

# ANNUAL REPORT

## 2018-19

*Submitted to*  
**ICAR- ATARI**  
Zone – V,  
Kolkata

*Submitted by*  
**Krishi Vigyan Kendra Burdwan**  
ICAR-Central Research Institute for Jute and Allied Fibres  
Budbud, Purba Bardhaman -713403,  
West Bengal

## 1. GENERAL INFORMATION ABOUT THE KVK

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

Address	Telephone		E mail
Bud Bud, Burdwan-713 403. West Bengal	Office - 0343 2513651	Fax -	kvkburdwan@gmail.com <b>Web:</b> www.kvkcrijaf.org.in

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

Address	Telephone		E mail
	Office	FAX	
ICAR-Central Research Institute for Jute and Allied Fibres, Nilgunj, Barrackpore Kolkata- 700 120. West Bengal	033-25356124-25	033- 25350415	director.crijaf@icar.gov.in crijaf-wb@nic.in

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

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr. Sk. Md. Azizur Rahman (Sr. Scientist and Head) 27.12.18 - continuing	--	6296651271 9435378886	r_aziz@rediffmail.com
Dr. D. Ghorai (SMS & PC I/C - 01.04.18 - 26.12.18)	033-25772766	9433122515	dipankarghoraikvk@gmail.com

### 1.4. Year of sanction of KVK: 2005 vide order No. 5-24 / 2002 - AE - I, dated April 01, 2005

### 1.5. Staff Position (as on 1<sup>st</sup> April, 2019)

Sl. No.	Sanctioned post	Name of the incumbent	Designation	Discipline/	Pay Scale with present basic	Date of joining	Permanent/ Temporary	Category (SC/ST/OBC/ Others)
1	Senior Scientist & Head	Dr. Sk. Md. Azizur Rahman	Senior Scientist & Head	Entomology	PB-4 (Rs 37,400-67,000) +9000. Level 13A Basic: Rs. 143600	27.12.18	Parmanent	GEN
2	Subject Matter Specialist	Dr. Dipankar Ghorai	SMS (Agriculture)	Agriculture	Rs. 78800-209200 Basic: Rs. 86100	26.04.2006	Permanent	GEN
3	Subject Matter Specialist	Dr. Subrata Sarkar	SMS (Horticulture)	Horticulture	Rs. 78800-209200 Basic: Rs. 86100	04.05.2006	Permanent	GEN
4	Subject Matter Specialist	Dr. Golam Ziauddin	SMS (Fishery Sc.)	Fisheries	Rs. 67700-208700 Basic: Rs. 83300	28.04.2006	Permanent	GEN
5	Subject Matter Specialist	VACANT	----					
6	Subject Matter Specialist	VACANT	-----					
7	Subject Matter Specialist	VACANT	-----					
8	Programme Assistant	Mr. Sandipan Garai	Prog. Assistant	Agriculture	Rs. 56100-177500 Basic: Rs. 61300	18.04.2006	Permanent	OBC
9	Computer Programmer	Sk Golam Rasul	Prog. Assistant (Computer)	Computer	Rs. 44900-142400 Basic: Rs. 53600	10.04.2006	Permanent	GEN
10	Farm Manager	Mr. Soumya Sarathi Kundu	Prog. Assistant (Farm Manager)	Agriculture	Rs. 56100-177500 Basic: Rs. 59500	06.01.2007	Permanent	GEN
11	Office supreintendant	Mr. Nilesh Ray	Assistant	--	Rs. 35400-142400 Basic: Rs. 36500	27.11.2017	Permanent	GEN
12	Stenographer	VACANT	-----					
13.	Driver	Mr. Joydeep Pal	Driver – cum - mechanic	--	Rs. 25500-81100 Basic: Rs. 30500	06.07.2006	Permanent	GEN
14.	Driver	Mr. Santi Nath Pal	Driver– cum - mechanic	--	Rs. 25500-81100 Basic: Rs. 30500	10.07.2006	Permanent	OBC
15.	Supporting staff	Mr. Shyamal Bhanja	Supporting staff	Peon	Rs. 19900-63200 Basic: Rs. 27600	25.02.2006	Permanent	GEN
16.	Supporting staff	Mr. Anup Das	Supporting staff	Cook	Rs. 19900-63200 Basic: Rs. 27600	01.03.2006	Permanent	SC

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

S. No.	Item	Area (ha)
1.	Under Buildings	2.5
2.	Under Demonstration Units	1.0
3.	Under Crops	7.0
4.	Orchard/ Agro-forestry	2.0
5.	Others (Waste land and Ponds)	4.0
	<b>Total</b>	<b>16.5</b>

*Total area should be matched with breakup*

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

S. No.	Name of infrastructure	Not yet started	Completed up to plinth level	Completed up to lintel level	Completed up to roof level	Totally completed	Plinth area (sq.m)	Under use or not*	Source of funding
1.	Administrative Building					√	552	Under use	ICAR
2.	Farmers Hostel					√	306	Under use	ICAR
3.	Staff Quarters (6)					√	400	Under use	ICAR
4.	Piggery unit								
5.	Fencing								
6.	Rain Water harvesting structure					√	7000	Under use	MGNREGA
7.	Threshing floor	√							
8.	Farm godown	√							
9.	Dairy unit	√							
10.	Poultry unit	√							
11.	Goatary unit					√	50	Not (SMS not available since Sept., 2015)	ICAR
12.	Mushroom Lab	√							
13.	Mushroom production unit	√							
14.	Shade house					√	1008	Under use	RKVY
15.	Soil test Lab					√	Instrumental	Under use	ICAR

							support		
16.	Others, Please Specify								
17.	Feed preparation Unit								
18.	Integrated farming system					√	6000	Under use	ICAR
19.	Vermicompost unit								
20.	Portable carp hatchery					√	30	Under use	ICAR
21.	Deep tube well					√	Depth 80 ft.	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
TATA SUMO WB 40 C 9883	01.04.1999	---	16187 km	Condemned
Tractor WB 39 3472	01.04.1999	---	135 hrs	-

