0	2	0	0	32	6	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur
113	Different machineries and implements and their uses	Engineering	27.08.2021	01	EF	01	30	5	0	2	0	0	32	5	0	37	MANAGE, Hyderabad & SAMETI, Narendrapur
114	Use of Nano Urea and Azolla in crop cultivation	Bio-inputs	07.09.2021	01	EF	01	32	3	0	4	1	0	35	5	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur

115	Integrated Disease Management in kharif Rice	IDM	07.09.2021	01	EF	01	32	3	0	4	1	0	35	5	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
116	Use of Nano Urea and Azolla in crop cultivation	Bio-inputs	10.09.2021	01	EF	01	31	6	0	2	0	0	33	6	0	39	MANAGE, Hyderabad & SAMETI, Narendrapur
117	Integrated Disease Management in kharif Rice	IDM	10.09.2021	01	EF	01	31	6	0	2	0	0	33	6	0	39	MANAGE, Hyderabad & SAMETI, Narendrapur
118	Integrated pest management of rabi vegetables	IPM	01.12.2021	01	EF	01	32	3	0	4	1	0	35	5	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
119	Importance of Soil testing and methods of soil sampling, interpretation of the results	Soil	03.12.2021	01	EF	01	30	6	0	2	0	0	32	6	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur
120	Importance of Soil testing and methods of soil sampling, interpretation of the results	Soil	07.12.2021	01	EF	01	27	2	0	3	0	0	30	2	0	32	MANAGE, Hyderabad & SAMETI, Narendrapur
121	Remote Sensing and Weather Forecasting	Agro-meteorology	10.12.2021	01	EF	01	31	6	0	2	0	0	33	6	0	39	MANAGE, Hyderabad & SAMETI, Narendrapur

## b) Details of participation

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST			M	F	T
		M	F	T	M	F	T	M	F	T			
<b>Crop production and management</b>													
Increasing production and productivity of crops	29	872	78	950	118	21	139	00	00	00	990	99	1089
Commercial production of vegetables	06	186	12	198	29	06	35	00	00	00	215	18	233
Production and value addition													
Fruit Plants	02	62	06	68	09	01	10	00	00	00	71	07	78
Ornamental plants													
Spices crops													
Soil health and fertility management	20	595	48	643	90	11	101	00	00	00	685	59	744
Production of Inputs at site	05	153	16	169	21	03	24	00	00	00	174	19	193
Methods of protective cultivation													
Other													
Integrated Pest Management	38	1152	101	1253	164	32	196	00	00	00	1316	133	1449
Rejuvenation of old orchards	04	120	12	132	18	02	20	00	00	00	138	14	152
Nursery Management of Agronomic Crops	02	59	06	65	08	01	09	00	00	00	67	07	74
Nursery Management of Horticultural Crops	02	58	06	64	08	01	09	00	00	00	66	07	73
Seed Production	03	86	08	94	13	01	14	00	00	00	99	09	108
Different Plant Propagation Techniques	02	64	05	69	09	01	10	00	00	00	73	06	79
Productivity Enhancement in Flower Crops	02	60	00	60	12	04	16	00	00	00	72	04	76
Productivity Enhancement in Medicinal Plants	02	54	00	54	06	04	10	00	00	00	60	04	64
Integrated Irrigation Management	01	25	03	28	03	01	04	00	00	00	28	04	32
Agro-Met Indices	02	53	05	58	08	01	09	00	00	00	61	06	67
Climate Change and Agriculture	04	120	10	130	21	01	22	00	00	00	141	11	152

Total	<b>124</b>	<b>3719</b>	<b>316</b>	<b>4035</b>	<b>537</b>	<b>91</b>	<b>628</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4256</b>	<b>407</b>	<b>4663</b>
<b>Post harvest technology and value addition</b>													
Processing and value addition													
Other													
Total													
<b>Farm machinery</b>													
Farm machinery, tools and implements	02	62	06	68	08	01	09	00	00	00	70	07	77
Other													
Total	<b>02</b>	<b>62</b>	<b>06</b>	<b>68</b>	<b>08</b>	<b>01</b>	<b>09</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>70</b>	<b>07</b>	<b>77</b>
<b>Livestock and fisheries</b>													
Livestock production and management													
Animal Nutrition Management													
Animal Disease Management													
Fisheries Nutrition													
Fisheries Management													
Other													
Total													
<b>Home Science</b>													
Household nutritional security													
Economic empowerment of women													
Drudgery reduction of women													
Other													
Total													
<b>Agricultural Extension</b>													
Capacity Building and Group Dynamics	01	32	04	36	03	01	04	00	00	00	35	05	40
Institutional Rural Credit Flow Mechanism and Crop Insurance	02	58	06	64	08	01	09	00	00	00	66	07	73
Marketing Management of Farm Produce	02	63	06	69	09	01	10	00	00	00	72	07	79
Extension Reforms	02	63	06	69	08	01	09	00	00	00	71	07	78
Other													
<b>Total</b>	<b>7</b>	<b>216</b>	<b>22</b>	<b>238</b>	<b>28</b>	<b>4</b>	<b>32</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>244</b>	<b>26</b>	<b>270</b>
<b>Grand Total</b>	<b>133</b>	<b>3997</b>	<b>344</b>	<b>4341</b>	<b>573</b>	<b>96</b>	<b>669</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4570</b>	<b>440</b>	<b>5010</b>

**3.4. A. Extension Activities (including activities of FLD programmes)**

Nature of Extension Activity	No. of activities	Farmers				Extension Officials			Total		
		M	F	T	SC/ ST (% of total)	Male	Female	Total	Male	Female	Total
Field Day	26	213	101	314	SC – 30.65% ST – 28.17 %	28	08	36	241	109	350
KisanMela											
KisanGhoshthi											
Exhibition											
Film Show											
Method Demonstrations											
Farmers Seminar											
Workshop											
Group meetings											
Lectures delivered as resource persons	14	375	146	521	SC – 12.51 % ST – 18.05 %	09	04	13	384	150	534
Advisory Services											
Scientific visit to farmers field	51	201	98	299	SC – 28.54 % ST – 26.52 %	04	02	06	205	100	305
Farmers visit to KVK	71	198	71	269	SC – 33.40 % ST – 36.18 %	04	02	06	202	73	275
Diagnostic visits											
Exposure visits											
Ex-trainees Sammelan											
Soil health Camp											
Animal Health Camp											
Agri mobile clinic											
Soil test campaigns											
Farm Science Club Conveners meet											
Self Help Group Conveners meetings											
MahilaMandals Conveners meetings											
Celebration of important days (specify) International Soil Day - 2021	01	55	05	60	SC – 27.78 % ST – 13.89 %	04	00	04	59	06	65
Celebration of important days (specify) PoshanMaah 2021(Food and nutrition for farmers)	01	02	49	51	SC – 26.68 % ST – 14.89 %	04	01	05	06	50	56
MahilaKisan Divas– 2021	01	00	47	47	SC – 23.00 % ST – 22.00 %	04	01	05	04	48	52
Celebration of World Milk Day-2021	01	620	120	740	SC – 26.68 % ST – 14.89 %	04	01	05	624	121	745

International Womens Day-2021	01	06	72	78	SC – 33.40 % ST – 36.18 %	04	01	05	10	73	83
World water day-2021	01	33	10	43	SC – 33.40 % ST – 36.18 %	04	01	05	37	11	48
<b>Total</b>	<b>168</b>	<b>1703</b>	<b>719</b>	<b>2422</b>		<b>79</b>	<b>21</b>	<b>90</b>	<b>1772</b>	<b>744</b>	<b>2516</b>

**B. Other Extension activities**

Nature of Extension Activity	No. of activities
Newspaper coverage	07
Radio talks	05
TV talks	03
Popular articles	07
Extension Literature	06
Other, if any	-

**3.5 a. Production and supply of Technological products****Village seed**

Crop	Variety	Quantity of seed (q)	Value (Rs)	No. of farmers involved in village seed production	Number of farmers to whom seed provided							
					SC		ST		Other		Total	
					M	F	M	F	M	F	M	F
Paddy	MTU-1010, Ranidhan, IET-4786	400	1600000		200	100	70	30	400	200	670	330
Black gram	PU-31	415	4150000		200	60	30	20	350	150	580	230
Sesame	Suprava	350	3500000		240	10	25	20	300	225	565	255
Lentil	L-4717	290	2500000		80	21	19	13	150	100	249	134
Mustard	NRCHB-1	100	105000		120	80	21	11	130	65	271	156
<b>Total</b>		<b>1555</b>	<b>11855000</b>		<b>840</b>	<b>271</b>	<b>165</b>	<b>94</b>	<b>1330</b>	<b>740</b>	<b>2335</b>	<b>6375</b>

**KVK farm**

Crop	Variety	Quantity of seed (q)	Value (Rs)	Number of farmers to whom seed provided							
				SC		ST		Other		Total	
				M	F	M	F	M	F	M	F
Rice	MTU-1010	5.25	21000	20	5	10	5	6	4	36	14
Rice	Ranidhan (IET-19418)	20.25	81000	69	34	41	26	38	44	148	104
Rice	IET-4786	1.96	7840	8	7	3	5	5	2	16	14
Elephant foot yam	Bidhan Kusum	1.66	9960	4	1	1	2	1	1	6	4
Mustard	NRCHB-1	0.90	9450	15	13	5	3	7	3	27	19
Mustard	YSH-0401	0.90	9450	12	10	4	5	4	6	20	21
Ekanghi	K. gelana	3.00	3300	6	1	3	1	3	1	12	3
Groundnut	Dharani	0.50	6500	2	1	1	0	0	0	3	1
<b>Grand Total</b>		<b>34.42</b>	<b>148500</b>	<b>118</b>	<b>73</b>	<b>68</b>	<b>46</b>	<b>95</b>	<b>61</b>	<b>468</b>	<b>180</b>

**Production of planting materials by the KVKs**

Crop	Variety	No. of planting materials	Value (Rs)	Number of farmers to whom planting material provided							
				SC		ST		Other		Total	
				M	F	M	F	M	F	M	F
<b>Vegetable seedlings</b>											
Cauliflower	Pusa Snowball, CFL-1522	3000	12000	10	20	5	15	4	6	19	41
Cabbage	PAN-3451, Blue Jans	3000	12000	15	15	6	14	5	5	26	34
Tomato	Abhilash, Saksham	2000	8000	8	12	4	6	3	7	15	25
Brinjal	Muktokeshi, VNR 85, VNR-218, VNR-212, Nava Kiran	5000	20000	20	30	10	20	5	15	35	65
Chilli	PAN-1402, Siam Hot, Krishna	1500	6000	5	10	3	5	3	4	11	19
Broccoli	Green Master	3000	12000	15	16	6	14	4	5	25	35
Capsicum	Delisha-2037, Mahasharat	3000	12000	10	20	6	14	3	7	19	41
Cauliflower	Pusa Snowball, CFL-1522	3000	12000	10	20	5	15	4	6	19	41
<b>Fruits</b>											
Mango											
Guava											
Lime											
Papaya											
Banana											
Others											
<b>Ornamental plants</b>											
<b>Medicinal and Aromatic</b>											
<b>Plantation</b>											
<b>Spices</b>											
<b>Turmeric</b>											
<b>Tuber</b>											
<b>Elephant yams</b>											
<b>Fodder crop saplings</b>											
<b>Forest Species</b>											
<b>Others, pl.specify</b>											
<b>Total</b>		<b>23500</b>	<b>94000</b>	<b>93</b>	<b>143</b>	<b>45</b>	<b>103</b>	<b>31</b>	<b>55</b>	<b>169</b>	<b>301</b>

**Production of Bio-Product by KVKs**

Name of product	Quantity (Kg)	Value (Rs.)	No. of Farmers benefitted							
			SC		ST		Other		Total	
			M	F	M	F	M	F	M	F
Biofertilizer										
(i) Azolla	2500	7500	100	50	20	10	30	20	150	80
(ii) Vermicompost	3000	30000	150	60	30	15	25	15	205	90
Bio-pesticide										
Bio-fungicide										
Bio-agents (Earthworm)	60000 nos.	30000	110	65	35	16	13	18	158	99
Others, please specify.										
<b>Total</b>		<b>67500</b>	<b>260</b>	<b>175</b>	<b>85</b>	<b>41</b>	<b>68</b>	<b>53</b>	<b>513</b>	<b>269</b>

**Production of livestock materials**

Particulars of Live stock	Name of the breed	Number	Value (Rs.)	No. of Farmers benefitted							
				SC		ST		Other		Total	
				M	F	M	F	M	F	M	F
Dairy animals											
Cows											
Buffaloes											
Calves											
Others (Pl. specify)											
Small ruminants											
Sheep											
Goat											
Other, please specify											
Poultry											
Broilers	Coloured Broiler(Advanced Grower)	30	8213	02				12		14	
Layers	Aseel(Advanced Grower)	30	5100					01		01	
	Aseel (Cock)	05	3390	01				03	01	04	01
	Aseel (Hen)	06	3338					06		06	
Duals (broiler and layer)											
Japanese Quail											
Turkey											
Emu											
Ducks											
Others (Pl. specify)											
Piggery											
Piglet											
Hog											
Others (Pl. specify) Egg	Aseel	333	1665	04				12	01	16	01
Fisheries											
Indian carp	Rohu,Katla	480 Kg	4800							57	
Exotic carp											
Mixed carp											
Fish fingerlings											
Spawn											
Others (Pl. specify)	Vietnam Koi	20 Kg	6000							22	
Vietnam Koi											
<b>Grand Total</b>			<b>32506</b>	<b>07</b>				<b>44</b>	<b>02</b>	<b>120</b>	<b>02</b>

**3.5. b. Seed Hub Programme-“Creation of Seed Hubs for Increasing Indigenous Production of Pulses in India”**

i) Name of Seed Hub Centre:

Name of Nodal Officer :	
Address :	
e-mail :	
Phone No. : Mobile :	

ii) Quality Seed Production Reports

Season	Crop	Variety	Production (q)			
			Target	Area sown (ha)	Production	Category of Seed (F/S, C/S)
Kharif 2018						
Rabi 2018-19						
Summer/Spring 2019						

iii) Financial Progress

Fund received (2016-17, 2017-18 and 2018-19)	Expenditure (Rs. in lakhs)		Unspent balance (Rs. in lakhs)	Remarks
	Infrastructure	Revolving fund		
2016-17				
2017-18				
2018-19				

iv) Infrastructure Development

Item	Progress
Seed processing unit	
Seed storage structure	

## 3.6 (A) Literature Developed/ Published (with full title, author &amp; reference)

Item	Title	Author's name	Number	Circulation
Research paper	1. "Crop Concentration and Crop Diversification in Birbhum District of West Bengal: Recent Situations", <i>Agricultural Reviews</i> [ISSN No. -0976-0741 (Print) and ISSN No. - 0253-1496 (Online)], DOI No. - 10.18805/ag.R-2120	<b>Prabuddha Ray</b>	02	Not Assessed
	2. "Management of Storage Pathogens of Cereal Grains: A Review", <i>International Journal of Economic Plants [Print ISSN 2349-4727, Online ISSN 2349-4735]</i> , Vol. 8, No. 2, pp. 103 - 108, <b>2021</b>	Alokesh Das, <b>Subrata Mandal</b> , Sudipa Nag and Bholanath Mondal		
Seminar/conference/ symposia papers	1. "Study on Soil Nutrient Status According to Global Positioning System in Different Blocks of Birbhum District of West Bengal", 8th Annual Convention of Society of Fertilizer and Environment and National Webinar on Stewardship to Agrochemicals for Up keeping Environment on 31.03.2021	<b>Subrata Mandal</b>	02	Not Assessed
	2. Effect of Technology Demonstration of Field Pea on Productivity, Profitability and Soil Health under Lateratic Soil of West Bengal. – 85 <sup>th</sup> Annual Convention and National Seminar of Indian Society of Soil Science at Palli Siksha Bhavana, Visva-Bharati during 16 <sup>th</sup> to 19 <sup>th</sup> Nov., 2021	<b>Subrata Mandal, Mrinmoy Karmakar, Sourav Mondal, Palash Ankure and F. H. Rahaman</b>		
Books	1. <i>Hand Book of Economic Botany</i> , ISBN No. - 978-81-948993-3-42021, 2021, New Delhi Publishers, New Delhi	<b>Subrata Mandal</b> , Sudipa Mandal and Alokesh Das	04	Not Assessed
	2. <i>Modern Agricultural Technology: A step towards rural self-reliance</i> , ISBN: 97881949237701, 2021, M/s AGROBIOS (India)	Kishore C Swain, Debasis Bhattacharya, Binoy Kumar Saren and <b>Subrata Mandal</b>		
	3. <i>Cultivation of Medicinal Plants (A Complete reference book for cultivated medicinal plants)</i> , ISBN: 978-93-91012-68-7, 2021, New Delhi Publishers, New Delhi	<b>Subrata Mandal</b> , Sudipa Mandal and Alokesh Das		
	4. <i>Integrated Pest Management – Reaching the Unreached</i> , ISBN No. 978-81-7880-882-6, 2021, Rajat Publications, New Delhi	<b>Prabuddha Ray</b> and Sarthak Chowdhury		
Bulletins	পশ্চিমবঙ্গের তথ্যবীরভূম জেলায় ঘূর্ণিঝড় সম্পর্কে সতর্কবার্তা	<b>Sri Sayak Mahato</b>	3	688

