



**ANNUAL REPORT  
(JAN. 2020 – DEC. 2020)**

**RATHINDRA KRISHI VIGYAN KENDRA  
PALLI SIKSHA BHAVANA  
(INSTITUTE OF AGRICULTURE)  
VISVA-BHARATI**

**SRINIKETAN, P. O. – SRINIKETAN,  
DIST. - BIRBHUM, WEST BENGAL – 731236,  
INDIA**

**SUBMITTED**

**TO**

**INDIAN COUNCIL OF AGRICULTURAL  
RESEARCH (ICAR) – AGRICULTURAL  
TECHNOLOGY APPLICATION RESEARCH  
INSTITUTE (ATARI), ZONE – V, KOLKATA**

**IN**

**APRIL, 2021**

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## PROFORMA FOR ANNUAL REPORT 2020 (January 2020 to December 2020)

### 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	03463-264771	rathindrakvk@gmail.com rathindrakvk@rediffmail.com

#### 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	<b>Vice-Chancellor: vice-chancellor@visva-bharati.ac.in</b> <b>Registrar: registrar@visva-bharati.ac.in</b> <b>Principal, Palli Siksha Bhavana (Institute of Agriculture)</b> <b>and In-Charge Rathindra KVK:</b> <b>debasis_us@yahoo.com</b>

#### 1.3. Name of Senior Scientist and Head [Programme Coordinator (Officiating)] with phone & mobile No.

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr. Subrata Mandal	-	9434431350	smkvkvb@gmail.com

**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. Staff Position (as on 1<sup>st</sup> April, 2021)**

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 (Programme Coordinator)	Vacant	Senior Scientist and Head	-	PB- 4, Rs.37400-67000/- + RGP - Rs.9000/-	Vacant since 01.11.2016.	Permanent	-
2	Subject Matter Specialist	Dr. Subrata Mandal	Senior Scientist and Head (Officiating) and Subject Matter Specialist	Agronomy	PB- 3, Rs. 15600-39100/- + GP-Rs.5400/- (Rs. 24650/-)	01.08.2004	Permanent	GC
3	Subject Matter Specialist	Sri Sourav Mondal	Subject Matter Specialist	Plant Protection	PB- 3, Rs. 15600-39100/- + GP-Rs.5400/- (Rs. 24650/-)	01.08.2004	Permanent	SC
4	Subject Matter Specialist	Dr. Prabuddha Ray	Subject Matter Specialist	Agricultural Extension	PB- 3, Rs. 15600-39100/- + GP-Rs.5400/- (Rs. 18240/-)	19.06.2012	Permanent	GC
5	Subject Matter Specialist	Dr. Madhuchhanda Khan	Subject Matter Specialist	Animal Science	PB- 3, Rs. 15600-39100/- + GP-Rs.5400/-+ NPA 25% (Rs. 16880/-)	10.06.2014	Permanent	GC
6	Subject Matter Specialist	Vacant	Subject Matter Specialist	Home Science	PB- 3, Rs. 15600-39100/- + GP-Rs.5400/- (Rs. 33100/-)	Vacant since 01.09.2018	Permanent	-
7	Subject Matter Specialist	Vacant	Subject Matter Specialist	Fishery	PB- 3, Rs. 15600-39100/- + GP-Rs.5400/- (Rs. 21300/-)	Vacant since 01.04.2020	Permanent	-
8	Programme Assistant	Vacant	Programme Assistant	-	PB-2, Rs. 9300-34800/- + GP-Rs.4200/-	Vacant since inception	Permanent	-
9	Computer Programmer	Sri Suraj Kumar Bhakta	Programme Assistant (Computer Programmer)	-	PB-2, Rs. 9300-34800/- + GP-Rs.4200/- (Rs. 10130/-)	16.06.2014	Permanent	OBC

10	<b>Farm Manager</b>	Sri Palash Ankure	Programme Assistant (Farm Manager)	-	PB-2, Rs. 9300-34800/- + GP-Rs.4200/- (Rs. 10130/-)	18.09.2014	Permanent	SC
11	<b>Accountant / Superintendent</b>	Vacant	Senior Assistant	-	PB-2, Rs. 9300-34800/- + GP- Rs.4200/-	Vacant since 01.04.2017	Permanent	-
12	<b>Stenographer</b>	Sri Makbul Ahmed	Jr. Stenographer-cum- Computer Operator	-	PB-1, Rs. 5200-20200/- + GP-Rs.2400/- (Rs. 11740/-)	13.04.1995	Permanent	GC
13.	<b>Driver</b>	Sri Krishna Bansi Chatterjee	Driver-cum-Mechanic	-	PB-2, Rs. 9300-34800/ - + GP- Rs.4200/- (Rs. 11560/-)	06.05.1997	Permanent	GC
14.	<b>Driver</b>	Sri Bikash Chandra Ghosh	Driver-cum-Mechanic	-	PB-2, Rs. 9300-34800/ - + GP- Rs.4200/- (Rs. 11560/-)	06.05.1997	Permanent	GC
15.	<b>Supporting staff</b>	Sri Chowdhury Md. Anwar	Supporting Staff	-	PB-1, Rs. 5200-20200/ - + GP- Rs.1900/- (Rs. 9850/-)	13.04.1995	Permanent	GC
16.	<b>Supporting staff</b>	Sri NaranTudu	Supporting Staff	-	PB-1, Rs. 5200-20200/ - + GP- Rs. 1800/- (Rs. 6090/-)	05.06.2014	Permanent	ST



13.	Mushroom production unit								
14.	Shade house								
15.	Soil test Lab					Totally completed	26.00	Under use	ICAR
16.	(Others, Please Specify) Portable Carp Hatchery for Fish Breeding					Totally completed	15.00	Under use	ICAR
17.	(Others, Please Specify) Duckery unit					Totally completed	80.00	Under use	ICAR
18.	(Others, Please Specify) Plant Diagnostic Laboratory					Totally completed	25.00	Under use	ICAR
19.	(Others, Please Specify) Micro Irrigation Demonstration Unit					Totally completed	100.00	Under use	ICAR

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

#### B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total km. Run	Present status
Motor Bike (Rajdoot)	1997	32,000.00	39,013	Not in running condition
Moped (Toro Jaz)	1997	12,500.00		Not in running condition
Multi Utility Vehicle (Bolero Plus)	2010	5,20,495.00	1,53,438	In running condition
Motor Bike (Hero Splendor Pro)	2016	59,223.00	6,146	In running condition
Scooter (Hero Edge LX)	2016	60,323.00	3,785	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 Digestion System Model KES 08L	2004-05	85,719.00	Working condition	ICAR
Kelplus Distillation System Elite Ex	2004-05	1,38,943.00	Working condition	ICAR
Systronics Micro controller based visible spectra-photometer	2004-05	53,064.00	Working condition	ICAR
Systronics P-H system	2004-05	21,582.00	Working condition	ICAR
Systronics Digital conductivity meter	2004-05	15,444.00	Working condition	ICAR
Systronics Flame photometer Type 128	2004-05	73405.00	Working condition	ICAR
Hotplate with energy regulator	2004-05	2,340.00	Working condition	ICAR
Glass distillation apparatus flux	2004-05	15,617.00	Working condition	ICAR
Physical balance cap.250g with weight box	2004-05	6,310.00	Working condition	ICAR
Shimadzu Electronic Balance	2004-05	66,254.00	Working condition	ICAR
Kjeldal digestion unit	2004-05	6,205.00	Working condition	ICAR
Kjeldal distillation unit	2004-05	10,411.00	Working condition	ICAR
Microscope- Trinocular	2010-11	47,069.00	Working condition	ICAR
Microscope – Stereo	2010-11	21,055.00	Working condition	ICAR
BOD incubator	2010-11	39,132.00	Working condition	ICAR
Autoclave- Vertical	2010-11	21,814.00	Working condition	ICAR
Centrifuge	2010-11	14,200.00	Working condition	ICAR
Microscope Image Projection System (MIPS)	2010-11	31,885.00	Working condition	ICAR
Laminar Flow	2010-11	53,465.00	Working condition	ICAR
Desiccators	2010-11	6,072.00	Working condition	ICAR
Rotary Shaker	2010-11	21,700.00	Working condition	ICAR
Digital Weighing machine	2010-11		Working condition	ICAR
Soil Testing Mini-Lab Mridhaparikshak Solar Operated	2015-16	70,000.00	Working condition	ICAR
Soil Testing Mini-Lab Mridhaparikshak Solar Operated	2016-17	86,000.00	Working condition	ICAR
Bardizzo Castrator	2016-17	1,600.00	Working condition	ICAR
Auto Vaccinator	2016-17	3,400.00	Working condition	ICAR
pH. Meter	2016-17	1,431.00	Working condition	ICAR
Room Thermometer	2016-17	295.00	Working condition	ICAR
Stethoscope	2016-17	500.00	Working condition	ICAR
Dissolved Oxygen Meter	2016-17	12,022.00	Working condition	ICAR
pH. Meter	2016-17	1,431.00	Working condition	ICAR
Digital Electronic Balance (5.0 mili grams – 300.00 grams)	2016-17	13,400.00	Working condition	ICAR

**b. Farm machinery**

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
<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
<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
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

#### 1.8. Details SAC meeting\* conducted in the year – Not Conducted.

Sl. No.	Date	Number of Participants	Salient Recommendations	Action taken	If not conducted, state reason
1.	-	-	-	-	The date of 24 <sup>th</sup> SAC Meeting of Rathindra KVK was scheduled to be held on 26 <sup>th</sup> March, 2020. But the meeting was postponed due to National Lockdown imposed to restrict COVID-19 infection.


\* *Salient recommendation of SAC in bullet form*

## 2.a. District level data on agriculture, livestock and farming situation (2020)

### 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)

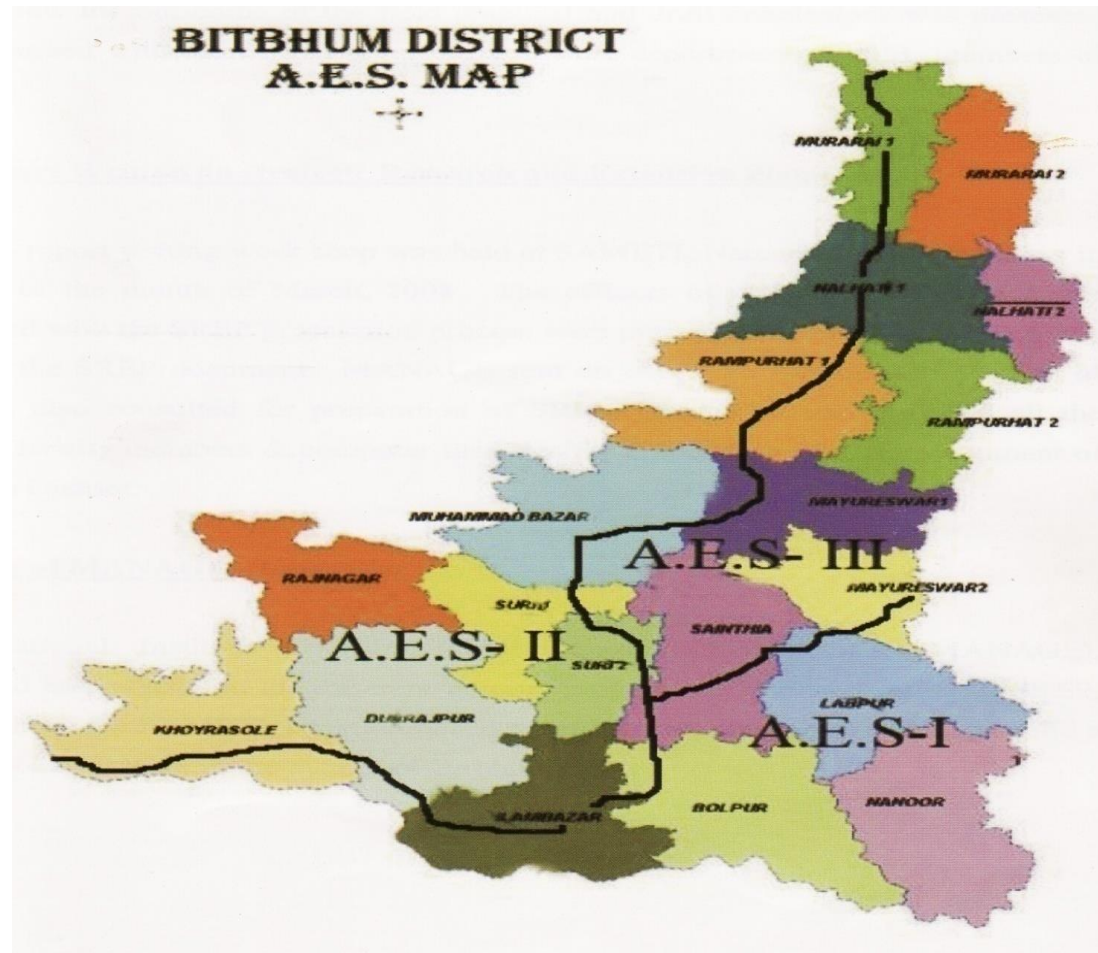
Eastern plateau (Chotanagpur) And Eastern Ghats, Hot Sub-humid Eco-Region (12.3)

**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 Agro-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, Nandor, Sainthia, parts of Mayureswar – I and Mayureswar – II, parts of Labpur, Illambazar	Blocks under this AES are Rajnagar, Dubrajpur, Khyrasole, parts of Nalhati – I, Rampurhat – I, Murarai	Blocks under this AES are Rampurhat – II, parts of Murarai – I, Murarai – II, Nalhati I, Nalhati – II, Md. Bazar, Suri – I and Suri – II.

		- I, Mayureswar - I, Illambazar, Labhpur, Suri - I and Md. Bazar.	
<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>	Pre-Kharif, Kharif and Boro Paddy  Mustard, Groundnut and Sesame  Black and Green Gram, Lentil, Bengal Gram, Kulthi  Seasonal vegetable round the year	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	Pre-Kharif, Kharif and Boro Paddy  Mustard, Groundnut and Sesame  Black Gram and Green Gram  Seasonal vegetables round the year

Fruits -	Mango, Guava, Citrus, Banana, Coconut	Mango, Guava, Citrus, Banana, Coconut	Mango, Guava, Citrus, Banana, Coconut.
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**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	1432590.1	3500	3592	12572	3540	3666.66	12980	3497	3775.2	13201.7	3305	3735.83	12346.92
Boro Paddy	68650	61224	4750	290814	53473	4867	260253.09	79310	5139.00	407574	67451	5210.8	351474	65120	5139	334651.7
Rabi Maize	390	119	930	110.67	61	945	57.645	9	940	8.46	85	905	76.925	250	975.15	243.7875
Summer Maize	950	75	1600	120	31	1626	50.406	114	1623	185.022	120	1580	189.6	450	1755	789.75
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
Adhar	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
Bhadoi Kalai	1500	1240	408	505.92	1321	502	663.142	1052	622	654.344	1085	640	694.4	1125	665	748.125
Kulhi & other Pulse	180	179	403	72.137	138	406.6	56.1108	94	420	39.48	99	475	47.025	100	485	48.5
Porato	23300	17930	27304	489553.55	19120	28432	543619.84	18795	23314.4	438194	19300	25251	487339	19485	27695	539637.1
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	136099.11	1722	77233	132995.23	1520	77817	118282	1269	76685	97313.5	1250	77612	97015

Source – Dept. of Agriculture, Birbhum District, Govt. of West Bengal. Internet Source - DDA,%20Birbhum.html

**Horticultural Development in Major Crops in Birbhum District in Terms of Area and Yield**

Major fruits and vegetables						
Crops	2004 -2005		2006 - 2007		2012 - 2013	
	Area (ha)	Productivity (q/ha)	Area (ha)	Productivity (q/ha)	Area (ha)	Productivity (q/ha)
Tomato	1680.00	55.00	1860.00	140.80		
Tomato (Winter)					900.00	164.45
Tomato (Spring)					1050.00	163.81
Cabbage	2370.00	86.00	2550.00	363.60		
Cabbage (Winter)					1200.00	267.00
Cauliflower	2130.00	52.00	2170.00	157.50		
Cauliflower (Winter)					1300.00	184.23
Cauliflower (Spring)					900.00	183.89
Peas					800.00	41.00
Brinjal	6410.00	87.00	6850.00	120.40		
Brinjal (Rainy)					2400.00	116.67
Brinjal (Winter)					5300.00	215.00
Brinjal (Summer)					2600.00	112.39
Cucurbits	8340.00	121.00	8280.00	144.20		
Cucurbits (Rainy)					300.00	100.00
Cucurbits (Winter)					900.00	177.78
Cucurbits (Summer)					8200.00	147.56
Onion	1090.00	70.00	1380.00	72.90	1455.00	112.37
Lady's Finger (Rainy)					1520.00	90.13
Lady's Finger (Winter)					420.00	100.00
Sweet Potato					850.00	220.59
Beans					760.00	31.19
Radish (Winter)					600.00	133.33
Radish (Spring)					1230.00	121.95
Watermelon					1000.00	160.00
Elephant's Foot Yam					830.00	234.94
Arum					750.00	142.67
Leafy Vegetables (Rainy)					50.00	240.00
Leafy Vegetables (Winter)					40.00	200.00
Leafy Vegetables (Spring)					1000.00	70.00
Leafy Vegetables (Summer)					20.00	15.00
Others (Rainy)					4500.00	07.11
Others (Winter)					3900.00	15.77
Others (Spring)					1150.00	15.04
Others (Summer)					3000.00	09.83

Misc. Vegetables	10350.00	14.90	22000.00	51.90		
<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.



	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, 2020 to December, 2020**

Month	Rainfall (mm.) (Total)	Temp. (° C) Maximum	Temp. (° C) Minimum	Temp. (° C) Maximum (Mean)	Temp. (° C) Minimum (Mean)	Relative Humidity (%) (Mean)	
						At 8.30 AM	At 5.30 PM
January,2020	25.9	29.4	7.6	24.0	11.5	89.3	69.0
February,2020	2.9	30.6	8.2	26.7	13.0	74.6	54.7
March,2020	49.5	36.4	15.4	31.3	18.6	67.7	55.9
April,2020	14.7	39.6	20.0	35.6	22.4	53.2	40.2
May,2020	147.7	39.4	19.4	33.4	23.5	79.8	73.7
June,2020	266.6	36.7	23.1	34.2	25.7	83.7	81.9
July,2020	288.4	36.5	24.1	34.0	26.3	86.8	83.5
August,2020	304.1	36.0	24.8	33.0	26.5	87.3	83.5
September,2020	207.2	35.7	23.9	33.8	26.2	86.6	84.3
October,2020	57.1	35.3	17.4	32.5	23.9	83.8	80.9
November,2020	0	32.0	10.8	29.7	16.4	74.6	67.2
December,2020	0.2	28.8	7.6	32.2	12.1	85.2	66.8
Total	1364.3						

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

Highest rainfall observed in the month of August, 2020 i.e. 304.1 mm

Lowest rainfall observed in the month of November, 2020 i.e. 0.0 mm

Total rainfall observed during the year 2020 was 1364.3 mm

Highest Maximum temperature observed in the month April, i.e. 39.6 °C

Lowest Minimum temperature observed in the month January and December, i.e. 7.6 °C

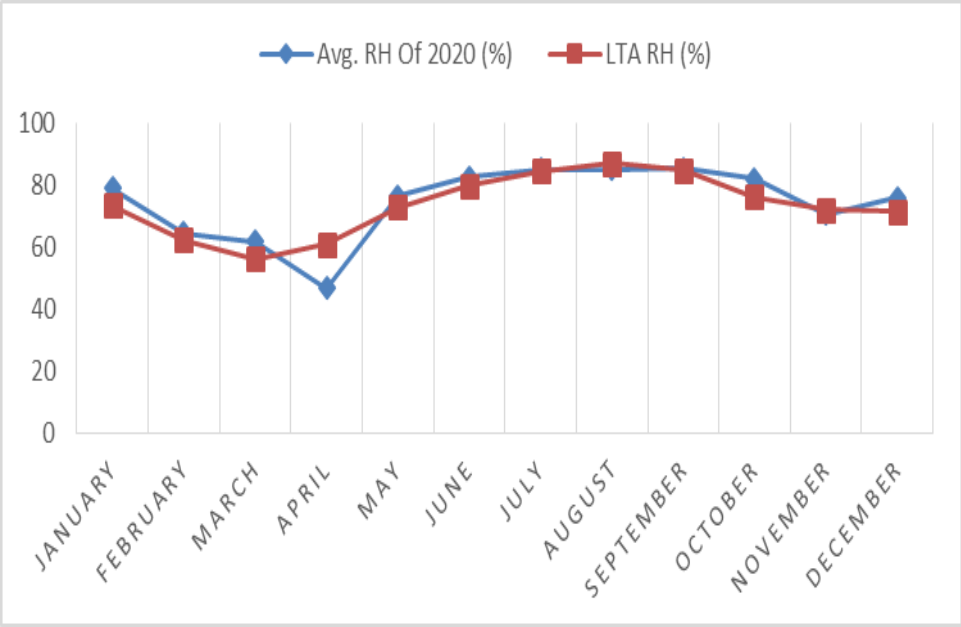
**Comparison between Observed data of 2020 to Long term Average (LTA) data of Birbhum district**