## C) Equipment &amp; AV aids

Name of equipment	Year of purchase	Cost (Rs.)	Present status	Source of fund
<i>a. Lab equipment</i>				
Flame photometer	2006-07	29813.00	Out of order	ICAR
Spectrophotometer	2006-07	46283.00	Out of order	ICAR
Shaker	2006-07	20756.00	In working condition	ICAR
Hot air oven	2006-07	5344.00	In working condition	ICAR
Hot plate	2007-08	14000.00	Out of order	ICAR
Glass distillation unit	2007-08	28000.00	In working condition	ICAR
Conductivity bridge	2007-08	10000.00	In working condition	ICAR
pH meter	2007-08	9563.00	Out of order	ICAR
Electronic balance	2007-08	12375.00	In working condition	ICAR
Grinder	2007-08	19500.00	In working condition	ICAR
Kjeldahl N analyser	2008-09	250474.00	In working condition	ICAR
Atomic absorption spectrophotometer	2012-13	944832.00	In working condition	ICAR
Mridaparikshak	2015-16	117450.00	Working	ICAR
PUSA STFR Meter	2017-18	86000.00	Working	ICAR
<i>b. Farm machinery</i>				
Tractor	01.04.1999	--	-	ICAR
Power reaper	2011-12	85476.00	In working condition	ICAR
<i>c. AV Aids</i>				
LCD projector	2008-09	109000.00	Out of order	ICAR
Computer with accessories (2 Nos.)	2009 -10	49920.00	In working condition	ICAR
LCD TV	2010-11	13110.00	In working condition	ICAR
Digital Camera	2010-11	14790.00	In working condition	ICAR
Digital SLR Camera	2017-18	38359.00	In Working condition	ICAR
Laptop	2017-18	32989.00	In Working condition	ICAR
Tablet	2018-19	29590.00	In Working condition	ATMA
Computer	2017-18	35999.00	In Working condition	ICAR
Printer(all in one)	2017-18	9575.00	In Working condition	ICAR

## D) Farm implements

Name of equipment	Year of purchase	Cost (Rs.)	Present status	Source of fund
CRIJAF Nail weeder	2012-13	3400.00	In working condition	ICAR
Brush cutter	2011-12	22360.00	In working condition	ICAR
Seed drill	2011-12	66500.00	In working condition	ICAR
Rotovator	2011-12	107120.00	In working condition	ICAR

Sprayer	2011-12	7300.00	In working condition	ICAR
Paddy thresher	2011-12	12000.00	In working condition	ICAR
Castrator for goat	2013-14	4000.00	In working condition	ATMA
Honda Pump set	2018-19	49999.00	In working condition	ICAR
Tractor Trolly	2018-19	150000.00	In working condition	ICAR
Protray Seedling Tray	2018-19	19651.00	In working condition	ICAR
Tractor	2018-19	619055.00	In working condition	ICAR
Brush cutter	2018-19	16771.00	In working condition	ICAR
Potato Digger	2018-19	154000.00	In working condition	ICAR
Power Weeder	2018-19	154600.00	In working condition	ICAR
Leveller Blade	2018-19	81900.00	In working condition	ICAR

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

Sl.No.	Date	Number of Participants	Salient Recommendations	Action taken	If not conducted, state reason
1.					

\* Salient recommendation of SAC in bullet form

Attach a copy of SAC proceedings along with list of participants

### 2.a. District level data on agriculture, livestock and farming situation (2018-19)

#### Purba Bardhaman

Sl. no.	Item	Information
1	Major Farming system/enterprise	Rice production system Dairy -poultry production system Poultry Goatery Duckery Fishery Rice – potato-fodder- livestock production system Rice -vegetable-Rice production system Jute-rice production system Fish-duck-banana production system
2	Agro-climatic Zone	<b>1. New Alluvium</b> Average annual rainfall 1300-1600 mm, Soil type- sandy loam, clay and clay loam,

		<p>Soil depth 4-6 ft with medium to good water holding capacity, <b>Neutral to acidic soil with good fertility.</b></p> <p><b>2. Old Alluvium</b> Average annual rainfall 1300-1500 mm, Soil type- sandy loam and clay loam Soil depth 4-6 ft with medium to good water holding capacity <b>Neutral to acidic soil with good fertility</b></p>
3	Agro ecological situation	<p><b>Agro ecological sub region 12.3 under the AES 12.0 (Eastern Plateau)</b> II. Moist and sub humid ecosystem with alluvial soil with LGP of 180-200 days covering the blocks of Burdwan (N), Burdwan (S), Kalna &amp; Katwa, Main crops paddy, mustard, <b>sesame, potato, jute, vegetables etc. The area covers 517532 ha</b></p>
4	Soil type	<p><b>1. Gangetic alluvial – 206423 ha</b> Soil order is entisols. Sandy loam to clay loam, fine in texture, slightly acidic to neutral in reaction. Rich in potash and medium to rich in available plant nutrients.</p> <p><b>2. Vindhya alluvial – 311000 ha</b> Soil order is entisol Sandy loam to clay loam, fine to moderate coarse in texture, acidic to neutral in reaction.</p>
5	Productivity of major 2-3 crops under cereals, pulses, oilseeds, vegetables, fruits and others	<p>Aman paddy – 32.73 Boro paddy – 26.95 Wheat – 21.99 Pulses – 8.80 Oilseeds – 10.01 Jute &amp; other fibres ** - 18.7 lakh bales Potato – 212.49</p>
6	Mean yearly temperature, rainfall, humidity of the district	<p>Mean yearly temperature: Max – 31, Min – 18 Relative humidity : 76 Total rainfall: 1136 mm</p>
7	Production of major livestock products like milk, egg, meat etc.	<p>Milk : 464080 tonnes, 280 kg/year Egg: 2672.40 lakh egg, 85 no. eggs/year Meat : 4000 MT</p>