	(Warning of cyclone for the Birbhum district of West Bengal)			
Newsletter				
Popular Articles	1. Rarh Banger Matite Tiler BhaloFalan (আনন্দবাজারপত্রিকা 17/3/2021)	<b>Dr.Subrata Mandal</b>	07	Not Assessed
	2. Kharif chas e bhuttalavjonok (আনন্দবাজারপত্রিকা 26/5/2021)	<b>Dr.Subrata Mandal</b>		
	3. Sayabinchasbarchejelai (আনন্দবাজারপত্রিকা 01/09/2021)	<b>Dr.Subrata Mandal</b>		
	4. “BikalpoAayearSandhaneY Hans Palan” (Bardhaman Jyoti 29/09/2021)	<b>Dr.Madhuchhanda Khan</b>		
	5. “Murgipalan Kaushal ooKhamarBabyashthapana” (আনন্দবাজারপত্রিকা 22/12/2021)	<b>Dr. Madhuchhanda Khan</b>		
	6. Warning for cyclonic activity and mitigation strategies to minimize the crop losses (আনন্দবাজারপত্রিকা 21/05/2021)	<b>Sri Sayak Mahato</b>		
	7. Remedy and prevention measures to minimise the loss in agriculture due to the depression over the Birbhum district (Puber Kolom 14/11/2021)	<b>Sri Sayak Mahato</b>		
Book Chapter				
Extension Pamphlets/ literature	“NarkelGaachheyUnnato Saar Prayog”	<b>Dr. Subrata Mandal</b>	06	6000
	“Baby Corn ChashLabhjanak”	<b>Dr. Subrata Mandal</b>		
	“Aloe vera Chash”	<b>Dr. Subrata Mandal</b>		
	Rathindra Krishi Vigyan Kendra – A Journey towards Unreached since 1994	<b>Dr. Prabuddha Ray</b>		
	“ChagalerBhibhinna Rog o tar Pratikar”	<b>Dr. Madhuchhanda Khan</b>		
	“KachuChasherUnnatoPrayukti”	<b>Sri Palash Ankure</b>		
Technical reports	1. Annual Report		16	Not Assessed
	2. Annual Action Plan			
	3. SAC Report			
	4. Report on World Soil Day			
	5. International Women’s Day			
	6. Report on Jal Shakti Abhiyan			
	7. Report on Mahila Kisan Diwas			
	8. Report on ATMA Activity			

	9. Report on World Water Day			
	10. Report on Hon'ble PM's Address during Conference on ?Natural Farming			
	11. Report on World Milk Day			
	12. Report on Food and Nutrition for Farmers			
	13. Report on Nutrition to Girls and Tree Plantation Campagin			
	14. Report on CFLD on Pulses and Oilseeds			
	15. Report on DFI Survey			
	16. Report on DFI Slides			
Electronic Publication (CD/DVD etc)	"KartickdangaKalimata WUA, Birbhum: Integrated approach for enhancing income from orchard and intercropping with add-on income from fishery", INTERNATIONAL WATER MANAGEMENT INSTITUTE (IWMI), Page-92-94, <a href="https://wbadmip.org/publications-external">https://wbadmip.org/publications-external</a> , Sl. No. 10 WBADMI PROJECT IMPACT ASSESSMENT REPORT- PHASE 2 by IWMI	<b>Dr. Prabuddha Ray</b>	01	3000
TOTAL				

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

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

Sl. No.	Name of programme	Name of course	Name of KVK personnel and designation	Date and Duration	Organized by
1.	Meeting	Severe weather reporting	Dr. Subrata Mandal Senior Scientist and Head	February 01, 2021 Duration- 1 day	IMD
2.	Meeting	Familiarization of Financial module developed in Agro-DSS	Dr. Subrata Mandal Senior Scientist and Head	February 03, 2021 Duration- 1 day	IMD
3.	Meeting	Review Meeting cum workshop on CFLD oilseeds	Dr. Subrata Mandal Senior Scientist and Head	February 05, 2021 Duration – 1 Day	ICAR

4.	Webinar	Webinar on Indian standards related to Agriculture & Irrigation	Dr. Subrata Mandal Senior Scientist and Head	March 3 <sup>rd</sup> , 2021 Duration – 01 Day	ICAR-ATARI, Kolkata
5.	Workshop	Sensitization workshop on National Project on DFI	Dr. Subrata Mandal Senior Scientist and Head	April 20 <sup>th</sup> . & 22 <sup>nd</sup> ., 2021	ICAR-ATARI, Kolkata
6.	Workshop	Annual Zonal Workshop	Dr. Subrata Mandal Senior Scientist and Head	July 6 <sup>th</sup> . – 8 <sup>th</sup> ., 2021	ICAR-ATARI, Kolkata
7.	Meeting	Meeting cum discussion on various projects at KVK workshop on finalization of Annual Action Plan	Dr. Subrata Mandal Senior Scientist and Head	July 16 <sup>th</sup> ., 2021	ICAR-ATARI, Kolkata
8.	Meeting	Real-time farmers feedback on weather-based crop advisory under GKMS	Dr. Subrata Mandal Senior Scientist and Head	July 17, 2021 Duration- 1 day	IMD
9.	Online training cum interaction	Use of pest and disease forewarning models and inventories on significant weather patterns and related agromet advisories under GKMS	Dr. Subrata Mandal Senior Scientist and Head	August 04, 2021. Duration- 1 day	IMD
10.	Meeting	Meeting on DFI	Dr. Subrata Mandal Senior Scientist and Head	August 5 <sup>th</sup> ., 2021	ICAR-ATARI, Kolkata
11.	Orientation Programme	GKMS	Dr. Subrata Mandal Senior Scientist and Head	August 27, 2021. Duration-Half Day	IMD
12.	Meeting	Meeting on PoshanMah and Tree Plantation	Dr. Subrata Mandal Senior Scientist and Head	September 17 <sup>th</sup> ., 2021	ICAR-ATARI, Kolkata
13.	Meeting	Meeting cum discussion on Finance related issues	Dr. Subrata Mandal Senior Scientist and Head	October 29 <sup>th</sup> ., 2021	ICAR-ATARI, Kolkata
14.	Meeting	Talk on CCS conduct rules on the eve of vigilance Awareness Week	Dr. Subrata Mandal Senior Scientist and Head	November 1 <sup>st</sup> ., 2021	ICAR-ATARI, Kolkata
15.	Meeting	Meeting on DFI data collection	Dr. Subrata Mandal	November 12 <sup>th</sup> ., 2021	ICAR-ATARI, Kolkata
16.	5-Days Online Training	Fruit Fly: Surveillance and Management	Sri. Sourav Mondal SMS-Plant Protection	22-26 February, 2021 Duration - 5 Days	National Institute of Plant Health Management, Govt. of India, Hyderabad
17.	5-Days Online Training	On-Farm Production of Biocontrol agents and Microbial Biopesticides	Sri. Sourav Mondal SMS-Plant Protection	15-19 March, 2021 Duration - 5 Days	National Institute of Plant Health Management, Govt. of India, Hyderabad
18.	21-Days Online Training Programme	Concepts and Application of Pharmacology for meeting challenges of One Health in 21 <sup>st</sup> Century	Dr. Madhuchhanda Khan SMS-Animal Science	12 <sup>th</sup> July to 1 <sup>st</sup> Aug, 2021 Duration 21 Days	Department of Veterinary Pharmacology and Toxicology, College of Veterinary Science and Animal Husbandry, Jabalpur, M.P.

19.	5-Days Online Training Programme	Advanced Training on Poultry and Duck Farming	Dr. Madhuchhanda Khan SMS-Animal Science	14 <sup>th</sup> – 18 <sup>th</sup> Sep, 2021 Duration 5 Days	ICAR-DPR, Rajendra Nagar, Hyderabad and ICAR-ATARI, Kolkata
20.	Annual Convention of Indian Society of Soil Science	85 <sup>th</sup> Annual Convention of Indian Society of Soil Science	Dr. Madhuchhanda Khan SMS-Animal Science	16 <sup>th</sup> -19 <sup>th</sup> Nov, 2021 Duration 4 Days	India Society of Soil Science
21.	5-Days Online Training Programme	Scientific Dairy Farming for Sustainable Economic Security	Dr. Madhuchhanda Khan SMS-Animal Science	6 <sup>th</sup> – 10 <sup>th</sup> Dec, 2021 Duration 5 Days	ICAR-ATARI, Kolkata and ICAR-NDRI, ERS, Kalyani, Nadia
22.	Meeting	Severe weather reporting	Sri. Sayak Mahato, SMS-Agrometeorology	February 01, 2021 Duration- 1 day	IMD
23.	Meeting	Familiarization of Financial module developed in Agro-DSS	Sri. Sayak Mahato, SMS-Agrometeorology	February 03, 2021 Duration- 1 day	IMD
24.	Meeting	Real-time farmers feedback on weather-based crop advisory under GKMS	Sri. Sayak Mahato, SMS-Agrometeorology	July 17, 2021 Duration- 1 day	IMD
25.	Online training cum interaction	Use of pest and disease forewarning models and inventories on significant weather patterns and related agromet advisories under GKMS	Sri. Sayak Mahato, SMS-Agrometeorology	August 04, 2021. Duration- 1 day	IMD
26.	Online Training	“Climate Change Adaptation in Agriculture”	Sri. Sayak Mahato, SMS-Agrometeorology	March 23 - 26, 2021. Duration-4 days.	MANAGE, Rajendranagar, Hyderabad
27.	Online Training	Strategies for climate risk management and resilient farming	Sri. Sayak Mahato, SMS-Agrometeorology	September 20-24, 2021. Duration-5 days.	CRIDA-MANAGE, Rajendranagar, Hyderabad
28.	Workshop-cum-Training Programme	Transfer of Ready-to-Use and Farmer’s Friendly Technologies Developed by BCKV.	Sri. Sayak Mahato, SMS-Agrometeorology	29 <sup>th</sup> to 1 <sup>st</sup> Oct, 2021. Duration-3 days.	DEE, BCKV
29.	Online workshop	Recent Advances in AI & ML for Climate Sciences	Sri. Sayak Mahato, SMS-Agrometeorology	13-15 Nov, 2021. Duration-3 days.	Technology Innovation Hub (TIH), Indian Statistical Institute (ISI), Kolkata
30.	International Webinar	BuildingClimate Resilience in Agriculture through Agrometeorology andother Technological Interventions	Sri. Sayak Mahato, SMS-Agrometeorology	15 - 17 Dec, 2021. Duration-3 days.	Dr. Rajendra Prasad Central AgriculturalUniversity, Pusa
31.	Refresher Workshop	Refresher Workshop of DAESI Facilitator	Sri Mrinmoy Karmakar, Facilitator, DAESI	11-12 Nov, 2021 Duration-2 Days	SAMETI, West Bengal
32.	Refresher Workshop	Refresher Workshop of DAESI Facilitator	Sri Sayan Chatterjee, Facilitator, DAESI	11-12 Nov, 2021 Duration-2 Days	SAMETI, West Bengal

**3.7.a: Success stories/Case studies, if any (two- or three-pages write-up on 1-2best case(s) with suitable action photographs)Sri Arabinda Ghosh, a successful Poultry Farmer partnered by the Rathindra Krishi Vigyan Kendra**

**Name of farmer - Sri Arabinda Ghosh**



**Address - Vill-Batla,P.O.-Batikar,C. D. Block-Illambazar, Dist-Birbhum,Pin-731121,West Bengal**

**Contact details (Phone, mobile, email Id) – Mobile Phone No. 980224042**

**Land holding (in ha.) –0.3 acre**

**Name and description of the farm / enterprise :**

Sri Arabinda Ghosh ,S/O-Sri Dayamoy Ghosh is a hard working young graduate and a promising poultry farmer of Birbhum district of West Bengal. After completion of graduation he started supporting his father in agricultural activities. The main source of their income were from paddy, mustard, potato and vegetables . But due to small land holding size, income from agricultural products and production was not satisfactory. Then he started broiler farming with 2000 bird capacity in the year 2012 with gross annual income of Rs, 100000 which is increased by farm size of 3000 bird capacity with gross annual income of Rs.300000 by 2021. Besides he started another farm of coloured broiler of 150 bird capacity and rearing RIR chicken in backyard.

The selected partner farmer, Sri Arabinda Ghosh, who launched broiler farm but earning and Net Profit Margin almost each and every year, was keenly observed by the Rathindra KVK focusing on the potential of increasing the profit gained by the above mentioned unemployed partner farmer. Sri Ghosh was selected for the On Farm Trial Programme on broiler farming and got RIR chicken for backyard farming. Sri Ghosh was also given intensive skill development training programme of Agriculture Skill Council of India organized by Rathindra Krishi Vigyan Kendra on the job role Small Poultry Farmer for the financial year 2019-20 and certified by Agriculture Skill Council of India. He also attended a lot of various awareness programmes and exposure visits to public as well as private sector poultry farms for gaining first hand experience on scientific rearing and low cost feed formulation of poultry. He procured coloured broiler both Krishibro and Caribro from Rathindra Krishi Vigyan Kendra.

The high demand of coloured broiler is due to similar plumage colour like desi birds. Keeping in view market's demand and faster growth rate than Desi birds Rathindra Krishi Vigyan Kendra inspired farmers to rear coloured broiler in semi intensive system . He started his poultry unit at his own land and constructed a non-conventional low-cost poultry house made of locally available materials, such as bamboo and wood Birds were let loose for scavenging to utilize the feed base, i.e., fallen grain, insect, earthworm, kitchen waste, green grass etc. as supplementary feeding of broiler feed. Almost one fourth of the amount of feed was replaced by *Azolla*(*Azolla pinnata*) and vegetables like *Kalmi*(*Ipomoea aquatica*) and Spinach (*Spinacia oleracea*) etc. De-worming and vaccination of birds were done by Sri .Arabinda Ghosh as per the standard protocol with technological backstopping by the scientist of the Rathindra KVK.

Bodyweight of the Caribro was about 1.6 Kg and 1.5 Kg for Krishibro at 6<sup>th</sup> week of age.Mortalilty upto 8<sup>th</sup> week of age is negligible.

Initially Rathindra KVK distributed 20 numbers of Rhode Island Red. Later on he propagated backyard poultry farming. Bodyweight of the Rhode Island Red was about 2.5 Kg and in case of of male was about 2.95 Kg and 2.3 Kg for female. Rhode Island Red produces 150-160 eggs and age of first egg laying of this poultry bird is i.e.,175-180 days. Mortality upto 52 weeks of age Rhode Island Red is also negligible.

Rhode Island Red bird fetches a market price of Rs.180.00 – Rs. 200.00 /kg. which is similar with local poultry price in market. The f table purpose egg fetches a price of Rs. 6.00 to Rs. 7.00 per egg

Broiler farming can be an alternative way to promote self-employment for rural convert from unemployed to employed persons. Considering the scope Rathindra Krishi Vigyan Kendra designed On Farm Trial Programme and intensive training small scale poultry farming to augment profitability of broiler farming .

This success of Sri Ghosh can be used as a Model for formulating the Strategies to double the incomes of the farmers of the Birbhum District, West Bengal within 2022.

**Economic impact** – The economics of the activities of Sri Arabinda Ghosh are given in the following Section.

**i) Coloured Broiler rearing**

Technology Option	Body Weight		Cost of cultivation (Rs./unit i.e. 30 nos)	Gross return (Rs./unit i.e. 30 nos)	Net Return (Rs /unit i.e 30 nos)	B:C Ratio
	At 6th. Week (gm)					
Krishibro	1542.45±10.45		3985	11700	7715	2.93
Caribro	1623.37± 10.87		3985	12480	8495	3.13

**ii) Backyard poultry Rearing**

Technology Option	Body Weight						Age at first egg (day)	Egg production up to 72 week	Egg weight at 40 th week (gm)	Cost of cultivation (Rs./unit i.e. 30 nos)	Gross return (Rs./unit i.e. 30 nos)	Net Return (Rs /unit i.e 30 nos)	B: C Ratio
	At 6th. Week (gm)		At 40th Week (gm)		At 52nd Week (gm)								
	M	F	M	F	M	F							
Rhode Island Red(RIR)	551.17±4.17	437.81±3.23	2349.24±1.95	1768.34±1.12	2941.43±1.82	2298.41±1.57	184.58±0.92	157.23±1.10	53.09±0.26	19012	31752	12740	1.67

**iii) Broiler Farming**

Body Weight	Cost of cultivation (Rs./unit i.e. 3000 nos)	Gross return (Rs./unit i.e. 3000nos)	Net Return (Rs /unit i.e 3000 nos)	B:C Ratio
2311.78±38.86	Chicks-120000 Feed-350000 Medicine-9000 Others-6000 Total= 485000	Sell of birds- 535000	50000	1.1

**Social Impact:** Back Yard Poultry Farming and poultry farming in semi intensive system both are Primary Source of Animal Protein and supplementary income generation for the down-trodden and marginalized rural population. Women and marginal farmers who sale Birds have opportunities to network and may have increased social standing. Income from sales of poultry products help the farmers with money for their daughters' weddings, meet their day-to-day necessities, expenditure for children's education, repair, and renovation of house. Traders of Poultry and eggs also have increased social standing as well as economic place in the society. They travel by bi-cycle about 20 – 30 kilometres per day and carry information between villages which help to spread messages. Broiler farming can be an alternative way to promote self-employment for rural youth to convert from unemployed to employed persons.

**Environmental Impact:** Environmental impacts related to Back Yard Systems and Semi intensive system are marginal, because of the limited concentration of waste and reliance on locally available sources of feed such as food residue, crop residue etc.

**Horizontal / Vertical spread:** 100 numbers of practicing farm women from disadvantageous and marginalized Scheduled Tribe (ST) community of the nearby villages of Illambazar Community Development Block of Birbhum District adopted the Poultry Farming as practiced by Sri Arabinda Ghosh.

**Remarks:** Mr. Arabinda Ghosh, an unemployed rural youth, paved the way for other unemployed youths as well as farmers and farm women to take up poultry rearing as a viable rural entrepreneurship to generate low input and high output venture for sustainable livelihood development which can be achieved within a noticeably short period of time.

**Sri Arabinda Ghosh at his Coloured Broiler Poultry Farm**



**Sri Arabinda Ghosh at his Broiler Farm**



### 3.7.b. Success Story of a Farmer under CFLD Oilseeds in Kharif, 2021 at RKVK, PSB, Visva-Bharati, Sriniketan Birbhum, West Bengal

**Name of the Crop & Variety:** Sesame, Var- Suprabha (Season: - Kharif and Year: - 2021)

**Farmer's Name:-**SkMotahar Hossain

**Husband's Name:-**Sk Ali

**Address:-** Village+ P.O- Bansanksha, Police Station:- Panrui  
Block- Suri-II, Pin- 731121, Dist- Birbhum

**Phone Number:-**7478827214

**AadharNumber:-**926658023785



**Background information about farmers field:**

#### i) How and why he/ She brought under CFLD?

SkMotahar Hossain and several other practicing farmer of the locality of the village+POBansanksha C.D. Block: -Suri-II, District- Birbhum have undergone various skill development training programmes on the Topic of “Crop Diversification through introduction of improved oilseeds in Kharif seasons”, organized by the Rathindra KVK, Palli Siksha Bhavana, Visva-Bharati, Sriniketan, Birbhum. In this context, this farmer along with several others farmers of his locality has shown keen interest on growing Kharif oilseeds cultivation especially of Sesame instead of Kharif Paddy. Among this group of farmers SkMotahar Hossain maintained a high level of interest and lead the other fellow farmers to become the partner Farmers in the Cluster Front Line Demonstration Programmes on Kharif Oilseeds viz. Sesame cultivation in kharif season 2021 in above mentioned area.