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

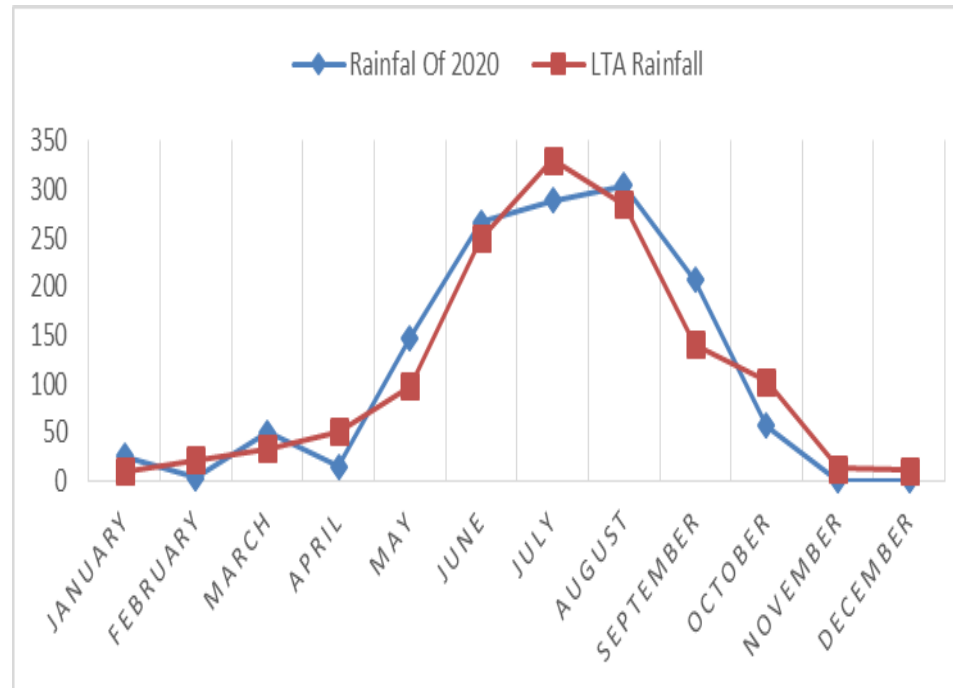
LTA = Long Term Average of 26 Years (From 1989-90 to 2016-17)

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

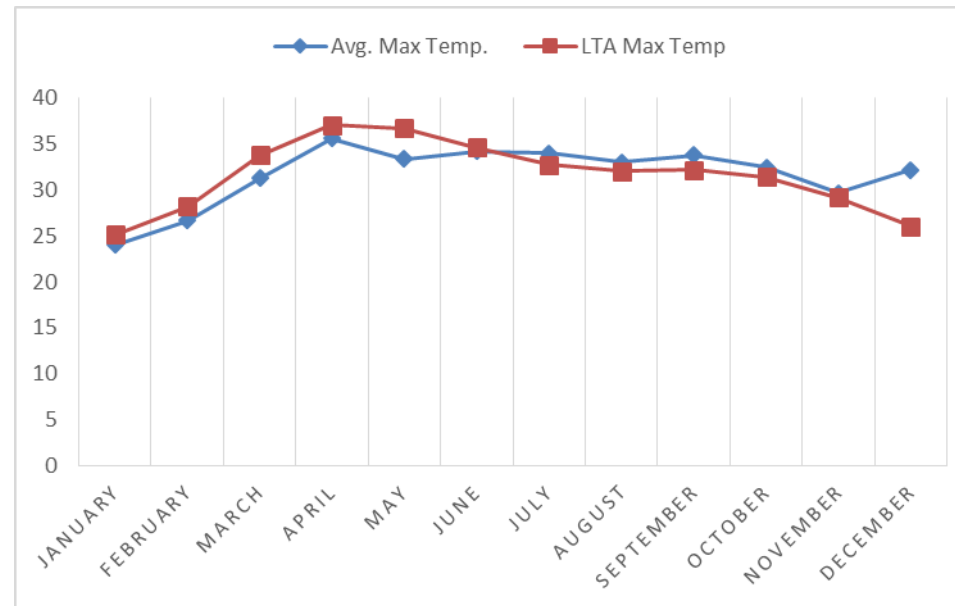
Monthly Average Relative Humidity (%) of Birbhum District in January, 2020 to December, 2020 vis-à-vis Long Term Average Monthly Relative Humidity (%) of Birbhum District



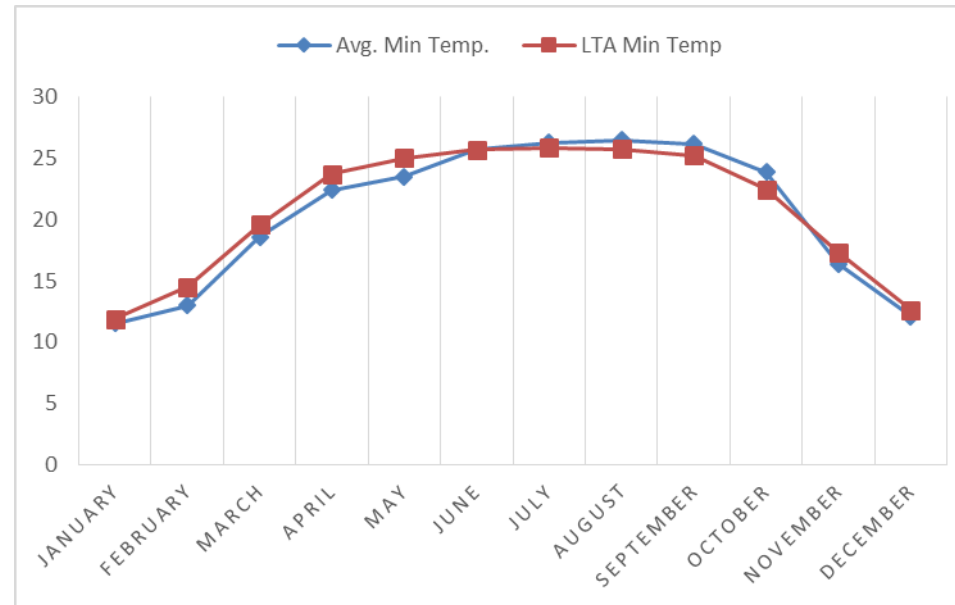
Monthly Rainfall (mm.) of Birbhum District in January, 2020 to December, 2020 vis-à-vis Long Term Average Monthly Rainfall (mm.) of Birbhum District



Monthly Average Maximum Temperature ( $^{\circ}$  Centigrade) of Birbhum District in January, 2020 to December, 2020 vis-à-vis Long Term Average Monthly Maximum Temperature ( $^{\circ}$  Centigrade) of Birbhum District



Monthly Average Minimum Temperature ( $^{\circ}$  Centigrade) of Birbhum District in January, 2020 to December, 2020 vis-à-vis Long Term Average Monthly Minimum Temperature ( $^{\circ}$  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

Category		(Number)							
		Year - 1989	Year - 1994	Year - 1997	Year - 2003	Year - 2007	Year 09-10	Year 10-11	Year 11-12
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Cattle:								
	Cows	255381	266217	274094	282145	372662			

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

Source: - Live-Stock Census Report, Govt. of W. B. and Annual Administrative Reports of 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
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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)
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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 Brinjal, Chilli, Tomato, Elephant Foot Yam, Cucurbits; Fruit plants like 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.	<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> </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			
3.	Sattore	Bolpur - Sriniketan	Asadullapur			
4.	Illambazar	Illambazar	Sahebdaanga			
5.	Panrui	Sainthia	Digha			

- Lack of credit facilities
- Lack of Insurance facilities for Crops
- Lack of Market Information of the produced products
- Lack of Backward and Forward Linkages for the farmers and farm women
- Lack of well established producers' Groups.

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

### Name of the villages adopted by PC and SMS (2020) 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. Pusa Bahar and Pusa Mahek and (ii) Wheat Var. HD – 2824.</p> <p><b>H. Cluster Front Line Demonstrations (Cluster FLDs) on Mustard Var. Pusa Mahek.</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. Pusa Bahar and Pusa Mahek; (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>

Sahebda (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. Pusa Bahar and Pusa Mahek; (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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### 3.1

#### Achievements on technologies assessed and refined

Summer 2020

#### OFT – 1

1.	Title of On farm Trial	Assessment of liming dose in profitable manners in increasing productivity of Black Gram
2.	Problem diagnosed	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.	Details of technologies selected for assessment / refinement	<p><u>Assessment</u></p> <p>Farmers' Practice : No liming</p> <p>Technology Option - I : Lime as per soil testing</p> <p>Technology Option - II: Lime @ 10% of the Lime requirement as per soil testing</p> <p>Technology Option - III: Lime @ 20% of the Lime requirement as per soil testing</p> <p>(N. B.: - Recommended fertilizer dose will be applied in all the Technology Options including the Farmers' Practice.)</p>
4.	Source of Technology (ICAR / AICRP / SAU / other, please specify)	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.	Production system and thematic area	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, 2020)**

**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					
Farmers' Practice : No liming	5	11	61	5.2	8.0	19325	48000	28675	2.49
Technology Option-I: Lime as per soil testing		13	65	5.8	12.2	56825	73200	16375	1.29
Technology Option -II: Lime @ 10% of the Lime requirement as per soil testing		18	75	6.9	12.9	23075	77400	54325	3.35
Technology Option - III: Lime @ 20% of the Lime requirement as per soil testing		17	73	6.2	12.5	26825	75000	48175	2.80
SEM <sub>±</sub>		0.79	0.46	0.094	0.02		295.80	181.93	0.02
CD(P=0.05)		2.39	1.40	0.29	0.05		891.82	548.50	0.05

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

	<b>Trial 1</b>	<b>Trial 2</b>	<b>Trial 3</b>	<b>Trial 4</b>	<b>Trial 5</b>
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<b>Initial soil pH</b>	6.2	6.1	6.4	6.2	6.2
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**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 (12.9 q/ha), and B:C ratio (3.35) than the T1 (Yield- 12.2 q/ha and B:C ratio- 1.29) and the T3 (Yield-12.5% and B:C ratio- 2.80) 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 6.1 however average Soil pH just after harvest became 6.5. So, it can be concluded that T2 i.e., 10% of recommended dose of lime was significantly more beneficial than any other treatments in respect of productivity and profitability.

## OFT – 2

<b>1.</b>	<b>Title of On farm Trial</b>	Assessment of profitability due to integration of different components under fish-based production systems
<b>2.</b>	<b>Problem diagnosed</b>	Lack of technological knowhow in integration of components in proper way for higher profitability
<b>3.</b>	<b>Details of technologies selected for assessment/refinement</b>	<p><b>Assessment</b></p> <p>Farmer's practice: Traditional fish farming</p> <p>I. composite fish culture (IMC) + Duck farming ( 30 nos.) + <i>Azolla</i> + Pulses (Redgram - Blackgram)</p> <p>II. composite fish culture (IMC) + Duck farming (30 nos.) + <i>Azolla</i> + Vegetables (Ladys' Finger -Capsicum)</p>
<b>4.</b>	<b>Source of Technology (ICAR / AICRP / SAU / other, please specify)</b>	ICAR [DARE/ICAR Annual Report, 2008-09, Page12-14 & Fertilizer News, 46 (11), pp 53-55 & 57-58]
<b>5.</b>	<b>Production system and thematic area</b>	Fish based production system and Thematic Area: - Integrated Farming System
<b>6.</b>	<b>Performance of the Technology with performance indicators</b>	The result of the trial indicated that Technology Option –I i.e., Composite fish culture +Poultry farming +Azolla+ Pulses exhibited significantly higher BC ratio (2.93) than those of Technology Option-II (2.52) and farmers practice (1.21).
<b>7.</b>	<b>Final recommendation for micro level situation</b>	It may be recommended that integrated farming system with composite fish culture, duck farming, azolla, and pulse cultivation in bank of the pond is very effective to integrate the components in profitable manner in Birbhum District.
<b>8.</b>	<b>Constraints identified and feedback for research</b>	<p>The scientific management and monitoring and evaluation and record keeping of different components of the Integrated Farming System is complicated for general farmers to follow.</p> <p>Future Research focus should be on areas of simplification and calibration of various models of IFS for different types of Agro Ecological Situation of Birbhum District.</p>
<b>9.</b>	<b>Process of farmers participation and their reaction</b>	Farmers actively participated in the day-to-day monitoring of the fishery, animal, crop components and data collection with KVK scientists. Farmers also incurred all the labour cost for the Integrated Farming.

**Thematic area: Integrated Farming System (Summer 2020)**

**Problem definition:** Lower profitability under fish-based production system

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

**Table 2: Profitability under fish based integrated farming system**

Technology option	No. of trials	Man days utilized per year	Cost of cultivation (Rs. / unit*)	Gross return (Rs. / unit)	Net Return (Rs. / unit)	BC Ratio
Farmer's practice: Traditional fish farming	7	22	43,846	65,152	21,306	1.48
TO I: composite fish culture (IMC) + Duck farming ( 30 nos) + Azolla + Pulses (Redgram- Blackgram)		258	67,045	2,06,542	1,39,497	3.08
TO II: composite fish culture (IMC) + Duck farming (30 nos) + Azolla + Vegetables (ladys' finger-capsicum )		272	99,704	2,61,350	1,61,646	2.62
SEM±		9.23	-	-	-	0.107
CD at 5%		28.42	-	-	-	0.33

- FP: 1 unit = 0.19 ha pond only + fallow land
- Opt-1: 1 unit= 0.19 ha pond + 30 nos. of Ducks + 0.13 ha utilized land with pulse
- Opt-2: 1 unit= 0.19 ha pond + 30 nos. of Ducks + 0.13 ha utilized land by vegetables

**Result:**

The result of the trial indicated that Technology Option –I i.e., Composite fish culture +Poultry farming +Azolla+ Pulses exhibited significantly higher BC ratio (3.08) than those of Technology Option-II (2.62) and farmers practice (1.48). Here it is to be mentioned that gross return and net return was higher in integrated farming system where vegetable cultivation was one of the components. It might be due to higher value of vegetables than pulses. But due to low cost of cultivation, BC ratio was higher in integrated farming system where pulses were the component. Droppings of ducks were also used as feed of fishes in both Technology Option-I and II. But in Technology Option-I, the leftover materials of pulses were also used as feed of fishes and ducks. So, integration was more among the components in the Technology Option-I. Moreover, azolla was also used as feed of fish and ducks. Besides that, the azolla was also used as organic manure and bio fertilizer in pulses and vegetables. Further, man day's utilization (272 per year) was slightly higher in Technology Option –II than Technology Option-I (258 per year) but it was found at par effects. In farmers practice, man days utilization was very low (22 per year) and BC ratio was also very low (1.48). Therefore, it may be concluded that integrated farming system with composite fish culture, duck farming, azolla and pulse cultivation in bank of the pond is very effective to integrate the components in profitable manner in Birbhum District.

**OFT-3**

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 2020)

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

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

**Table 3: 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	54.27 <sup>a</sup> +0.84	138.93 <sup>a</sup> +1.91	365.47 <sup>a</sup> +2.86	524.35 <sup>a</sup> +3.75	898.71 <sup>a</sup> +9.63	1135.85 <sup>a</sup> +11.32	3985	8564	4567	2.14
Technology Option — I: Krishibro		64.35 <sup>b</sup> +0.76	177.28 <sup>b</sup> +1.86	413.05 <sup>b</sup> +3.54	617.37 <sup>b</sup> +3.94	1045.42 <sup>b</sup> +10.45	1312.85 <sup>b</sup> +13.97	3985	9898	5913	2.48
Technology Option — II: Caribro		67.12 <sup>b</sup> +0.71	182.89 <sup>b</sup> +1.78	428.57 <sup>c</sup> +3.61	634.85 <sup>c</sup> +4.07	1075.47 <sup>c</sup> +10.86	1362.23 <sup>c</sup> +14.68	3985	10271	6285	2.57

**Result:** The data from this table indicates that Technology option II i.e. Caribro produced significant weight changes and better B/C ratio (2.57) than Technology option-I i.e., Krishibro and farmer's practice (Coloured broiler: Kuroiler).

Kharif 2020

## OFT - 4

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>	Paddy – Mustard/ Potato – green gram
	<b>Thematic Area</b>	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>	Collection of data was found difficult due to rain before the sowing time.
	<b>feedback for research</b>	
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, 2020)**

**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 4 : 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	31	7.7	18000	46200	28200	2.56
Technology Option I: Thiamethoxam 25% WG (0.2 g./lit ).		21	11.1	20000	66600	46600	3.33
Technology Option II: Thiamethoxam 25% WG 0.2g./lit. + Lambda cyhalothrin 5% SC (0.5 ml per lit.)		15	12.2	20200	73200	53000	3.62
Technology Option III: Fipronil + Acidamiprid @ 1.6 ml/lit of water		24	10.0	19750	60000	40250	3.04
SEM ±		0.63	0.44		470.81	340.19	0.24
CD ( $\rho=0.05$ )		1.91	1.32		1419.45	1025.63	0.73

**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 (12.2 q/ha), lower pest attack intensity (15%), and higher B:C ratio(3.62) than the TO-I (yield 11.1 q/ha), pest attack intensity(27%), and B:C ratio(3.33)) and the TO-III (yield , pest attack intensity, and B:C ratio) and also significantly higher than the Farmers' Practice (pest attack intensity34%, yield 7.7 q/ha and B:C ratio 2.56) in Green Gram cultivation during kharif.

**Rabi, 2020****OFT - 5**

1.	<b>Title of On farm Trial</b>	<b>Assessment of micronutrient boron in quality and production of Broccoli (<i>Brassica oleracea</i> var. <i>italica</i>) 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 5: 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.)					
<b>Farmers' practice</b>	7	11	16	20.2	113000	292900	179900	2.59
<b>Technology Option I: Soil Applied Boron</b>		15	19	27.5	125000	398750	273750	3.19
<b>Technology Option II: Foliar spray of Boron</b>		18	21	30	133000	435000	302000	3.27
<b>Sem ±</b>		0.88	0.15	0.53	-	14907.12	258.20	0.36
<b>CD (p=0.05)</b>		2.42	0.41	1.45	-	40965.84	709.55	0.98

(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- 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) and also significantly higher than the Farmers' Practice (Number of leaves- 11, Curd size- 16 cm., Yield- 20.2 t/ha and B:C ratio- 2.59) in Broccoli cultivation.