Note: Please give recent data only



### Paschim Bardhaman

Sl. no.	Item	Information
1	Major Farming system/enterprise	Rice production system Dairy –poultry production system Poultry Goatery Duckery Fishery Rice –vegetable-Rice production system
2	Agro-climatic Zone	<b>1. Red and Lateritic</b> Average annual rainfall 1100-1400 mm, Soil type- sandy loam, coarse in texture Undulating land with low soil depth, sometimes hard layer present in sub surface <b>Medium to highly acidic soil</b>
3	Agro ecological situation	<b>Agro ecological sub region 12.3 under the AES 12.0 (Eastern Plateau)</b> I Chhotonagpur Plateau and Garhjat hills, hot dry sub humid ecosystem with red & laterite soils and LGP 150-180 days covering the blocks of Durgapur & Asansol. Main crops are, paddy, mustard, vegetables, pulse etc. The area covers 186154 ha
4	Soil type	<b>1. Red and Lateritic – 186054 ha</b> Soil orders are mainly alfisol and ultisol. Coarse gritty soil blended with rock fragment, mainly acidic in nature, reddish in color due to high level of iron, low in nitrogen, calcium, phosphate and other plant nutrient.
5	Productivity of major 2-3 crops under cereals, pulses, oilseeds, vegetables, fruits and others	Aman paddy – 26.83 Wheat – 21.99 Pulses – 7.92 Oilseeds – 8.04
6	Mean yearly temperature, rainfall, humidity of the district	Mean yearly temperature: Max – 33, Min – 15 Relative humidity : 69 Total rainfall: 1024 mm
7	Production of major livestock products like milk, egg, meat etc.	Data not available

## 2.b. Details of operational area / villages (2018-19)

S.N	Taluk	Block	Village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
1	Durgapur	Kanksa	Keten , Palashboni, Payarigunj, Chuya, Shokna Shilampur Gangbil Natungram	Paddy, potato, mustard, sesame, lentil, vegetable, cattle, poultry, duck, goat, pig fish  Kharif paddy, wheat, mustard, brinjal, cattle, buffalo, pig, goat and poultry	<u><b>Bio-physical</b></u> <b>Low productivity of all major crops</b> <ul style="list-style-type: none"> <li>• Non-availability of quality seed / planting materials</li> <li>• Marginal soil</li> <li>• Limited water resources for irrigation</li> <li>• Indiscriminate and inappropriate use of chemical fertilizer</li> </ul> <b>Inadequate descriptive/prolific breed of livestock</b> <b>Poor feed resources</b> <u><b>Socio- economic</b></u> <b>Lack of credit facilities</b> <b>Lack of awareness regarding good agronomic /husbandry practices</b> <b>Very restricted livelihood option</b>	<ul style="list-style-type: none"> <li>• Integration of good agronomic practices</li> <li>• Creation of rainwater harvesting structures</li> <li>• Utilization of mine lift water for irrigation</li> <li>• Providing quality seeds/planting materials</li> <li>• Diversification of land use</li> <li>• Soil health management like organic farming etc.</li> <li>• Livestock productivity improvement and health care</li> <li>• Efficient utilization of water bodies</li> <li>• Entrepreneurship development</li> </ul>
		Andal	Moirra, Madanpur, Baska, Pubra, Andal, Andal Gram, Battala, Dakshinkhand a, Sakra, Shrirampur, Damra Gram, Kajora Gram, Rajhat, Dignala.			
		Ranigunj	Napur, Napur Gram, Chelod, Ballavpur, Belunia, Belunia Gram, Raghunathchak			

			, Kankardanga			
		Jamuria	Jamuria, Siddhapur, Baghdhia, Haripur, Barul, Chaktulshi, Sankhari, Nandi, Sahakhir, Berali, Patharchur, Shibpur, Bogra, Chakdola, Hijalgora, Jambad, Taltor, Parasia, Churulia, Satgram, Madantor, Charanpur, Birkulti, Morden Satgram, Panchachur, Damodarpur			
		Salanpur	Sidhabari			
2	Burdwan North	Galsi-I	Bharatpur Jaguli para , Sillya, Ramgopalpur, Atpara, Raipur, Goligram, Kondaipur, Manikbazar- Jharul, Tildanga, Nurkona Nabakhanda, Bamunara, Fatepur,	Aus paddy, kharif paddy, jute, potato, mustard, vegetable cattle, poultry, Goat, broiler farming, fish	<u><b>Bio-physical</b></u> <b>Low productivity of all major crops</b> <ul style="list-style-type: none"> <li>• Non-availability of quality seed materials</li> <li>• High cost involvement for major crops</li> <li>• Indiscriminate and inappropriate use of chemical fertilizers</li> <li>• Low input of organics &amp; biofertiliser</li> </ul> <b>Lesser extent of crop diversification</b> <b>Low productivity of livestock &amp; poultry</b> <b>Poor feed resources</b> <u><b>Socio-economic</b></u> <ul style="list-style-type: none"> <li>• Lack of credit facilities</li> </ul>	<ul style="list-style-type: none"> <li>• Providing quality seeds/planting material</li> <li>• Diversification of land use</li> <li>• Entrepreneurship development</li> <li>• Organic farming</li> <li>• Health care</li> <li>• Improvement of women led vocations</li> <li>• Popularization of balanced feeding practices</li> <li>• Crop diversification</li> </ul>

			Puratangram, Ucchagram, Serorai, Chaktentul, Naskarbandh, Budbud,		• Inadequate house hold income generation	
		Galsi-II	Garamba, Bhasapur, Pursora, Hitta, Bahirghanna, Taranagar, Sankrai, Sarul, Bhuri.			
3.	Bardhaman Sadar	Aushgram-I	Dignagar, Woyarishpur, Alutia, Bannabagram, Dangpara,	Kharif paddy, Potato, lentil, mustard, til, fodder, cattle, goat, poultry, duck, fish	<u><b>Bio-physical</b></u> <b>Low productivity of all major crops</b> <ul style="list-style-type: none"> <li>• Non-availability of quality seed / planting materials</li> <li>• Poor soil health</li> <li>• Limited water resources for irrigation</li> <li>• Indiscriminate and inappropriate use of chemical fertilizer</li> </ul> <b>Inadequate descriptive/prolific breed of livestock</b> <b>Poor feed resources</b> <b>Inadequate health care</b> <u><b>Socio- economic</b></u> <b>Lack of credit facilities</b>  <b>Lack of awareness regarding good agronomic /husbandry practices</b> <b>Very restricted livelihood option</b>	i. Integration of good agronomic practices ii. Providing quality seeds/planting materials iii. Diversification of land use iv. Restoration of soil health through organic manuring. v. Livestock productivity improvement and health care vi. Efficient utilization of water bodies vii. Entrepreneurship development viii. Promotion of efficient water use technology ix. technology showcasing
		Aushgram-II	Premganj, Abhirampur, Anandabazar, Bijoydanga, Chandipur,			
		Bhatar	Gholda, Gramdihi, Bamshor, Bijipur,			