#### ii) Existing practices before adopting CFLD recommendation:

Farmers generally use Sesame varieties like B- 67 (Tilottama) and they do not use any micronutrients and herbicides. They only use chemical fertilizers @ 80- 00 – 00 or 80 – 20 – 00 (N-P-K Respectively Kg. /ha).

#### Institutional Involvement:

##### i) Details of inputs and Technology provided:

- (A) Seeds of Improved Variety Suprabha
- (B) Herbicides: - Pendimethalin as per-emergence
- (C) Foliar spray of Micro- Nutrients (Zinc).
- (D) Need based plant protection chemicals

##### ii) Details of application of technology with photograph:

- (A) Seeds of Improved Variety Suprabha @ 6 Kg. /ha
- (B) Method of seed sowing: - Broadcasting
- (C) Application of herbicides. Pendimethalin @ 3 lit. / ha at 1- 3 DAS.
- (D) Foliar Spray of Micro- Nutrients: - ZN EDTA @ 1 gm. / lit. of water at 25 and 45 DAS.

**Cluster FLD on Kharif Sesame in 2021 organized by the Rathindra KVK, Birbhum at the vegetative Growth stage of the plot of SkMotahar Hossain**



**Rathindra KVK Scientist at the plot of the Cluster FLD on Summer sesame in 2021 organized by the Rathindra KVK, Birbhum at the Flowering Stage of the plot of SkMotahar Hossain**



**iii) Field Days observed:**

10.08.2021- Land preparation & Sowing of improved seeds.

11.08.2021- Fertilizer application

24.09.2021- Vegetative growth stage.

05.11.2021- Harvesting stage

**Success Point:**

Use of new improved variety Suprabha distinctly increased the yield by 51 % than the old variety, Tillotoma (B-67). Beside that spraying of micronutrient Zn played beneficial role than local check. And ultimately the benefits of farmers increased by 55 %

**Outcome Yield (q/ha):**

Demonstration-----11.2 q/ha

Potential yield of variety-----13 q/ha

District average -----9.33 q/ha

State Average-----9.15 q/ha

**Performance of the technology vis-à-vis local check (Increase in productivity and returns)**

Specific Technology	Yield (q/ ha)	Gross Cost (Rs/ha)	Gross income (Rs/ha)	Net Income (Rs/ha)	B:C Ratio
Farmer practices	7.4	16800	37000	20200	2.2
Demonstration	11.2	17100	56000	38900	3.3
% increase	51	2	51	92	55

**Farmer Feed Back:**

The demonstrated variety Suprabha is shorter in duration by 15 days on an average than the existing variety i.e. B- 67 (Tilottama) and the average height of the demonstrated variety is also shorter by 10-15 cms than the Tilottama variety. The number of siliqua per plant is 47 on an average demonstrated variety whereas in the case of the existing variety it is only 30 in numbers on an average. It increased the farmers income them these obtained from paddy cultivation.

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

Sl. No.	Name/ Title of the Technology	Name/ Details of the Innovator(s)	Brief details of the Innovative Technology
01.	The Rathindra KVK acting as a Technology Demonstration Centre	Rathindra KVK	This can overcome the problems, faced by developing countries, especially the LDCs, of demonstrating technology utilization potential and promoting overall technology awareness. Science and technology exhibitions, both stationary and mobile, and school and mass media programmes are being undertaken by this KVK and these exhibitions (especially through organizing programmes on Cluster Front Line Demonstrations on Rabi Pulses and Oilseeds, International Soil Day, Soil Health Card preparation, Pre-Rabi Kisan Campaign, Krishi Kalyan Abhiyan, District Kisan Mela, Pre-Rabi Kisan Sammelan, Jai Kisan Jai Vigyan Diwas, Sankalp Se Siddhi – New India Manthan – for taking Pledge to double the farmers’ Income, MahilaKishan Diva Awareness Camps in Rural Schools, celebration of Technology Week etc.) are necessary if the cultural aspects of technology transfer and development are to be addressed.
02.	The Rathindra KVK’s Role in Information development	Rathindra KVK	The role of information in technology transfer and development is crucial, and therefore capacities are needed to ensure access to the information required for adequate technological capability. There is much information in the public domain that is useful for technology transfer and development. However, the information needed should go beyond simple inventories of costs and environmental parameters, and should include specific technical data that will facilitate technology selection, development and use. Keeping these factors in mind, the Rathindra KVK is developing Technological Modules in the forms of Extension Literatures like Booklets, Leaflets, Folders, Brochures, CDs, DVDs etc. using the information generated from its past research and extension activities as well as information generated from both the ICAR and SAU or CU Systems to meeting the information gaps prevalent among the practicing farmers, farm women, rural youths and extension functionaries of the district of Birbhum. This KVK also focuses on (a) information assessment and screening, (b) maximal use of electronic systems and (c) the development of relevant databases in Agriculture and related sectors.

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

Sl. No.	Crop / Enterprise	ITK Practiced	Purpose of ITK
01.	Broiler Farming	Aloe Vera leaves are crushed and mixed with sugar syrup at the rate 250 gm Aloe Vera leaves and 750 gm per 1000Birds.for 5 days	For treatment of Gout and Kidney dis-order in Broiler.

**Sri Arijit Hazra of Village -Karchadihi, P. O. – Batikar, C. D. Block – Illumbazar, Dist. – Birbhum with Aloe Vera Leaf to be crushed in Mixer-Grinder Machine for Treatment of Gout and Kidney Disorder of his Broiler Birds**



**Sri rijitHazaof Village -Kariachati, P. O. – Batikar, C. D. Block – Illumbazar, Dist. – Birbhum extracting the Juice of the Aloe Vera Leaf crushed for Treatment of Gout and Kidney Disorder of his Broiler Birds**



**Sri Aurobindo Ghosh of Village –Kariachati, P. O. – Batikar, C. D. Block – Illumbazar, Dist. – Birbhum making sugar syrup and mixing the juice of Aloe Vera leaves with it for Treatment of Gout and Kidney Disorder of the Broiler Birds**



**Sri Arijit Hazra of Village –Kariachati, P. O. – Batikar, C. D. Block – Illumbazar, Dist. – Birbhum mixing the juice of Aloe Vera leaves with siugar syrup for Treatment of Gout and Kidney Disorder of the Broiler Birds**



**b. Give details of organic farming practiced by the farmer**

Sl. No.	Crop / Enterprise	Area (ha)/ No. covered	Production	No. of farmers involved	Market available (Y/N)
01.	Production of Seasonal Vegetables without using chemical inputs	16 ha	2400 q of Seasonal Vegetables / Week in a harvesting season (Minimum 2 harvesting Seasons in a Year)	600	Yes

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

Sl. No.	Brief details of the tool/ methodology followed	Purpose for which the tool was followed
01.	Rathindra KVK family coordinates the work of all scientists for smooth functioning of the KVK as well as for the benefit of the rural people of that area. Programme Co-ordinator is liaisoning with other line departments for coordination and effective implementation of different programs of the KVK in the adopted village. Rathindra KVK tried to adopt a Cluster of 4 to 6 economically, culturally, and technologically backward villages situated within 10-20 Kms radius of the KVK. These villages are not too small or too large. Before adoption, a detailed survey of the village was conducted to study the socio-economic and cultural status of that village. Now-a-days Participatory Rural Appraisal (PRA) tool was used to conduct the survey in which the village people are actively participated in the process. The village map was drawn by the help of different colour by the villagers themselves and different prominent structures of the village such as school, temple, river, club etc. were depicted in that map. These structures will help the scientists to conduct the survey easily and smoothly. Basing upon the survey the field crop maps, animal resource map and other ancillary maps were prepared for future use. After the survey work detailed plan of work was chalked out and depending upon the requirement different activities was undertaken in different areas by the Rathindra KVK scientists.	Training Need Assessment of Rathindra KVK Clientele viz. Practicing Farmers and Farm Women
02.	Rathindra KVK assesses the needs of the Rural Youth mainly through Participatory Tools like Resource map, transact map, Employment Opportunity Analysis, Job Availability Matrix, Job Choice Matrix, Un-Employment Problem Cause Diagram etc. and also administering them a Structured Question Schedule regarding the needs of the Rural Youth prepared by the Rathindra KVK in consultation with other experts of ICAR and Visva-Bharati.	TrainingNeed Assessment of Rathindra KVK Clientele viz. Rural Youths
03.	Rathindra KVK assesses the need of the Extension Functionaries mainly through questioning the respective clientele about their needs and their job needs and the needs of their sponsoring agencies. Here mainly PRA tools like problem – cause diagram, Resource map, Organizational Diagram, Job Analysis, Job Satisfaction Matrix etc. are used.	TrainingNeed Assessment of Rathindra KVK Clientele viz. Extension Functionaries

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

Sl. No	Name of the Equipment	Qty.
1.	Mixer grinder Kenstar	2 nos.
2.	Refrigerator Whirlpool	2 nos.
3.	Stabilizer Fizi	2 nos.
4.	Shaker	1 no
5.	Oven	1 no
6.	Kelplus Elect Digestion System Model KES 08L	1 no
7.	Kelplus Elect Distillation System Elite Ex	1 no
8.	Systronics Micro controller based visible Spectrophotometer	2 nos.
9.	Systronics P-H system	2 nos.
10.	Systronics Digital Conductivity Meter	2 nos.
11.	Systronics Flame Photometer Type 128	2 nos.
12.	Hotplate with energy regulator	1 no.
13.	Glass Distillation apparatus flux	3 nos.
14.	Physical Balance Cap.250g with weight box	4 nos.
15.	Shimadzu Electronic Balance	2 nos.
16.	Kjeldal digestion unit	2 nos.
17.	Kjeldal distillation unit	2 nos.
18.	MridhaParikshak (Digital Mini-Lab Solar Powered)	2 nos.
<b>Total</b>		<b>34 nos.</b>

**3.11.b. Details of samples analyzed so far :**

Number of soil samples analyzed			No. of Farmers	No. of Villages	Amount realized (in Rs.)
Through mini soil testing kit/labs	Through soil testing laboratory	Total			
90	13	103	103	46	15840.00

**3.11.c. Details on World Soil Day**

Sl. No.	Activity	No. of Participants	No. of VIPs	Name (s) of VIP(s)	Number of Soil Health Cards distributed	No. of farmers benefitted
01.	Participatory Discussion on Soil Health Management Practices	65	02	<p>1.Prof. Arun Kumar Barik a,Principal, PalliSiksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum – 731236, West Bengal</p> <p>2.Prof. Goutam Ghosh,,Professor(Soil Science &amp;Agril. Chemistry),Palli Siksha Bhavana (Institute of Agriculture) Visva-Bharati University Sriniketan -731236, Birbhum (Distt.),</p>	51	65

### 3.12. Activities of rainwater harvesting structure and micro irrigation system: - Activities of Demonstration Unit on Micro Irrigation System

No. of training programme	No. of demonstrations	No. of plant material produced	Visit by the farmers	Visit by the officials
03	2	15000	1540	15

### 3.13. Technology week celebration

Type of activities	No. of activities	Number of participants	Related crop/livestock technology

### 3.14. RAWE/ FETprogramme - is KVK involved? (Y/N) Yes

### 3.14. RAWE / FET programme - is KVK involved? (Y/N) Yes

In the RAWE Programme of the 7th. Semester of B. Sc. (Ag.) Honours Course, 28 students from 3 different universities namely The Neotia University, Seacom Skills University, Dr. Rajendra Prasad Central Agricultural University and Siksha 'O' Anusandhan (Deemed to be University) have undergone the RAWE Programme under the guidance of the Rathindra KVK, Palli-Siksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum, from September, 2021 to December, 2021 as per directives related to COVID Protocol

### 3.15. List of VIP visitors (Minister/ MP/MLA/DM/VC/ZilaSabhadipati/Other Head of Organization/Foreigners)

Date	Name of the Person	Purpose of Visit
13.03.2021	DebjitBose,ICAR-HQ	To observe KVK activities
27.03.2021	SnehasishDatta,IMC member ,ICAR-ATARI,Zone V	To discuss the KVK programmes.
16.11.2021	Dr.S.K.Chaudhuri,DDG(NRM),ICAR	To visit the RKVK at the time of Annual Convention of ISSS and farmers meet.
21.11.2021	Prof. Bidyut Chakraborty, Vice chancellor, Visva-Bharati,Birbhum,West Bengal	To monitor KVK activities
24.11.2021	Prof. BaluChopade ,Vice Chancellor, Dr. Balasaheb Ambedkar Marthwada University ,Aurangabad	Departmental visit for assessment of University

## 4. IMPACT

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

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.)	
			Before (Rs./Unit)	After (Rs./Unit)
Seed Production of Paddy	70	85.72	Rs. 67,080.00 per ha	Rs. 1,03,200.00 per ha
Seed Production of Pulses	230	52.18	Rs.31,600.00 per ha	Rs.66,500.00 per ha
Varietal Replacement of Mustard with Improved Mustard Variety RW – 351	170	88.24	Rs. 23,520.00 per ha	Rs. 73,800.00 per ha
Improved Method of Elephant's Foot Yam Cultivation	207	89.00	Rs. 2,36,250.00 per ha	Rs. 14,17,500.00 per ha
Low Cost Fish Feed Preparation	51	49.02	Rs. 20,000.00 per Year	Rs. 96,000.00 per Year
Kantha Stitch Work	71	56.34	Nil	Rs. 12,000.00 to Rs. 36,000.00 per Year
Preparation and Use of Vermin-Composting	290	62.07	Nil	Rs. 19,000.00 per 2.5 ft X 2.0 ft X 3.0 ft area /year

#### 4.2. Cases of large-scale adoption

(Please furnish detailed information for each case)

Horizontal Spread of Technologies	
Technology	Horizontal spread
<b>Seed Production of Paddy</b>	60 farmers Trained in the Rathindra KVK on various aspects of Paddy Seed Production adopted the Technology and from them the Technology was spreaded with culminating effect of adoption among another 120 numbers of farmers of whom 32 numbers of farmers resided within 0.1 – 5 kms. Radius of the Rathindra KVK; 40 numbers of farmers resided within 5.1 – 10 kms. Radius of the Rathindra KVK; 24 farmers resided within 10.1 – 15 kms. Radius of the Rathindra KVK and the rest 24 numbers of the farmers resided within 15.1 kms and above radius of the Rathindra KVK.
<b>Seed Production of Pulses</b>	120 farmers Trained in the Rathindra KVK on various aspects of Pulse Seed Production adopted the Technology and from them the Technology was spreaded with culminating effect of adoption among another 70 numbers of farmers of whom 19 numbers of farmers resided within 0.1 – 5 kms. Radius of the Rathindra KVK; 23 numbers of farmers resided within 5.1 – 10 kms. Radius of the Rathindra KVK; 14 farmers resided within 10.1 – 15 kms. Radius of the Rathindra KVK and the rest 14 numbers of the farmers resided within 15.1 kms and above radius of the Rathindra KVK.
<b>Varietal Replacement of Mustard with Improved Mustard Variety RW – 351</b>	150 farmers Trained in the Rathindra KVK on various aspects of Cultivation of Improved Mustard Variety RW – 351 adopted the Technology and from them the Technology was spreaded with culminating effect of adoption among another 100 numbers of farmers of whom 27 numbers of farmers resided within 0.1 – 5 kms. Radius of the Rathindra KVK; 34 numbers of farmers resided within 5.1 – 10 kms. Radius of the Rathindra KVK; 20 farmers resided within 10.1 – 15 kms. Radius of the Rathindra KVK and the rest 19 numbers of the farmers resided within 15.1 kms and above radius of the Rathindra KVK.
<b>Improved Method of Elephant's Foot Yam Cultivation</b>	185 farmers Trained in the Rathindra KVK as well as 110 of them were involved in the FLD Programmes of Rathindra KVK on various aspects of improved method of Elephant's Foot Yam Cultivation adopted the Technology and from them the Technology was spreaded with culminating effect of adoption among another 118 numbers of farmers of whom 31 numbers of farmers resided within 0.1 – 5 kms. Radius of the Rathindra KVK; 39 numbers of farmers resided within 5.1 – 10 kms. Radius of the Rathindra KVK; 24 farmers resided within 10.1 – 15 kms. Radius of the Rathindra KVK and 20 numbers of the farmers resided within 15.1 kms and above radius of the Rathindra KVK. <b>It was necessary to mention here that 4 numbers of farmers of the neighbouring Dumka District of the Jharkhand State also adopted the above mention Technology through the horizontal spread of the Technology.</b>
<b>Low Cost Fish Feed Preparation</b>	25 farmers Trained as well as getting involved in the FLD Programmes of the Rathindra KVK on various aspects of low cost fish feed preparation adopted the Technology and from them the Technology was spreaded with culminating effect of adoption among another 12 numbers of farmers of whom 03 numbers of farmers resided within 0.1 – 5 kms. Radius of the Rathindra KVK; 04 numbers of farmers resided within 5.1 – 10 kms. Radius of the Rathindra KVK; 02 farmers resided within 10.1 – 15 kms. Radius of the Rathindra KVK and the rest 03 numbers of the farmers resided within 15.1 kms and above radius of the Rathindra KVK.
<b>Replacement of Deshi Poultry Breed by Rhode Island Red Breed (RIR)</b>	309 farmers Trained as well as getting involved in the FLD Programmes of the Rathindra KVK on various aspects of replacement of local Deshi Poultry Breed by introduction of High Yielding Poultry Breed viz. Rhode Island Red (RIR) adopted the Technology and from them the Technology was spreaded with culminating effect of adoption among another 512 numbers of farmers of whom 302 numbers of farmers resided within 0.1 – 5 kms. Radius of the Rathindra KVK; 109 numbers of farmers resided within 5.1 – 10 kms. Radius of the Rathindra KVK; 23 farmers resided within 10.1 – 15 kms. Radius of the Rathindra KVK and the rest 78 numbers of the farmers resided within 15.1 kms and above radius of the Rathindra KVK.
<b>Kantha Stitch Work</b>	40 farm women and female rural youths Trained in the Rathindra KVK on various aspects of Kantha Stitch Work adopted the Technology and from them the Technology was spreaded with culminating effect of adoption among another 25 numbers of farm women and female rural youths of whom 07 numbers resided within 0.1 – 5 kms. Radius of the Rathindra KVK; 08 numbers resided within 5.1 – 10 kms. Radius of the Rathindra KVK; 05 numbers of farm women and female rural youths resided within 10.1 – 15 kms. Radius of the Rathindra KVK and the rest 05 numbers of the farm women and female rural youths resided within 15.1 kms and above radius of the Rathindra KVK.
<b>Preparation</b>	180 farmers Trained in the Rathindra KVK on various aspects of preparation and use of Vermin-

<b>and Use of Vermin-Composting</b>	Composting adopted the Technology and from them the Technology was spreaded with culminating effect of adoption among another 110 numbers of farmers of whom 29 numbers of farmers resided within 0.1 – 5 kms. Radius of the Rathindra KVK; 37 numbers of farmers resided within 5.1 – 10 kms. Radius of the Rathindra KVK; 22 farmers resided within 10.1 – 15 kms. Radius of the Rathindra KVK and the rest 22 numbers of the farmers resided within 15.1 kms and above radius of the Rathindra KVK.
<b>Fodder Cultivation</b>	350 farmers involved in FLD programme entitled quality fodder cultivation both leguminous and non leguminous of Rathindra Krishi Vigyan Kendra. From them the Technology was spreaded with culminating effect of adoption among another 312 numbers of farmers of whom 302 numbers of farmers resided within 0.1 – 5 kms. Radius of the Rathindra KVK; 109 numbers of farmers resided within 5.1 – 10 kms. Radius of the Rathindra KVK; 23 farmers resided within 10.1 – 15 kms. Radius of the Rathindra KVK and the rest 78 numbers of the farmers resided within 15.1 kms and above radius of the Rathindra KVK.