## OFT - 6

January to December, 2020

<b>Season</b>	<b>2020</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>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>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>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 (2020)*

**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: 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 = T<sub>1</sub></b> = 10 members (Small Group)	10	61,101.00	1,11,213.00	56,501.00	31,203.00	13,301.00	71,203.00	3,44,522.00	III
<b>T<sub>2</sub></b> = 11-15 members (Medium Group)	10	1,22,302.00	2,03,523.00	2,03,503.00	61,503.00	41,500.00	2,23,501.00	8,55,832.00	I



### Details of farming situation

Crop	Season	Farming situation (RF/Irrigated)	Soil type	Status of soil (Kg/ha)			Previous crop	Sowing date	Harvest date	Seasonal	No. of rainy days
				N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O					
1)Paddy var Ranidhan	Kharif ,2020	Monocropped upland	Sandy loam soil with lower pH	Medium	Low	High	Fallow	1-15 <sup>th</sup> August, 2020	November 25 <sup>th</sup> to December 10 <sup>th</sup> , 2020	-	-
2) Paddy var IET 4786&MTU 1010	-do-	-do-	-do-	-do-	-do-	-do-	-do-	1-15 <sup>th</sup> August, 2020	1-10 <sup>th</sup> November, 2020	-	-
3)Maize var.Kiran	-do-	-do-	-do-	-do-	-do-	-do-	-do-	10-20 <sup>th</sup> July, 2020	10-20 <sup>th</sup> November, 2020	-	-

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 Kharif, 2020	Varietal replacement	Improved variety Ranidhan (IET 19418)	56	15	67.1	56.9 (Lal swarna)	17.9	60930	1,27,490	66,560	2.09	60700	1,08,110	47410	1.78



\*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 demonstration on pulse crops

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

\*Besides that CFLD on Pulse 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

## 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			Dem o	Chec k	Gros s Cost	Gross Return	Net Return	** BCR	Gros s Cost	Gros s Return	Net Return	** BCR
Azolla Kharif 2020	Soil Health Management	Green manuring in rainy	84	24	66.7 (Paddy Yield)		20.8	No. of panicles/m <sup>2</sup>	392	370	58100	120060	61960	2.06%	60932	104880	43948	1.72

		season paddy var.MITU-7029				55.2 (Paddy Yield)		No.of grains /Panicle	182	151								
Ekangi Pre kharif 2020	Crop diversification	Planting Materials and Methods of Cultivation	32	0.33	134		New Introduction	Rhizome Size (cm)	3.4	-	-	1.60,000	10,72,000	9,16,000	6.7	--	-	-
Drumstick Kharif 2019	Varietal Replacement	PKM-1	146	2	18.0	42,7		Pod length (Cm)	45	31	62800	427000	364200	6.79	58000	180000	122000	3.10
Elephant Foot Yam Kharif,2020	Varietal replacement	Bidhan Kusum	61	0.2	697.5	250(Local)		Corn size (Cm)	29.5	10.2	505434	1743750	1238316	3.45	280000	500000	220000	1.78
Food+Fodder intercropping ,Rabi ,2019	New introduction	Fodder(Oat) + Pulse(Lentil) Intercropping	30	2.0			Oat-232 Lentil-8.9				17400	62200	44800	3.57	-	-	-	-
Blackgram Summer ,2020	Weed Management	Application of pre emergence herbicide Pendimethalin	82	10	12.7	10.8		Weed population/ sq.m.at 25 DAS	6	29	18300	63500	45200	3.46	17400	54000	36600	3.10
<b>Total</b>			435	38.53														

## Livestock

Category	Thematic area	Name of the technology demonstrated	No. of Farmer	No. of units	Major parameters		% change in major parameter	Other parameter		*Economics of demonstration (Rs.)				*Economics of check (Rs.)			
					Demonstration	Check		Demonstration	Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR

Dairy																	
Cow																	
Buffalo																	
Poultry Japanese Quail (Winter, 2019-20)	New Introduction	Introduction of Quail	30	(20 No. of birds per unit)	Body weight at 6 <sup>th</sup> week- Male- 148.32±1.31 Female- 164.21±1.20			Livability(%)- 97.53		399	950	551	2.38	-	-	-	-
Poultry (Summer, 2020)	Broiler management	Water sanitiser Chlorine dioxide	30	(2400 No. of birds in each unit)	Body weight gain at 42 <sup>nd</sup> day 2318.82±41.73	Body weight gain at 42 <sup>nd</sup> day 2169.08±44.56		FCR at 42 <sup>nd</sup> day 1.59	FCR at 42 <sup>nd</sup> day 1.75	3,04,454.38	4,27,637.20	123182.82	1.40	3,12,498.50	3,86,592.80	74094.30	1.23
Rabbitry																	
Piggery																	
Sheep and goat (Goat Winter, 2019-20)	Feed management	Calcium supplementation in Black Bengal Does after kidding	10	10 (2 Does per unit)	Birth weight- 1.07±0.04	Birth weight- 1.05±0.04		Body weight at 1 <sup>st</sup> month - 2.28±0.06	Body weight at 1 <sup>st</sup> month- 1.88±0.05	3138	7300	4162	2.32	3010	5630	2620	1.87



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	01		70 (+)	03	00							91	11
Total		100	10														

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

\*\* BCR= GROSS RETURN/GROSS COST

### Women empowerment

Category	Name of technology	No. of demonstrations	Observations		Remarks
			Demonstration	Check	
Farm Women	Back Yard Kitchen Garden	118	The Programme is going on.		
Pregnant women					
Adolescent Girl					
Other women					





Coconut										
Others (Pl. specify)										
Total										
Fodder crops										
Napier (Fodder)										
Maize (Fodder)										
Sorghum (Fodder)										
Others (Pl. specify)										
Total		15	02	5550	3480	59.4	31300	83250	51950	2.67

### 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 17.90 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 134 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 119%.
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 697.50 q. / ha with 179.00 per cent increase in yield over local check along with B : C Ratio of 3.45 over 1.78 in Local Check.
6.	Pre emergence Herbicide Pendimethalin @ 6 ml./ lt of water in summer Black Gram	Application of Herbicide Pendimethalin at 1-3 DAS increased summer Black Gram yield 17.6% by reducing early weed population.
7.	Hybrid Maize var. Kiran	Hybrid Maize cultivation in monocropped upland situation is beneficial (B:C Ratio 2.66) as a part of crop diversification effort.
8.	Fodder (Oat) + Pulse (Lentil) intercropping	Fodder (Oat) + Pulse (Lentil) intercropping gives a B: C Ratio of 3.57 with a Net Return of Rs. 44,800.00 / ha.
9.	Supplementation with Non-antibiotic (Probiotic) growth promoters in broiler production	Supplementation with Non-antibiotic (Probiotic) growth promoters in broiler production is very much profitable in terms of Body Weight gain than traditional practice and also gives a B: C Ratio of 2.32 in comparison to 1.87 of traditional practice.
10.	Calcium supplementation in Black Bengal Does after kidding	Calcium supplementation in Black Bengal Does after kidding increased survivability by 21.8% and also increased body weight. B:C Ratio was increased by 24.1%.

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 70 %, Video Dissemination by 80 %, Percentage of Population Adopted New Technology increases by 70 % and Videos as Sources of New Technologies increases by 86 %.
12.	Back Yard Kitchen Garden	The Programme is going on.
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. 13,500.00 per hectare with an average cost reduction of 58 per cent. But found difficult in rainy season if heavy rain comes within 3 days of sowing
14.	Japanese Quail Rearing	Japanese Quail Rearing fetched a good income with B;C Ratio of 2.38 as a part of diversified poultry farming.

### Extension and Training activities under FLD

Sl. No.	Activity	Date	No. of activities organized	Number of participants	Remarks
1.	Field days	-	-	-	Due to restrictions imposed to control COVID-19 infections, extension and training activities were restricted.
2.	Farmers Training	-	-	-	
3.	Media coverage	-	-	-	
-4.	Training for extension functionaries	-	-	-	

### Performance of the demonstration under CFLD on Pulse and Oilseed Crops during Rabi, 2019-20, Kharif 2020 and Rabi 2020-21:

#### RABI PULSE (2019-20)

The crops were sown in the month of November-December, 2019. But results were obtained in the month of March, 2020 i.e. within the reporting period (January, 2020 to December, 2020)

#### A. Technical Parameters:

Sl. No.	Crop demonstrated	Existing (Farmer's) variety name	Existing yield (q/ha)	Yield gap (Kg/ha) w.r.to			Name of Variety + Technology demonstrated	Number of farmers	Area in ha	Yield obtained (q/ha)			Yield gap minimized (%)		
				District yield (D)	State yield (S)	Potential yield (P)				Max.	Min.	Av.	D	S	P
1	Lentil	WBL-77	7.40	90	190	860	Improved variety WBL 77 + Herbicide Whip Super (Fenoxaprop-P-ethyl) as early post emergence @	10	38	14.50	10.10	13.40	670	320	70

							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									
<b>Total</b>								<b>10</b>	<b>38</b>							

### B. Economic parameters

Sl. No.	Variety demonstrated & Technology demonstrated	Farmer's Existing plot				Demonstration plot				Farmers, feedback
		Gross Cost (Rs/ha)	Gross return (Rs/ha)	Net Return (Rs/ha)	B:C Ratio	Gross Cost (Rs/ha)	Gross return (Rs/ha)	Net Return (Rs/ha)	B:C Ratio	
1	Improved variety WBL 77 + 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	16848	44400	27552	2.63	18810	80400	61590	4.27	additional net return Rs. 34638/ha than local check which is very much encouraging for lentil cultivation under rice fallow situation



1.	Improved variety WBL 77 + 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	Y	Farmers prefer brown colored seeds of Lentils.	72%	None	80%	Shorter duration improved varieties should be popularized. 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.
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### E) Specific Characteristics of Technology and Performance

Specific Characteristic	Performance	Performance of Technology vis-a vis Local Check	Farmers Feedback
1.Plant height (cm):	Height is less	New technology: 15 Local check: 8	81% 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. 34038/ha. Than local check which is very much encouraging for lentil cultivation under rice fallow situation.
2.No. of branches/ plant:	Highly branched	New technology: 38 Local check: 17	

### F) Extension activities under FLD conducted till dates:

1.	Organic cultivation practises for Lentil	BIRBHUM KVK 25.11.2019	50
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2.	Preparation & use of Organic Inputs	BIRBHUM KVK 8-14.12.2019	15
3.	Pulses production in crop Diversification	BIRBHUM KVK 28.01.2020	32

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

**Rathindra KVK collecting Data at the Flowering and Harvesting Stage of Lentil**



No.	Crop demonstrated	Existing (Farmer's) variety name	Existing yield (q/ha)	w.r.to			Name of Variety + Technology demonstrated	Number of farmers	Area in 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	Summer -Green gram Var: IPM-02-3+ Herbicides pendimethalin as pre emergences @ 3lt/ha+ Micronutrient spray Boron-20 @2gm/lt water in 25 and 45 DAS	62	10	12.85	8.80	12.25	30	538	60
2	Summer-Black gram	Kali-50	6.2	2	56	780	Summer -Black gram Var: PU-31+ Herbicides pendimethalin as pre emergences @ 3lt/ha+ Micronutrient spray Boron-20 @2gm/lt water in 25 and 45 DAS	47	10	13.00	9.5	12.20	3000	1071	77

### B. 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-02-3 Herbicides, Micronutrient spray	19700	48000	28300	2.44	20900	73500	52600	3.51	Additional net return is Rs.24300/ha
2	Black gram Var, PU_31,	16450	34100	17650	2.07	17500	67100	49600	3.83	Additional net return is Rs.31950/ha

	Herbicides, Micronutrient									
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### C. 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-02-3 + Herbicides, Micronutrient spray	12250 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-31 + Herbicides, Micronutrient spray	12200 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

### D. 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-02-3 + 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	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,	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

				beneficiaries when the programme support would be withdrawn.		micro-nutrients, plant protection chemicals, irrigation water, labour etc.	created by the Governmental agencies.
1.	Summer- Black gram Var: PU-31 + 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.

### E. Specific Characteristics of Technology and Performance

Specific Characteristic (Green gram)	Performance	Performance of Technology vis-a vis Local Check	Farmers Feedback
1. Duration	Shorter	New variety: 80 days Local check: 90 days	53 % 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. 24300/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	
Specific Characteristic (Black gram)	Performance	Performance of Technology vis-a vis Local Check	Farmers Feedback
1. Duration	Shorter	New variety: 70 days Local check: 95days	96% 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.
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	31950/ha than local check which is very much encouraging for summer black gram cultivation instead of summer rice.
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**F) Extension activities under FLD conducted till dates:**

Sl. No.	Extension Activities organized	Date and place of activity	Number of farmers attended
1.	Audio Conference on Management of Summer Pulses during Lock down	29.04.2020 Rathindra KVK	52

**G. 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 Technology Agent Collecting Data at the Vegetative Stage of Green Gram**

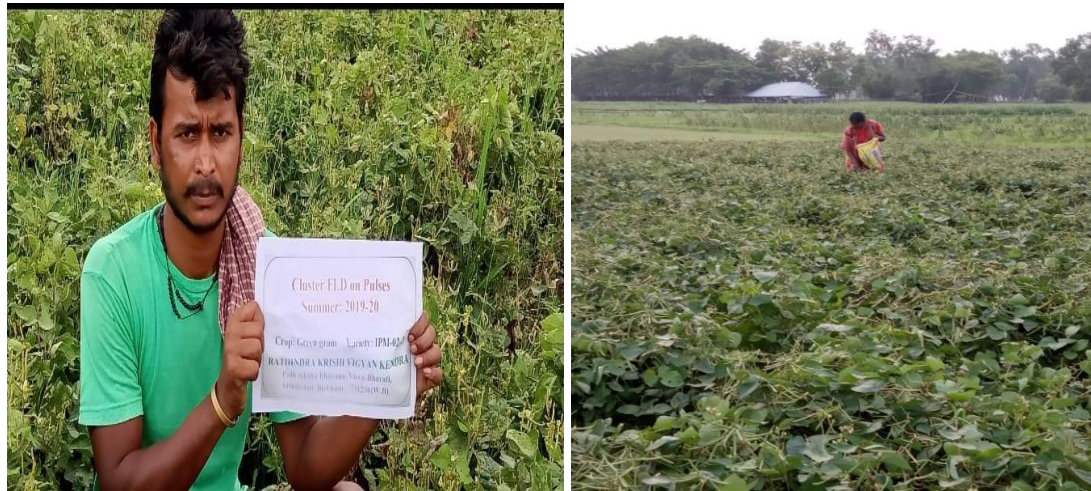




**Rathindra KVK Technology Agent collecting Data at the Flowering Stage of Green Gram**



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



**Rathindra KVK Scientist collecting Data at the Harvesting Stage of Green Gram**





#### H. Details of budget utilization

Crop (provide crop wise information)	Items	Budget Received (Rs.)	Budget Utilization (Rs.)	Balance (Rs.)
Summer,2019-20, (Green Gram and Black gram)	i) Critical input	<b>1,80,000.00</b>	<b>1,32,700.00</b>	<b>47,300.00</b>
	ii) TA/DA/POL etc. for monitoring			
	iii) Extension Activities (Field day, training etc)			
	iv)Publication of literature etc.			

**Total****1,80,000.00****1,32,700.00****47,300.00****RABI PULSES (2020-21)**

The crops were sown in the month of November-December 2020 (within reporting period) but results have been obtained during the month of March, 2021 (Beyond reporting period)

**A. Technical Parameters:**

Sl. No.	Crop demonstrated	Existing (Farmer's) variety name	Existing yield (q/ha)	Yield gap (Kg/ha) w.r.to			Name of Variety + Technology demonstrated	Number of farmers	Area in ha	Yield obtained (q/ha)			Yield gap minimized (%)		
				District yield (D)	State yield (S)	Potential yield (P)				Max.	Min.	Av.	D	S	P
1	Chickpea	Mahamaya-1	Crop was in early growing stage during reporting period i.e up to December, 2020				Improved Var. Anuradha + 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	84	10						
2	Lentil	Asha													

				spray Boron-20 @ 2 g/lit water in 25 and 45 DAS and need based fungicide spray Carbendazim+ Mancozeb 2 g/lit of water for control of wilt			
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## **RABI OILSEED (2019-20)**

The crops were sown in the month of October-November, 2019. But results were obtained in the month of March, 2020 i.e. within the reporting period (January, 2020 to December, 2020)

### **B. Technical Parameters:**

Sl. No.	Crop demonstrated	Existing (Farmer's) variety name	Existing yield (q/ha)	Yield gap (Kg/ha) w.r.to			Name of Variety + Technology demonstrated	Number of farmers	Area in ha	Yield obtained (q/ha)			Yield gap minimized (%)		
				District yield (D)	State yield (S)	Potential yield (P)				Max.	Min.	Av.	D	S	P
1	Mustard	B-9	10.25	116	52	575	Var. NRCHB- 101 + Herbicides pendimethalin as pre-emergence @ 3lt/ha+ Micronutrient spray Zinc EDTA @ 1g/lit water in 25 and 45 DAS	269	55	13.50	10.85	12.85	193	500	55
							Var. YSH- 0401 + Herbicides pendimethalin as pre-emergence @ 3lt/ha+ Micronutrient spray Zinc EDTA @ 1g/lit water in 25 and 45 DAS	245	55	12.50	10.50	11.90	142	317	28

Total 514

110

**B. Economic parameters**

Sl o.	Variety demonstrated & Technology demonstrated	Farmer's Existing plot				Demonstration plot				Farmers, feedback
		Gross Cost (Rs/ha)	Gross return (Rs/ha)	Net Return (Rs/ha)	B:C Ratio	Gross Cost (Rs/ha)	Gross return (Rs/ha)	Net Return (Rs/ha)	B:C Ratio	
1	NRCHB-101 (Improved variety) + Herbicides pendimethalin as pre emergence @ 3lt/ha+ Micronutrient spray Zinc EDTA @ 1g/lt water in 25 and 45 DAS	19983	51250	31267	2.56	20982	64250	43268	3.06	Additional net return Rs. 12001/ ha The new variety can assure yield even under rice fallow situation. It has good oil content. Farmers like yellow sarson more than mustard
2	YSH-0401 (Improved variety) + Herbicides pendimethalin as pre emergence @ 3lt/ha+ Micronutrient spray Zinc EDTA @ 1g/lt water in 25 and 45 DAS					20982	59500	38518	2.84	Additional net return Rs. 12001/ ha The new variety can assure yield even under rice fallow situation. It has good oil content. Farmers like yellow sarson more than mustard

**C. 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/house hold)
1	Mustard Var. NRCHB-101	70675	200	50.00	Rest is kept for extracting oil and sowing seeds in the next season.	-	Payment of labour bill, Fertilizer and pesticide cost	18
2	Mustard Var. YSH-0401	65450	150	50.00	Rest is kept for extracting oil and sowing seeds in the next season.	-	Payment of labour bill, Fertilizer and pesticide cost	14

#### D. Oilseed Farmer's perception of the intervention demonstrated

Sl. No.	Technologies demonstrated (with name)	Farmers' Perception parameters					Suggestions, for change/improvement, if any
		Suitability to their farming system	Likings (Preference)	Affordability	Any negative effect	Is Technology acceptable to all in the group/village	
1.	Var. NRCHB-101 + Herbicides, Micronutrient spray  And Var. YSH-0401 + Herbicides, Micronutrient spray	Suitable to a large extent.	Farmers prefer white colored seeds of Mustards.	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 tc.	Shorter duration improved varieties should be popularized. 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 Technology vis-a vis Local Check	Farmers Feedback
<b>Crop: Mustard, Var. NRCHB- 101</b>			
1.Plant height (cm):	Height is less	New technology: 95 Local check:90	26 % 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. 12001/ha than local check which is very much encouraging for mustard cultivation even in rice fallow situation
2. No. of branches/ plant:	Highly branched	New technology: 6 Local check: 4	
3.No. of pods /plant: 20-25	Higher	New technology: 29 Local check: 22	
<b>Crop: Mustard, Var. YSH- 0401</b>			
1. Plant height (cm):	Height is more	New technology:90 Local:25	26 % 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. 12001/ha than local check which is very much encouraging for mustard cultivation even in rice fallow situation
2.No. of branches/ plant:	Highly branched	New technology:5 Local check: 7	
3.No. of pods /plant:	Higher	New technology: 26 Local check: 16	

### G) Extension activities under FLD conducted till dates:

4.	Organic cultivation of prectices for Mustard cultivation var. NRCHB-101	BIRBHUM KVK 25.11.2019	50
5.	Organic cultivation of prectices for Mustard cultivation var. YSH- 0401	BIRBHUM KVK 25.11.2019	50
6.	Spraying of Zinc in Mustard var. YSH- 0401	BIRBHUM KVK 03.01.2020	7
7.	Spraying of Zinc in Mustard var. NRCHB-101	BIRBHUM KVK 03.01.2020	7
8.	Production Performance of CFLD for data collection in Mustard var. YSH- 0401	BIRBHUM KVK 17.03.2020	16
9.	Production Performance of CFLD for data collection in Mustard var. NRCHB-101	BIRBHUM KVK 17.03.2020	16

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

**Photographs of Seed distribution**



### Rathindra KVK collecting Data at the Flowering Stage of Mustard



Rathindra KVK collecting Data at the Fruiting and harvesting Stage of Mustard



## SUMMER OILSEED (2020)

### A. Technical Parameters:

Sl. No.	Crop demonstrated	Existing (Farmer's) variety name	Existing yield (q/ha)	Yield gap (Kg/ha) w.r.to			Name of Variety + Technology demonstrated	Number of farmers	Area in ha	Yield obtained (q/ha)			Yield gap minimized (%)		
				District yield (D)	State yield (S)	Potential yield (P)				Max.	Min.	Av.	D	S	P
1	Summer-Sesame	Tilottoma	8.8	53	35	720	Summer -Sesame Var: G-2+ Herbicides pendimethalin as pre emergences @ 3lt/ha+ Micronutrient spray Boron-20 @2gm/lt water in 25 and 45 DAS	94	20	14.4	9.3	12.80	754	1142	55

Seeds of Improved Variety G-2 (Tilottoma) @ 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.

### E. 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- G-2 + Herbicide, Micronutrient Spray	16200	44000	27800	2.72	17400	64000	46600	3.68	Additional net return is Rs.18800/ha

### B. 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- G-2 + Herbicide, Micronutrient Spray	25600 kg	170.00	50.00	Rest (102) is kept for extracting Oil and sowing seeds in the next season.	–	Payment for Labor bill, payment for irrigation, fertilizer and pesticide expenditures.	18

### C. Oilseeds 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- G-2 + 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: 95 days, Local check: 110 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.16350/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: 47 days Local Check: 35 days	
3. Colour of the seed	Attractive	New Technology: White Local Check: Brown	

### H) Extension activities under FLD conducted till dates:

Sl. No.	Extension Activities organized	Date and place of activity	Number of farmers attended
1.	Audio Conference	27.04.2020, Rathindra KVK	
2.	Newspaper (Jana Darpan Agril. Newspaper)	24.05.2020 Rathindra KVK	

### G. 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 Oilseed



### Photographs of Seed Distribution



**Rathindra KVK Technology Agent Collecting Data at the Vegetative Stage of Sesame**



**Rathindra KVK Technology Agent collecting Data at the Flowering Stage of Sesame**



Farmers field at the Maturity Stage of Sesame



### Farmers at the Harvesting Stage of Sesame



#### H. Details of budget utilization

Crop (provide crop wise information)	Items	Budget Received (Rs.)	Budget Utilization (Rs.)	Balance (Rs.)
Summer, Sesame, 2019- 20	i) Critical input	1,00000.00	51,920.00	48,080.00
	ii) TA/DA/POL etc. for monitoring			
	iii) Extension Activities (Field day, training etc.)			