			Alinagar, Natungram, Muraripur, Kapshor, Nasigram, Madhpur, Salun, Bonpas, Palar, Narayanpur, Balsidanga, Erachia, Kubachpur, Polsona, Bijaypur, Kherur, Sahebganj, Kashipur, Nurpur,			
5.	Kalna	Kalna	Bhagnapara, Kalna, Durgapur, Nandai, Deulpara, Diara, Mirzapur, Balua, Anukhal, Rangpara, Goara, Anakul,	Paddy, jute, onion, fodder, mustard, banana, potato, mango, cattle, sheep, goat, pig, poultry	<u><b>Bio-physical</b></u> <b>Low productivity of all major crops</b> <ul style="list-style-type: none"> <li>• Non-availability of quality seed / planting materials</li> <li>• Nutrient Deficient soil</li> <li>• Indiscriminate and inappropriate use of chemical fertilizer/ pesticides</li> </ul> <b>Inadequate descriptive/prolific breed of livestock</b> <b>Poor feed resources</b> <b>Inadequate health care</b> <u><b>Socio- economic</b></u> <b>Lack of credit facilities</b>  <b>Lack of awareness regarding good agronomic /husbandry practices</b> <b>Very restricted livelihood option</b> <b>Less of post harvest operation</b>	Integration of good agronomic practices ii. Production of quality seeds/planting materials in PPP mode iii. Diversification of land use iv. Restoration of soil health through organic manuring. v. Livestock productivity improvement and health care vi. Efficient utilization of water bodies vii. Entrepreneurship development viii. Promotion of efficient water use technology ix. Promotion of Improved post harvest technology
		Purbasthali - I	Kuricha, Golihat, Betpukur, Chakbamungor	Paddy, jute, onion, fodder, mustard, banana, potato, mango, cattle, sheep, goat, pig, poultry	<u><b>Bio-physical</b></u> <b>Low productivity of all major crops</b> <ul style="list-style-type: none"> <li>• Non-availability of quality seed / planting materials</li> </ul>	Integration of good agronomic practices ii. Production of quality seeds/planting materials in PPP

		ia,Shyampur, Parulia, kuldanga, Bhaturia, Minapur, Ramchandrapu r, Dogachia, Chupi, Biswarambha, Banki,Bhatsala, Rajapur, Chaitpur, Maganpur, Moshipur,		<ul style="list-style-type: none"> <li>• Indiscriminate and inappropriate use of chemical fertilizer/ pesticides</li> <li>• Very low ground water table</li> </ul> <b>Inadequate descriptive/prolific breed of livestock</b> <b>Poor feed resources</b> <b>Inadequate health care</b> <u>Socio- economic</u> <ul style="list-style-type: none"> <li>• Lack of awareness regarding good agronomic /husbandry practices</li> <li>• Very restricted livelihood option</li> <li>• Less of post harvest operation</li> </ul>	mode iii. Diversification of land use iv. Restoration of soil health through organic manuring. v. Livestock productivity improvement and health care vi. Efficient utilization of water bodies vii. Entrepreneurship development viii. Promotion of efficient water use technology ix. Promotion of Improved post harvest technology of jute and other crops
	Memari-I & II	Satchachia, Debipur, Khanro, Harindanga	Paddy, onion, fodder, mustard, banana, potato, mango, cattle, sheep, goat, pig, poultry	<u>Bio-physical</u> <b>Low productivity of all major crops</b> <ul style="list-style-type: none"> <li>• Non-availability of quality seed / planting materials</li> <li>• Nutrient Deficient soil</li> <li>• Indiscriminate and inappropriate use of chemical fertilizer/ pesticides</li> </ul> <b>Inadequate descriptive/prolific breed of livestock</b> <b>Poor feed resources</b> <b>Inadequate health care</b> <u>Socio- economic</u> <ul style="list-style-type: none"> <li>• Lack of credit facilities</li> <li>• Lack of awareness regarding good agronomic /husbandry practices</li> <li>• Very restricted livelihood option</li> <li>• Less of post harvest operation</li> </ul>	Integration of good agronomic practices ii. Production of quality seeds/planting materials in PPP mode iii. Diversification of land use iv. Restoration of soil health through organic manuring. v. Livestock productivity improvement and health care vi. Efficient utilization of water bodies vii. Entrepreneurship development viii. Promotion of efficient water use technology ix. Promotion of Improved post harvest technology
	Montheswar	Bhelia, Bheti, Sutra	Paddy, onion, fodder, mustard, banana, potato, mango, cattle, sheep, goat, pig, poultry	<u>Bio-physical</u> <b>Low productivity of all major crops</b> <ul style="list-style-type: none"> <li>• Non-availability of quality seed / planting materials</li> <li>• Nutrient Deficient soil</li> <li>• Indiscriminate and inappropriate use of chemical fertilizer/ pesticides</li> </ul>	Integration of good agronomic practices ii. Production of quality seeds/planting materials in PPP mode iii. Diversification of land use iv. Restoration of soil health

					<b>Inadequate descriptive/prolific breed of livestock</b> <b>Poor feed resources</b> <b>Inadequate health care</b> <u>Socio- economic</u> <b>Lack of credit facilities</b>  <b>Lack of awareness regarding good agronomic /husbandry practices</b> <b>Very restricted livelihood option</b> <b>Less of post harvest operation</b>	through organic manuring. v.Livestock productivity improvement and health care vi.Efficient utilization of water bodies vii.Entrepreneurship development viii. Promotion of efficient water use technology ix. Promotion of Improved post harvest technology
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2. c. Details of village adoption programme:

Name of the villages adopted by PC and SMS (2018-19) for its development and action plan

Name of village	Block	Action taken for development
Gopalpur	Ausgram II	<ul style="list-style-type: none"> <li>• Training programmes on different aspects of agriculture</li> <li>• CFLD on pulse and oilseeds</li> <li>• Awareness camp on horticulture and agriculture</li> <li>• field day and exposure visit of farmers</li> <li>• Activities on DFI</li> </ul>
Uchchagram	Galsi-I	<ul style="list-style-type: none"> <li>• Training programmes on different aspects of horticulture</li> <li>• FLD on TCB and Onion</li> <li>• Awareness camp on horticulture and agriculture</li> <li>• Field day and exposure visit of farmers</li> </ul>
Alutia	Ausgram-I	<ul style="list-style-type: none"> <li>• Training programmes on different aspects of horticulture</li> <li>• FLD on TCB and Onion</li> <li>• Awareness camp on horticulture and agriculture</li> <li>• Field day and exposure visit of farmers</li> </ul>
Bhelia	Memari-II	<ul style="list-style-type: none"> <li>• Training programmes on different aspects of fisheries</li> <li>• FLD on Singi, Gift Telapia</li> <li>• Awareness camp on fisheries</li> <li>• Field day</li> </ul>

## 2.1 Priority thrust areas

S. No	Thrust area
1.	Integration of good agronomic practices for cultivation of field and vegetable crops for vertical agricultural growth ensuring availability of quality seed
2.	Soil health management for ensuring sustainable crop production vis-à-vis maintain benignity of environment
3.	Livestock productivity improvement and health care
4.	Efficient resource utilization and output maximization through integrated farming system approach
5.	Entrepreneurship development for family income generation
6.	Use of ICT in agriculture in area of climate based agro advice, disease diagnosis, SMS service
7.	Doubling of farmers income by 2022



### 3. TECHNICAL ACHIEVEMENTS

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

OFT												FLD											
No. of technologies tested:												No. of technologies demonstrated:											
Number of OFTs		Number of farmers										Number of FLDs		Number of farmers									
Target	Achievement	Target	Achievement										Target	Achievement	Target	Achievement							
			SC		ST		Others		Total						SC		ST		Others		Total		
			M	F	M	F	M	F	M	F	T				M	F	M	F	M	F	M	F	T
9	7	80	11	5	1	0	30	12	42	17	59	25	19	1251	336	63	67	12	747	138	1150	213	1363

Training												Extension activities											
Number of Courses		Number of Participants										Number of activities		Number of participants									
Target	Achievement	Target	Achievement										Target	Achievement	Target	Achievement							
			SC		ST		Others		Total						SC		ST		Others		Total		
			M	F	M	F	M	F	M	F	T				M	F	M	F	M	F	M	F	T
81	43	2155	349	69	26	5	918	180	1293	254	1547	65	213	3500	1708	443	519	135	5198	1348	7442	1923	9408

Impact of capacity building											Impact of Extension activities										
Number of Participants trained		Number of Trainees got employment (self/ wage/ entrepreneur/ engaged as skilled manpower)									Number of Participants attended		Number of participants got employment (self/ wage/ entrepreneur/ engaged as skilled manpower)								
Target	Achievement	SC		ST		Others		Total			Target	Achievement	SC		ST		Others		Total		
		M	F	M	F	M	F	M	F	T			M	F	M	F	M	F	M	F	T
2	2	7	1	5	0	26	1	38	2	40											

Seed production (q)						Planting material (in Lakh)					
Target			Achievement			Target			Achievement		
225			250			0.50			0.40		

Livestock strains and fish fingerlings produced (in lakh)*						Soil, water, plant, manures samples tested (in lakh)					
Target			Achievement			Target			Achievement		
0.05			0.04			0.002			0.0032		

\* Give no. only in case of fish fingerlings

Publication by KVKs							
Item	Number	No. circulated	No. of Research papers in NAAS rated Journals	Highest NAAS rating of any publication	Average NAAS rating of the publications	Details of awarded publication, if any	Details of Award given to the publication
Research paper	1						
Seminar/conference/ symposia papers	2						
Books							
Bulletins	1	30					
News letter							
Popular Articles							
Book Chapter	1						
Extension Pamphlets/ literature	17	8500					
Technical reports	2						
Electronic Publication (CD/DVD etc)							
<b>TOTAL</b>	<b>24</b>	<b>8530</b>					

## 1 Achievements on technologies assessed and refined

### OFT-1

1.	Title of On farm Trial	Assessment of different management practices of lentil in rice-fallow system under medium upland situation of Burdwan district
2.	Problem diagnosed	Low productivity of lentil in rice-fallow system
3.	Details of technologies selected for assessment/refinement	Farmers' practice: Broadcasting dry non-treated seed @ 30 kg/ha TO - 1: Seed priming + seed rate of 36 kg/ha TO - 2: Seed priming + Seed treatment with <i>trichoderma viridae</i> + rhizobium + micronutrient @ seed rate of 30 kg/ha TO - 3: Seed priming + Foliar spray of 2% urea at pre-flowering and pod development @ seed rate of 30 kg/ha
4.	Source of Technology	IIPR, Kanpur
5.	Production system and thematic area	Rice based production system
6.	Performance of the Technology with performance indicators	Results indicated that seed priming itself can increase productivity significantly over FP. TO2 and TO3 resulted in at par yield and was significantly higher than TO1 (25% and 18%, respectively, TO1:Seed priming with higher seed rate) although seed rate used in TO2 was less.
7.	Final recommendation for micro level situation	Farmers must follow seed priming for enhanced productivity. Foliar spray of urea should be done. Seed inoculation of rhizobium and trichoderma with lower seed rate should be done, wherever feasible
8.	Constraints identified and feedback for research	Trichoderma and rhizobium are not easily available in market.
9.	Process of farmers participation and their reaction	Demonstration, group discussion and field day