#### 4.2. Details of impact analysis of KVK activities carried out during the reporting period

Sl. No.	Brief details of technology	Impact of the technology in subjective terms			Impact of the technology in objective terms	
		Productivity / Yield		Numbers of Farmers adopted the Technology	Change in Income due to Activities of KVK	
		Before Adoption of new technology	After Adoption of new technology		Before Adoption of new technology	After Adoption of new technology
01.	Improved Poultry Breed Rhode Island Red (RIR)	No. of 155.30 Eggs / Bird / Year Average Body Weight of Male – 2.08 kg. Average Body Weight of Female – 1.53 kg.	No. of 163.20 Eggs / Bird / Year Average Body Weight of Male – 2.43 kg. Average Body Weight of Female – 1.68 kg.	65	Rs. 6,853.00 per Household from 20 Birds Capacity reared in Back Yard condition	Rs. 11,750.00 per Household from 20 Birds Capacity reared in Back Yard condition
02.	Area Specific Mineral Mixture for Lactating Dairy Cow	Milk Yield – 18.46 kg. / wk. / Cow	Milk Yield – 23.88 kg. / wk. / Cow	76	Rs. 10,218.00 / Year / Cow	Rs. 14,737.00 / Year / Cow

#### 4.4. Details of innovations recorded by the KVK

<b>Thematic area</b>	Poultry Production
<b>Name of the Innovation</b>	Handmade Low Cost Manual Incubator
<b>Details of Innovator</b>	Sri ErshadMolla, Village + P. O. – Sattore, Pin. –731236, Dist. – Birbhum.
<b>Back ground of innovation</b>	Sri ErshadMolla has got the idea of a Low Cost Manual Incubator for Poultry egg hatching through technical inputs and knowledge and skill acquired from the Scientist Rathindra KVK in the year 2017-18 and he proceeded to build up that incubator in the same year at a total expenditure of Rs. 35,000.00 (Rupees Thirty Five thousands) and started egg hatching in 2018-19.
<b>Technology details</b>	Hand-made incubator (operated by both Main Line Electric and Inverter current) of 700 egg hatching capacity with around 8 cycles in a year.
<b>Practical utility of innovation</b>	(a) According to the needs of the villagers, he operates the Incubator and achieves up to 8 cycles per years. (b) The farmers get the opportunity to procure Chicks or Ducklings of RIR, Deshi Duck and Khaki Campbells as per their own needs at the door step at reasonable price. (c) Sri ErshadMolla earns around Rs. 10,000.00 (Rupees Ten Thousands) per month with 700 egg hatching capacity of the incubator. (d) Normally Sri Molla buys egg for hatching at the rate of Rs. 12 per egg from the State Govt. Poultry Farm of West Bengal and also from the Rathindra KVK trained farmers of Birbhum District and sells at the rate Rs. 30 per Chick or Duckling

**Sri ErshadMolla, Village + P. O. – Sattore, C. D. Block – Bolpur – Sriniketan, Pin. – 731236, Dist. – Birbhum along with his Innovative Handmade Low Cost Manual Incubator**



**4.5. Details of entrepreneurship development**

<b>Entrepreneurship development</b>	
<b>Name of the enterprise</b>	<b>Dairy of Sri Debasish Mandal</b>
<b>Name &amp; complete address of the entrepreneur</b>	Village: - Surul, P. O. – Sriniketan, Pin. – 731236, Dist. – Birbhum, West Bengal. Mobile Phone No. – 7001358872
<b>Role of KVK with quantitative data support:</b>	<p>Crossbreeding and Breed up-gradation through Artificial Insemination (A. I.). is the most suitable and economical technique for generating higher genetic and production potential. Crossbreeding in indigenous low producing cattle with superior germplasm influences the genetic potential of the crossbred so born. The age at puberty have been attended at 2 to 2.5 years of age. All the female calves fed properly from the beginning of the birth so that they attain desired body weight and maturity at an early age. The traditional feeding practice is modified by providing mineral mixture, concentrate and green forages and formulation of low cost feed. After parturition animals usually always come to heat up to 2- 2 1/2 months.</p> <p>Sri Mandal tried hard so that no heat might be missed and insemination is being given by trained person and timely to achieve optimum pregnancy result. Post insemination confirmation of pregnancy at 60 days. Sri Debasish Mandal got educated and trained in modern profitable animal husbandry practices, especially feeding, management and care of growing calves and heifers by Rathindra Krishi Vigyan Kendra.</p> <p>Poor quality of germplasm, poor nutrition and management and to some extent lack of proper animal husbandry practices and traditional misconception play an important role in less reproductive efficiency of cattle in rural area. Generally the traditional dairy farmers are not much aware about the time when their animal should reach puberty and the young growing animals don't get proper attention and are raised on dry fodder and grazing. Thus the age at puberty is attended as late as 4, 5 or 6 years. In this way livestock owner misses at least one crop or two-calf crop in their lifetime. Keeping this scenario in mind, the Technological Back-stopping from the Rathindra Krishi Vigyan Kendra regarding the adoption of A. I., formulation of low cost feed, supplementation with mineral mixture and cultivation of fodder crops helped Sri Mandal a lot to make profit from his small scale dairy Unit.</p> <p>The Rathindra Krishi Vigyan Kendra has provided Sri Debasish Mandal detailed Knowledge and Skill Development Training on</p> <ul style="list-style-type: none"> <li>● Artificial Insemination (A. I.) in cattle</li> <li>● Conscientious heat detection</li> <li>● Proper timing of insemination</li> <li>● Low cost feed formulation</li> <li>● Feeding, management and care of growing calves and heifers</li> </ul>

	<ul style="list-style-type: none"> <li>• Cultivation and feeding of green fodder</li> </ul> Feeding of area specific mineral mixture.		
<b>Timeline of the entrepreneurship development</b>	<p>Before the Rathindra KVK Intervention, Sri Debasish Mandal who owned 1 hectare of land was engaged in cultivation of Kharif Paddy and Potato in Rabi Season which gave him a net monthly income of Rs. 2,500.00 (Rupees Two Thousands Five Hundreds) only.</p> <p>Before the Rathindra KVK intervention, he has started a Small scale Dairy Unit with Two Cross Breed Cows which give him an average Milk Production of 6 – 7 litres per cow per day. Sri Mandal's Traditional Dairy Farming was based on Feeds like Mustard Cake, Broken Rice, Hay and Straws without any presence of Green Fodder, Mineral Mixture, Concentrate Feeds in the diets of the Cows. He earned a Net Income of Rs. 4,600.00 (Rupees Four Thousands Six Hundreds) only per Year from his Traditional Dairy Unit with a B: C Ratio of 1.27.</p> <p><b>The Present Situation: - A. Agricultural Activities:</b> - Cultivation of Paddy, Potato, Cabbage, Cauliflower and Fodder Crops like Maize, Cowpea, Sorghum and Rice Bean.</p> <p><b>B.Non-Agricultural Activities:</b> - Commercial Dairy Farming with 04 Cross Breed Cows and 02Breed Up-graded Deshi Cows and 06 Calves.</p>		
<b>Technical Components of the Enterprise</b>	<ul style="list-style-type: none"> <li>• Artificial Insemination (A. I.) in cattle</li> <li>• Conscientious heat detection</li> <li>• Detection of oestrous by fern pattern of cervical mucous</li> <li>• Proper timing of insemination</li> <li>• Low cost feed formulation</li> <li>• Feeding, management and care of growing calves and heifers</li> <li>• Cultivation and feeding of green fodder</li> </ul> Feeding of area specific mineral mixture.		
	<p>1.Crossbreeding and Breed up-gradation through A. I. is the most suitable and economical technique for generating higher genetic and production potential. Crossbreeding in indigenous low producing cattle with superior germplasm influences the genetic potential of the crossbred so born giving an Average Milk Yield of 8 Litres / Cross bred Cow / Day and Breed Up-graded Cows yields about 6 Litres / Cow / Day.</p> <p>2. The age at puberty have been attended at 2 to 2.5 years of age. All the female calves fed properly from the beginning of the birth so that they attain desired body weight and maturity at an early age.</p> <p>3. The traditional feeding practice is modified by providing mineral mixture, concentrate and green forages and formulation of low cost feed. After parturition animals usually always come to heat up to 2- 2 1/2 months.</p>		
<b>Status of entrepreneur before and after the enterprise</b>	<b>Parameters</b>	<b>Before</b>	<b>After</b>
	Yield of Product		8 lits. / Cross Bred Cow / Day 6 lits. / Up-graded Cow / Day
	Fixed Cost		Rs. 3,90,000.00 / Year
	Recurring Cost		Rs. 86,000.00 / Year
	Gross Income		Rs. 7,76,000.00 / Year
	Net Profit	Rs. 30,000.00 per Year from Agricultural Operations	Rs. 3,00,00.00 / Year
	B:C Ratio		1.63

	Marketing		Door to door sale
<b>Present working condition of enterprise in terms of raw materials availability, labour availability, consumer preference, marketing the product etc. (Economic viability of the enterprise):</b>	<p><b>Raw Material Availability:</b> - Feed Ingredients and other feed materials are procured from his own agricultural land as well Green Fodders are produced in the adjacent farm land of the dairy.</p> <p><b>Labour Availability:</b> - Family Labour is used and also local Labours are available and used.</p> <p><b>Consumer Preference:</b> - Farm milk is preferred by the consumers who are loyal customers to Sri Mandal.</p> <p><b>Marketing the product:</b> - Mainly door to door sale method is used and sold to both domestic houses and small businesses like tea stall, sweet shops etc.</p>		
<b>Horizontal spread of enterprise</b>	20 (Twenty) farmers in the Locality adopted the Technology and related Activities having getting an information from Sri Mandal. Sri Debasish Mandal's Cows have been awarded as "Best Milch Cattle" at the "PraniSampada (Animal Resource) Week" organized by the Dept. of Animal Resource Development, Govt. of West Bengal.		

**Sri Debasish Mandal of Village: - Surul, P. O. – Sriniketan, Pin. – 731236, Dist. – Birbhum, West Bengal along with the Rathindra KVK Scientist at his Small Scale Dairy Farm**



#### 4.6. Any other initiative taken by the KVK

### 5. LINKAGES

#### 5.1. Functional linkage with different organizations

Name of Organization	Nature of linkage
Palli SanghatanaVibagh, 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.

	<ul style="list-style-type: none"> <li>- Facilitate On Farm Testing Modules.</li> <li>- Provide different location specific germ-plasm.</li> </ul>
West Bengal University of Animal and Fishery Sciences, Belgachia, Kolkata, West Bengal	<p>This linkage is mainly on the following aspects:-</p> <ul style="list-style-type: none"> <li>- Conducting regular basis Human Resource Development Training Programme in different discipline.</li> <li>- Facilitate for Annual Action Plan Development.</li> <li>- Facilitate On Farm Testing Modules.</li> <li>- Provide different location specific mineral mixture, vaccines, medicines, seeds of Improved Varieties of Green Fodder Crops.</li> </ul>
ICAR-Indian Agricultural Research Institute (IARI), Regional Station, Samastipur, Bihar	<p>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.</p> <ul style="list-style-type: none"> <li>- Provide Weather related Information for Crop based Action Plan Development.</li> </ul>
ICAR-National Dairy Research Institute (NDRI), Eastern Regional Station (ERS), Kalyani, West Bengal	<p>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.</p>
Regional Fodder Station, Kalyani, Ministry of Agriculture and Farmers' Welfare, Govt. of India, Nadia, West Bengal	<p>This Linkage is basically for organizing the Front Line Demonstration (FLD) Programmes on various Improved Varieties of Green Fodder.</p>
ICAR-Indian Grassland and Fodder research Institute (IGFRI), Jhansi, Uttar Pradesh	<p>This Linkage is basically for organizing the Front Line Demonstration (FLD) Programmes on various Improved Varieties of Green Fodder.</p>
Agriculture Skill Council of India (ASCI), National Skill Development Corporation (NSDC), Ministry of Skill Development and Entrepreneurship, Govt. of India, New Delhi	<p>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.</p>
National Fisheries Development Board (NFDB), Ministry of Agriculture and Farmers' Welfare, Govt. of India, Hyderabad, Telengana	<p>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.</p>
National Institute of Agricultural Extension Management (MANAGE), Ministry of Agriculture and Farmers' Welfare, Govt. of India, Hyderabad, Telengana	<p>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.</p>
Line Departments like Agriculture, Horticulture and Food Processing Industries, Animal Resource Development, Fisheries etc. of the Govt. of West Bengal, Birbhum, West Bengal	<p>This linkage is basically on Technological back-stopping of the Extension and developmental activities of various developmental departments of the Govt. of West Bengal.</p>
National Research Centre on Weed Control, Jabbalpur, Madhya Pradesh	<p>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".</p>
Agricultural Technology	<p>The linkage is now focusing on Orientation Farmers' training and Programme Training for Head</p>

Management Agency (ATMA), Birbhum, Suri, Birbhum, West Bengal	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 (SAMETI), Narendrapur, 24 Parganas (South), West Bengal.	This linkage is mainly on the following aspects - Conducting regular basis Human Resource Development Training Programme in different discipline for Scientists of the Rathindra KVK. - All the linkage activities profoundly help the Rathindra KVK clientele in updating their knowledge, skill and attitude.
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.
ManabJamin, 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.
BolpurKrishijaSamabay 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.