1.	Groundnut, Var: Dharani. (TCGS-1043)	1,06,400 kg	400	60.00	Rest (181) is kept for extracting Oil and sowing seeds in the next season.	–	Payment for Labor bill, payment for irrigation, fertilizer and pesticide expenditures.	25
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#### D. Oilseeds 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.	Groundnut, Var: Dharani. (TCGS-1043)	Suitable to a large extent	Farmers prefer the new improved variety of Groundnut, Var: Dharani. as the existing variety of local check AK-12-24 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. Mulching, Liming 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
<b>1. Duration</b>	Satisfactory	New Technology: 95 days, Local check: 110 days	90% 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.57300/ha than local check which is very much encouraging for groundnut cultivation in summer season instead of Boro rice.
<b>2. No. of silique/plant</b>	High	New Technology: 57 days Local Check: 39 days	
<b>3. Type</b>	Vigorous	New Technology: Spreading Local Check: Bunchy	

**F. 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 Sowing and fertilizer management of Ground Nut	10.2.2020 Village Halsidanga Bolpur Srinikeatn	50
2	Training Programme on Improved varieties and cultivation practices of Groundnut	16.2.2020, Sahebdanga Illambazar block	54
3	Training Programme on Sowing and water management of Ground Nut	19.2.2020, Village Kumardihi Md. Bazar Block	40
4	Training Programme on weed management and nutrient management of Ground Nut	20.2.2020, Rajnagar	50
5	Audio Conference	27.04.2020, Rathindra KVK	33
6	Newspaper (Jana Darpan Agril. Newspaper)	24.05.2020, Rathindra KVK	-

**G. 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 Oilseed, Groundnut, 2019-20**





**Data collection at the Vegetative Stage of Groundnut, var Dharani, 2019-20**



**Field visit at the Flowering Stage of Groundnut, 2019-20** **Cleaning of Groundnut after harvesting, 2019-20**



**H. Details of budget utilization**

Crop (provide crop wise information)	Items	Budget Received (Rs.)	Budget Utilization (Rs.)	Balance (Rs.)
Summer Ground Nut, 2019-20	i) Critical input	4,80,000.00	4,80,300.00	-300.00
	ii) TA/DA/POL etc. for monitoring			
	iii) Extension Activities (Field day, training etc.)			
	iv) Publication of literature etc.			
	Total	4,80,000.00	4,80,300.00	-300.00

**RABI OILSEED ( 2020-21)**

**A. Technical Parameters:**

Sl. No.	Crop demonstrated	Existing (Farmer's) variety name	Existing yield (q/ha)	Yield gap (Kg/ha) w.r.to			Name of Variety + Technology demonstrated	Number of farmers	Area in ha	Yield obtained (q/ha)			Yield gap minimized (%)		
				District yield (D)	State yield (S)	Potential yield (P)				Max.	Min.	Av.	D	S	P
1	Mustard	B-9	Crop was in flowering stage during December, 2020 i.e upto reporting period				Var. NRCHB- 101 + Herbicides pendimethalin as pre emergence @ 3lt/ha+ Micronutrient spray Zinc EDTA @ 1g/lt water in 25 and 45 DAS	46	15	Crop was in flowering stage during December, 2020 i.e upto reporting period					
							Var. YSH- 0401 + Herbicides pendimethalin as pre-emergence @ 3lt/ha+ Micronutrient spray Zinc EDTA @ 1g/lt water in 25 and 45 DAS	41	15						
<b>Total</b>								<b>87</b>	<b>30</b>						











Integrated Pest Management	24	471	00	471	28	00	28	00	00	00	499	00	499
Integrated Nutrient management	07	63	00	63	04	00	04	00	00	00	67	00	67
Rejuvenation of old orchards													
Value addition													
Protected cultivation technology													
Formation and Management of SHGs													
Group Dynamics and farmers organization	01	27	00	27	01	00	01	00	00	00	28	00	28
Information networking among farmers	01	36	00	36	02	00	02	00	00	00	38	00	38
Capacity building for ICT application													
Care and maintenance of farm machinery and implements													
WTO and IPR issues													
Management in farm animals													
Livestock feed and fodder production	01	32	00	32	02	00	02	00	00	00	34	00	34
Women and Child care													
Low cost and nutrient efficient diet designing													
Production and use of organic inputs													
Gender mainstreaming through SHGs													
Others if any (Important Fruit Crops and Package of Practices and Lay out and Preparation of Seed Bed for Vegetables etc.)		74	00	74	04	00	04	00	00	00	78	00	78
Others if any (Composite Fish Culture)		26	00	26	01	00	01	00	00	00	27	00	27
Others if any (Hazards of Pesticide in Animal Husbandry and Its Remedies)	02	35	00	35	02	00	02	00	00	00	37	00	37
Others if any (Type of Problem Soils and its Management)	01	26	00	26	02	00	02	00	00	00	28	00	28
Others if any (Tasting Various	01	26	00	26	02	00	02	00	00	00	28	00	28





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			
Household food security by kitchen gardening and nutrition gardening													
Design and development of low/minimum cost diet													
Designing and development for high nutrient efficiency diet													
Minimization of nutrient loss in processing													
Gender mainstreaming through SHGs													
Storage loss minimization techniques													
Enterprise development													
Value addition													
Income generation activities for empowerment of rural Women													
Location specific drudgery reduction technologies													
Rural Crafts													
Capacity building													
Women and child care													
Others, if any (Awareness Programme on Food Security)													
<b>VI. Agril. Engineering</b>													
Installation and maintenance of micro irrigation systems													
Use of Plastics in farming practices													
Production of small tools and implements													
Repair and maintenance of farm machinery and implements													
Small scale processing and value addition													
Post Harvest Technology													
Others, if any (Farm Mechanization)													
<b>VII. Plant Protection</b>													
Integrated Pest Management													
Integrated Disease Management													
Bio-control of pests and diseases													
Production of bio control agents and bio pesticides													
Others, if any													
<b>VIII. Fisheries</b>													
Integrated fish farming													
Carp breeding and hatchery management													
Carp fry and fingerling rearing													
Composite fish culture & fish disease													
Fish feed preparation & its application to fish pond, like nursery, rearing & stocking pond													
Hatchery management and culture of freshwater prawn													
Breeding and culture of ornamental fishes													
Portable plastic carp hatchery													
Pen culture of fish and prawn													















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			
Vermi-culture													
Sericulture													
Protected cultivation of vegetable crops													
Commercial fruit production													
Repair and maintenance of farm machinery and implements													
Nursery Management of Horticulture crops													
Training and pruning of orchards													
Value addition													
Production of quality animal products													
Dairying													
Sheep and goat rearing	01	03	00	03	01	06	07	04	16	20	08	22	30
Quail farming													
Piggery													
Rabbit farming													
Poultry production													
Ornamental fisheries													
Para vets													
Para extension workers	01	08	00	08	07	00	07	05	00	05	20	00	20
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													
Enterprise development													
Others if any (Hatchery Production Worker)	01	12	00	12	08	00	08	00	00	00	20	00	20
<b>TOTAL</b>	<b>03</b>	<b>41</b>	<b>04</b>	<b>45</b>	<b>11</b>	<b>01</b>	<b>12</b>	<b>05</b>	<b>00</b>	<b>05</b>	<b>57</b>	<b>05</b>	<b>62</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													
Integrated Pest Management	24	471	00	471	28	00	28	00	00	00	499	00	499
Integrated Nutrient management	07	63	00	63	04	00	04	00	00	00	67	00	67
Rejuvenation of old orchards													
Value addition													
Protected cultivation technology													
Formation and Management of SHGs													
Group Dynamics and farmers organization	01	27	00	27	01	00	01	00	00	00	28	00	28
Information networking among farmers	01	36	00	36	02	00	02	00	00	00	38	00	38
Capacity building for ICT application													
Care and maintenance of farm machinery and implements													
WTO and IPR issues													
Management in farm animals													
Livestock feed and fodder production	01	32	00	32	02	00	02	00	00	00	34	00	34
Household food security													
Women and Child care													
Low cost and nutrient efficient diet designing													
Production and use of organic inputs													
Gender mainstreaming through SHGs													
Crop intensification													
Others if any (Important Fruit Crops and Package of Practices and Lay put and Preparation of Seed Bed for Vegetables etc.)	02	74	00	74	04	00	04	00	00	00	78	00	78
Others if any (Composite Fish Culture)	01	26	00	26	01	00	01	00	00	00	27	00	27

Others if any (Hazards of Pesticide in Animal Husbandry and Its Remedies)	01	35	00	35	02	00	02	00	00	00	37	00	37
Others if any (Type of Problem Soils and its Management)	01	26	00	26	02	00	02	00	00	00	28	00	28
Others if any (Tasting Various Attributes of Quality Seeds)	01	26	00	26	02	00	02	00	00	00	28	00	28
Others if any (Effective Water Management in Field Crops)	01	32	00	32	02	00	02	00	00	00	34	00	34
Others if any (Farm Mechanization)	01	32	00	32	02	00	02	00	00	00	34	00	34
Others if any (Economic Cultivation of Rice)	01	25	00	25	02	00	02	00	00	00	27	00	27
<b>TOTAL</b>	<b>43</b>	<b>1312</b>	<b>62</b>	<b>1374</b>	<b>165</b>	<b>00</b>	<b>165</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>1477</b>	<b>62</b>	<b>1539</b>

Please furnish the details of training programmes as Annexure in the proforma given below

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

### H) Vocational training programmes for Rural Youth

#### Details of training programmes for Rural Youth

Crop / Enterprise	Identified Thrust Area	Training title*	Duration (days)	No. of Participants			Self employed after training			Number of persons employed else where
				Male	Female	Total	Type of units	Number of units	Number of persons employed	
Preparation of Organic Inputs	Organic Farming	Preparation and Use of Organic Inputs	21	17	05	22	Organic Input Production Unit	12	12	08
Hatchery Production Worker	Fish Hatchery Management	Hatchery Production Worker - Fishery	21	20	00	20	Hatchery Production Unit	00	00	18
Small Poultry Farmer	Poultry Management	Small Poultry Farmer	21	20	00	20	Small Poultry Units	17	17	03
<b>Total</b>			<b>63</b>	<b>57</b>	<b>05</b>	<b>62</b>	<b>-</b>	<b>29</b>	<b>29</b>	<b>29</b>

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

**I) Sponsored Training Programmes**

SI No.	Title	Thematic area	Month	Duration (days)	Client	No. of courses	No. of Participants										Sponsoring Agency
							Male			Female			Total				
							Others	SC	ST	Others	SC	ST	Others	SC	ST	Total	
1	Role of Remote Sensing in Agriculture	Agro-meteorology	07.01.2020	01	EF	01	28	4	0	1	0	0	29	4	0	33	MANAGE, Hyderabad & SAMETI, Narendrapur
2	Climate Resilient Agriculture	Agro-meteorology	07.01.2020	01	EF	01	28	4	0	1	0	0	29	4	0	33	MANAGE, Hyderabad & SAMETI, Narendrapur
3	Season wise important crops and new varieties suitable for the district	Crop Production	14.01.2020	01	EF	01	33	4	0	1	0	0	33	4	0	37	MANAGE, Hyderabad & SAMETI, Narendrapur
4	Crop diversification through summer pulse cultivation	Crop Production	14.01.2020	01	EF	01	33	4	0	1	0	0	33	4	0	37	MANAGE, Hyderabad & SAMETI, Narendrapur
5	Pest management in rabi vegetables	IPM	21.01.2020	01	EF	01	32	3	0	1	0	0	33	3	0	36	MANAGE, Hyderabad & SAMETI, Narendrapur
6	Disease management in rabi vegetables	IPM	21.01.2020	01	EF	01	32	3	0	1	0	0	33	3	0	36	MANAGE, Hyderabad & SAMETI, Narendrapur
7	Insect pest & disease management in potato	IPM	11.02.2020	01	EF	01	29	4	0	1	0	0	30	4	0	34	MANAGE, Hyderabad & SAMETI, Narendrapur
8	Integrated nutrient management in boro rice	Nutrient management in crops	11.02.2020	01	EF	01	29	4	0	1	0	0	30	4	0	34	MANAGE, Hyderabad & SAMETI, Narendrapur

9	Cultivation of mushroom	Mushroom production	18.02.2020	01	EF	01	35	4	0	1	0	0	36	4	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
10	Post-harvest management of mushroom	Mushroom production	18.02.2020	01	EF	01	35	4	0	1	0	0	36	4	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
11	Insect pest management in boro rice	IPM	03.03.2020	01	EF	01	35	4	0	1	0	0	36	4	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
12	Disease management in boro rice	IPM	03.03.2020	01	EF	01	35	4	0	1	0	0	36	4	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
13	Integrated weed Management in boro rice	Weed Management in crops	10.03.2020	01	EF	01	28	3	0	1	0	0	29	3	0	32	MANAGE, Hyderabad & SAMETI, Narendrapur
14	Field diagnosis of plant diseases & their management	Disease management in crops	10.03.2020	01	EF	01	28	3	0	1	0	0	29	3	0	32	MANAGE, Hyderabad & SAMETI, Narendrapur
15	Field management of kharif rice	Crop Protection	28.07.2020	01	EF	01	28	4	0	1	0	0	29	4	0	33	MANAGE, Hyderabad & SAMETI, Narendrapur
16	Critical stages of irrigation of different field crops	Water management	28.07.2020	01	EF	01	28	4	0	1	0	0	29	4	0	33	MANAGE, Hyderabad & SAMETI, Narendrapur
17	Use of organic inputs for sustainable agriculture	Crop Production	31.07.2020	01	EF	01	25	3	0	1	0	0	26	3	0	29	MANAGE, Hyderabad & SAMETI, Narendrapur

18	Soil moisture conservation in dry and dryland areas	Soil water conservation	31.07.2020	01	EF	01	25	3	0	1	0	0	26	3	0	29	MANAGE, Hyderabad & SAMETI, Narendrapur
19	Weed management in kharif & post kharif vegetables	Weed management	04.08.2020	01	EF	01	31	4	0	1	0	0	32	4	0	36	MANAGE, Hyderabad & SAMETI, Narendrapur
20	Safe use of herbicide in Agriculture	Weed management	04.08.2020	01	EF	01	31	4	0	1	0	0	32	4	0	36	MANAGE, Hyderabad & SAMETI, Narendrapur
21	Marketing management of farm produce	Agril. Marketing	11.08.2020	01	EF	01	30	4	0	1	0	0	31	4	0	35	MANAGE, Hyderabad & SAMETI, Narendrapur
22	Kisan credit card and crop insurance	Crop Insurance	11.08.2020	01	EF	01	30	4	0	1	0	0	31	4	0	35	MANAGE, Hyderabad & SAMETI, Narendrapur
23	Characteristics of good seed	Seed Technology	14.08.2020	01	EF	01	24	4	0	1	0	0	25	4	0	29	MANAGE, Hyderabad & SAMETI, Narendrapur
24	Seed Certification	Seed Technology	14.08.2020	01	EF	01	24	4	0	1	0	0	25	4	0	29	MANAGE, Hyderabad & SAMETI, Narendrapur
25	Cultivation practices of different fruit crops	Fruit Production Technology	18.08.2020	01	EF	01	33	3	0	1	0	0	34	3	0	37	MANAGE, Hyderabad & SAMETI, Narendrapur
26	Grafting, Budding & Layering	Propagation techniques	18.08.2020	01	EF	01	33	3	0	1	0	0	34	3	0	37	MANAGE, Hyderabad & SAMETI, Narendrapur

27	Cropping system & its classification	Crop Production	21.08.2020	01	EF	01	24	3	0	1	0	0	25	3	0	28	MANAGE, Hyderabad & SAMETI, Narendrapur
28	Crop Diversification	Crop Production	21.08.2020	01	EF	01	24	3	0	1	0	0	25	3	0	28	MANAGE, Hyderabad & SAMETI, Narendrapur
29	Effect of green-house gas & global warming in Agriculture	Agro-meteorology	25.08.2020	01	EF	01	33	4	0	1	0	0	34	4	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur
30	Changes in agriculture with the changes in climatic scenario	Agro-meteorology	25.08.2020	01	EF	01	33	4	0	1	0	0	34	4	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur
31	Pest management in early rabi vegetables	IPM	01.09.2020	01	EF	01	35	4	0	1	0	0	36	4	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
32	Disease management in early rabi vegetables	Disease Management	01.09.2020	01	EF	01	35	4	0	1	0	0	36	4	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
33	Seed Act	Seed Technology	12.09.2020	01	EF	01	35	4	0	1	0	0	36	4	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
34	Fertilizer Act	Fertilizer Management	12.09.2020	01	EF	01	35	4	0	1	0	0	36	4	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
35	Scientific Use of Fish Feed and Lime in Small Ponds	Fish Feed Preparation and Its Application	05.11.2020	01	PF & PFW	01	08	12	07	03	08	05	11	20	12	43	ICAR - Central Inland Fisheries Research Institute, Barrackpore, Kolkata
36	Introduction and course module	Introduction	15.12.2020	01	EF	01	32	3	0	4	1	0	36	4	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur

37	Ice breaking and brain storming of DAESI students	Introduction	15.12.2020	01	EF	01	32	3	0	4	1	0	36	4	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
38	Introduction and course module	Introduction	18.12.2020	01	EF	01	30	6	0	2	0	0	32	6	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur
39	Ice breaking and brain storming of DAESI students	Introduction	18.12.2020	01	EF	01	30	6	0	2	0	0	32	6	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur
40	Orientation and brief idea of the Rathindra KVK	Orientation	22.12.2020	01	EF	01	31	3	0	4	1	0	35	4	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
41	A general idea about plant protection	Plant Protection	22.12.2020	01	EF	01	31	3	0	4	1	0	35	4	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
42	Orientation and brief idea of the Rathindra KVK	Orientation	25.12.2020	01	EF	01	30	6	0	2	0	0	32	6	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur
43	A general idea about plant protection	Plant Protection	25.12.2020	01	EF	01	30	6	0	2	0	0	32	6	0	38	MANAGE, Hyderabad & SAMETI, Narendrapur
44	Pest and pest management: a brief idea	IPM	29.12.2020	01	EF	01	32	3	0	4	1	0	36	4	0	40	MANAGE, Hyderabad & SAMETI, Narendrapur
	<b>Total</b>			<b>44</b>		<b>44</b>	<b>1322</b>	<b>17</b>	<b>07</b>	<b>65</b>	<b>13</b>	<b>5</b>	<b>1385</b>	<b>19</b>	<b>12</b>	<b>1589</b>	
								<b>7</b>						<b>0</b>			





Soil test campaigns											
Farm Science Club Conveners meet											
Self Help Group Conveners meetings											
Mahila Mandals Conveners meetings											
Celebration of important days (specify) International Soil Day - 2020	01	60	00	60	SC – 27.78 % ST – 13.89 %	04	01	05	64	01	65
Celebration of important days (specify) Poshan Maah 2020	01	00	40	40	SC – 26.68 % ST – 14.89 %	04	01	05	04	41	45
Swatchta Hi Sewa	12	218	93	311	SC – 25.56 % ST – 13.81 %	04	01	05	222	94	316
Mahila Kisan Divas - 2020	01	00	47	47	SC – 23.00 % ST – 22.00 %	04	01	05	04	48	52
<b>Total</b>	<b>358</b>	<b>2613</b>	<b>1181</b>	<b>3794</b>		<b>36</b>	<b>14</b>	<b>50</b>	<b>2649</b>	<b>1196</b>	<b>3844</b>

## B. Other Extension activities

Nature of Extension Activity	No. of activities
Newspaper coverage	
Radio talks	08
TV talks	00
Popular articles	07
Extension Literature	09
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
Rice	Rani Dhan, IET – 4786, Pratiksha, MTU - 1010	445.00	17,80,000.00		300	100	600	1000
Black Gram	WBU – 109	412.30	43,33,120.00		230	50	532	812
Sesame	Sabitri	350.00	36,75,000.00		222	51	525	798
Green Gram	Samrat	225.60	23,68,800.00		201	63	551	815
Lentil	WBL - 77	200.00	21,00,000.00		101	43	326	470
Groundnut	Dharani	100.00	10,50,000.00		93	35	285	413
<b>Total</b>		<b>1732.90</b>	<b>1,53,06,920.00</b>		<b>847</b>	<b>242</b>	<b>2219</b>	<b>3308</b>