**Thematic area: Integrated crop management**

**Problem definition:** Low productivity of lentil in rice-fallow system

**Technology assessed:** Improved production technology

**Table: Performance of lentil under rice-fallow system with improved production technology**

Technology option	No. of trials	Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
<b>Farmers' practice (FP):</b> Broadcasting dry non-treated seed @ 30 kg/ha	5	6.52	19600	27384	7784	1.40
<b>TO 1:</b> Seed priming + seed rate of 36 kg/ha		8.46	20500	35532	15032	1.73
<b>TO2:</b> Seed priming + Seed treatment with <i>trichoderma viridae</i> + rhizobium + micronutrient @ seed rate of 30 kg/ha		10.59	24700	44478	19778	1.80
<b>TO3:</b> Seed priming + Foliar spray of 2% urea at pre-flowering and pod development @ seed rate of 36 kg/ha		9.95	21800	41790	19990	1.92
<b>LSD at 5%</b>		0.74				

**Results:**

Results indicated that seed priming itself can increase productivity significantly over FP. TO2 and TO3 resulted in at par yield and was significantly higher than TO1 (25% and 18%, respectively, TO1:Seed priming with higher seed rate) although seed rate used in TO2 was less.

**OFT-2 (2<sup>nd</sup> year)**

1.	Title of On farm Trial	<b>Assessment of Zn and B nutrition under deficient regimes in Rice-Mustard cropping system in medium upland situation of Burdwan district</b>
2.	Problem diagnose	Non-optimum productivity for lack of essential micronutrient in soil and concomitant non-application from outside
3.	Details of technologies selected for assessment/refinement	<b>FP:</b> 100% RDF (100:50:50 in rice; 80:40:40 in mustard) + No micronutrient <b>TO - 1:</b> 100% RDF + 5 kg Zn/ha as basal in both seasons <b>TO - 2 :</b> 100% RDF + 1 kg B/ha basal application <b>TO - 3 :</b> 100% RDF + 5 kg Zn/ha as basal in both seasons + 1 kg B/ha basal application
4.	Source of Technology	ICAR-NRRI, Cuttuck
5.	Production system and thematic area	Rice based production system; Technology
6.	Performance of the Technology with performance indicators	As found in the pervious year, the on farm trial indicated that application of Zn and B in conjugation was better as regard productivity of rice and mustard in comparison to single application. Increases in productivity over FP in TO1, TO2 and TO3 were 6%, 18% and 28%, respectively. The OFT revealed that application of B is <i>sine qua non</i> for optimizing productivity of mustard and rice to significant extent.
7.	Final recommendation for micro level situation	Farmers must use micronutrients like Zn and B in crops of rice and mustard
8.	Constraints identified and feedback for research	Nil
9.	Process of farmers participation and their reaction	Training and awareness; Farmers were highly satisfied with performance of improved cultivars

*Initial Zn content of the soils: 0.32 – 0.74 mg kg<sup>-1</sup>*

*Initial B content of the soils: 0.05 – 0.084 mg kg<sup>-1</sup>*

**Thematic area: Nutrient management**

**Problem definition:** Non-optimum productivity for lack of essential micronutrient in soil and concomitant non-application from outside

**Technology assessed:** Application of micronutrients of Zn and B

**Results**

**Table A: Performance of rice crop (Cv. IR 36)**

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
		Plant height (cm)	No. of effective tillers/hill	Filled grains/pa nicle					
FP	5	94.5	11.3	174	52.1	54500	83360	28860	1.53
TO1		96.7	13.8	198	54.4	55700	87040	31340	1.56
TO2		99.8	13.3	219	56.9	55200	91040	35840	1.65
TO3		101.9	14.2	228	59.8	56400	95680	39280	1.70
LSD at 5%		NS	0.62	15.3	1.98				

- Cost of production was taken to be varying only for varying cost towards fertilizer
- Selling price of paddy was taken at Rs. 1600/ql

**Table B: Performance of Mustard crop (Cv. JD 6)**

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
		Plant height (cm)	No. of siliquae/plan t	No. of seed/sili quae					
FP	5	137.9	89.4	19.6	10.57	25500	43337	17837	1.70
TO1		149.8	92.8	23.4	11.23	26250	46043	19793	1.75
TO2		152.8	96.8	25.7	12.48	26000	51168	25168	1.97
TO3		160.5	98.9	29.9	13.67	26750	56047	29297	2.10
LSD at 5%		6.43	4.68	2.48	0.78				

- Cost of production was taken to be varying only for varying cost towards fertilizer
- Selling price of paddy was taken at Rs. 4100/ql

**Results:**

As found in the pervious year, the on farm trial indicated that application of Zn and B in conjugation was better as regard productivity of rice and mustard in comparison to single application. Increases in productivity over FP in TO1, TO2 and TO3 were 6%, 18% and 28%, respectively. The OFT revealed that application of B is *sine qua non* for optimizing productivity of mustard and rice to significant extent.

**OFT-3**

1.	Title of On farm Trial	Varietal evaluation of hybrid tomato
2.	Problem diagnosed	Cultivation of tomato is totally dependent on performance of hybrid varieties. Though hybrids have considerably improved the yield in comparison to open pollinated ones but still there is a significant yield gap and problem of viral disease infestation in the district even in comparison to southern part of the country.
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	<b>FP: Abhilash</b> <b>TO1: Arka Samrat</b> <b>TO 2 : Arka Rakshak</b>
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	ICAR-IIHR, Bangaluru
5.	Production system and thematic area	Irrigated, vegetable based production system. Varietal evaluation
6.	Performance of the Technology with performance indicators	Both the hybrids of IIHR failed to surpass the yield of existing variety namely, Abhilash. Though shape of Arka Samrat was preferred by local market.
7.	Final recommendation for micro level situation	Due to hardness or pericarp thickness Arka varieties, particularly Arka Samrat may be recommended for long distance market.
8.	Constraints identified and feedback for research	Though Arka varieties are claimed to be multi disease resistance, incidence of leaf curl virus was very high, particularly in Arka Rakshak.
9.	Process of farmers participation and their reaction	Through training and field day. They preferred the shape and tightness of fruits of Arka Samrat but little disappointed about the performance (disease infestation) of Arka Rakshak.