**6.2. Performance of Instructional Farm (Crops)**

Name of the crop	Date of sowing	Date of harvest	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Type of Produce	Qty.(q)	Cost of inputs	Gross income	
Elephant foot yam	15.04.2021	29.10.2021	0.005	Bidhan Kusum	Corm(see d)	1.8	3200	10000	Kept in godown
Black gram	20.04.2021	25.06.2021	0.13	PU-31	TL Seeds	2.0	7000	20000	Kept in godown
Turmeric	15.07.2021	25.06.2021	0.13	Saguna	Seeds				Standing crop
Groundnut	23.04.2021	15.07.2021	0.006	Dharani	Seeds	1.0	4000	12000	Kept in godown
Ekanghi	10.07.2021	15.07.2021	0.09	K.galana	Seeds				Standing crop
Green gram	24.04.2021	21.05.2021	0.06	Samrat	TL Seeds	1.0	3500	10000	Kept in godown
Rice	26.07.2021	01.11.2021	0.15	IET-4786	TL Seeds	6.0	12000	24000	Kept in godown
Rice	27.07.2021	10.12.2021	0.025	Sabita	TL Seeds	1.5	2000	4000	Kept in godown
Rice	29.07.2021	11.12.2021	0.5	Ranidhan	TL Seeds	20.0	45000	80000	Kept in godown
Lentil	02.12.2021	-	0.065	L-4717	Foundation Seed				Standing crop
Green gram	24.04.2021	21.05.2021	0.06	Samrat	TL Seeds	1.0	3500	10000	Kept in godown
Rice	26.07.2021	01.11.2021	0.15	IET-4786	TL Seeds	6.0	12000	24000	Kept in godown
Rice	27.07.2021	10.12.2021	0.025	Sabita	TL Seeds	1.5	2000	4000	Kept in godown
Rice	29.07.2021	11.12.2021	0.5	Ranidhan	TL Seeds	20.0	45000	80000	Kept in godown
Lentil	02.12.2021	-	0.065	L-4717	Foundation Seed				Standing crop
<b>Total</b>			<b>1.961</b>			<b>71.8</b>	<b>139200</b>	<b>437200</b>	

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

Sl. No.	Name of the Product	Qty (Kg)	Amount (Rs.)		Remarks
			Cost of inputs	Gross income	
1.	Azolla	2000	2000	100000	
2.	Vermicompost	3000	6000	30000	
3.	Earthworm	100000 nos.	10000	50000	

**6.4. Performance of instructional farm (livestock and fisheries production)**

Sl No.	Name of the animal/ bird/ aquatics	Details of production			Amount (₹)		Remarks
		Breed	Type of produce	Qty. (q)	Cost of inputs	Gross income	
1	Hen (Advanced grower)	Aseel	Poultry	30	2000	5100	
2	Coloured Broiler (Adult)	Coloured Broiler	Poultry	30	4200	8213	
3	Egg	Aseel	Poultry	333		1665	
4	Cock	Aseel	Poultry	5	2100	3390	
5	Hen	Aseel	Poultry	3	900	1688	
6	Hen	Aseel	Poultry	3	900	1650	
3	Composite fish	Rohu, Katla, Mrigal, Bata	Table Fish	480 kg	2500	4800	Approx. 500 kg fish is in the pond
4.	Fish	Vietnam Koi	Table Fish	20 kg	5000	6000	Approx. 30 kg fish is in the Biofloc

**6.5. Utilization of hostel facilities**

Accommodation available (No. of beds) 27

Months	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
January, 2020	-	-	N.A.
February, 2020	-	-	N.A.
March, 2020	-	-	N. A.
April, 2020	-	-	N. A.
May, 2020	-	-	N. A.
June, 2020	-	-	N. A.
July, 2020	-	-	N.A.
August, 2020	-	-	N. A.
September, 2020	-	-	N.A.
October, 2020	-	-	N.A.
November, 2020	-	-	N.A.
December, 2020	-	-	N.A.
<b>Total:</b>	-	-	<b>N. A.</b>

**6.6. Utilization of staff quarters**

Whether staff quarters has been completed:

No. of staffquarters:

Date of completion:

Occupancy details:

Months	Q I	Q II	Q III	Q IV	Q V	Q VI

**7. FINANCIAL PERFORMANCE****7.1. Details of KVK Bank accounts**

Bank account	Name of the bank	Location	Account Number
Visva-Bharati University A/c. Krishi Vigyan Kendra A/c. No. 10598447180	State Bank of India	Santiniketan, P. O. – Santiniketan, Dist. – Birbhum, Pin. – 731235, West Bengal.	10598447180

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

Item	Released by ICAR		Expenditure		Unspent balance as on 31 <sup>st</sup> December,2021
	Rabi	Kharif	Rabi	Kharif	
Seasame		0.5		0.49	0.01
Mstard	2.40		0.06		2.34

**7.3. Utilization of funds under CFLD on Pulses (Rs. In Lakhs)Not -audited**

Item	Released by ICAR		Expenditure		Unspent balance as on31 <sup>st</sup> December,2021,
	Rabi	Kharif	Rabi	Kharif	
Black Gram		1.80		1.52	0.28

**7.4. Utilization of KVK funds during the year 2021-22(Not audited)**

Sl. No.	Particulars	Sanctioned	Released	Expenditure
<b>A. Recurring Contingencies</b>				
1	Pay & Allowances	166.00	123.50	95.53
2	Traveling allowances	1.50		
3	Contingencies	23.00	20.10	8.60
3	HRA	0.30		
A	Stationary			
B	POL			
C	Meals			
D	Training material			
E	Front Line Programne			
F	On Farm Trial			
G				
H				
O	SCSP			
J	Swachhta Expenditure			
TOTAL (A)		190.80	143.60	104.13
<b>B. Non-Recurring Contingencies</b>				
1	Equipment Furniture	2.30		
2	Work Irrigation System	4.00		
3	Vehicle	NIL		
4	Library	0.40	0.10	
TOTAL (B)		6.40	0.10	
<b>C. REVOLVING FUND</b>				
<b>GRAND TOTAL (A+B+C)</b>		<b>197.20</b>	<b>143.70</b>	<b>104.13</b>

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

Year	Opening balance as on 1 <sup>st</sup> April	Income during the year	Expenditure during the year	Net balance in hand as on 1 <sup>st</sup> April of each year (Kind + cash)
2018-19	3.22	2.43	1.67	3.98
2019-20	3.98	2.86	1.40	5.44
2020-21	5.44	2.57	3.05	4.96
2021-22	4.96	6.25	2.79	8.42+Kind approx. of 2.34

**7.6. (i) Number of SHGs formed by KVKs - 01**

(ii) Association of KVKs with SHGs formed by other organizations indicating the area of SHG activities – 04 Numbers of SHGs involved in (a) Certified Seed Production of Paddy, Pulses and Oilseeds; (b) Production of Vermi-Compost, (c) Production of Mushroom and (d) Goatery.

(iii) **Details of marketing channels created for the SHGs** – Rathindra KVK is acting as Linkage between the members of SHGs and “SUFAL BANGLA”, an initiative by the Dept. of Agricultural Marketing for marketing the products of SHGs through Mobile Vans and Stationery Showrooms and from this Year the Rathindra KVK is an active partner of the RKVY Sponsored Project on “Up-gradation of Market-Linkage Network for Promotion of Bengal Aromatic Rice”, being executed by the Department of Agronomy, Bidhan Chandra Krishi Viswavidyalaya, P. O. – Krishi Viswavidyalaya, Dist. - Nadia, Pin. – 741252, West Bengal, India for promoting the production and marketing of the traditional aromatic Paddy Variety of Birbhum District viz. Radhunipagol by the members of the SHGs.

**7.7. Joint activity carried out with line departments and ATMA**

Name of Activity	Number of Activity	Season	With Line Department	With ATMA	With Both
Short Term Research	1	Summer, 2021	-	With ATMA	-
Front Line Demonstration on Ekangi		Pre kharif, 2021	-	-	With both
Farmers Training within district	1	Kharif, 2021	-	With ATMA	-
Farm School	2	Kharif 2021	-	With ATMA	-
Capacity building training	1	Kharif 2021	-	-	With both
Conducting DAESI Course	2	Throughout the year	-	-	With both
Advisory services for DAMU	96	Throughout the year	With line department	-	-
District Level Technical Committee	2	Kharif and rabi, 2021	With line department		
Exposure Visits	4	Summer and Rabi, 2021	-	-	With both

**8. Other information****8.1. Prevalent diseases in Crops**

Name of the disease	Crop	Date of outbreak	Area affected (in ha)	% Commodity loss	Preventive measures taken for area (in ha)

**8.2. Prevalent diseases in Livestock/Fishery**

Name of the disease	Species affected	Date of outbreak	Number of death/ Morbidity rate (%)	Number of animals vaccinated	Preventive measures taken in pond (in ha)

**9.1. Nehru YuvaKendra(NYK) Training**

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

**9.2. PPV & FR Sensitization training Programme**

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

**9.3. mKisanPortal (National Farmers' Portal/ SMSPortal)**

Type of message	No. of messages	No. of farmers covered
Crop	20	20,300
Livestock	24	26,020
Fishery	02	13,000
Weather	348	8,976
Marketing	336	26,693
Awareness	220	19,900
Training information	24	18,462
Other	-	-
<b>Total</b>	<b>974</b>	<b>1,33,351</b>

**9.4. KVK Portal and Mobile App**

Sl. No.	Particulars	Description
1.	No. of visitors visited the portal	<b>15,848</b>
2.	No. of farmers registered in the portal	-
3.	Mobile Apps developed by KVK	-
4.	Name of the App	-
5.	Language of the App	-
6.	Meant for crop/ livestock/ fishery/ others	-
7.	No. of times downloaded	-

## 9.5. a. Observation of Swachh Bharat Programme

Date / Duration of Observation	Activities undertaken
16.12.2021	All the staff of the Rathindra KVK has taken a whole hearted effort to clean the Office Building Complex of the KVK through cleaning the dusts, cob webs, weeding out the weeds etc. through manual work. Special Awareness Generation Module on COVID appropriate behaviours and measures to control the same was operationalized.
17.12.2021	All the staff of the Rathindra KVK has tried their level best to clean the garbage, dust and debris accumulated on the Roof of the Administrative Building through the manual work. Special Awareness Generation Module on COVID appropriate behaviours and measures to control the same was operationalized.
18.12.2021	All the staff of the Rathindra KVK has tried their level best to clean the garbage, dust and debris accumulated in and around the Trainees' Hostel of the Rathindra KVK through the manual work. Special Awareness Generation Module on COVID appropriate behaviours and measures to control the same was operationalized.
19.12.2021	The Instructional Farm of the Rathindra KVK like Orchard, Crop Cafeteria, Nursery etc. and Demonstration Units like the Fish Breeding Unit, the Poultry and Duckery Units etc. were thoroughly cleaned, the weeds were manually up-rooted and the farm wastages and the crop residues were used as input in the Vermi-Composting Unit of the Rathindra KVK. In this Operational procedure, the Threshing Floor of the Instructional Farm and the Medicinal Plants Garden of the Rathindra KVK was thoroughly cleaned and the Farm debris was utilized as input material for the Vermi-Composting Unit of the Rathindra KVK. Special Awareness Generation Module on COVID appropriate behaviours and measures to control the same was operationalized.
20.12.2021	All the staffs of the Rathindra KVK has taken initiatives to clean the remaining debris, garbage and dusts inside, outside and roof of the Administrative Building of the Rathindra Krishi Vigyan Kendra. Special Awareness Generation Module on COVID appropriate behaviours and measures to control the same was operationalized.
21.12.2021	All the staff of the Rathindra KVK has taken a whole hearted effort to clean the Office Building Complex of the KVK through cleaning the dusts, cob webs, weeding out the weeds etc. through manual work. Special Awareness Generation Module on COVID appropriate behaviours and measures to control the same was operationalized.
22.12.2021	All the staff of the Rathindra KVK has taken a whole hearted effort to clean the outside the Office Building Complex of the KVK including the main Gate. The main path and adjoining areas through cleaning the dusts, cob webs, weeding out the weeds etc. through manual work. Special Awareness Generation Module on COVID appropriate behaviours and measures to control the same was operationalized.
23.12.2021	All the staff of the Rathindra KVK has taken a whole hearted effort to clean the outside the Office Building Complex of the KVK including the ornamental Hedges and Garden and adjoining areas through cleaning the dusts, cob webs, weeding out the weeds etc. through manual work on the eve of Kisan Diwas – 2021. Celebration of Kisan Diwas (Farmer's Day) was performed by inviting farmers and experience sharing on Swachhata initiatives by farmers. Special Awareness Generation Module on COVID appropriate behaviours and measures to control the same was operationalized.
24.12.2021	Rathindra KVK has organized a Mobile Publicity Programme regarding the "SWACHHTA PAKHWARA" through utilizing the Office Jeep of the Rathindra KVK. The Jeep went to various Villages of the District of Birbhum, i.e. the mandate District of the Rathindra KVK and spreaded the message about the need and importance of the cleanliness in the day to day life as well as in all the Agricultural and related activities. This programme of the Rathindra KVK invoked a great response among the Villagers in all the places where this Mobile Jeep went. One of the villages was Domdoma, P. O. – Albandha, Community Development (CD) Block–Bolpur-Sriniketan, Dist. – Birbhum. At this village, the villagers along with school going students were seen attentively listening to the Campaign being launched by the Scientists of the Rathindra KVK. Special Awareness Generation Module on COVID appropriate behaviours and measures to control the same was operationalized.
25.12.2021	The Rathindra KVK has organized an Awareness Camp for Primary level school students, where 72

	(Seventy Two) students from Assadullahpur Primary School and Dhanyasara Primary School were present at the Village - Assadullahpur, P. O. – Sattore, Police Station – Bolpur, Community Development (CD) Block – Bolpur-Sriniketan, Dist. – Birbhum. In this Awareness Camp, the students were highlighted on the general importance of the cleanliness in the day to day life as well as the importance of the call of the Father of the Nation, Mahatma Gandhi as well as the point of view expressed by the present Union Government headed by the Honorable Prime Minister, Sri Narendra Bhai Modi were discussed in details with special emphasis on nurturing the habit of cleanliness from very beginning of a life at a tender age by the scientists of the Rathindra KVK. The conceptual discussion was followed by a lively question-answer session which was succeeded by a series of concrete actions such as cleaning of the Primary School Building and its Campus, weeding out the weeds grown in and around these campuses were spontaneously taken up by the participant students present in the Awareness Camp. Special Awareness Generation Module on COVID appropriate behaviours and measures to control the same was operationalized.
26.12.2021	Rathindra KVK has organized a virtual meeting of farmers and farm women and rural youth regarding the “SWACHHTA PAKHWARA” through utilizing the Office ICT tools of the Rathindra KVK. The clientele of the meeting were from various Villages of the District of Birbhum, i.e. the mandate District of the Rathindra KVK and spreaded the message about the need and importance of the cleanliness in the day to day life as well as in all the Agricultural and related activities. This programme of the Rathindra KVK invoked a great response among the Villagers in all the places where the programme was conducted. Special Awareness Generation Module on COVID appropriate behaviours and measures to control the same was operationalized.
27.12.2021	The Rathindra KVK has organized an Awareness Camp for farmers of the Village - Bishnubati, P. O. – Sattore, Police Station – Panrui, Community Development (CD) Block – Bolpur-Sriniketan, Dist. – Birbhum. In this Awareness Camp, the practicing farmers, farm women were highlighted on the general importance of the cleanliness in the day to day life as well as the importance of the call of the Father of the Nation, Mahatma Gandhi as well as the point of view expressed by the present Union Government headed by the Honorable Prime Minister, Sri Narendra Bhai Modi were discussed in details with special emphasis on nurturing the habit of cleanliness from very beginning of a life at a tender age by the scientists of the Rathindra KVK. The conceptual discussion was followed by a lively question-answer session which was succeeded by a series of concrete actions such as cleaning of the village Primary School Building and its Campus, weeding out the weeds grown in and around these campuses were spontaneously taken up by the participant students present in the Awareness Camp. Special Awareness Generation Module on COVID appropriate behaviours and measures to control the same was operationalized.
28.12.2021	The Instructional Farm of the Rathindra KVK like Orchard, Crop Cafeteria, Nursery etc. and Demonstration Units like the Fish Breeding Unit, the Poultry and Duckery Units etc. were thoroughly cleaned, the weeds were manually up-rooted and the farm wastages and the crop residues were used as input in the Vermi-Composting Unit of the Rathindra KVK. In this Operational procedure, the Threshing Floor of the Instructional Farm and the Medicinal Plants Garden of the Rathindra KVK was thoroughly cleaned and the Farm debris was utilized as input material for the Vermi-Composting Unit of the Rathindra KVK. The Threshing Floors of the Instructional Farms of the Rathindra KVK was thoroughly cleaned on this occasion. Special Awareness Generation Module on COVID appropriate behaviours and measures to control the same was operationalized.
29.12.2021	All the Staffs of the Rathindra KVK has organized a thorough cleaning operation through manual weeding out of weeds, cleaning of debris with the help of brooms, destruction of weeds, placing the garbage in the specific garbage cans etc. in the areas adjacent with the Administrative Office Building of the Rathindra KVK as well as the Trainees Hostel of the Rathindra KVK. Special Awareness Generation Module on COVID appropriate behaviours and measures to control the same was operationalized.
30.12.2021	All the Staff of the Rathindra KVK organized a Walk inside the Sriniketan Campus of Visva-Bharati to make the people aware about the importance of “SWACHHTA PAKHWARA”.Special Awareness Generation Module on COVID appropriate behaviours and measures to control the same was operationalized.
31.12.2021	All the Staff of the Rathindra KVK took a pledge on cleanliness to make the KVK premises and outside of the KVK premises neat and clean with their all efforts. Special Awareness Generation Module on COVID appropriate behaviours and measures to control the same was operationalized.

**b. Details of Swachhta activities with expenditure**

Activities	Number	Expenditure (in Rs.)
1. Digitization of office records/ e-office	05	
2. Basic maintenance	06	
3. Sanitation and SBM	30	
4. Cleaning and beautification of surrounding areas	10	
5. Vermicomposting / Composting of biodegradable waste management & other activities on generate of wealth for waste	40	
6. Used water for agriculture/ horticulture application	01	
7. Swachhta Awareness at local level	08	
8. Swachhta Workshops	-	
9. Swachhta Pledge	01	
10. Display and Banner	-	
11. Foster healthy competition	-	
12. Involvement of print and electronic media	-	
13. Involving the farmers, farm women and village youth in the adopted villages (no of adopted village)	10	
14. No of Staff members involved in the activities	20	
15. No of VIP/VVIPs involved in the activities	-	
16. Any other specific activity (in details)	-	20,000.00
<b>Total</b>	<b>131</b>	<b>20,000.00</b>

**9.6. Observation of National Science day**

Date of Observation	Activities undertaken

**9.7. Programme with SeemaSurakshaBal/ BSF**

Title of Programme	Date	No. of participants

**9.8. Agriculture Knowledge in rural school**

Name and address of school	Date of visit to school	Areas covered	Teaching aids used

Give good quality 1-2 photograph(s)

**9.9. Details of Swachhta Hi Surakshaprogramme(16-31.12.2021) organized**

Sl. No.	Activity	No. of villages Involved	No. of Participants	No. of VIPs	Name (s) of VIP(s)

**9.10. Details of MahilaKisan Divas programme(15.10.2021) organized**

Sl. No.	Activity	No. of villages Involved	No. of Participants	No. of VIPs	Name (s) of VIP(s)