### KVK farm

Crop	Variety	Quantity of Seed (Kg.)	Value (Rs)	Number of Farmers Provided			
				SC	ST	Others	Total
Rice	Rani Dhan	14.51	Rs. 43,530.00	60	40	20	120
Elephant Foot Yam	Bidhan Kusum	100.00	Rs. 10,000.00	05	04	01	10
Green Gram	Samrat	220.00	Rs. 33,000.00	20	10	20	50
Black Gram	WBU – 109	100.00	Rs. 15,000.00	05	10	10	25
Mustard	NRCHB – 101	180.00	Rs. 18,900.00	30	30	30	90
	YSH – 0401	180.00	Rs. 18,900.00	40	25	25	90
<b>Grand Total</b>		<b>794.51</b>	<b>Rs. 1,39,330.00</b>	<b>160</b>	<b>119</b>	<b>106</b>	<b>385</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
<b>Vegetable seedlings</b>							
Cauliflower	Pusa Snow Ball	1000	4,000.00	10	06	04	20
Cabbage	PAN - 3451	1000	4,000.00	10	06	04	20
Tomato	Abhilas	2000	8,000.00	20	12	08	40
Brinjal	Mukto Keshi	2000	8,000.00	20	12	08	40
Chilli	PAN -1402	1000	4,000.00	10	06	04	20
Onion							
Others (Capsicum)	Mahabharat	1500	6,000.00	15	10	05	30
Others (Drumstick)	PKM – 1	2050	41,000.00	80	70	50	200
<b>Fruits</b>							
Mango							
Guava							
Lime		30	600.00	10	10	10	30
Papaya	Honeydew	30	200.00	03	04	03	10
Banana							
Others							

Ornamental plants							
Medicinal and Aromatic							
Plantation							
Spices							
Turmeric							
Tuber							
Elephant yams							
Fodder crop saplings							
Forest Species							
Others, pl. specify							
<b>Total</b>		<b>10610</b>	<b>75800.00</b>	<b>178</b>	<b>136</b>	<b>96</b>	<b>410</b>



Bio-product	Name of the Bio-product	Quantity (no.)	Quantity (Kg.)	Value (Rs.)	Number of farmers	Quantity (no.)	Quantity (Kg.)	Value (Rs.)	Number of farmers	Quantity (no.)	Quantity (Kg.)	Value (Rs.)	Number of farmers	Quantity (no.)	Quantity (Kg.)	Value (Rs.)	Number of farmers	
<b>Bio-fertilisers</b>		<b>A&amp;N Islands</b>				<b>Odisha</b>				<b>West bengal</b>				<b>Total</b>				
<b>Earth worm</b>																		
Eiseniafoetida																		
Earth worm																		
<b>Total</b>																		
<b>Bio-fungicides</b>																		
Trichoderma viridae																		
<b>Total</b>																		
<b>others</b>																		
Vermiculture																		
Mushroom-spawn																		
Culture																		
Mineral mixture																		
Cow dung(dry)																		
Cow dung(wet)																		
<b>Total</b>																		
<b>Grand Total</b>																		

#### Production of livestock materials

Particulars of Live stock	Name of the breed	Number	Value (Rs.)	No. of Farmers benefitted			
				SC	ST	Other	Total
Dairy animals							
Cows							
Buffaloes							
Calves							

Others (Pl. specify)							
<b>Small ruminants</b>							
Sheep							
Goat							
Other, please specify							
<b>Poultry</b>							
Broilers	Coloured Breed (Advanced Grower)	30	1800.00	00	00	03	03
		20	1200.00				
		35	2100.00				
Layers							
Duals (broiler and layer)							
Japanese Quail	<i>Coturnix coturnix japonica</i> (Japanese Quail)	50	2500.00	00	00	02	02
Turkey							
Emu							
Ducks							
Others (Pl. specify)	Poultry Adult RIR	30	4500.00	00	00	01	01
	Coloured Broiler	10	1500.00	00	00	01	01
<b>Piggery</b>							
Piglet							
Hog							
Others (Pl. specify)							
<b>Fisheries</b>							
Indian carp		02.00 q	20,000.00				
Exotic carp		01.30 q	13,000.00				
Mixed carp							
Fish fingerlings							
Spawn		6,00,000	7,200.00	20	12	28	60
Others (Small Fishes)		00.68 q	5,000.00				
<b>Grand Total</b>				<b>23</b>	<b>14</b>	<b>33</b>	<b>70</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	Authors' Names	Number	Circulation
<b>Research paper</b>	1. "YIELD ANALYSIS OF OILSEED CROPS UNDER FRONT LINE DEMONSTRATION PROGRAMMES IN MEDIUM AND HIGH LAND FARMING SITUATIONS OF BIRBHUM DISTRICT", INTERNATIONAL JOURNAL OF AGRICULTURE, ENVIRONMENT AND BIOTECHNOLOGY (PRINT ISSN NO. 0974-1712 AND ONLINE ISSN NO. 2230-732X), VOL. 13, NO. 2, JUNE, 2020, PP. 231 – 237.	Prabuddha Ray, Subrata Mandal, Sourav Mondal and Palash Ankure	<b>05 (Five)</b>	-
	2. "STUDY ON SOIL NUTRIENT STATUS ACCORDING TO GLOBAL POSITIONING SYSTEM IN DIFFERENT BLOCKS OF BIRBHUM DISTRICT OF W. B.", CURRENT JOURNAL OF APPLIED SCIENCE AND TECHNOLOGY, VOL. 39, NO. 21, 2020, PP. 64 – 70.	Subrata Mandal, Mrinmoy Karmakar and F. H. Rahaman		
	3. "WOMEN FARMERS AND E-EXTENSION SERVICES FOR ORGANIC FARMING: CONCERN AREAS IN CAPACITY BUILDING MEASURES", INTERNATIONAL JOURNAL OF AGRICULTURE SCIENCE (PRINT ISSN No. 0975-3710 AND E-ISSN No. 0975-9107), VOL. 12, ISSUE 20, 30TH. OCTOBER, 2020, PP. 10311 - 10313.	Prabuddha Ray		
	4. "ASPECTS OF MILK PRODUCTION AND AVAILABILITY IN BIRBHUM DISTRICT VIS-A-VIS THE STATE OF WEST BENGAL – STEPS FOR AUGMENTATION OF THE SECTOR", THERIOGENOLOGY INSIGHT: AN INTERNATIONAL JOURNAL OF REPRODUCTION OF ANIMALS (PRINT ISSN - 2249-6610 E-ISSN - 2277-3371), VOL. 10, NO. 2, AUGUST, 2020, PP. 35-49 .	Prabuddha Ray and Madhuchhanda Khan		
	5. "EVALUATION OF PERFORMANCE OF MODIFIED EARTHEN POT COOL CHAMBER (MEPCC) IN SHELF LIFE OF VEGETABLES IN LATERITIC BELT OF WEST BENGAL", INTERNATIONAL JOURNAL OF AGRICULTURE SCIENCE (PRINT ISSN No. 0975-3710 AND E-ISSN No. 0975-9107), VOL. 12, ISSUE 24, 30TH. DECEMBER, 2020, PP. 10530-10532.	S. Mandal, P. Ray, R. Addy and S. K. Roy		
<b>Seminar /conference / symposia papers</b>	1. "Store Grain Pathogens of Cereals and Control – A Review", Book of Abstracts, National Webinar on Modern Agricultural Technology: A Step towards Rural Self-Reliance, Palli Sksha Bhyavana, Visva-Bharatiu, Sriniketan, from 12th. – 14th. June, 2020.	Alokesh Das, Subrata Mandal, Sudipa Mandal and Bholanath Mondal	<b>02 (Two)</b>	-
	2. "Women Farmers and e-Extension Services for Organic Farming: Concern Areas in Capacity building Measures", Book of Abstracts, National Webinar on Organic Farming 2020 organized by the College of Agriculture, Balaghat, Jawaharlal Nehru Krishi Viswa Vidhyalaya, Jabalpur from 16th. June to 20th. June, 2020, Sl. No. – 183, Page No. – 195.	Dr. Prabuddha Ray		
<b>Books</b>	1. "Fundamentals of Extension Education" (ISBN No. 978-93-88821-64-5), 2020, Rama Publishing House, Meerut, Uttar Pradesh, 252 p.	Prof. Sarthak Chowdhury and Dr. Prabuddha Ray	<b>01 (One)</b>	-
<b>Bulletins</b>	-	-	-	-
<b>News letter</b>	-	-	-	-
<b>Popular Articles</b>	1. Eakti Sarbangan Krishi Babyastha Garai Lakshya, 20 <sup>th</sup> . March, 2020, AnandaBazar Patrika, Birbhum District Edition, Khet Khamaar, Page No. 4 of District Page.	Dr. Madhuchhanda Khan	<b>07 (Seven)</b>	-

	<p>2. Quail Chyasher Prayojoniyata, Sabuj Sona Ooo Prani Bikash, 11<sup>th</sup>. Annual Edition, March, 2020, Page No. – 60.</p> <p>3. Lock Downey Maar Kheyechey Krishi Kaaj, 8<sup>th</sup>. April, 2020, AnandaBazar Patrika, Birbhum District Edition, Khet Khamaar, Page No. 4 of District Page.</p> <p>4. Aay Baratey Bharosha Banglaar Kalo Chagal, 22<sup>nd</sup>. April, 2020, AnandaBazar Patrika, Birbhum District Edition, Khet Khamaar, Page No. 4 of District Page.</p> <p>5. Ekangi Chashey Bikalpa Disha, 1<sup>st</sup>. July, 2020, AnandaBazar Patrika, Birbhum District Edition, Khet Khamaar, Page No. 4 of District Page.</p> <p>6. Tiil Chashei Khushi Jelar Chashiraa, 2<sup>nd</sup>. September, 2020, AnandaBazar Patrika, Birbhum District Edition, Khet Khamaar, Page No. 4 of District Page.</p> <p>7. Beej Sangraha abong Sangrakshaneer Upay, 30<sup>th</sup>. September, 2020, AnandaBazar Patrika, Birbhum District Edition, Khet Khamaar, Page No. 4 of District Page.</p>	<p>Dr. Madhuchhanda Khan</p> <p>Dr. Subrata Mandal</p> <p>Dr. Madhuchhanda Khan</p> <p>Dr. Subrata Mandal</p> <p>Dr. Subrata Mandal</p> <p>Dr. Subrata Mandal</p>		
<b>Book Chapter</b>	<p>1. “Organic Agriculture: Myths, Realities and Beyond”, Chapter – 12, Eco-Friendly Pest Management Strategies for Major Vegetable Crops [978-81-943776-6-5], edited by Tamoghna Saha, Kalmesh Managanvi and Nithya Chandran, AGROBIOS (INDIA), Jodhpur, 2020, pp. 211 – 243.</p>	Prabuddha Ray and Sarthak Chowdhury	<b>01 (One)</b>	-
<b>Extension Pamphlets/ literature</b>	<p>1. Bansh Chashear Tuki Taki (Cultivation Practices of Bamboo)</p> <p>2. Basanteay Daal Chashear Aay Briddhi (Increasing Farmers Income through Pulse Production in Spring season)</p> <p>3. Sashaeay Baichitreay Bhuttar Chash (Cultivation of Maize for Crop Diversification)</p> <p>4. Krishi Khesthrey Pratisthanik Muldhaan Pradan- Koyektii Natun Udyog (Supply of Institutional Farm Credits – Some New Initiatives)</p> <p>5. Pradhan Mantri Kisan Samman Nidhi [PM-KISAN] – Bharat Barshear Krishakdear Jonya Eakti Sammanik Pradan Prakaalp [Pradhan Mantri Kisan Samman Nidhi (PM-KISAN)] – An Honorarium Distribution Programme for Indian Farmers</p> <p>6. Pradhan Mantri Kisan Maan Dhan Yojana (PM-KMY) – Khsudra abong Prantik Krishakder Janya Eakti Pension Prakaalpa [Pradhan Mantri Kisan Maan Dhan Yojana (PM-KMY) - Pension Programme for Small and Marginal Farmers]</p> <p>7. Swanirvaratear Lakshaey Banglar Kaalo Chagal Palon (Rearing of Black Bengal Goats for Self Sustenance)</p> <p>8. Swanirvaratear Lakshaey Bhera Palon (Rearing of Sheep for Self Sustenance)</p> <p>9. Palan Pradaha Baa Dhunka Ooo Taar Pratikaar (Mastitis and Its Prevention)</p>	<p>Dr. Subrata Mandal</p> <p>Dr. Prabuddha Ray</p> <p>Dr. Madhuchhanda Khan</p>	<b>09 (Nine)</b>	<b>9000 (Nine thousand)</b>
<b>Technical reports</b>	<p>1. Annual Progress Report (January, 2020 – December, 2020) of Rathindra KVK</p> <p>2. Report on RFD, CCC and Skill Training (12 Reports for 12 Months)</p> <p>3. Report on Achievement of Mandated Activities of Krishi Vigyan Kendras (12 Reports for 12 Months)</p>	Rathindra KVK	<b>141 (One Hundred Forty One)</b>	Among all the concerned.

	<p>4. Report on the Activities under Swachha Bharat Mission (12 Reports for 12 Months)</p> <p>5. Monthly Reports of RKVK (12 Reports for 12 Months)</p> <p>6. Report to PMO on Activities of RKVK (12 Reports for 12 Months)</p> <p>7. Monthly Progress Report (MPR) for All India KVK Portal (12 Reports for 12 Months)</p> <p>8. Information on setting up of Demonstration unit of Integrated Cow-based Socio Economical Model of Indigenous Cows</p> <p>9. Full QRT Report and the Write-up on the QRT Report prepared by the Rathindra KVK</p> <p>10. Report on Additional Information for QRT from Rathindra KVK, Birbhum</p> <p>11. Report on Webcasting of the Global Potato Conclave 2020 being organized at Mahatma Mandir, Gujarat and Speech of Hon'ble PM on 28.01.2020</p> <p>12. Achievement of Additional CFLD on Oilseeds under Sustainable Agriculture Practices (SAP)</p> <p>13. Organizing district level awareness programme on "Agricultural Marketing Infrastructure Scheme" of Ministry of Agriculture &amp; Farmers Welfare, Govt. of India .</p> <p>14. Physical and financial progress report of demo units on Micro Irrigation</p> <p>15. Information regarding Innovators</p> <p>16. Information for nutritional programme of Ministry of WCD, GOI</p> <p>17. Success stories on CFLD Pulses, kharif-2019-RKVK, Birbhum</p> <p>18. Reporting dissemination of agro-advisories to farmers during lockdown period 3rd April 2020</p> <p>18. Report on Arogyo App-RKVK, Birbhum</p> <p>20. Report on Dissemination of State Advisories (14.04.2020) COVID-19</p> <p>21. Case Study on Small Scale Goat Farming- RKVK, Birbhum</p> <p>22. Report on Aarogya Setu App (19.04.2020)</p> <p>23. Report on Dissemination of State Advisories (19.04.2020) COVID-19</p> <p>24. Launch of Agriculture - Tele Consultation through Krishi Vigyan Kendra and CSCs"    Status report</p>			
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	<p>25. Report on Aarogya Setu App (27.04.2020)</p> <p>26. Report on Dissemination of State Advisories (27.04.2020) COVID-19</p> <p>27. Yield report of Additional CFLD on Oilseeds under Sustainable Agriculture Practices (SAP) 2019-20</p> <p>28. Report on Audio Conference at Multilocation Conducted by Reliance Foundation on 29.04.2020</p> <p>29. Best management practices by Rathindra KVK during lockdown period</p> <p>30. Report on Audio Conference at Multilocation Conducted by Reliance Foundation on 03.05.2020</p> <p>31. Report on Audio Conference at Multilocation Conducted by Reliance Foundation on 08.05.2020</p> <p>32. Report on Audio/video conferencing</p> <p>33. Report-CFLD Pulse, Rabi,2019-20, RKVK, Birbhum</p> <p>34. Goat Case Study-RKVK, Birbhum</p> <p>35. Action Plan- Migrant Labour-RKVK, Birbhum</p> <p>36. Sending report of physical and financial progress on Micro-Irrigation demo units</p> <p>37. Report on Audio Conference at Multilocation Conducted by Reliance Foundation on 27.05.2020</p> <p>38. RKVK Birbhum-Progress Report of Project of PKVY on Cluster Demonstrations on Organic Farming</p> <p>39. Annual Report Summary 2019-20 (Jan 19- Dec 19)-RKVK, Birbhum</p> <p>40. Application of Deen Dayal Upadhaya Award- 2019 of Rathindra KVK, Birbhum</p> <p>41. Report on Audio Conference at Multilocation Conducted by Reliance Foundation on 26.06.2020</p> <p>42. Action Plan January, 2020 to December, 2020- RKVK, Birbhum</p> <p>43. Report on Audio Conference at Multilocation Conducted by Reliance Foundation on 08.07.2020</p> <p>44. Report on Audio Conference at Multilocation Conducted by Reliance Foundation on 09.07.2020</p> <p>45. Report on Audio Conference at Multilocation Conducted by Reliance Foundation on 11.07.2020</p>			
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	<p>46. Yield report of CFLD pulses, Summer, 2019-20- RKVK, Birbhum.</p> <p>47. Report of SC/SP fund under KVK Contingency head 2019-20- RKVK_Birbhum</p> <p>48. Submission of yield report of CFLD Summer Oilseed -2019-20</p> <p>49. Report on Audio Conference at Multilocation Conducted by Reliance Foundation on 17.07.2020</p> <p>50. Success story of CFLD Summer Oilseeds, 2019-20- RKVK, Birbhum</p> <p>51. PKVY-Annuual Report 2019-20- RKVK, Birbhum</p> <p>52. Report-CFLD Oilseeds-Groundnut-RKVK, Birbhum</p> <p>53. IFS Model Report</p> <p>54. Report on Audio Conference at Multilocation Conducted by Reliance Foundation on 19.08.2020</p> <p>55. ICAR-CIFA - NFDB Virtual Consultation Meet- RKVK, Birbhum</p> <p>56. FPO Initiative-RKVK, Birbhum</p> <p>57. RKVK, Birbhum-Reporting of Poshan Abhiyan Program on 17 Sept 2020</p> <p>58. Case Study of the Kartickdanga Kalimata Water Users' Association, Birbhum District, West Bengal</p> <p>59. Report on Poshan Maah-RKVK, Birbhum</p> <p>60. Report on Audio Conference at Multilocation Conducted by Reliance Foundation on 28.09.2020</p> <p>61. Plantation drive under poshan aviyan- RKVK, Birbhum</p> <p>62. Report on Audio Conference at Multilocation Conducted by Reliance Foundation on 07.10.2020</p> <p>63. Report regarding the DARE Format 2020-21 for SCSP and KSHAMTA of Rathindra KVK, Birbhum</p> <p>64. UC- Pulses- RKVK, Birbhum</p> <p>65. Report of Mahila Kishan Divas, 2020 -- RKVK, Birbhum</p> <p>66. Report on Audio Conference at Multilocation Conducted by Reliance Foundation on 21.10.2020</p> <p>67. Information on programmes organized for creation of awareness on new farm acts</p> <p>68. Provisional SOE of DAMU- RKVK, Birbhum</p>			
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	<p>69. Report on Micro-irrigation Demonstration Unit</p> <p>70. Report of World Soil Day 2020- RKVK, Birbhum</p> <p>71. Report for IIHR by Rathindra KVK, Birbhum</p> <p>72. Two Numbers of e-Posters for the Scientists Meet on 23-24 December 2020 during India International Science Festival</p> <p>73. Report regarding Celebration of Pradhan Mantri Kisan Samman Nidhi Yojana Programme</p> <p>74. Report on Audio Conference at Multilocation Conducted by Reliance Foundation on 14.12.2020</p> <p>71. Report on Audio Conference at Multilocation Conducted by Reliance Foundation on 28.12.2020</p>			
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<b>Electronic Publication (CD/DVD etc.)</b>	<p>1. YouTube Link: - <a href="https://youtu.be/yS4uQTqNJjg">https://youtu.be/yS4uQTqNJjg</a> Video Title: - Inauguration of ASCI Skill Training 2018 RKVK Birbhum.mp4</p> <p>2. YouTube Link: - <a href="https://youtu.be/tbCkSSWtGKQ">https://youtu.be/tbCkSSWtGKQ</a> Video Title: - Birbhum District Kisan Mela 2019.mp4</p> <p>3. YouTube Link: - <a href="https://youtu.be/ZCx_EJLrjUM">https://youtu.be/ZCx_EJLrjUM</a> Video Title: - Class in ASCI Skill Training on Agriculture Extension Service Provider Rathindra KVK Birbhum.mp4</p> <p>4. YouTube Link: - <a href="https://youtu.be/LLdWm6vMgk4">https://youtu.be/LLdWm6vMgk4</a> Video Title: - Classes of ASCI Skill Training on Agriculture Extension Service Provider Rathindra KVK Birbhum.mp4</p> <p>5. YouTube Link: - <a href="https://youtu.be/RmaQ8vxHHI0">https://youtu.be/RmaQ8vxHHI0</a> Video Title: - Participatory Classes of ASCI Skill Training on Agriculture Extension Service Provider Rathindra KVK.mp4</p> <p>6. YouTube Link: - <a href="https://youtu.be/rCWuEiA4eWI">https://youtu.be/rCWuEiA4eWI</a> Video Title: - Theoretical Class in ASCI Skill Training on Agriculture Extension Service Provider Rathindra KVK Birbhum.mp4</p> <p>7. YouTube Link: - <a href="https://youtu.be/nx80tUGMW7U">https://youtu.be/nx80tUGMW7U</a> Video Title: - Vigilance Awareness Week 2018 Rathindra KVK Birbhum.mp4</p> <p>8. YouTube Link: - <a href="https://youtu.be/rQUSJuwYdMc">https://youtu.be/rQUSJuwYdMc</a> Video Title: - Fishery based IFS Model in Birbhum District assisted by Rathindra KVK.mp4</p> <p>9. YouTube Link: - <a href="https://youtu.be/VNbbIGBkTS0">https://youtu.be/VNbbIGBkTS0</a> Video Title: - DAESI Course Rathindra KVK Birbhum.mp4</p> <p>10. YouTube Link: - <a href="https://youtu.be/cADHuuplpz4">https://youtu.be/cADHuuplpz4</a> Video Title: - Mixed Farming by a Rural Youth of Birbhum District and assisted by Rathindra KVK.mp4</p>	Rathindra KVK	<b>17 (Seventeen)</b>	
	<b>Compilation and up-loading of the Videos on the experience of the Farmers during COVID-19 Pandemic Situation and Initiatives to overcome the Challenges and Constraints with the help of various Developmental Agencies including KVK on PM-KISAN Portal (<a href="http://www.pmkisan.gov.in">www.pmkisan.gov.in</a>) – First Five Videos uploaded on 06.08.2020 and then again Two Videos on 07.08.2020.</b>	Rathindra KVK		
<b>TOTAL</b>			<b>174 (One Hundred Seventy Four)</b>	