*Thematic area:* Varietal evaluation

Problem definition: Cultivation of tomato is totally dependent on performance of hybrid varieties. Though hybrids have considerably improved the yield in comparison to open pollinated ones but still there is a significant yield gap and problem of viral disease infestation in the district even in comparison to southern part of the country.

Technology assessed: Newly released hybrids of ICAR-IIHR, Bengaluru

Table:

Technology option	No. of trials	Yield component			Disease incidence (leaf curl) (%)	Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		No. of effective tillers/hil	No. of spikelet per panicle	Test wt. (100 grain wt.)						
<b>FP: Abhilash</b>	7	--	--	--	14	305	97100	203000	105900	2.09
<b>TO1: Arka Samrat</b>	7	--	--	--	16	290	96800	195000	98200	2.01
<b>TO 2 : Arka Rakshak</b>	7	--	--	--	27	270	96800	179000	82200	1.85
<b>LSD @ 5%</b>						8.9				



## OFT-4

1.	Title of On farm Trial	Evaluation of nutrient management practice in mango
2.	Problem diagnosed	Low yield as well as jelly seed in mango is the common problem to the farmers due to conventional method of nutrient management.
3.	Details of technologies selected for assessment/ refinement (Mention either Assessed or Refined)	FP: N:P:K::1kg: 1kg: 1kg (per plant per year) TO 1: FP + Foliar spray of boron (3nos.) TO 2 : FP + Soil application of Calcium nitrate TO 3 : FP + Foliar spray of Aquacal (combination of CaNO <sub>3</sub> , B, Mg, Zn, Fe ) (3nos.)
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	ICAR-IIHR, Bangaluru
5.	Production system and thematic area	Fruit orchard, Nutrient management
6.	Performance of the Technology with performance indicators	Fruits are not yet harvested, Result awaited
7.	Final recommendation for micro level situation	Fruits are not yet harvested, Result awaited
8.	Constraints identified and feedback for research	Fruits are not yet harvested, Result awaited
9.	Process of farmers participation and their reaction	Fruits are not yet harvested, Result awaited

*Thematic area:* Nutrient management.

Problem definition: Low yield as well as jelly seed in mango is the common problem to the farmers due to conventional method of nutrient management.

Technology assessed: Role of secondary nutrients and micronutrients in quality and yield improvement in mango

Table:

Technology option	No. of trials	Yield component			Disease incidence (leaf curl) (%)	Yield (q/h a)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		No. of effective tillers/hill	No. of spikelet per panicle	Test wt. (100 grain wt.)						
	7	Fruits are not yet harvested, Result awaited								

#### OFT-5

1.	Title of On farm Trial	<b>Evaluation of performance of different chemicals used for removing unwanted fishes"</b>
2.	Problem diagnosed	Lack of awareness of fish farmers regarding usefulness of different chemicals in fish ponds leading to poor environments for fish ponds.
3.	Details of technologies selected for assessment	<b>FP:</b> Farmers' practice : no use of chemical <b>TO 1:</b> use of commercial bleaching powder alone <b>TO2:</b> commercial bleaching powder and urea (5 ppm each)
4.	Source of Technology	ICAR-CIFA,BBSR
5.	Production system and thematic area	semi intensive fish based production system and composite fish culture management practice
6.	Performance of the Technology with performance indicators	application of chemical to remove fish performed better in terms total yield at this farming situation
7.	Final recommendation for micro level situation	application of bleaching powder and urea 5 ppm each is recommended along with application of growth promoter.
8.	Constraints identified and feedback for research	Lack of Awareness of application of suitable chemicals in fish ponds.
9.	Process of farmers participation and their reaction	Through training and field level demonstration of application. Farmers were satisfied with the performance of the technology.

### ***Thematic area: Composite Fish Culture***

**Problem definition:** improper pond preparation is due to lack of awareness regarding application of proper chemicals for removing specific fish from fish ponds during pond preparation

**Technology assessed:** assessment of different suitable chemicals during pond preparation.

Fish production by application of urea and bleaching powder were evaluated under extensive management practices by fishers of Burdwan district. The trial was conducted with fingerlings of IMC.

The result of the trial (Table-1) indicated that Technology Option -2 i.e. application of Mixture of Urea and commercial Bleaching powder (application of urea @ 100 kg/ha-m, after 24 hrs commercial bleaching powder (30% active chlorine)@175 kg/ha-m.) exhibited higher BC ratio (2.50) than those of Technology Option-I i.e. application of commercial Bleaching powder (30% active chlorine) @350 kg/ha-m with BC ratio (1.91). Here it is to be mentioned that gross return and net return was higher in technology option 2 where low value chemical was used effectively for fish removing purpose. The natural productivity increased though initial reduction in planktons was noticed, a subsequent increase in plankton population as well as productivity was observed. In farmers practice, BC ratio was also very low (1.51). Therefore, it may be concluded that application of Mixture of Urea and commercial Bleaching powder (application of urea @ 100 kg/ha-m, after 24 hrs commercial bleaching powder (30% active chlorine)@175 kg/ha-m.) is very effective to prepare pond for culture by removing predatory and weed fishes in profitable manner in Burdwan district.

In technology option 2, mixture of urea [ $\text{CO}(\text{NH}_2)_2$ ] and bleaching powder [ $\text{Ca}(\text{OCl})\text{Cl}$ ] is applied as a piscicides. Urea, after application into the pond is hydrolysed to ammonia ( $\text{NH}_3$ ) which is liberated within 24-48 hrs. at a temperature ranging from  $23^\circ\text{C}$ – $30^\circ\text{C}$ , while hypochlorous acid ( $\text{HOCl}$ ) is produced instantaneously from the chlorinated compound, bleaching powder under the prevailing environmental conditions. This hypochlorous acid, being a strong oxidizing agent is readily produced in the presence of reducing substances namely,  $\text{NH}_3$ ,  $\text{Mn}^{+2}$ ,  $\text{Fe}^{+2}$  etc. of the environment resulting in 'chlorine demand' of water. In the pond ecosystem, chloramines usually termed "Combined Residual Chlorine" (CRC) are formed with the operation of oxidative-reduction process in the presence of both  $\text{NH}_3$  and hypochlorous acid. The rate of chloramines formation largely depends upon ambient pH of the system.