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

Sl. No.	Name of Farmer	Address of the farmer with contact no.	Innovation/ Leading in enterprise
1	Sri Srikanta Pandit	Vill. - Kamalakanpur; P.O.- Khanjanpur; Pin. – 731236, Dist. - Birbhum Mob- 9647886328	Leading in CFLD on Chick Pea cultivation in his locality in Rice - Fallow situation.
2	Sri Gadai Ghosh	Vill. –Rajatpur; P.O. - Rajatpur; Pin. – 731204, Dist. - Birbhum Mob- 8670076681	Leading in CFLD on Mustard cultivation in his village and surrounding village.
3	Sri Uday Ghosh	Vill. –Rajatpur; P.O. - Rajatpur; Pin. - 731204, Dist. - Birbhum Mob- 8670076681	Leading in CFLD implementation on new variety of Wheat in large area.
4	Sri Partha Mal	Vill. –Daranda; P.O. – Dwaronda; Pin. - 731236, Dist. - Birbhum Mob- 8926536411	Leading in Vermi-compost production sale and use in production of organic vegetables.
5	Sri Bipadtaran Ghosh	Vill. –Kartikdanga; P.O. – Raipur; Pin. - 731204, Dist. - Birbhum Mob- 8900484426	Leading in cultivation of large Ekangi (Medicinal Plant) as crop diversification and making market channel to sale it.
6	Smt. Malati Biswas	Vill. –Kalinagar Colony; P.O. –Chowhatta, Pin. – 731201, Dist. - Birbhum Mob- 9002176948	Leading to popularise Linseed cultivation in her area.
7	Smt. Lalita Tudu	Vill. – Faridpur; P.O. – Bilatisultanpur; Pin. - 731236, Dist. - Birbhum Mob- 9609646189	Leading in CFLD programme in Sesame as crop diversification in her locality.
8	Sri Lakshi Narayan Sen	Vill. –Senkapur; P.O. – Raipur; Pin. - 731204, Dist. - Birbhum Mob- 9933937720	Leading in CFLD programme on Field Pea in Rice - Fallow situation in his area.
9	Smt. Lakshmi Mardi	Vill. – Faridpur; P.O. – Bilatisultanpur; Pin. - 731236, Dist. - Birbhum Mob- 8942902797	Leading in CFLD on Summer Green Gram instead of Boro Rice in her area.
10	Sri Subhasish Ghosh	Vill. –Digha; P.O. –Digha; Pin. – 731236, Dist. - Birbhum Mob- 8640866516	Leading in using Drum Seeder for Paddy cultivation to promote conservation agriculture in his locality.
11	Sri Nisith Ghosh	Vill. –Damdama; P.O. – Laudaha; Pin. - 731204, Dist. - Birbhum Mob- 9800604849	Leading to implement CFLD on Black Gram and Sesame in Kharif season as crop diversification in his locality.
12	Sri KhudiramDebangshi	Vill. –Debanandapur; P.O. – Laudaha; Pin. - 731204 Mob- 9002688159	Leading in Lentil cultivation in Rice - Fallow under CFLD programme in his village and surrounding villages.
13	Sri Debashish Mandal	Vill. –Surul; P.O. – Sriniketan; Pin. - 731236, Dist. - Birbhum Mob- 7001358872	Leading in Dairy Farm

14	Sri Bidhan Sinha	Village: - Mirzapur, P. O. – Raipur, Pin. – 731204, Dist. – Birbhum, West Bengal. Mob- 9734134282	Innovative Dairy Farmer
15	Smt. Prava Biswas	Vill. – Melegar; P.O. – Illumbazar; Pin. – 731214, Dist. – Birbhum Mob- 8016284129	Progressive Rural Back Yard Poultry Farmer.
16	Smt. Sukodi Mardi	Vill. – Adibasi Para, Bishnubati, P. O. – Sattore; Pin. – 731236, Dist. – Birbhum Mob. 9647677362	Leading in Self Help Group formation, Handi Crafts and Rural Crafts production
17	Sri Tapan Ghosh	Village: Bishnubati, CD Block: Bolpur-Sriniketan, P. O. – Sattore, Pin. – 731236, Police Station: Sattore, District: Birbhum Mob: 9614057093	Innovative Farmer of SRI Marker and Rural Back Yard Poultry based on Improved Rural Breeds and Breed Up-gradation
18	Sri Mahadev Sarkar	Vill. – ChotoShimulia, P. O. – Panchshoya, Dist. – Birbhum Mob. - 8670077649	Leading in cultivation of High Value Low Volume Vegetables like Capsicum, Broccoli, French Beans, Chinese Cabbage etc.
19	Sri Arabinda Pal	Vill. – Sundipur, P. O. – Bishnukhanda, Pin. – 731236, Dist. – Birbhum Mob: 7001024884	Innovative Farmer of Fish based Integrated Farming System (IFS)
20	Sri TuhinSubhra Dey	Vill. – Domdoma, P. O. – Albandha, Pin. – 731204, Dist. – Birbhum Mob: 9735174764	Innovative Farmer of Fish based Integrated Farming System (IFS)
21	Sri Abu Taher	Vill. – Mala, P. O. – Bergram, Dist. – Birbhum Mob. 7872454731	Innovative Farmer of Fish based Integrated Farming System (IFS)
22	Sr Arbinda Chakraborty	Vill. – Hatikra; P.O. – Panrui, Dist. – Birbhum Mob. - 9732332656	Innovative Farmer of modern Fish Hatchery.
23	Sri Sunil Das	Vill. – Srichandrapur; P.O.- Sattore; Pin. – 731236, Dist. – Birbhum Mob. - 9679885667	Innovative farmer of Glass Jar Hatchery, cultivation of Amur Common Carp
24	Sri BapiDhara	Vill. – Srichandrapur; P.O. – Sattore; Pin. – 731236, Dist. – Birbhum Mob. - 9851470447	Progressive farmer of culture of Amur, Jayanti Rohu, Monosex Tilapia
25	Sri Buddhadeb Ghosh	Vill. – Amgoria; P.O. – Bishnukhanda, Dist. – Birbhuum Mob. 9475097332	Progressive fish fingerling producer.
26	Sri Santosh Ghosh	Vill. – Amgoria; P.O. – Bishnukhanda, Dist. – Birbhum Mob. - 7076593717	Progressive fish fingerling producer.

**9.12. Revenue generation**

Sl.No.	Name of Head	Income(Rs.)	Sponsoring agency
1.	Revolving Fund from sale of 1. Farm Produce like Seeds, Planting Materials, Fruits from Mango Orchard, Demonstration Farm for Seed Production and Demonstration Progeny Orchards of the Rathindra KVK 2. Poultry Birds and eggs of the Demonstration Poultry of the Rathindra KVK) 3. Fishes of the Pond of the Rathindra KVK)	1,38,225.00	Own arrangement – KVK Demonstration Farms Own arrangement – KVK Demonstration Farms
2.			
3			
4.	Seminar Hall Rent	80,000.00	
5.	Income from RAWE Programme	1,23,000.00	
6.	<b>Total</b>	<b>3,41,225.00</b>	

**9.13. Resource Generation:**

SL. No.	Name of the programme	Purpose of the programme	Sources of fund	Amount (Rs. Lakhs)	Infrastructure created
01.	Cluster Front Line Demonstrations (Cluster FLDs) on Kharif Oilseeds	To disseminate Improved Varieties, Agro-Technologies and supporting Package of Practices for Kharif Oilseeds Production	ICAR, New Delhi	0.50	
02.	Cluster Front Line Demonstrations (Cluster FLDs) on KharifPulses	To disseminate Improved Varieties, Agro-Technologies and supporting Package of Practices for Kharif Pulses Production	ICAR, New Delhi	Yet to be release	
03.	Cluster Front Line Demonstrations (Cluster FLDs) on Rabi Oilseeds	To disseminate Improved Varieties, Agro-Technologies and supporting Package of Practices for Rabi Oilseeds Production	ICAR, New Delhi	2.40	
04.	Training Programme on Profitable Dairy Farming and Livestock Management	To build up capacity of dairy and livestock farmers for profitable dairy and livestock farming	ICAR, New Delhi	2.00	
05.	Special Laying Out of Demonstration Plot (LODP) Scheme	To develop human resources among the rural youths through Skill and Entrepreneurship development Training Programmes on Various Aspects of sustainable management practices of Coconut Trees	Coconut Development Board, Ministry of Agriculture and Farmers' Welfare, Govt. of India, West Bengal State Centre, DA-94, Sector-I, Salt Lake City, Kolkata - 700 064, West Bengal	0.089	
06.	SWACCHA Action Plan in 2021-22	To generate awareness and skill of the practicing farmers, far women, rural youth and grass-root level extension functionaries in maintenance of hygienic condition and cleanliness a part and parcel of each and every aspect of daily economic and social life	ICAR, New Delhi	0.20	
07.	District Agromet Unit (DAMU)	To provide real time information on District Weather and	IMD, Ministry of Earth Sciences, Govt. of	5.85	Work is in progress.

		Meteorological Data and their interpretations to the practicing farmers, farm women, rural youths and extension functionaries for taking suitable actions	India, New Delhi		
08.	Bio-efficacy data generation of Lufenuron on Black gram	Bio-efficacy data generation of Lufenuron 5.4% EC on Black gram	Rainbow Agro Science Pvt. Ltd.	6.136	
09.	Invati Bio-stimulant trial (Hydronano M)	Project trial on 'Enhancing productivity of kharif Black gram using Hydronano M'	Invati Creation Pvt. Ltd	3.068	
10.	STRY Programme		SAMETI, West Bengal	0.84	
<b>Total</b>				<b>21.083</b>	

**9.14. Performance of Automatic Weather Station in KVK**

Date of establishment	Source of funding i.e. IMD/ICAR/Others (pl. specify)	Present status of functioning
02.07.2021	IMD	Fully functioning

**9.15. Contingent crop planning**

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

**10. Report on Cereal Systems Initiative for South Asia (CSISA)**

a) Year:

b) Introduction / General Information:

	Title	Objective	Treatment details	Date of sowing	Replication	Result with photographs
Experiment 1						
Experiment 2						
Experiment 3						
...						
..						
Others (If any)						

**11. Celebration of World Food Day in 2021**

Sl. No.	Activities undertaken	No. of VIPs attended	No. of participants		
			M	F	T



Detailed report should be provided in the circulated Performa

**13. Awards/Recognition received by the KVK**

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

**Award received by Farmers from the KVK district**

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

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

**15. Number of commodity based organizations/ farmers' cooperative society/ FPO formed/ associated with during last one year (Details of the group/society may be indicated)**

Sl. No.	Name of the organization/ Society	Trust Deed No.& date	Date of Trust Registration Address	Proposed Activity	Commodity Identified	No. of Members	Financial position (Rupees in lakh)	Success indicator
01.	BharkataAdivashiChashi Bhai Lahanati Producer Company Limited	U01100WB2018PTC225331 ; Dated – 23.03.2018	<b>Date of Trust Registration:</b> - 23.03.2018 Address – Village - Jethia, P. O. – Varkata, Police Station – Md. Bazar, Dist. – Birbhum, Pin. – 731216, West Bengal	Main Activities: - Production of Certified Seeds of Paddy and Mustard	Certified Seeds of Paddy and Mustard	500	Rs. 1,50,000.00 (Rupees One Lakh Fifty Thousands) was kept as savings earned from sale of the FPO products in the Current Account of the FPO.	
02.	MashraAdibashi Farmers Producer Company Limited	U36999WB2018PTC224177 ; Dated – 05.01.2018	<b>Date of Trust Registration:</b> - 05.01.2018. Address – Village – Nirisha, P. O. – Kastogara, Police Station – Rampurhat, Dist. – Birbhum, Pin. – 731216, West Bengal	Main Activities: - Production of Certified Seeds of Paddy and Lentil	Certified Seeds of Paddy and Lentil	500	Rs. 76,000.00 (Rupees Seventy Six Thousands) was kept as savings earned from sale of the FPO products in the Current Account of the FPO. Under this FPO, there are 35 Numbers of Farmers' Interest Groups (FIGs) whose total Capital is Rs. 2,00,000.00.	
03.	Mondal Farmers' Producer	U36100WB2018PTC224713 ; Dated –	<b>Date of Trust Registration:</b> - 21.02.2018.	Main Activities: - Goatery,	Goats, Mushroom, Aromatic	1000	Rs. 3,00,000.00 (Rupees Three Lakhs) was kept	

Company Limited	<b>21.02.2018.</b>	Address: - Village – Seharakuri, P. O. – Seharakuri, Police Station – Md. Bazar, Dist. – Birbhum, Pin. – 731127, West Bengal.	Mushroom Production, Cultivation of Aromatic Paddy using Vermi- Compost, Production of Paper Plates.	Paddy, Vermi- Compost and Paper Plate	as savings earned from sale of the FPO products in the Current Account of the FPO.
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**16. Integrated Farming System (IFS)****Details of KVK Demo. Unit**

Sl. No.	Module details (Component-wise)	Area under IFS (ha)	Production (Commodity-wise)	Cost of production in Rs. (Component-wise)	Value realized in Rs. (Commodity-wise)	No. of farmer adopted practicing IFS	% Change in adoption during the year

**17. Technologies for Doubling Farmers' Income**

Sl. No.	Name of the Technology	Brief Details of Technology (3-5 bullet points)	Net Return to the farmer (Rs.) per ha per year due to adoption of the technology	No. of farmers adopted the technology in the district	One high resolution 'Photo' in 'jpg' format for each technology
1	Cultivation of Kharif Oilseed Crop Sesame, Var. - SWB-32-10-1 (Sabitri)	<p><b>Variety:</b> - Seeds of Improved Variety SWB-32-10-1 (Sabitri) @ 6 kg. / ha</p> <p><b>Herbicide application:</b> - Application of herbicides Pendimethalin @ 3 lit. / ha at 1 – 3 DAS.</p> <p><b>Sulphur application</b></p> <p><b>Micro-Nutrient Spray:</b>-Foliar Spray of Micro-Nutrients: - Zn EDTA @ 1 gm. / lit. of water at 25 and 45 DAS.</p>	Rs. 33,265.00 / ha. / Annum	216	Please see Photograph - A
2.	Crop Diversification through Cultivation of High Value Low Volume Vegetable viz. Broccoli	<p><b>Spacing:</b> 2.0 feet x 2.0 feet</p> <p><b>Time of Planting</b> - August – October</p> <p><b>Seed Treatment</b> – Treated with 2 - 2.5 gm Thiram / litre of water.</p> <p><b>Application of Manure per hectare</b> – Compost- 20-25 ton; 160 (100 + 60) kg Urea; 550 kg SSP; 170 kg MoP</p> <p><b>Application of Micro-nutrients</b> - 1 - 1.5 kg Molybdenum and 20 kg. Sodium borate per hectare before planting</p>	Rs. 1,52,500.00 / ha. / Annum	107	Please see the Photograph - B

3.	Jute based Rural Handicrafts	<p><b>Improved Techniques:</b> - 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</p> <p><b>Materials:</b> - Jute, Gums, Hard Boards, Coloured Beads, Coloured Jutes etc.</p> <p><b>Designs:</b> - As per the requisite product</p> <p><b>Plan of Works:</b> - 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.</p>	Rs. 72,000.00 / Annum	29	Please see Photograph - C
4	Modern Kantha Stitch Works	<p><b>Improved Techniques:</b> - 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.</p> <p><b>Materials:</b> - Cloth, Thread, Tracing Paper, Carbon Paper, Different Sized Frames, Different Sized Needles etc.</p> <p><b>Designs:</b> - As per the requisite product and Consumer’s preference.</p> <p><b>Plan of Works:</b> - 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.</p>	Rs. 96,000.00 / Annum	1000	Please see the Photograph - D
5.	Introduction of Giant Prawn ( <i>Macrobrachium rosenbergii</i> ) as A New Component of Composite Fish Culture	<p><b>Pond Preparation:</b> - 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.</p> <p><b>Water Quality Management:</b> -pH. is to be maintained within a range of 7.5 to 8.0 through liming.</p> <p><b>Fish Feed Management:</b> - Rice Bran, Groundnut Oil Cake, Fish Meal and Dry Yeast Powder in the ratio of 50: 30:10:10</p>	Rs. 3,40,000.00 / ha. / Annum	35	Please see the Photograph - E

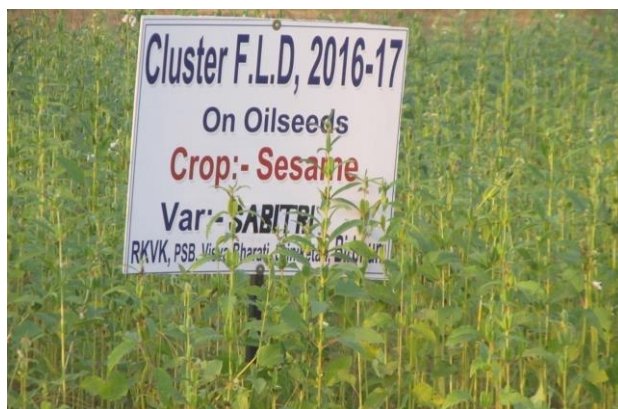
		<p>respectively @ 3 – 5 per cent of Total Body Weight of the stocked Fish and Prawn.</p> <p><b>Aeration Technique:</b> - Through using 0.5 HP – 1.0 HP Pump daily @ 2 hours / day.</p> <p><b>Fish Health Management:</b> - Use of Potassium Per Manganate (KMnO<sub>4</sub>) @ 150 grams / 0.13 ha / month and Aquahealth @ 100 ml. / 0.13 ha. / 3 Months Interval.</p>			
6.	Proper blending of Technologies and Products for Scientific Dairy farming	<p><b>Crossbreeding and Breed up-gradation through Artificial Insemination (A. I.)</b> in cattle is the most suitable and economical technique for generating higher genetic and production potential.</p> <p><b>Conscientious heat detection,</b> detection of oestrous by fern pattern of cervical mucus and proper timing of insemination is ensured.</p> <p><b>Crossbreeding in indigenous low producing cattle with superior germplasm</b> 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><b>All the female calves have to be fed properly</b> from the beginning of the birth so that they attain desired body weight and maturity at an early age.</p> <p><b>Cultivation of green fodder and feeding the Cattles with area specific mineral mixture are ensured.</b></p> <p><b>The traditional feeding practice is to be modified</b> by providing mineral mixture, concentrate and green forages and formulation of low cost feed.</p> <p><b>After parturition animals usually always come to heat up to 2- 2 1/2 months.</b></p> <p><b>Proper vaccination and medical check up</b> 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	Please see the Photograph - F
7.	Production enhancement through improved backyard farming utilizing Improved Poultry Breeds viz. Vanaraja and Rhode Island Red (RIR)	<p><b>Backyard poultry farming with rural improved breeds.</b></p> <p><b>Breed up gradation</b> by crossing these two breeds viz. Vanaraja and Rhode Island Red with local birds.</p> <p><b>Hatching of eggs of both Vanaraja and Rhode Island Red by using local hen.</b></p>	Rs. 63,265.50 / Batch / Unit of 20 Numbers of Deshi Birds + 20 Numbers of Rhode Island Red Birds + 20	65	Please see the Photograph - G