**(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
01.	National Conference of KVKs	National Conference of KVKs	Dr. Subrata Mandal, Senior Scientist and Head (Officiating) and Subject Matter Specialist (Agronomy)	28.02.2020 to 01.03.2020 (03 Days)	ICAR, New Delhi
02.	Five-weeks online Course on “Digital Agriculture”, a Massive Open E-Learning Course	Five-weeks online Course on “Digital Agriculture”, a Massive Open E-Learning Course	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	25 <sup>th</sup> March to 30 <sup>th</sup> April, 2020 (06 Days)	Open Learning Campus, World Bank Group and edX founded by Harvard University, USA and Massachusetts Institute of Technology, USA.
03.	“Introduction to Digital Transformation and Global E-Governance Initiatives”	“Introduction to Digital Transformation and Global E-Governance Initiatives”	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	1 <sup>st</sup> June, 2020 (01 Day)	National Productivity Council (NPC), Department of Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, Govt. of India, Utpadakta Bhavan, 5-6 Institutional Area, Lodhi Road, New Delhi – 110003
04.	National Webinar on Modern Agricultural Technology: A Step Towards Rural Self-Reliance	Modern Agricultural Technology: A Step Towards Rural Self-Reliance	Dr. Subrata Mandal, Senior Scientist and Head (Officiating) and Subject Matter Specialist (Agronomy)	12 <sup>th</sup> June to 14 <sup>th</sup> June (03 Days)	Palli Siksha Bhavana (Institute of Agriculture) Visva-Bharati.
05.	International Webinar on World Skill Day on the Theme “Reinventing Agricultural Skill in the Time of Pandemic: Research and Extension Services	International Webinar on World Skill Day on the Theme “Reinventing Agricultural Skill in the Time of Pandemic: Research and Extension Services	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	16 <sup>th</sup> . June. 2020 (01 Day)	Association for Agriculture, Environment and Bio-Technology (AAEB), in collaboration with College of Agriculture, Tripura
06.	National Webinar on “Organic Farming 2020”	National Webinar on “Organic Farming 2020”	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	16 <sup>th</sup> June to 20 <sup>th</sup> June, 2020 (05 Days)	College of Agriculture, Balaghat, Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur, Madhya Pradesh
07.	Online Annual Zonal Workshop of Krishi Vigyan Kendras of Zone-V of ICAR	Annual Zonal Workshop of Krishi Vigyan Kendras of Zone-V of ICAR	Dr. Subrata Mandal, Senior Scientist and Head (Officiating) and Subject Matter Specialist (Agronomy)	1 <sup>st</sup> July to 2 <sup>nd</sup> July, 2020 (02 Days)	ICAR-ATARI, Kolkata
08.	MANAGE Webinar on Coping with Covid-19 – Strategies for Farmer Producer Organizations (FPOs)	MANAGE Webinar on Coping with Covid-19 – Strategies for Farmer Producer Organizations (FPOs)	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	6 <sup>th</sup> July, 2020. (01 Day)	National Institute of Agricultural Extension Management (MANAGE), Ministry of Agriculture and Farmers’

					Welfare, Govt. of India, Hyderabad, Telengana
09.	MANAGE Webinar on Extension NEXT: Changing Roles and Future Reforms in Agricultural Extension	MANAGE Webinar on Extension NEXT: Changing Roles and Future Reforms in Agricultural Extension	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	10 <sup>th</sup> July, 2020 (01 Day)	National Institute of Agricultural Extension Management (MANAGE), Ministry of Agriculture and Farmers' Welfare, Govt. of India, Hyderabad, Telengana
10.	Review Workshop on Video conferencing on GKMS (DAMU Project)	GKMS (DAMU Project)	Dr. Subrata Mandal, Senior Scientist and Head (Officiating) and Subject Matter Specialist (Agronomy)	21 <sup>st</sup> July, 2020 (01 Day)	ICAR-ATARI, Kolkata
11.	Annual Conferencing of Society for Fertilizer and Environment and Webinar on Agro Chemicals for upkeeping Environment	Agro Chemicals for upkeeping Environment	Dr. Subrata Mandal, Senior Scientist and Head (Officiating) and Subject Matter Specialist (Agronomy)	29 <sup>th</sup> Aug, 2020 (01 Day)	Society for Fertilizers and Environment, Kolkata
12.	Annual Conferencing of Society for Fertilizer and Environment and Webinar on Agro Chemicals for upkeeping Environment	Agro Chemicals for upkeeping Environment	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	29 <sup>th</sup> Aug, 2020 (01 Day)	Society for Fertilizers and Environment, Kolkata
13.	Short Term Training Course on "Preparation and Dissemination of Agromet Advisories at Block Level under Gramin Krishi Mausam Seva (GKMS) Scheme"	Short Term Training Course on "Preparation and Dissemination of Agromet Advisories at Block Level under Gramin Krishi Mausam Seva (GKMS) Scheme"	Mr. Sayak Mahato Subject Matter Specialist (Agrometeorology)	24 <sup>th</sup> Sept. to 30 <sup>th</sup> Sept., 2020 (07 Days)	Indian Meteorological Department (IMD) and Indian Council of Agricultural Research (ICAR)
14.	International Webinar on Receptor Dynamics in Cell Signalling	International Webinar on Receptor Dynamics in Cell Signalling	Dr. Madhuchhanda Khan, Subject Matter Specialist (Animal Science)	4 <sup>th</sup> Oct 2020 (01 Day)	Indian Society of Veterinary Pharmacology and Toxicology
15.	Annual Conference of Indian Society of Veterinary Pharmacology and Toxicology	Online International XX Annual Conference of Indian Society of Veterinary Pharmacology and Toxicology	Dr. Madhuchhanda Khan, Subject Matter Specialist (Animal Science)	4 <sup>th</sup> Oct to 5 <sup>th</sup> Oct, 2020 (02 Days)	Department of Veterinary Pharmacology and Toxicology, U.P. Deen Dayal Upadhyay Pashu Chikitsa Vigyan Viswavidyalaya and Indian Society of Veterinary Pharmacology and Toxicology
16.	National Webinar on Translational Approaches in Herbal Drug Development	National Webinar on Translational Approaches in Herbal Drug Development	Dr. Madhuchhanda Khan, Subject Matter Specialist (Animal Science)	5 <sup>th</sup> Oct 2020 (01 Day)	Indian Society of Veterinary Pharmacology and Toxicology

17.	Webinar on New Farm Act, 2020	New Farm Act, 2020	Dr. Subrata Mandal, Senior Scientist and Head (Officiating) and Subject Matter Specialist (Agronomy)	29 <sup>th</sup> Oct, 2020	ICAR-ATARI, Kolkata
18.	Webinar on New Farm Act, 2020	New Farm Act, 2020	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	29 <sup>th</sup> Oct, 2020	ICAR-ATARI, Kolkata
19.	Webinar on National Nutrition Mission	National Nutrition Mission	Dr. Subrata Mandal, Senior Scientist and Head (Officiating) and Subject Matter Specialist (Agronomy)	11 <sup>th</sup> . November, 2020 (01 Day)	ICAR-ATARI, Kolkata
20.	Webinar on National Nutrition Mission	National Nutrition Mission	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	11 <sup>th</sup> . November, 2020 (01 Day)	ICAR-ATARI, Kolkata
21.	18th. One Week National E-Workshop on Planning and Development of Massive Open Online Courses (MOOCs)	National E-Workshop on Planning and Development of Massive Open Online Courses (MOOCs)	Dr. Subrata Mandal, Senior Scientist and Head (Officiating) and Subject Matter Specialist (Agronomy)	10 <sup>th</sup> Dec to 16 <sup>th</sup> Dec 2020 (07 Days)	A.K. Dasgupta Centre for Planning and Development, Visva-Bharati, Santiniketan, Birbhum, West Bengal
22.	18th. One Week National E-Workshop on Planning and Development of Massive Open Online Courses (MOOCs)	National E-Workshop on Planning and Development of Massive Open Online Courses (MOOCs)	Mr. Sourav Mondal Subject Matter Specialist (Plant Protection)	10 <sup>th</sup> Dec to 16 <sup>th</sup> Dec 2020 (07 Days)	A.K. Dasgupta Centre for Planning and Development, Visva-Bharati, Santiniketan, Birbhum, West Bengal
23.	18th. One Week National E-Workshop on Planning and Development of Massive Open Online Courses (MOOCs)	National E-Workshop on Planning and Development of Massive Open Online Courses (MOOCs)	Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	10th Dec to 16th Dec 2020 (07 Days)	A.K. Dasgupta Centre for Planning and Development, Visva-Bharati, Santiniketan, Birbhum, West Bengal
24.	18th. One Week National E-Workshop on Planning and Development of Massive Open Online Courses (MOOCs)	National E-Workshop on Planning and Development of Massive Open Online Courses (MOOCs)	Mr. Sayak Mahato Subject Matter Specialist (Agrometeorology)	10th Dec to 16th Dec 2020 (07 Days)	A.K. Dasgupta Centre for Planning and Development, Visva-Bharati, Santiniketan, Birbhum, West Bengal
25.	Online International Training cum Orientation Programme on Advances in Pharmacology: Addressing the Paradigm Shift in Clinical and Para clinical Sciences	Training cum Orientation Programme on Advances in Pharmacology: Addressing the Paradigm Shift in Clinical and Para clinical Sciences	Dr. Madhuchhanda Khan, Subject Matter Specialist (Animal Science)	28 <sup>th</sup> Dec, 2020 to 21 <sup>st</sup> Jan, 2021 (21 Days)	Department of Veterinary Pharmacology and Toxicology, College of Veterinary Science and Animal Husbandry, Rewa, M.P., Nanaji Deshmukh Veterinary Science University, Jabalpur, M.P.

### 3.7. Success stories/Case studies, if any (two- or three-pages write-up on 1-2 best case(s) with suitable action photographs)

**Sri Tapan Kumar Ghosh, a successful Back Yard Poultry Farmer partnered by the Rathindra Krishi Vigyan Kendra**

**Name of farmer** - Sri Tapan Kumar Ghosh

**Address** - Village – Bishnubati, C. D. Block – Bolpur - Sriniketan, P. O. – Sattore, P. S. – Sattore, Dist. – Birbhum, Pin. – 731236, West Bengal

**Contact details (Phone, mobile, email Id)** – Mobile Phone No. - 9614057093

**Land holding (in ha.)** –1.33

**Name and description of the farm / enterprise** – Backyard poultry farming is one of the most important viable non-crop enterprises of dry semi-arid zone of West Bengal. However, the traditional way of backyard poultry keeping system is less remunerative because of scarcity of superior germplasm. Though, rural backyard poultry segment contributes nearly 30 per cent of the national egg production, still it is a neglected one. The meat of backyard scavenging chickens is well accepted in the markets and more remunerative than commercial broiler meat because of its taste, lower fat content and texture.

Keeping these real level situations in mind, the Rathindra Krishi Vigyan Kendra has intervened through conducting an On Farm Trial Programme on Comparative Performance analysis of the Breeds viz. Vanaraja, Rhode Island Red and Indigenous (Deshi) Chicken in dryland farming situation of Birbhum District of West Bengal. At first, in the financial years of 2014-15 and 2015-16, the Rathindra Krishi Vigyan Kendra selected fourteen partner farmers from different villages of Birbhum district for the On Farm trial Programmes.

One of the selected partner farmers, Sri Tapan Ghosh, who was continuing the Back Yard Poultry Farming in a traditional way but earning a Net Profit Margin almost each year, was keenly observed by the Rathindra KVK focusing on the potential of increasing the profit gained by the above-mentioned unemployed partner farmer, i.e., Sri Tapan Kumar Ghosh. Sri Ghosh was selected for the On Farm Trial Programme on comparative analysis of the performances of the different types of rural poultry breeds under Back Yard Farming situation. Before inducting Sri Ghosh in the On Farm trial programme, Sri Ghosh was given intensive skill development training programmes on scientific poultry farming and management practices and low-cost feed formulation of poultry from Rathindra KVK, Visva-Bharati, West Bengal. He also attended a lot of various awareness programmes and exposure visits to public as well as private sector poultry farms for gaining firsthand experiences.

Rathindra KVK distributed 20 numbers of Vanaraja, 20 numbers of Rhode Island Red and 20 numbers of Indigenous (Deshi) chicken breeds to Sri Tapan Ghosh as critical input of the On Farm Trial Programme after twenty-one days of brooding programme organized and performed in the Instructional Poultry Farm of the KVK. He started his backyard 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 as night shelter and to protect the birds from predators. Birds were let loose as free-range scavenging for utilizing the feed base, i.e., fallen grain, insect, earthworm, kitchen waste, green grass etc. with supplementary feeding of concentrate mixture prepared by the locally available feed resources. Almost one fourth of the amount of concentrate mixture 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 Mr. Tapan Kumar Ghosh as per the standard protocol with technological backstopping by the scientist of the Rathindra KVK.

Bodyweight of the Vanaraja Breed at 52 weeks of age for male was about 3.7 Kg while for female it was about 2.5 Kg and in case of Rhode Island Red the bodyweight of male was about 2.95 Kg and 2.3 Kg for female. Vanaraja produces 103-110 eggs and Rhode Island Red produces 150-160 eggs and age of first egg laying of these two breeds is almost similar i.e., 175-180 days. Mortality upto 52 weeks of age for Vanaraja and Rhode Island Red is also negligible. By the time, Sri Tapan Kumar Ghosh started to brood fertile eggs of both Vanaraja and Rhode Island Red by using his local hen; this has initiated breed up-gradation of his chicken breeds.

Vanaraja and 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 price of newly hatched chick is around Rs. 22.00 to Rs.25.00 per chick and table purpose egg fetches a price of Rs. 6.00 to Rs. 7.00 per egg. Besides, Sri Ghosh diversified his Back Yard Poultry Farming into a breed up-gradation sector also by crossing these two breeds viz. Vanaraja and Rhode Island Red with local birds.

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 Tapan Kumar Ghosh are given in the following Section.

**Economics of the Enterprise:**

**Performance of Different Breed of Poultry Birds under Back yard Farming System practiced by Sri Tapan Ghosh**

Technology option	Body weight						Age at first egg (day)	Egg production up to 72 week	Egg weight at 26 th week (gm)	Egg weight at 40 th week (gm)	Cost of cultivation (Rs./unit i.e. 20 nos)	Gross return (Rs./unit i.e. 20 nos)	Net Return (Rs /unit i.e 20 nos)	B:C Ratio
	At 6th. Week (gm)		At 40 <sup>th</sup> Week (gm)		At 52 <sup>nd</sup> Week (gm)									
	M	F	M	F	M	F								
Farmer's (Sri Tapan Ghosh's) practice: Indigenous (Deshi) Poultry bird	24 7. 21 ±4 .4 9	36 5. 12 ±5 .8 6	78 5.2 7± 6.6 9	12 34 .5 2± 8. 37	91 6.8 5± 7.7 4	14 78 .3 2± 9. 91	202.6 4±1.2 4	65.73±0.71	31.85±0.18	36.52±0.13	8541	10079	1538	1.18
I. Rhode Island Red (RIR)	55 1. 17 ±4 .1 7	43 7. 81 ±3 .2 3	17 68. 39 ±1 2.3 5	23 49 .2 4 ±1 4. 75	29 41. 43 ±1 7.8 2	22 98 .1 4± 12 .5 7	184.5 8±0.9 2	157.23±1.10	47.35±0.24	53.09±0.26	12675	21168	8493	1.67
II. Vanaraja	51 9. 32 ±4 .5 4	63 6. 32 ±3 .3 8	29 76. 61 ±1 8.0 8	23 52 ±1 2. 66	24 87. 01 ±1 6.7 3	36 91 .8 7± 20 .8 4	186.3 2±1.0 8	103.28±1.04	42.32±0.21	48.92±0.23	15244	19665	4421	1.29

$P < 0.05$

**Result:** The data from the Table- 1 indicated that the Technology Option - I i.e., Improved Rural Poultry Bird Rhode Island Red (RIR) significantly produced better B:C ratio at 72<sup>nd</sup> week (1.67), than those of Technology Option-II (Breed Vanaraja) and Farmer's practice [Breed Indigenous (Deshi)]. Technology Option - II i.e., Improved Poultry Bird Vanaraja produced better B:C ratio at 72<sup>nd</sup> Week (1.29) than farmer's practice (Deshi).

**Profit and Loss:** Sri Tapan Ghosh has got a net profit of Rs.38,000.00 (Rupees Thirty-eight thousand) by selling ready bird, table egg and newly hatched chicks from each unit and each batch.

**Social Impact:** Back Yard Poultry Farming is a Primary Source of Animal Protein and supplementary income generation for the downtrodden 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.

**Environmental Impact:** Commercial Poultry facilities are major sources of Green House Gases Viz. Carbon-Dioxide, Nitrous Oxide etc. Odour and flies are two important nuisances to carry disease. Odour emission caused by a large number of contributing compounds including Ammonia, Hydrogen sulphides etc. from Poultry farms adversely affect the life of people living in the vicinity.

On the contrary, environmental impacts related to Back Yard Systems 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 who were members of 10 Self Help Groups (SHGs) of the nearby three villages namely, Assadulahapur, Adibasipara and Bautizole of Bolpur – Sriniketan Community Development Block of Birbhum District adopted the Back Yard Poultry Farming System as practiced by Sri Tapan Kumar Ghosh.

**Remarks:** Mr. Tapan Kumar Ghosh, an unemployed rural youth, paved the way for other unemployed youths as well as farmers and farm women to take up poultry rearing of improved breeds like Vanaraja and Rhode Island Red 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 Tapan Kumar Ghosh amidst "Rhode Island Red (RIR)" Poultry Breeds along with Rathindra KVK Scientist in the On Farm Trials on "Evaluation of Rural Breeds Poultry Breeds in the Back Yard Farming System" organized by the Rathindra KVK, Birbhum**



**Sri Tapan Kumar Ghosh with “Vanaraja” Poultry Breeds in the On Farm Trials on “Evaluation of Rural Breeds Poultry Breeds in the Back Yard Farming System” organized by the Rathindra KVK, Birbhum**



**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, Mahila Kishan 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.

**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	Green Betel leaves are crushed and mixed with Juggery at the rate of 4 (Four) Numbers of Crushed Betel leaves and 15.00 Grams of Juggery per 100 Birds.	For treatment of Gout and Kidney dis-order in Broiler.

**Sri Aurobindo Ghosh of Village - Balta, P. O. – Batikar, C. D. Block – Illumbazar, Dist. – Birbhum with Betel Leaf to be crushed in Mixer-Grinder Machine for Treatment of Gout and Kidney Disorder of his Broiler Birds**



**Sri Aurobindo Ghosh of Village - Balta, P. O. – Batikar, C. D. Block – Illumbazar, Dist. – Birbhum mixing the Juice of the Betel Leaf crushed in Mixer-Grinder Machine with Juggery in the Drinker for Treatment of Gout and Kidney Disorder of his Broiler Birds**



**Sri Aurobindo Ghosh of Village - Balta, P. O. – Batikar, C. D. Block – Illumbazar, Dist. – Birbhum giving the mixture of the Juice of the Betel Leaf crushed in Mixer-Grinder Machine with Jaggery through the Drinker to the Broiler Birds 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.	<p>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 liaising 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.</p> <p>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.</p>	<p>Training Need Assessment of Rathindra KVK Clientele viz. Practicing Farmers and Farm Women</p>
02.	<p>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.</p>	<p>Training Need Assessment of Rathindra KVK Clientele viz. Rural Youths</p>
03.	<p>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.</p>	<p>Training Need Assessment of Rathindra KVK Clientele viz. Extension Functionaries</p>

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

Sl. No	Name of the Equipment	Qty.
1.	Mixer grinder Kenstar	2 nos.
2.	Refrigerator Whirlpool	2 nos.
3.	Stabilizer Fizi	2 nos.
4.	Shaker	1 no
5.	Oven	1 no

6.	Kelplus Elect Digestation System Model KES 08L	1 no
7.	Kelplus Elect Distillation System Elite Ex	1 no
8.	Systronics Micro controller based visible Spectrophotometer	2 nos.
9.	Systronics P-H system	2 nos.
10.	Systronics Digital Conductivity Meter	2 nos.
11.	Systronics Flame Photometer Type 128	2 nos.
12.	Hotplate with energy regulator	1 no.
13.	Glass Distillation apparatus flux	3 nos.
14.	Physical Balance Cap.250g with weight box	4 nos.
15.	Shimadzu Electronic Balance	2 nos.
16.	Kjeldal digestion unit	2 nos.
17.	Kjeldal distillation unit	2 nos.
18.	MridhhaParikshak (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			
59	07	66	66	12	Not Applicable

### 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.	1. Soil Health Card Distribution. 2. Publication of Various Extension Literature on different aspects of Soil Health Management. 3. Lectures by Eminent Professors of Soil Science on the issues related with Soil Health and its Management. 4. Training for Practicing Farmers and Farm Women on maintenance of Soil Health and related topics. 5. Distribution of Extension Literature among the participants on various aspects of Soil Health Management. 6. Total Nos. of Practicing Farmers and Farm Women present: - 61 7. Total Nos. of persons attended the Programme: - 75	60	01	Prof. Debasis Bhattacharya, Principal, Palli Siksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum – 731236, West Bengal	10	10

### 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

02	-	10500	141	04
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### 3.13. Technology week celebration

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

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

In the RAWE Programme of the 7<sup>th</sup>. Semester of B. Sc. (Ag.) Honours Course, Bijan Kumar Mondal of Banaras Hindu University, Varanasi, U.P. and Selim Malek Siddiquee of Bihar Agricultural University, Sabour, Bhagalpur, Bihar have undergone the RAWE Programme under the guidance of the Rathindra KVK, Palli-Siksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum, from September, 2020 to February, 2021 as per directives related to COVID Protocol.

No. of students trained	No. of days stayed
02	-

ARS trainees trained	No. of days stayed
-	-

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

Date	Name of the Person	Purpose of Visit
-	-	-
-	-	-
-	-	-

## 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)

<b>Horizontal Spread of Technologies</b>
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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 and Use of Vermin-Composting</b>	180 farmers Trained in the Rathindra KVK on various aspects of preparation and use of Vermin-Composting adopted the Technology and from them the Technology was spreaded with culminating effect of adoption among another 110 numbers of farmers of whom 29 numbers of farmers resided within 0.1 – 5 kms. Radius of the Rathindra KVK; 37 numbers of farmers resided within 5.1 – 10 kms. Radius of the Rathindra KVK; 22 farmers resided within 10.1 – 15 kms. Radius of the Rathindra KVK and the rest 22 numbers of the farmers resided within 15.1 kms and above radius of the Rathindra KVK.

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

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 Ershad Molla, Village + P. O. – Sattore, Pin. – 731236, Dist. – Birbhum.
<b>Back ground of innovation</b>	Sri Ershad Molla 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 Ershad Molla 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 Ershad Molla, 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</p>

	<p>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> <li>• Cultivation and feeding of green fodder</li> </ul> <p>Feeding of area specific mineral mixture.</p>
<p><b>Timeline of the entrepreneurship development</b></p>	<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 02 Breed Up-graded Deshi Cows and 06 Calves.</p>
<p><b>Technical Components of the Enterprise</b></p>	<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> <p>Feeding of area specific mineral mixture.</p> <ol style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>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.</li> </ol>

Status of entrepreneur before and after the enterprise	Parameters	Before	After
	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: - Feed Ingredients and other feed</b> 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 "Prani Sampada (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 Sanghatana Vibagh, Visva-Bharati, Sriniketan, Birbhum	This linkage is mainly focusing on organizing joint Training programmes for the villagers as well as giving exposure to the clientele of the Rathindra KVK as about the field level situation
All India Radio, Santiniketan Kendra, Birbhum, West Bengal	Broadcasting of different Rathindra KVK activities as well as live Phone –In Programmes are being organized.
Doordarshan, Santiniketan Kendra, Birbhum, West Bengal	Telecasting of different Rathindra KVK activities as well as live phone –In Programmes are being organized. As a result a vast number of farmers, farm women and rural youth are being exposed to multiple information sources regarding multiple issues. This is necessary to mention that the viewers of these Programmes have been immensely benefited by viewing Method Demonstration on various new Technologies.
Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, West Bengal	This linkage is mainly on the following aspects:- <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 germ-plasm.</li> </ul>

West Bengal University of Animal and Fishery Sciences, Belgachia, Kolkata, West Bengal	This linkage is mainly on the following aspects:- - Conducting regular basis Human Resource Development Training Programme in different discipline. - Facilitate for Annual Action Plan Development. - Facilitate On Farm Testing Modules. - Provide different location specific mineral mixture, vaccines, medicines, seeds of Improved Varieties of Green Fodder Crops.
ICAR-Indian Agricultural Research Institute (IARI), Regional Station, Samastipur, Bihar	The linkage is mainly based on Collaborative Demonstration Programme on newer Wheat and Paddy varieties. As a result of this linkage, the farmers of Birbhum District are being exposed to newer varieties of Wheat and scented as well as non-scented Paddy varieties. Some varieties have shown very good potential for future introduction in the District. - Provide Weather related Information for Crop based Action Plan Development.
ICAR-National Dairy Research Institute (NDRI), Eastern Regional Station (ERS), Kalyani, West Bengal	This Linkage is basically for organizing the Collaborative Animal Health Camps, Cattle Infertility Treatment Camps, Hybrid Napier Distribution Camps and for organizing Front Line Demonstrations on improved varieties of Fodder Crops like Berseem, Oat etc.
Regional Fodder Station, Kalyani, Ministry of Agriculture and Farmers' Welfare, Govt. of India, Nadia, West Bengal	This Linkage is basically for organizing the Front Line Demonstration (FLD) Programmes on various Improved Varieties of Green Fodder.
ICAR-Indian Grassland and Fodder research Institute (IGFRI), Jhansi, Uttar Pradesh	This Linkage is basically for organizing the Front Line Demonstration (FLD) Programmes on various Improved Varieties of Green Fodder.
Agriculture Skill Council of India (ASCI), National Skill Development Corporation (NSDC), Ministry of Skill Development and Entrepreneurship, Govt. of India, New Delhi	This linkage is for Training of Trainers, formulation of Training Courses, assessment and providing Skill Training Certificates to the Trainees of ASCI Skill Training Courses like Hatchery Production Worker, Animal Health Worker, Agriculture Extension Service Provider etc.
National Fisheries Development Board (NFDB), Ministry of Agriculture and Farmers' Welfare, Govt. of India, Hyderabad, Telengana	This linkage is for providing Human Resource Development Training to KVK Scientists as well as for organizing Long Duration Skill and Entrepreneurship Development Training Programmes to fish farmers and interested Rural Youths on different aspects of Fish Production and for hand-holding the Fish Growers for different Governmental Schemes in Fishery Sector.
National Institute of Agricultural Extension Management (MANAGE), Ministry of Agriculture and Farmers' Welfare, Govt. of India, Hyderabad, Telengana	This linkage is for providing Human Resource Development Training to KVK Scientists as well as for organizing Diploma in Agricultural Extension Services for Input Dealers (DAESI), a Long Duration Skill and Entrepreneurship Development Training Programmes for the Agricultural Input Dealers for developing them as grass-root level Extension Functionaries.
Line Departments like Agriculture, Horticulture and Food Processing Industries, Animal Resource Development, Fisheries etc. of the Govt. of West Bengal, Birbhum, West Bengal	This linkage is basically on Technological back-stopping of the Extension and developmental activities of various developmental departments of the Govt. of West Bengal.
National Research Centre on Weed Control, Jabbalpur, Madhya Pradesh	The linkage is now focusing on Technical Support for organizing Training and Awareness Camps for controlling weeds specifically weeds like <i>Parthenium</i> . The farmers of this District get immense benefit as they get exposure on <i>Parthenium</i> and other weeds through participating in "Parthenium Control Week Programme".
Agricultural Technology Management Agency (ATMA), Birbhum, Suri, Birbhum, West Bengal	The linkage is now focusing on Orientation Farmers' training and Programme Training for Head Master / Achiever Farmer. Various Short Term Researches on Topics related with Fishery, Agronomy etc. are also being performed utilizing these linkages Programme.
Agricultural Technology Management Agency	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

(ATMA), Various Districts of West Bengal	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.
Manab Jamin, Birbhum, West Bengal.	This linkage gives importance as well as focuses on joint Training and Demonstration for stakeholders for various non-adopted villages of Birbhum District.
Bolpur Krishija Samabay Samity, Bolpur, Birbhum, West Bengal	This linkage is basically focuses on supply of quality agricultural inputs for various FLD and OFT Programmes of the Rathindra KVK undertakes. As a result, the clientele of the Rathindra KVK is immensely benefitted through experiencing newer and better quality agricultural inputs.
National Seed Corporation, Kolkata, West Bengal	This linkage is basically focuses on supply of quality breeder and foundation seeds of various Crops for various FLD and OFT Programmes of the Rathindra KVK undertakes. As a result, the clientele of the Rathindra KVK is immensely benefitted through experiencing newer and better quality seeds.
West Bengal State Seed Corporation, Kolkata, West Bengal	This linkage is basically focuses on supply of quality breeder and foundation seeds of various Crops for various FLD and OFT Programmes of the Rathindra KVK undertakes. As a result, the clientele of the Rathindra KVK is immensely benefitted through experiencing newer and better quality seeds.
Panchayati Raj Institutions (PRIs), Birbhum, West Bengal	This linkage helps the Rathindra KVK to get base-line information for choosing Target Areas both on Geographical Terms as well as on Technological Terms by going through various surveys and reports generated by the PR Institutions of the Birbhum District.
Other Krishi Vigyan Kendras (KVKs)	This linkage helps the farmers of various Districts to have an exposure and visit to Rathindra KVK and exchange ideas and experiences with farmers of the District of Birbhum and Scientists of the Rathindra KVK.

**5.2. List of special programmes undertaken during 2020-21 by the KVK, which have been financed by ATMA/ Central Govt./ State Govt./NABARD/NHM/NFDB/Other Agencies (information of previous years should not be provided)**

**a) Programmes for infrastructure development**

Name of the programme/ scheme	Purpose of programme	Date/ Month of initiation	Funding agency	Amount (Rs.)



Mustard	18.11.2020	-	0.13	NRCHB -101	-	-	-	-	Standing Crop
Mustard	18.11.2020	-	0.13	YSH - 0401	-	-	-	-	Standing Crop
<b>Total</b>			<b>01.87</b>			<b>71.69</b>	<b>Rs.</b> <b>1,17,320.00</b>	<b>Rs.</b> <b>2,98,260.00</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.	<i>Azolla</i>	1000.00	10,000.00	50,000.00	990.00 kgs. were utilized in FLD Programmes, and rest amount was utilized in the Instructional Farms of the Rathindra KVK
2.	Vermi-Compost	2000.00	4,000.00	20,000.00	65.00 kgs. of Vermi-Compost were sold and remaining the Vermi-compost was used in Farmer's plots, KVK Flower and Vegetable garden.
3.	Earth-worm	55,000 in nos.	5000.00	27,500.00	40,000 numbers of Earth-worms were supplied to 400 numbers of the farmers free of cost for encouragement in future use.

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

Sl. No.	Name of the animal / bird / aquatics	Details of production			Amount (Rs.)		Remarks
		Breed	Type of Produce	Qty.	Cost of inputs	Gross income	
1.	Japanese Quail	<i>Coturnix coturnix japonica</i>	Adult Birds	50 nos.	625.00	2500.00	Net Profit – Rs. 1875.00
2.	Broiler	Coloured Broiler	Advanced Grower	30 nos.	2200.00	1800.00	Net Profit – Rs. 2900.00
3.	Broiler	Krishibro	Advanced Grower	20 nos.		1200.00	
4.	Broiler	Caribro	Advanced Grower	35 nos.		2100.00	

### 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 staff quarters:

Date of completion:

Occupancy details:

Months	Q I	QII	Q III	QIV	Q V	QVI

## 7. FINANCIAL PERFORMANCE

### 7.1. Details of KVK Bank accounts

Bank account	Name of the bank	Location	Account Number
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.	<b>10598447180</b>

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

Item	Released by ICAR		Expenditure		Unspent balance as on 1 <sup>st</sup> . April, 2021
	Rabi	Summer	Rabi	Summer	
Rabi – Rapeseed and Mustard Summer – Groundnut and Sesame	1.80	5.40	1.06537	3.84800	2.28663

### 7.3. Utilization of funds under CFLD on Pulses (Rs. In Lakhs)

Item	Released by ICAR		Expenditure		Unspent balance as on 1 <sup>st</sup> . April, 2021
	Rabi	Summer	Rabi	Summer	
Rabi – Lentil and Chickpea Summer – Black Gram and Green Gram	1.80	1.80	1.46680	1.50800	00.62520

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**7.4. Utilization of KVK funds during the year 2020-21 (Not audited)**

Sl. No.	Particulars	Sanctioned	Released	Expenditure
<b>A. Recurring Contingencies</b>				
1	Pay & Allowances	140.00	140.00	108.00
2	Traveling allowances	00.45	00.45	00.10
3	Contingencies	26.00	26.00	26.00
A				
B				
C				
D				
E				
F				
G				
H				
I				
J	Swachhta Expenditure	00.15	00.15	00.15
<b>TOTAL (A)</b>		<b>166.60</b>	<b>166.60</b>	<b>134.25</b>
<b>B. Non-Recurring Contingencies</b>				
1	Library	00.10	00.10	00.10
2				
3				
4				
<b>TOTAL (B)</b>				
<b>C. REVOLVING FUND</b>				
<b>GRAND TOTAL (A+B+C)</b>		<b>166.70</b>	<b>166.70</b>	<b>134.35</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)
<b>2015-16</b>	2.3330738	1.58382	1.29424	2.6226538
<b>2016-17</b>	2.6226538	1.06356	0.71855	2.9676638
<b>2017-18</b>	2.9676638	2.19133	1.93960	3.2193938
<b>2018-19</b>	3.2193938	2.43150	1.67544	3.9754500
<b>2019-20</b>	3.9754500	2.86500	1.39650	5.4439500
<b>2020-21</b>	5.4439500	2.91500	2.44000	2.30000 (Kinds) + 5.9189500 (Cash)

**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 on Liming of Black Gram in Summer Season	01	Summer Season	-	ATMA-BIRBHUM	-
Cluster FLD on Green Gram in summer Season	01	Summer Season	-	ATMA-BIRBHUM	-

### 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 Yuva Kendra (NYK) Training

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

#### 9.2. mKisan Portal (National Farmers' Portal / SMS Portal)

Type of message	No. of messages	No. of farmers covered

Crop	24	13310
Livestock	38	18020
Fishery	28	3870
Weather	37	5020
Marketing	48	7920
Awareness	36	8900
Training information	14	8462
Other	-	-
<b>Total</b>	<b>225</b>	<b>65502</b>

### 9.3. KVK Portal and Mobile App

Sl. No.	Particulars	Description
1.	No. of visitors visited the portal	11349
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	-

### 9.4. a. Observation of Swachh Bharat Programme

Date / Duration of Observation	Activities undertaken
16.10.2020.	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.
17.10.2020.	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.
18.10.2020.	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.
19.10.2020.	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.
20.10.2020.	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.
21.10.2020.	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.
22.10.2020.	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.

23.10.2020.	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.
24.10.2020.	Rathindra KVK has organized a Mobile Publicity Programme regarding the “ <i>SWACHHTA PAKHWARA</i> ” 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.
25.10.2020.	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.
26.10.2020.	Rathindra KVK has organized a Mobile Publicity Programme regarding the “ <i>SWACHHTA PAKHWARA</i> ” through utilizing the Office Jeep of the Rathindra KVK. The Jeep went to various Villages of the District of Birbhum, i.e. the mandate District of the Rathindra KVK and spreaded the message about the need and importance of the cleanliness in the day to day life as well as in all the Agricultural and related activities. This programme of the Rathindra KVK invoked a great response among the Villagers in all the places where this Mobile Jeep went. One of the villages was Durgapur, P. O. – Panchshoya, Police Station – Bolpur, Community Development (CD) Block–Bolpur-Sriniketan, Dist. – Birbhum. At this village, the villagers along with school going students were seen attentively listening to the Campaign being launched by the Scientists of the Rathindra KVK.
27.10.2020.	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.
28.10.2020.	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.
29.10.2020.	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.
30.10.2020	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 “ <i>SWACHHTA PAKHWARA</i> ”.
31.10.2020.	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.

### b. Details of Swachhta activities with expenditure

Activities	Number	Expenditure (in Rs.)
1. Digitization of office records / e-office	05	
2. Basic maintenance	02	
3. Sanitation and SBM	24	
4. Cleaning and beautification of surrounding areas	24	
5. Vermicomposting / Composting of biodegradable waste management & other activities on generate of wealth for waste	24	
6. Used water for agriculture/ horticulture application	-	
7. Swachhta Awareness at local level	10	
8. Swachhta Workshops	-	
9. Swachhta Pledge	01	
10. Display and Banner	02	
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	16	
15. No of VIP/VVIPs involved in the activities	-	
16. Any other specific activity (in details)	-	
<b>Total</b>	<b>118</b>	<b>15,000.00</b>

### 9.5. Observation of National Science day

Date of Observation	Activities undertaken

### 9.6. Programme with Seema Suraksha Bal / BSF

Title of Programme	Date	No. of participants

### 9.7. Agriculture Knowledge in rural school

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

### 9.8. Details of 'Pre-Rabi Campaign' Programme

Date of programme	No. of Union Ministers attended the programme	No. of Hon'ble MPs (Loksabha/Rajyasabha) participated	No. of State Govt. Ministers	Participants (No.)							Coverage by Door Darshan (Yes/No)	Coverage by other channels (Number)
				MLAs Attended the programme	Chairman Zila Panchayat	Distt. Collector/DM	Bank Officials	Farmers	Govt. Officials, PRI members etc.	Total		
-	-	-	-	-	-	-	-	-	-	-	-	-

### 9.9. Details of Swachhta Hi Sewa programme organized

Sl. No.	Activity	No. of villages Involved	No. of Participants	No. of VIPs	Name (s) of VIP(s)
01.	Awareness Generation Programme on Importance of Cleanliness and Hygiene	07	253	-	-
02.	Campaign by RKVK Staff on Cleanliness through Cleaning Activity by the Staffs themselves	02	63	-	-

### 9.10. Details of Mahila Kisan Divas programme organized

Sl. No.	Activity	No. of villages Involved	No. of Participants	No. of VIPs	Name (s) of VIP(s)
01.	Training Programme, Film Show and Method Demonstration on Farm Women related Technologies in Agriculture and Related Sectors	12	47	-	-

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

Sl. No.	Name of the Farmer	Address of the Farmer with contract 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 Bipantaran 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. - Choto Shimulia, 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 Bapi Dhara	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 Farm Produce like Seeds, Planting Materials, Fruits from Mango Orchard, Demonstration Farm for Seed Production and Demonstration Progeny Orchards of the Rathindra KVK)	2,21,990.00	Own arrangement – KVK Demonstration Farms, Orchads, Poultry, Pond etc.
2.	Revolving Fund (From sale of Poultry Birds of the Demonstration Poultry of the Rathindra KVK)	6,000.00	
3	Revolving Fund (From sale of Fishes of the Pond of the Rathindra KVK)	23,510.00	
4.	Seminar Hall Rent	40,000.00	
5.	Other Sources	40,000.00	
5.	<b>Total</b>	<b>3,31,500.00</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 Rabi Oilseed	To disseminate Improved Varieties, Agro-Technologies and supporting Package of Practices for Rabi Oilseeds Production	ICAR, New Delhi	01.80	-
02.	Cluster Front Line Demonstrations (Cluster FLDs) on Rabi Pulses	To disseminate Improved Varieties, Agro-Technologies and supporting Package of Practices for Rabi Pulse Production	ICAR, New Delhi	01.80	-
03.	Cluster Front Line Demonstrations (Cluster FLDs) on Summer Oilseed	To disseminate Improved Varieties, Agro-Technologies and supporting Package of Practices for Summer Oilseeds Production	ICAR, New Delhi	05.40	-

04.	Cluster Front Line Demonstrations (Cluster FLDs) on Summer Pulses	To disseminate Improved Varieties, Agro-Technologies and supporting Package of Practices for Summer Pulse Production	ICAR, New Delhi	01.80	-
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	00.089	-
06.	SWACCHA Action Plan in 2020-21	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	00.15	-
07.	Diploma in Agricultural Extension Service for Input Dealers	To develop human resources among the Input Dealers through Skill, Knowledge and Entrepreneurship development Training Programmes on Various Aspects of Agricultural Extension Services	MANAGE, Hyderabad, Telengana	16.00	-
08.	District Agromet Unit (DAMU)	To provide real time information on District Weather and Meteorological Data and their interpretations to the practicing farmers, farm women, rural youths and extension functionaries for taking suitable actions	IMD, Ministry of Earth Sciences, Govt. of India, New Delhi	11.38	Work is in progress.
09.	<b>Total</b>			<b>38.419</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
Partly established upto 31.12.2020	IMD	Civil work is going on.