		<p><b>Supply chicks and fertile eggs</b> of improved rural poultry breed.</p> <p><b>Construction of a low-cost poultry house</b> made of locally available materials, such as bamboo and wood as night shelter and to protect the birds from predators.</p> <p><b>Birds are to be let loose as free-range scavenging for utilizing the feed base</b>, 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><b>Almost one fourth of the amount of concentrate mixture may be replaced by Azolla (<i>Azollapinnata</i>) and vegetables like Kalmi(<i>Ipomoea aquatica</i>) and Spinach (<i>Spinacia oleracea</i>) etc.</b> as per suggestion of the Scientists.</p> <p><b>De-worming and vaccination</b> 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 F<sub>1</sub> LaSota and R<sub>2</sub>B Vaccines against Ranikhet Disease and IBDV Intermediate Strain Vaccine against Gumboro disease are to be done.</p>	Numbers of Vanaraja Birds / Annum		
8.	Low Cost Commercial Vermin-Composting Unit	<p><b>Earth-Worms (<i>Eisenia foetidae</i>)</b> are being used.</p> <p><b>Low cost pits</b> built-up with mainly bare bricks covered Polythene Sheets are to be used.</p> <p><b>Organic farm and domestic wastes</b> along with cow dung are to be used as compost culture media.</p> <p><b>Regular optimum watering of compost media</b> is to be ensured.</p> <p><b>Sieving and packaging of usable Vermin-Compost</b> is done as and when necessary.</p>	Rs. 85,714.00 / Annum	51	Please see the Photograph - H
9.	Feeding of Quality Green Fodder both Leguminous and Non-Leguminous to Milch Cattles	<p><b>Recommended Package of Practices for Fodder Cultivation</b> such as Land Preparation, Fertilizer Application, Timely Sowing, Fertilizer Application, Irrigation Scheduling, Integrated Pest Management Practices and Harvesting Schedules.</p> <p><b>Short Duration Varieties</b> of Fodder Crops</p>	Rs. 54,850.00 / Cow / Lactation	169	Please see Photograph - I

		<p>viz. Maize, Cow Pea etc. between two seasonal crops.</p> <p><b>Cultivation of Cereal Fodder Crops like Maize, Sorghum, Oat etc. with Fodder Legumes like Cow Pea, Berseem etc.</b></p> <p><b>Cultivation of Multi-Cut Varieties of Fodder Crops</b> at regular intervals to get optimum production.</p> <p><b>Legume and Non-Legume Fodders should be mixed in 1: 3 ratio.</b></p> <p><b>For lactating Crossbred Milch Cows, the daily production ration contains 1.25 + 1 kg concentrate per 2.5 kg Milk Production and requires 25 to 30 kgs. Green Grasses when Green Grass is plenty.</b></p> <p><b>For lactating Deshi Milch Cows, the daily feed schedule consists of 1 + 1 kg. Concentrate per 2.5 to 3.0 kg Milk Production with up to 20 kg. Fodder feeding.</b></p> <p><b>Every 10 kgs. Fodder feeding will reduce 1 kg. Concentrate feeding and thus reducing the cost of inputs.</b></p>			
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**Photograph – A**

**Cluster FLD on Kharif Sesame in 2016-17 in the Field of Sri Ashutosh Biswas, Village: - Srichandrapur, District – Birbhum organized by the Rathindra KVK, Birbhum at the Vegetative Growth Stage**



**Photograph - B**

**Sri Nilu Das of Village: - BaroShimulia, Dist. - Birbhum in his Field of Broccoli**



**Photograph - C**

**Various Jute based Handicraft Products prepared by the Trainees of Rathindra KVK**



**Photograph - D**

**Kantha Stitched Sharee produced by the members of the SHG named "Shilpashree" of Village: - Kankutia, Dist. - Birbhum**



**Photograph – E**

**Sri DilipDolui (Left) harvesting his produce of Giant Prawn along with Carps in a Composite Fish Culture System from his Pond at Village:- Durgapur, Dist. - Birbhum**



**Photograph - F**

**Sri Bidhan Chandra Sinha along with his Cross Bred and Up-graded Milch Cows at His Dairy Unit at Village – Mirzapur, Dist. - Birbhum**



**Photograph – G**

**Sri Tapan Kumar Ghosh with Poultry Birds at his Back Yard Poultry Farm at Village – Bishnubati, Dist. - Birbhum**



Photograph – H

Sri Partha Mal watering the Vermin-Compost Materials in his Low Cost Commercial Vermin-Composting Unit at Village: - Daronda, Dist. - Birbhum



Photograph – I

Cultivation and Use of Green Fodder for Cattle Feeding at the Rathindra KVK adopted Village: - Digha, C. D. Block: Sainthia, District - Birbhum through KVK Initiative



18.a) Information on ASCI Skill Development Training Programme, if undertaken during 2021

Name of the Job role	Name of the certified Trainer of KVK for the Job role	Date of start of training	Date of completion of training	No. of participants						Whether uploaded to SIPPportal (Y/N)	Fund utilized for the training (Rs.)
				SC		ST		Other			
				M	F	M	F	M	F		

b) Information on Skill Development Training Programme (Other than ASCI or less than 200 hrs., if any) if undertaken during 2021

Thematic area of training	Title of the training	Duration (in hrs.)	No. of participants										Fund utilized for the training (Rs.)
			SC		ST		Other		Total				
			M	F	M	F	M	F	M	F	T		

19. Information on NARI Project(if applicable)

Name of Nodal Officer	No. of OFT on specified aspects	Title(s) of OFT	No. of FLD on specified aspects	No. of capacity development programme on specified aspects	Total no. of farm women/ girls involved in the project	Details of Issues related to gender mainstreaming addressed through the project

**20. Specific programmes for the period****i. Achievements in SCSP (Scheduled Caste Sub-Plan) (Specific for SC farmers only)**

Sl. No.	Activity	No. of SC farmers/ stakeholders		
		Male	Female	Total
1	On- farm trials	30	08	38
2	Frontline demonstrations	955	637	1592
3	No. of Training programmes for farmers	55		
4	Farmers trained	446	197	643
5	No. of Training programmes for Extension Personnel	133		
6	Extension Personnel trained	573	96	669
7	Participants in extension activities	750	350	1100
8	Distribution of seed	31	189	220
9	Planting material distributed	180	570	750
10	Livestock strains and fingerlings distributed	25	15	40
11	Soil, water, plant, manures samples tested	85	15	100
12	Mobile agro-advisory provided to farmers	60,000	15,000	75,000
13	Other (Please specify)			

**ii. Capacity building of farmers through training on Profitable Dairy Farming and Livestock Management (In case your KVK has Scientist (Animal/Veterinary Science))**

Sl. No.	Title of the training	Date/ Duration	No. of Participants							
			SC		ST		Other		Total	
			M	F	M	F	M	F	M	F
01.	Scientific Goat Farming	03 days (09.12.2021-11.12.2021)	06	01	01	01	10	21	17	23

**iii. Status of Natural Farming**

Crop/ Commodity involved in Natural farming	Area covered under such farming (ha)	No. of farmers practicing Natural farming at present	Details of individual farmers (Name and Contact No.)	Organic component/ inputs used for such farming

**iv. Farmer Producer Organizations****a) General information**

Sl. No.	Name & Address of FPO	Name & Contact No. of Head of FPO	No. of farmer members of FPO			Crop/ Enterprise dealt with by FPO	Kind of support provided by KVK in running/ starting of FPO (in brief)
			M	F	T		

**b) Financial information**

Name & Address of FPO	Date of Registration	FPO Registered (Y/N)	Application Submitted for Registration (Y/N)	No. of share-holding farmer members	Equity Amount Collected (Rs.)	Bank Account Opened (Y/N)	Board Reconstituted after attaining minimum membership (Y/N)

**v. Nutri-gardens (Village wise)**

Sl. No.	Name of village	Name of crop	Area under the crop (acre)	No. of farmers			Whether bio-fortified variety of crop used (If yes, mention variety & crop)
				M	F	T	
01.	Mahula, Binuria	Cabbage, Cauliflower, spinach, Tamato, brinjal, coriander, Carrot, Chili, Broccoli	2.53	00	152	152	-

**vi. Progress report on scientific beekeeping (2020-21 & 2021-22)**

Name of KVK	Total budget allotted (Rs.)	Total budget utilized (Rs.)	Physical Training organized			Online Training organized				
			No. of training	No. of total participants		No. of training	No. of total participants			
				M	F		T	M	F	T

**21. Any other programme organized by KVK, not covered above**

Sl. No.	Name of the programme	Date of the programme	Venue	Purpose	No. of participants
1.	International Womens' Day	8.3.2021	RKVK, Birbhum	To felicitate the successful women in agriculture and allied activities in the district	83
2.	World Water Day	22.3.2021	RKVK, Birbhum	To create awareness on judicious use of water in agriculture and daily life	48
3.	World Milk Day	1.6.2021	RKVK, Birbhum	To create awareness on quality milk production for more benefits	750
4.	Food and Nutrition for farmers	26.8.2021	RKVK, Birbhum	To encourage the farmers and farm women for production of nutritious food	56
5.	Nutrition to girls and tree plantation	17.09.2021	RKVK, Birbhum	To aware the girls about proper nutrition and plantation of vegetables	101

	campaign			and fruits to get nutrition	
6	World Antimicrobial Awareness Week	24.11.2021	RKVK, Birbhum	To aware people about spread of antimicrobial resistance	75
7.	Honourable PM address during conference on Natural Farming	16.12.2021	RKVK, Birbhum	To start natural farming for sustainable production in the country	1382

**22. Good quality action photographs (with proper caption) of overall achievements of KVK during the year (best 10)**



**Photograph of the OFT on Assessment of liming Dose in profitable manners in increasing Productivity of Black Gram**



**Photographs of the OFT on Broccoli**



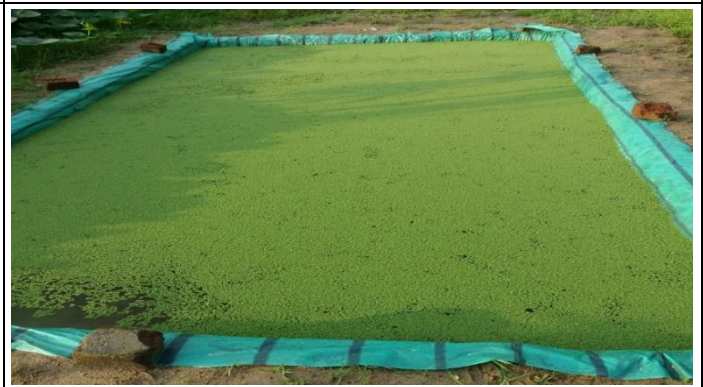
**FLD on Kharif Paddy (2021) under SCSP  
Crop: Paddy (Varietal replacement), Var: Ranidhan (IET-19418), Area: 45 ha No. of farmers: 252**



**OFT Conducted of coloured broiler chicken**



**FLD on Ekangi (2021) sponsored by ATMA, Birbhum  
Crop: Ekangi (Crop diversification), Area: 1 ha No. of farmers: 30**



**FLD on Azolla in Kharif paddy (2021) under SCSP  
Area: 33.6 ha No. of farmers: 63**



**FLD on Drumstick (2021) under SCSP**  
**Crop: Drumstick (Varietal replacement), Var: PKM-1,**  
**Area: 2 ha No. of farmers: 148**



**FLD on Elephant Foot Yam (2021)**  
**Crop: Elephant Foot Yam (Varietal replacement),**  
**Var: Bidhan Kusum, Area: 0.2 ha No. of farmers: 81**



**FLD on Green fodder Maize (2021)**  
**Crop: Maize (Varietal replacement), Var: J-1006; Area: 3 ha**



**FLD on Drum Seeder on kharif rice, 2021**  
**Area: 9 ha; No of farmers: 15**



**FLD on Nutri Garden: 2021**  
**No of farm women: 182**



**FLD on new introduction of Poultry breed**





**World Water Day**

**Date: 22.03.2021 No. of Participants: 48**



**World Milk Day**

**Date: 01.06.2021 No. of Participants:750**



**Food and Nutrition for farmers**

**Date: 26.08.2021 No. of participants: 56**



**Nutrition to girls and tree plantation campaign**

**Date: 17.09.2021 No. of participants:**



**Honourable PM address during conference on Natural farming**

**Date: 16.12.2021 No. of participants: 1382**



**National Farmers' Day**

**Date: 23.12.2021 No. of participants: 56**

**Collaborative Farmers Field Day and Training with Coconut Development Board, Ministry of Agriculture and Farmers Welfare, Govt of India**



SCSP programme  
Date: 3rd February, 2021, No. Of Farmers: 20



**Scientists'-Women SHG Group Members'-Interface Meet organized**

7th December, 2021, Birbhum, West Bengal

The ICAR-Central Inland Fisheries Research Institute, Barrackpore, Kolkata organized the "Scientists'-Women Self-Help Group Members'-Interface Meet" at Rathindra Krishi Vigyan Kendra, Sriniketan, Birbhum, West Bengal today.



The Meet was organized in collaboration with the Rathindra Krishi Vigyan Kendra, Visva Bharati, Shanti Niketan.

Delivering the inaugural address, the Chief Guest, Dr. B.K. Das, Director, ICAR-CIFRI, Barrackpore emphasized on the advantages of Inland Fisheries for nutrition and income. The sustainability of the livelihood improvement programmes conducted through the ICAR Schemes at the field level was also outlined by Dr. Das.

The Meeting aimed at sensitizing the participants about the Inland Fisheries Management for livelihood and nutritional security registered participation by a total of 152 beneficiaries of the Scheduled Caste and Scheduled Tribe Community from 16 Self-Help Groups of Birbhum District.

(Source: ICAR-Central Inland Fisheries Research Institute, Barrackpore, Kolkata)

**Collaborative SCSP and TSP Programme with ICAR-CIFRI  
Fish Farm Women: 152 of 15 SHG**



**Skill Training on Bio Input Production**



**Skill Training on Mushroom Production**



**Skill Training on Beekeeping**



**Skill Training on Goat Farming**



Place: RKVK, Block: Bolpur-Sriniketan  
 Total numbers of farmers attend the programme: Date: 26.08.2021



Village: Mohula, Block: Bolpur-Sriniketan  
 Total numbers of farmers attend the programme: 25



DAESI programme at RKVK



RKVK products for sale



**Honourable Vice Chancellor and other officials of Visva-Bharati monitoring the KVK activities**



**Dr. S. K Chaudhary, Honourable DDG (NRM), ICAR and Dr. F. H. Rahaman, Principal Scientist, ICAR-ATARI, Kolkata visiting different units of KVK**



**Visit of UGC NAAC Team**



**Annexure-I**  
**Details of Training Programmes – 2021**

Discipline	Clientele	Title of the training programme	Duration in days	Venue (Off / On Campus)	Number of participants			Number of SC/ST		
					Male	Female	Total	Male	Female	Total
Animal Science	PF & PFW	Sheep Rearing	02	ON (Online)	30	01	31	06	00	06
	PF & PFW	Quail Farming	01	ON (Online)	27	01	28	09	00	09
	RY	Dairy Farming	15	ON	02	19	21	02	16	18
	PF & PFW	Dairy Farming	02	ON (Online)	38	02	40	12	00	12
	PF & PFW	Training Programme on World Veterinary Day	01	ON (Online)	22	03	25	04	00	04
	PF & PFW	Dairy Farming (World Milk Day)	01	ON (Online)	40	04	44	08	00	08
	PF & PFW	Dairy Farming (World Milk Day)	01	ON (Online)	39	01	40	06	00	06
	PF & PFW	Goat Farming	01	ON (Online)	60	05	65	26	01	27
	PF & PFW	Poultry Farming	01	ON (Online)	60	05	65	26	01	27
	PF & PFW	Duck Rearing & Its Management both for Egg & Meat	01	ON (Online)	29	01	30	10	00	10
	PF & PFW	Dairy Farming	01	ON (Online)	29	01	30	04	00	04
	PF & PFW	Piggery Farming	01	ON (Online)	28	02	30	06	01	07
	RY	Ornamental Bird Rearing	01	ON	15	00	15	03	00	03
	PF & PFW	Scientific Goat Farming	03	ON	17	23	40	07	02	09
<b>Total</b>					<b>436</b>	<b>68</b>	<b>504</b>	<b>129</b>	<b>21</b>	<b>150</b>

Discipline	Clientele	Title of the training programme	Duration in days	Venue (Off / On Campus)	Number of participants			Number of SC/ST		
					Male	Female	Total	Male	Female	Total
Fishery	RY	Bio-Flock Fish Farming	03	ON	37	03	40	14	01	15
	<b>Total</b>					<b>37</b>	<b>03</b>	<b>40</b>	<b>14</b>	<b>01</b>

Discipline	Clientele	Title of the training programme	Duration in days	Venue (Off / On Campus)	Number of participants			Number of SC/ST		
					Male	Female	Total	Male	Female	Total
Plant Protection	RY	Beekeeping	15	ON	28	02	30	25	00	25
	EF	Pest & Pest Management, a brief idea	01	ON	35	02	37	05	00	05
	EF	Disease and Pests of Potato and their management	01	ON	35	02	37	05	00	05
	EF	Disease and Pests of Potato and their management	01	ON	35	05	40	03	01	04

EF	IPM-Introduction and brief idea	01	ON	38	02	40	06	00	06
EF	General idea about weeds and their management	01	ON	35	04	39	03	00	03
EF	Pesticides Resistance	01	ON	33	05	38	03	01	04
EF	Mode of survival of Plant Pathogens and their management strategies	01	ON	35	05	40	03	01	04
EF	Identification of various diseases and pests	01	ON	35	05	40	03	01	04
EF	Preparation of Herbarium, Practical records, and assignments	01	ON	35	05	40	03	01	04
EF	Preparation of different botanical pesticides and their application	01	ON	33	05	38	03	01	04
EF	Weed management of different field crops	01	ON	35	05	40	03	01	04
EF	Mode of survival of Plant Pathogens and their management strategies	01	ON	36	02	38	06	00	06
EF	Identification of various diseases and pests	01	ON	35	01	36	06	00	06
EF	Preparation of Herbarium, Practical records, and assignments	01	ON	35	01	36	06	00	06
EF	Preparation of different botanical pesticides and their application	01	ON	38	02	40	06	00	06
EF	Overview of DAESI Course	01	ON	30	05	35	03	01	04
EF	IPM of Brinjal	01	ON	28	05	33	03	01	04
EF	Overview of DAESI Course	01	ON	35	02	37	05	00	05
EF	IPM of Brinjal	01	ON	36	02	38	06	00	06
EF	Integrated Pest and Disease Management of Mango and Guava	01	ON	38	02	40	06	00	06
EF	Weed Problem and use of Herbicides in Agriculture	01	ON	36	02	38	05	00	05
EF	Integrated Pest and Disease Management of Mango and Guava	01	ON	32	05	37	03	01	04
EF	Weed Problem and use of Herbicides in Agriculture	01	ON	34	05	39	03	01	04
EF	Mode of action of Herbicides and Herbicides resistance	01	ON	32	05	37	03	01	04
EF	Mode of action of Herbicides and Herbicides resistance	01	ON (Online)	34	02	36	00	02	02
EF	Classification of Pesticides and their mode of action	01	ON (Online)	35	02	37	05	02	07
EF	Pest and Diseases of Cucurbitaceous Vegetables and their management	01	ON (Online)	37	02	39	06	02	08
EF	Mode of action of Herbicides and Herbicides resistance	01	ON (Online)	34	02	36	04	02	06

EF	Classification of Pesticides and their mode of action	01	ON (Online)	35	02	37	05	02	07
EF	Pest and Diseases of Cucurbitaceous Vegetables and their management	01	ON (Online)	30	02	32	03	02	05
EF	Pests of Cruciferous Vegetables and their management	01	ON (Online)	37	02	39	06	00	06
EF	Pests of Cruciferous Vegetables and their management	01	ON (Online)	35	05	40	03	01	04
PF & PFW	Integrated management of Parthenium	01	ON (Online)	29	04	33	00	00	00
EF	Integrated Disease management in Kharif Rice	01	ON	37	02	39	06	00	06
EF	Integrated Disease management in Kharif Rice	01	ON	35	05	40	03	01	04
PF & PFW	Plant Health	01	OFF	11	04	15	10	04	14
PF	Diagnosis of Pest Diseases of different crops and their management	01	ON	29	00	29	11	00	11
PF & PFW	Integrated Pest Management	01	ON	19	19	38	16	07	23
EF	Identification of different Pests and Diseases in Rabi Crops	01	ON	37	02	39	06	00	06
EF	Integrated Pest and Disease Management of Potato and Mustard	01	ON	36	02	38	06	00	06
EF	Identification of different Pests and Diseases in Rabi Vegetables	01	ON	35	05	40	03	01	04
EF	Integrated Pest Management of Rabi Vegetables	01	ON	35	05	40	03	01	04
EF	IPM in Paddy	01	ON	30	04	34	03	01	04
RY	Skill Training of Mushroom	07	ON	06	09	15	04	02	06
<b>Total</b>				<b>1473</b>	<b>166</b>	<b>1639</b>	<b>229</b>	<b>42</b>	<b>271</b>

Discipline	Clientele	Title of the training programme	Duration in days	Venue (Off / On Campus)	Number of participants			Number of SC/ST		
					Male	Female	Total	Male	Female	Total
Agronomy	EF	Seed Production Technology in Potato Cultivation	01	ON	33	02	35	04	00	04
	EF	Cultural practices and irrigation management in Potato Cultivation	01	ON	33	02	35	04	00	04
	EF	Package and Practices of Mustard Cultivation	01	ON	33	02	35	05	00	05
	EF	Introduction and Importance of Potato Cultivation	01	ON	34	05	39	03	01	04
	EF	Cultural practices and irrigation management in Potato Cultivation	01	ON	34	05	39	03	01	04
	EF	Package and Practices of Potato Cultivation	01	ON	35	05	40	03	01	04
	EF	Package and Practices of Mustard Cultivation	01	ON	33	05	38	03	01	04
	EF	Nutrient Management in crop plant	01	ON	36	02	38	06	00	06

EF	Role of Water management in crop production	01	ON	36	02	38	02	00	02
EF	Dry Land Agriculture	01	ON	37	01	38	06	00	06
EF	Package and Practices of Wheat Cultivation	01	ON	37	01	38	06	00	06
EF	Nutrient Management in crop plant	01	ON	35	04	39	03	00	03
EF	Role of Water management in crop production	01	ON	33	05	38	03	01	04
EF	Dry Land Agriculture	01	ON	30	05	35	03	01	04
EF	Package and Practices of Wheat Cultivation	01	ON	30	05	35	03	01	04
PF & PFW	Sowing and Nutrient management of Summer Green gram	01	ON	09	03	12	01	02	03
PF & PFW	Improved variety and Nutrient management in summer Black gram	01	ON	09	02	11	05	02	07
PF & PFW	Improved variety and Nutrient management in summer Sesame	01	ON	17	06	23	04	01	05
PF & PFW	Improved Variety of Green Gram Cultivation in Summer	01	ON	11	02	13	07	02	09
PF & PFW	Improved Variety of Black Gram Cultivation in Summer Season	01	ON	09	02	11	02	02	04
EF	Nutrient management in Rice	01	ON	35	05	40	03	01	04
EF	Package and Practices of Green gram and Black gram cultivation	01	ON	35	05	40	03	01	04
EF	Package and Practices of Maize Cultivation	01	ON	33	05	38	03	01	04
EF	Package and Practices of Green gram and Black gram cultivation	01	ON	35	01	36	06	00	06
EF	Nutrient management in Rice	01	ON	35	01	36	06	00	06
EF	Package and Practices of Maize Cultivation	01	ON	38	02	40	06	00	06
RY	Bio-Input Production	15	ON	16	09	25	13	04	17
PF & PFW	Sowing and Improved variety of summer Sesame	01	ON	06	05	11	02	02	04
PF	Fertilizer management in summer Oilseed (Groundnut)	01	ON	21	00	21	09	00	09
PF & PFW	Sowing and Improved variety of summer Oilseeds (Groundnut)	01	ON	11	01	12	11	01	12
PF & PFW	Land Preparation and Sowing of Summer Season	01	ON	16	06	22	05	02	07
PF & PFW	Agro-Techniques of Ekangi Cultivation	01	ON (Online)	22	07	29	05	05	10
PF	Direct seedling of Rice	01	ON (Online)	43	00	43	09	00	09
EF	Integrated Nutrient management in Kharif Rice	01	ON	29	05	34	03	01	04
EF	Basic idea of Soil- Genesis, Components and Types	01	ON	33	05	38	03	01	04
EF	Integrated Nutrient management in Kharif Rice	01	ON	28	02	30	03	00	03
EF	Basic idea of Soil- Genesis, Components and Types	01	ON	36	02	38	06	00	06
PF & PFW	Nursery management on Rice	01	ON (Online)	44	07	51			
PF & PFW	Seed production of Kharif Rice	01	ON (Online)	150	55	205	80	30	110

PF & PFW	Resource Conservation Technologies in Agriculture and Allied sectors on World Environment Day	01	ON (Online)	175	75	250	87	45	132
EF	Properties of Soil	01	ON	37	02	39	05	00	05
EF	Critical Irrigation Stages for different crops for efficient management	01	ON	37	02	39	05	00	05
EF	Nursery management and Cultivation Practices of Kharif Rice	01	ON	35	02	37	05	00	05
EF	Properties of Soil	01	ON	33	05	38	03	01	04
EF	Nursery management and Cultivation Practices of Kharif Rice	01	ON	32	05	37	03	01	04
EF	Concept of Cropping pattern and cropping system	01	ON	31	05	36	03	01	04
PF	Sowing and management of improved variety of Black gram	01	ON	22	00	22	10	00	10
EF	Concepts of cropping patterns and cropping systems	01	ON (Online)	30	07	37	00	02	02
EF	Production Technology of some Oilseeds crops (Sesame, Groundnut and Sunflower)	01	ON (Online)	35	02	37	06	02	08
EF	Problem Soils and their management	01	ON (Online)	37	02	39	06	02	08
EF	Problem Soils (Acidic Soils) and their management	01	ON (Online)	35	02	37	05	02	07
EF	Concepts of cropping patterns and cropping systems	01	ON (Online)	35	02	37	05	02	07
EF	Production Technology of some Oilseeds crops (Sesame, Groundnut and Sunflower)	01	ON (Online)	35	02	37	06	02	08
EF	Problem Soils and their management	01	ON (Online)	37	02	39	06	02	08
EF	Problem Soils (Acidic Soils) and their management	01	ON (Online)	35	02	37	05	02	07
EF	Integrated Watershed management	01	ON (Online)	36	02	38	05	00	05
EF	Production Technology of Sugarcane and Cotton	01	ON (Online)	35	02	37	06	00	06
EF	Seed Certification	01	ON (Online)	32	02	34	06	00	06
EF	Different Machineries and implements and their uses	01	ON (Online)	35	02	37	05	00	05
EF	Integrated Watershed management	01	ON (Online)	34	05	39	03	01	04
EF	Production Technology of Sugarcane and Cotton	01	ON (Online)	34	05	39	03	01	04
EF	Seed Certification	01	ON (Online)	34	05	39	03	01	04
EF	Different machineries and implements and their uses	01	ON (Online)	35	05	40	03	01	04
PF & PFW	Sowing and Fertilizer management of Sesame in Kharif Season	01	ON (Online)	23	04	27	19	03	22
PF & PFW	Production Technology of Millets	01	ON (Online)	29	55	84	07	39	46
PF & PFW	Climate Resilient and varieties technologies and	01	ON (Online)	40	28	68	10	16	26

	products									
EF	Use of Nano urea and Azolla in crop Cultivation	01	ON (Online)	37	02	39	06	00	06	
EF	Use of Nano urea and Azolla in crop Cultivation	01	ON (Online)	35	05	40	03	01	04	
PF & PFW	Harvesting, Threshing and Storing of Kharif Black Gram	01	ON	32	03	35	07	02	09	
PF & PFW	Natural Farming	01	ON (Online)	20	04	24	07	03	10	
PF	Sowing and Fertilizer management of Mustard	01	ON	29	00	29	11	00	11	
PF & PFW	Fertilizer Management in Food+ Fodder intercropping	01	ON	08	01	09	01	00	01	
EF	Importance of Soil Testing and methods of Soil Sampling, interpretation of the results	01	ON	34	02	36	06	00	06	
EF	Soil Sample collection	01	ON	34	02	36	06	00	06	
EF	Preparation of Vermi Compost	01	ON	35	02	37	06	00	06	
EF	Registers, Records to be maintained as per Act and Sampling procedures	01	ON	35	02	37	06	00	06	
EF	Importance of Soil Testing and methods of Soil Sampling, interpretation of the results	01	ON	29	03	32	03	00	03	
EF	Soil Sample collection	01	ON	35	05	40	03	01	04	
EF	Preparation of Vermi Compost	01	ON	34	05	39	03	01	04	
EF	Preparation of Vermi Compost	01	ON	34	05	39	03	01	04	
<b>Total</b>				<b>2709</b>	<b>462</b>	<b>3171</b>	<b>553</b>	<b>200</b>	<b>753</b>	

Discipline	Clientele	Title of the training programme	Duration in days	Venue (Off / On Campus)	Number of participants			Number of SC/ST		
					Male	Female	Total	Male	Female	Total
Horticulture	EF	Nursery Management of Vegetables	01	ON	33	02	35	05	00	05
	EF	Nursery Management of Vegetables	01	ON	33	05	38	03	01	04
	PF & PFW	Farmer Field Day training on Nourishment of Coconut trees	01	OFF	18	02	20	12	02	14
	EF	Mango Orchard Management	01	ON	35	05	40	03	01	04
	EF	Package and Practices of Cultivation of Solanaceous Vegetables	01	ON	35	05	40	03	01	04
	EF	Mango Orchard Management	01	ON	36	02	38	06	00	06
	EF	Production Technology of Mango	01	ON	30	05	35	03	01	04
	EF	Package and Practices of Cultivation of Solanaceous Vegetables	01	ON	36	02	38	06	00	06
	EF	Production Technology of Mango and Banana	01	ON	37	02	39	06	00	06
	EF	Production Technology of Guava and Papaya	01	ON	38	02	40	06	00	06
	EF	Different Plant Propagation Techniques of Horticultural Crops	01	ON	38	02	40	06	00	06
	EF	Production Technology of Banana and Papaya	01	ON	33	05	38	03	01	04

EF	Different Plant Propagation Techniques of Horticultural Crops	01	ON	35	04	39	03	01	04
EF	Production Technology of Seasonal flowers at Birbhum District	01	ON (Online)	36	02	38	06	02	08
EF	Production Technology of Cole Crops (Cabbage, Cauliflower and Broccoli)	01	ON (Online)	37	02	39	06	02	08
EF	Production Technology of Medicinal Plants	01	ON (Online)	30	02	32	03	02	05
EF	Production Technology of Seasonal flowers at Birbhum District	01	ON (Online)	36	02	38	06	02	08
EF	Production Technology of Cole Crops (Cabbage, Cauliflower and Broccoli)	01	ON (Online)	37	02	39	06	02	08
EF	Production Technology of Medicinal Plants	01	ON (Online)	30	02	32	03	02	05
EF	Production Technology of Cole Crops (Knol-Khol, Turnip, Brussel's Sprout, Radish, Chinese Cabbage)	01	ON (Online)	36	02	38	05	00	05
EF	Production Technology of Cole Crops (Knol-Khol, Turnip, Brussel's Sprout, Radish, Chinese Cabbage)	01	ON (Online)	34	05	39	03	01	04
PF & PFW	Mulching in Seasonal Vegetables for seasonal Cultivation	01	ON	01	21	22	00	18	18
<b>Total</b>				<b>714</b>	<b>83</b>	<b>797</b>	<b>103</b>	<b>39</b>	<b>142</b>

Discipline	Clientele	Title of the training programme	Duration in days	Venue (Off / On Campus)	Number of participants			Number of SC/ST		
					Male	Female	Total	Male	Female	Total
Agricultural Extension	PF & PFW	Formation of Farmer Producer Organization	01	ON	19	03	22	03	02	05
	PF & PFW	Revitalization of defunct Self Help Group (SHG)	01	ON	33	04	37	14	01	15
	PF & PFW	Concept and formation of Joint Liability Group	01	ON	25	06	31	01	05	06
	PF & PFW	Crop Insurance – Concept and Functioning	01	ON	33	04	37	02	01	03
	EF	Kisan Credit Card and Crop Insurance	01	ON	32	05	37	03	01	04
	PF	Concept and Utilities of Crop Insurance	01	ON	30	05	35	03	01	04
	EF	Concept and Utilities of Crop Insurance	01	ON	34	02	36	05	00	05
	PF & PFW	Disaster Management Strategies in Agriculture	01	ON (Online)	22	10	32	10	00	10
	EF	Marketing Management of Farm Produce	01	ON (Online)	38	02	40	06	00	06
	EF	Different Ongoing Government Schemes in Birbhum District and use POS Machine	01	ON (Online)	35	05	40	03	01	04
	EF	Marketing Management of Farm Produce	01	ON (Online)	35	05	40	03	01	04
	PF & PFW	Disaster Management Strategies with special reference to Agriculture and allied sectors	01	ON (Online)	27	16	43	07	03	10
	EF	Extension Reforms: Concept, Organizational mechanism and role of Input Dealers in the	01	ON (Online)	36	02	38	05	00	05

		Organizational Structure								
	EF	Extension Reforms: Concept, Organizational mechanism and role of Input Dealers in the Organizational Structure	01	ON (Online)	35	05	40	03	01	04
	PF & PFW	Formation and functioning of FPOs	01	ON (Online)	36	04	40	05	00	05
	PF & PFW	Market linkages and market information for Oilseeds and Pulse producing FPOs	01	ON (Online)	21	12	33	01	11	12
	PF & PFW	Concept and formation of Farmers' Clubs	01	ON (Online)	31	07	38	01	06	07
	PF & PFW	Formation of FPOs from SHGs for marketing purposes	01	ON (Online)	30	01	31	00	01	01
<b>Total</b>					<b>552</b>	<b>98</b>	<b>650</b>	<b>75</b>	<b>35</b>	<b>110</b>

Discipline	Clientele	Title of the training programme	Duration in days	Venue (Off / On Campus)	Number of participants			Number of SC/ST		
					Male	Female	Total	Male	Female	Total
Home Science	PF & PFW	Food and Nutrition for Farmers	01	ON	08	07	15	01	07	08
<b>Total</b>					<b>08</b>	<b>07</b>	<b>15</b>	<b>01</b>	<b>07</b>	<b>08</b>

Discipline	Clientele	Title of the training programme	Duration in days	Venue (Off / On Campus)	Number of participants			Number of SC/ST		
					Male	Female	Total	Male	Female	Total
Agricultural Meteorology	PF & PFW	Introduction to Agro-Met Advisory Bulletin, District Agro-Met Unit (DAMU) and Meghdoot App	01	OFF	14	21	35	08	18	26
	PF & PFW	Introduction to Agro-Met Advisory Bulletin, District Agro-Met Unit (DAMU) and Meghdoot App	01	OFF	26	19	45	12	08	20
	EF	Agro-Meteorological Indices and its role in crop production	01	ON	36	02	38	06	00	06
	EF	Climate change in agriculture	01	ON	36	02	38	06	00	06
	EF	Agro-Meteorological Indices and its role in crop production	01	ON	25	04	29	02	01	03
	EF	Climate change and sustainable Agriculture	01	ON	31	05	36	03	01	04
	EF	Climate change and sustainable Agriculture	01	ON	37	02	39	06	00	06
	PF & PFW	Introduction to Agro-Met Advisory Bulletin, District Agro-Met Unit (DAMU) and Meghdoot App	01	ON	05	16	21	03	13	16
	PF	Introduction to Agro-Met Advisory Bulletin, District Agro-Met Unit (DAMU) and Meghdoot App	01	OFF	25	00	25	06	00	06
	EF	Remote Sensing and Weather forecasting	01	ON	37	02	39	06	00	06
<b>Total</b>					<b>272</b>	<b>73</b>	<b>345</b>	<b>58</b>	<b>41</b>	<b>99</b>