#### 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): - Not Applicable

- 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. Details of TSP: - Not Applicable

- a. Achievements of physical output under TSP during 2020-21

Programmes	Physical achievements
Asset creation (Number; Sprayer, ridge maker, pump set, weeder etc.)	
On-farm trials (Number)	
Frontline demonstrations (Number)	
Farmers training (in lakh)	
Extension personnel training (in lakh)	
Participants in extension activities (in lakh)	
Seed production (in tonnes)	
Planting material production (in lakh)	
Livestock strains and fingerlings production (in lakh)	
Soil, water, plant, manures samples testing (in lakh)	
Provision of mobile agro – advisory to farmers (in lakh)	
No. of other programmes (Swachha Bharat Abhiyaan, Agriculture knowledge in rural school, Planting material distribution, Vaccination camp etc.)	

- b. Fund received under TSP in 2020-21 (Rs. In lakh):  
c. (i) Achievements of physical outcome under TSP during 2020-21

Sl. No.	Description	Unit	Achievements
1	Change in family income	%	
2	Change in family consumption level	%	
3	Change in availability of agricultural implements/ tools etc.	No. per household	

- (ii) Table:

<i>Sl. No.</i>	<i>Description</i>	<i>Unit</i>	<i>Achievements</i>
1	Number of Technologies Identified after Assessment	Number	
2	Upgraded Skills and Knowledge of farmers	Number	
3	Oriented extension personnel in frontier areas of agricultural technology	Number	
4	Increased availability of quality seed	Quintal	
5	Increased availability of quality Planting material	Number	
6	Increased availability of live-stock strains and fingerlings	Number	
7	Testing of Soil & water samples for balance fertilizer use	Number	

d. Location and Beneficiary Details during 2020-21

<i>District</i>	<i>Sub-district</i>	<i>No. of Village covered</i>	<i>Name of village(s) covered</i>	<i>ST population benefitted (No.)</i>		
				M	F	T

**12. Schedule caste Output & Outcome achievements**

<i>Sl. No.</i>	<i>Indicator/Activities</i>	<i>Unit of Indicator</i>	<i>Achievements</i>
1	Farmers, farm women trained by KVKs	Number	1111
2	Extension personnel trained by KVKs	Number	-
3	On-farm trials conducted by KVKs	Number	06
4	Frontline demonstrations conducted by KVKs	Number	890
5	Quantity of seeds produced	Quintal	71.69
6	Planting materials Produced	Number	10610
7	Livestock strains and fingerlings produced	Number	155
8	Soil & water samples tested	Number	66

**13. Information pertaining to ARYA Project**

020-21							
Name of KVK	Year since ARYA is initiated in the KVK (specify year)	No. of Training programs	No. of rural youth trained		No. of youth established units		No. of entrepreneurial units established
			M	F	M	F	

**14. Progress report of NICRA KVK (Technology Demonstration component) during the period (Applicable for KVKs identified under NICRA): - Not Applicable**

## Natural Resource Management

Name of intervention undertaken	Numbers under taken	No of units	Area (ha)	No of farmers covered / benefitted						Remarks									
				SC		ST		Other			Total								
				M	F	M	F	M	F		M	F	T						

## Crop Management

Name of intervention undertaken	Area (ha)	No of farmers covered / benefitted						Remarks											
		SC		ST		Other			Total										
		M	F	M	F	M	F		M	F	T								

## Livestock and fisheries

Name of intervention undertaken	Number of animals covered	No of units	Area (ha)	No of farmers covered / benefitted						Remarks									
				SC		ST		Other			Total								
				M	F	M	F	M	F		M	F	T						

## Institutional interventions

Name of intervention undertaken	No of units	Area (ha)	No of farmers covered / benefitted									Remarks
			SC		ST		Other		Total			
			M	F	M	F	M	F	M	F	T	

#### Capacity building

Thematic area	No of Courses	No of beneficiaries									
		SC		ST		Other		Total			
		M	F	M	F	M	F	M	F	T	

#### Extension activities

Thematic area	No of activities	No of beneficiaries								
		SC		ST		Other		Total		
		M	F	M	F	M	F	M	F	T

Detailed report should be provided in the circulated Performa

#### 15. Awards / Recognition received by the KVK

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

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

Sl. No.	Name of the Award	Name of the Farmer	Year	Conferring Authority	Amount	Purpose
01.	Krishak Ratna	Sri Subhasish Ghosh	2020	Dept. of Agriculture, Govt. of West Bengal	-	To encourage the farmer in spreading Improved Package of Practices of Cultivation

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

A. Plantation Programme of Mango Vars. Amrapali and Himsagar was undertaken at the Village: - Belgoria, C. D. Block: - Md. Bazar, Dist. - Birbhum by the Rathindra KVK. The KVK distributed 300 numbers of saplings of the above-mentioned fruit trees to 150 numbers of Scheduled Tribe community farmers of the locality in loving memory of the martyr of Galwan Valloey battle, Sri Rajesh Oraon of the Indian army on 8<sup>th</sup>. October, 2020.

### Distribution of Mango Saplings to Family Members of Martyr Shri Rajesh Oraon, Indian Army



#### 17. 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.	Bharkata Adivashi Chashi Bhai Lahanati Producer Company Limited	U01100WB2018PTC225331; Dated – 23.03.2018	Date of Trust Registration: - 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.	Mashra Adibashi Farmers Producer Company Limited	U36999WB2018PTC224177; Dated – 05.01.2018	Date of Trust Registration: - 05.01.2018. Address – Village – Nirisha, P. O. – Kastogara, Police Station – Rampurhat, Dist. –	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	

			Birbhum, Pin. – 731216, West Bengal				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 Company Limited	U36100WB2018PTC224713; Dated – 21.02.2018.	<b>Date of Trust Registration:</b> - 21.02.2018.  <b>Address:</b> - Village – Seharakuri, P. O. – Seharakuri, Police Station – Md. Bazar, Dist. – Birbhum, Pin. – 731127, West Bengal.	Main Activities: - Goatery, Mushroom Production, Cultivation of Aromatic Paddy using Vermi-Compost, Production of Paper Plates.	Goats, Mushroom, Aromatic Paddy, Vermi-Compost and Paper Plate	1000	Rs. 3,00,000.00 (Rupees Three Lakhs) was kept as savings earned from sale of the FPO products in the Current Account of the FPO.

### 18. Integrated Farming System (IFS)

Details of KVK Demo. Unit: - Not Applicable

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

### 19. 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)	<b>Variety:</b> - Seeds of Improved Variety SWB-32-10-1 (Sabitri) @ 6 kg. / ha  <b>Herbicide application:</b> - Application of herbicides Pendimethalin @ 3 lit. / ha at 1 – 3 DAS.  <b>Sulphur application</b>	Rs. 33,265.00 / ha. / Annum	216	Please see Photograph - A

		<b>Micro-Nutrient Spray:-</b> Foliar Spray of Micro-Nutrients: - Zn EDTA @ 1 gm. / lit. of water at 25 and 45 DAS.			
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”</p>	Rs. 96,000.00 / Annum	1000	Please see the Photograph - D

		Work is carried out on the Cloth by different coloured Threads.			
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 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>	Rs. 3,40,000.00 / ha. / Annum	35	Please see the Photograph - E
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>	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

		<b>Proper vaccination and medical check up</b> schedules and medicine regimes are to be followed.			
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> <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 <i>Azolla</i> (<i>Azolla pinnata</i>) and vegetables like <i>Kalmi</i> (<i>Ipomoea aquatica</i>) and <i>Spinach</i> (<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. 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>	Rs. 63,265.50 / Batch / Unit of 20 Numbers of Deshi Birds + 20 Numbers of Rhode Island Red Birds + 20 Numbers of Vanaraja Birds / Annum	65	Please see the Photograph - G
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 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>	Rs. 54,850.00 / Cow / Lactation	169	Please see Photograph - I
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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**





## 20. Report on Digital Farming Initiatives in Agriculture / Digital Ag. Extension Service

Phase	Database prepared/ covered for		KVK level Committee		Various activity conducted for farmers
	Total no. of villages	Total no. of farmers	Date of formation	Name of members	
I (up-to 15.03.2018)	200	4000	30.01.2018.		



### 23. Information on NARI Project (if applicable) Not 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

### 24. Information on Krishi Kalyan Abhiyan Phase - I / Phase – II / Phase - III, if applicable – Not Applicable

#### Krishi Kalyan Abhiyan- I and II

#### A. Training

Name of programme	No. of programmes	No. of farmers benefited									No. of officials attended the programme
		SC		ST		Others		Total			
		M	F	M	F	M	F	M	F	T	
KKA-I											
KKA-II											

#### B. Distribution of seed / planting materials / input / others

Name of programme	No. of Programme	Total quantity distributed				No. of farmers benefited									No. of other officials (except KVK) attended the programme
		Seed (q)	Planting material (lakh)	Input (kg)	Other (kg/ No.)	SC		ST		Others		Total			
						M	F	M	F	M	F	M	F	T	
KKA-I															
KKA-II															

#### C. Livestock and Fishery related activities

Name of programme	No. of Programme	Activities performed				No. of farmers benefited									No. of other officials (except KVK) attended the programme
		No. of animals vaccinated	No. of animals dewormed	Feed/ nutrient supplements provided (kg)	Any other (Distribution of animals / birds / fingerlings) [No.]	SC		ST		Others		Total			
						M	F	M	F	M	F	M	F	T	
KKA-I															
KKA-II															

#### D. Other activities

Name of programme	Activities	No. of farmers benefited									No. of other officials (except KVK) attended the programme
		SC		ST		Others		Total			
		M	F	M	F	M	F	M	F	T	
KKA-I	Soil Health Card Distributed										
	NADEP Pit established										
	Farm implements distributed										
	Others, if any										
KKA-II	Soil Health Card Distributed										
	NADEP Pit established										
	Farm implements distributed										
	Others, if any										

### Krishi Kalyan Abhiyan - III

No. of villages covered	No. of animal inseminated	No. of farmers benefited									Any other, if any (pl. specify)
		SC		ST		Others		Total			
		M	F	M	F	M	F	M	F	T	

### 25. Nutri-garden

Sl. No.	Name of KVK	Established in KVK Campus	No. of nutria-garden established in the village	Major vegetables production
1	RKVK, Birbhum	1	2	Cabbage, cauliflower, spinach, tamato, brinjal, coriander

### 26. 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.	Farmers awareness programme	30.09.2020	Salon, Bolpur-Sriniketan	Introduction to Agromet Advisory Bulletin, District Agromet Unit (DAMU) and Meghdoot app	22
2	Farmers awareness programme	05.10.2020	Rathindra Krishi Vigyan Kenda, PSB,	Introduction to Agromet Advisory Bulletin, District	19

			Visva-Bharati, Sriniketan	Agromet Unit (DAMU) and Meghdoot app	
3.	Agromet Advisory Bulletin	18.08.2020	DAMU-Birbhum, Rathindra Krishi Vigyan Kenda, PSB, Visva-Bharati, Sriniketan	Dissemination of district level agromet advisory bulletin of Birbhum district	Disseminated through the WhatsApp group of- 1. Progressive farmers group of RKVK (Block wise) 2. DAESI group of RKVK 3. Farmers group of Reliance foundation 4. Farmers group of IFFCO 5. Officers group of Visva- Bharati
		21.08.2020			
		25.08.2020			
		28.08.2020			
		01.09.2020			
		04.09.2020		Dissemination of district level agromet advisory bulletin of Birbhum district and block level agromet advisory bulletin for Bolpur-Sriniketan block	
		08.09.2020		Dissemination of district level agromet advisory bulletin of Birbhum district and block level agromet advisory bulletin for Bolpur-Sriniketan block and Suri-I block	
		11.09.2020		Dissemination of district level agromet advisory bulletin of Birbhum district and block level agromet advisory bulletin for Bolpur-Sriniketan, Suri-I, Rampurhat-I and Khoyrasol block	
		15.09.2020		Dissemination of district level agromet advisory bulletin of Birbhum district and block level agromet advisory bulletin for Bolpur-Sriniketan block	
		18.09.2020		Dissemination of district level agromet advisory bulletin of Birbhum district and block level agromet advisory bulletin for Bolpur-Sriniketan block	
		25.09.2020		Dissemination of district level agromet advisory bulletin of Birbhum district and block level agromet advisory bulletin for 9 blocks of Birbhum district	
		29.09.2020		Dissemination of district level agromet advisory bulletin of Birbhum district and block level agromet advisory bulletin for Bolpur-Sriniketan, Suri-I and Suri-II block.	
		01.10.2020		Dissemination of district level agromet advisory bulletin of Birbhum district and block level agromet advisory bulletin for 9 blocks of Birbhum district	
	06.10.2020	Dissemination of district level agromet advisory bulletin of Birbhum district and block level agromet advisory bulletin			

			for 12 blocks of Birbhum district
		09.10.2020	Dissemination of district level agromet advisory bulletin of Birbhum district and block level agromet advisory bulletin for 19 blocks of Birbhum district
		13.10.2020	Dissemination of district level agromet advisory bulletin of Birbhum district and block level agromet advisory bulletin for 14 blocks of Birbhum district
		16.10.2020	Dissemination of district level agromet advisory bulletin of Birbhum district and block level agromet advisory bulletin for 19 blocks of Birbhum district
		20.10.2020	Dissemination of district level agromet advisory bulletin of Birbhum district and block level agromet advisory bulletin for 14 blocks of Birbhum district
		27.10.2020	Dissemination of district level agromet advisory bulletin of Birbhum district
		29.10.2020	
		03.11.2020	Dissemination of district level agromet advisory bulletin of Birbhum district and block level agromet advisory bulletin for 19 blocks of Birbhum district
		06.11.2020	
		10.11.2020	
		13.11.2020	
		17.11.2020	Dissemination of district level agromet advisory bulletin of Birbhum district
		20.11.2020	Dissemination of district level agromet advisory bulletin of Birbhum district and block level agromet advisory bulletin for 19 blocks of Birbhum district
		24.10.2020	
		27.10.2020	
		01.12.2020	Dissemination of district level agromet advisory bulletin of Birbhum district and block level agromet advisory bulletin for 19 blocks of Birbhum district

		04.12.2020		Dissemination of district level agromet advisory bulletin of Birbhum district and block level agromet advisory bulletin for 15 blocks of Birbhum district
		08.12.2020		Dissemination of district level agromet advisory bulletin of Birbhum district and block level agromet advisory bulletin for 19 blocks of Birbhum district
		11.12.2020		
		15.12.2020		
		18.12.2020		
		22.12.2020		
		24.12.2020		Dissemination of district level agromet advisory bulletin of Birbhum district
		29.12.2020		Dissemination of district level agromet advisory bulletin of Birbhum district and block level agromet advisory bulletin for 19 blocks of Birbhum district

**27. Good quality action photographs of overall achievements of KVK during the year (best 10)**

**Online Training Organized by Rathindra KVK**



## World Soil Day – 2020



Soil Health Card distribution by **Prof. Debasis Bhattacharya**,  
Principal,  
Palli Siksha Bhavana, VisvaBharati, Sriniketan

## Poshan Maah – 2020



**Training on nutritional requirement of children and mothers at RKVK, Birbhum**

#### DAMU, RKVK

### Some glimpses of Farmers Awareness Programme (FAP) conducted by DAMU, RKVK



Village: Salon, Block: Bolpur-Sriniketan  
Total numbers of farmers attend the programme: 22  
Date: 30.09.2020



Place: RKVK, Block: Bolpur-Sriniketan  
Total numbers of farmers attend the programme: 19  
Date: 05.10.2020



Village: Daranda, Block: Illambazar  
Total numbers of farmers attend the programme: 35  
Date: 09.01.2021



Village: Digha, Block: Sainthia  
Total numbers of farmers attend the programme: 45  
Date: 11.01.2021

#### DAESI, RKVK



**ONLINE CLASS BEING HELD FOR DAESI 2019-20**



**INAUGURATION OF DAESI PROGRAMME 2020-21**



**OFFLINE CLASS CONDUCTED FOR DAESI PROGRAMME 2020-21**



**EXPOSURE VISIT TO AMAR KUTIR DEVELOPMENT SOCIETY BY DAESI STUDENTS 2020-21**

**OFT on Broccoli**

**Photographs of the OFT on Broccoli**



Foliar application of Boron



Over all Field with Farmer



Soil application of Boron

**FLD on Drum Seeder**

**FLD on Drum Seeder on kharif rice, 2020**  
**Area: 10 ha No of farmers: 12**



**Labour reduction : 58 /ha**  
**Cost Reduction: Rs. 13,000/ - per ha**



**FLD on Azolla**

**Training and FLD on Azolla in Kharif rice Under SCSP programme of 2020, Area: 24 ha Total farmers :84**



**Av. Yield of rice due to use of Azolla: 66.7 t/ha**      **B:C Ratio: 1.85**  
**Increase In Yield: 20.1%**



**FLD on Elephant Foot Yam**

## Front Line Demonstration on summer Under SCSP programme of 2020-21

Crop: Elephant foot Yam; Var: Bidhan-Kusum., Area: 0.2 ha., Farmers: 61



Av. Yield: 697.5 q/ha  
Increase In Yield: 198%

B:C Ratio: 3.45



### FLD on Ekangi

## FLD on Ekangi Cultivation Under SCSP programme of 2019-20



Area: 0.33-ha. No. of Farmers: 32

Av. Yield: 134 q/ha

B:C Ratio: 6.5



Table-I: Schedule Caste Output &amp; Outcome Achievement/Indicators for 2020-21 (QUARTER-WISE)

## Physical Output 2020-2021

Sl. No.	Indicator/Activities	Unit of Indicator	Quarterly Breakup (Target)	Targets Achieved	No. of Beneficiaries	Outcome
1	Farmers, farm women trained by KVKs	Number	Q-1- 390 Q-2 - 100 Q-3 - 175 Q-4 - 361	Q-1- 395 Q-2 -110 Q-3 - 195 Q-4 - 416	Q-1- 395 Q-2 -110 Q-3 - 195 Q-4 - 416	108.25 %
2	Extension personnel trained by KVKs	Number	Q-1 Q-2 Q-3 Nil Q-4	Q-1 Q-2 Q-3 Nil Q-4	Q-1 Q-2 Q-3 Nil Q-4	-
3	On-farm trials conducted by KVKs	Number	Q-1 - 1 Q-2 - 2 Q-3 - 2 Q-4 - 1	Q-1 - 1 Q-2 - 2 Q-3 - 2 Q-4 - 1	Q-1 - 12 Q-2 -00 Q-3- 19 Q-4- 100	100.00 %
4	Frontline demonstrations conducted by KVKs	Number	Q-1 - 70 Q-2 - 140 Q-3 - 470 Q-4 - 210	Q-1 - 70 Q-2 - 140 Q-3 - 470 Q-4 - 210	Q-1 - 70 Q-2 - 140 Q-3 - 470 Q-4 - 210	125.75 %
5	Quantity of seeds produced	Quintal	Q-1 - 30.30 Q-2 - 24.20 Q-3 - 04.50 Q-4 - 37.87	Q-1 - 24.30 Q-2 - 17.00 Q-3 - 02.50 Q-4 - 27.89	Q-1 - 51 Q-2 - 61 Q-3 - 14 Q-4 - 90	74.00 %
6	Planting materials Produced	Number	Q-1 - 4000 Q-2 - 1800 Q-3 - 3600 Q-4 - 5336	Q-1 - 3023 Q-2 - 755 Q-3 - 2000 Q-4 - 4832	Q-1 - 141 Q-2 - 98 Q-3 - 214 Q-4 - 300	72.00 %
7	Livestock strains and fingerlings produced	Number	Q-1 - 130 Q-2 - 20 Q-3 - 00 Q-4 - 43	Q-1 - 100 Q-2 - 00 Q-3 - 00 Q-4 - 55	Q-1 - 20 Q-2 - 00 Q-3 - 00 Q-4 - 20	80.00 %
8	Soil & water samples tested	Number	Q-1 - 25 Q-2 - 13 Q-3 - 07 Q-4 - 32	Q-1 - 21 Q-2 - 10 Q-3 - 02 Q-4 - 33	Q-1 - 21 Q-2 - 10 Q-3 - 02 Q-4 - 33	86.00 %