In aquaculture ponds, 3–5 mg total N/L must be achieved through application of urea 24–48 hrs before application of bleaching powder to attain 5 mg chlorine/ L for 100% fish kill within 1 hr of application.

**Table 1. : Effect of different technology options on productivity of fish and economic parameters**

<b>Technology Assessed</b>	<b>Production per unit (Avg. fish production in q/ha/yr)</b>	<b>Cost of production (Rs/ha)</b>	<b>Gross return (Rs/ha)</b>	<b>Net Return (Profit) in Rs./ha/yr)</b>	<b>B:C Ratio (Gross return : cost)</b>
FP: Farmers' practice : no use of chemical	12.0	101148	153002	51854	1.51
<b>TO 1:</b> Production Technology - 1 to be assessed: use of bleaching powder alone	20.6	117472	224034	106562	1.91
<b>TO 2:</b> Production Technology - 2 to be assessed: bleaching powder (50 %) and urea (50% )	25.5	136730	341484	204754	2.50

**OFT-6**

1.	Title of On farm Trial	Effectiveness of different modes of extension intervention individually and in combination on knowledge gain and retention of methods of grafting and vegetative propagation (nursery management)
2.	Problem diagnose	Low gain and retention of knowledge leading to low adoption
3.	Details of technologies selected for assessment/refinement	Farmers practice: Farmers knowledge through informal sources. TO1: Lecture TO2: Demonstration TO3: Lecture+ Demonstration TO4: Lecture +Extension literature TO5: Demonstration + Extension Literature
4.	Source of Technology	-
5.	Production system and thematic area	Training Methods
6.	Performance of the Technology with performance indicators	Knowledge gain and Knowledge retention
7.	Final recommendation for micro level situation	Lecture + demonstration
8.	Constraints identified and feedback for research	-
9.	Process of farmers participation and their reaction	Farmers had active participation through lecture demonstration and field day. They interacted with experts and among themselves also. It was found that lecture followed by demonstration was effective method for knowledge gain and demonstration followed by extension literature was best method for knowledge retention.

*Thematic area:* Training Methods

Problem definition: Low gain and retention of knowledge leading to low adoption

Technology assessed:

Farmers practice: Farmers knowledge through informal sources.

TO1: Lecture

TO2: Demonstration

TO3: Lecture+ Demonstration

TO4: Lecture +Extension literature

**TO5: Demonstration + Extension Literature**

Table 1. Effectiveness of different extension teaching methods in terms of gain in knowledge by the respondents

Extension teaching methods	Mean knowledge score		Difference (IAT-BT)	Standard deviation	't' value	Rank
	BT	IAT				
TO1	0.00	7.62	7.62	5.3882	10.76**	V
TO2	0.00	9.90	9.90	7.0004	8.13**	IV
TO3	0.00	12.12	12.12	8.5701	5.18**	I
TO4	0.00	10.25	10.25	7.2478	6.93**	III
TO5	0.00	11.07	11.07	7.8277	5.61**	II

BT = Before Treatment, IAT = Immediately After Treatment

\*\* indicate 1 % level of significance

Table 2. Effectiveness of different extension teaching methods in terms of retention of knowledge by the respondents

Extension teaching methods	Mean knowledge score		Difference (IAT-15 DAT)	Standard deviation	't' value	Rank
	IAT	15 DAT				
TO1	7.62	4.70	2.92	3.1946	5.78**	V
TO2	9.90	7.20	2.70	4.4396	3.84**	IV
TO3	12.12	8.96	2.05	5.3405	2.42**	II
TO4	10.25	7.87	2.38	4.7470	3.17**	III
TO5	11.07	9.07	2.00	5.9558	2.12**	I

IAT = Immediately After Treatment, 15 DAT = 15 Days After Treatment

\*\* indicate 1 % level of significance

**Results:** The study was taken in Burdwan District with an aim to see best extension teaching method in providing knowledge on methods of grafting and vegetative propagation (nursery management). It was seen that lecture followed by demonstration was the best teaching method in term of knowledge gain and demonstration followed by extension literature was best method of knowledge retention.

#### OFT-7

1.	Title of On farm Trial	Impact of cluster demonstration on mustard on farmers of Burdwan
2.	Problem diagnose	Low adoption
3.	Details of technologies selected for assessment/ refinement	FP: Non beneficiary TO1: Cluster demonstration on mustard year 2016-17 TO2: Cluster demonstration on mustard 2017-18
4.	Source of Technology	-
5.	Production system and thematic area	Impact assessment
6.	Performance of the Technology with performance indicators	Change in yield, horizontal spread, change in attitude, change in knowledge, change in adoption level, problem identification
7.	Final recommendation for micro level situation	
8.	Constraints identified and feedback for research	
9.	Process of farmers participation and their reaction	Through structured interview

**Thematic area:** Impact study

**Problem definition:** Low technology adoption

**Technology assessed:**

FP: Non beneficiary

TO1: Cluster demonstration on mustard year 2016-17

TO2: Cluster demonstration on mustard 2017-18

**Table 1. Increase in yield of mustard and horizontal spread**

Sl. No.	Year	Varoety demonstrated	Existing (Farmer's) variety name	Existing yield (q/ha)	Yield obtained (q/ha)			% increase in Yield	Total area under demonstration	Total area under cultivation	% increase in area
					Max.	Min.	Av.				
1	2016-17	PM 26	B - 9	11.6	16.4	13.6	15.23	31.29	53 ha	61 ha	15.09
2	2017-18	JD-6	B-9	12.47	16.8	14	15.62	25.26	53 ha	64 ha	20.75

**Table 2. Knowledge of respondent regarding improved Mustard Cultivation Practices**

Sr.No	Statement	Adoption % (N=90)			Gap in adoption		
		17-18	16-17	Non beneficiaries	17-18	16-17	Non beneficiaries
1	Use of high yielding varieties	93.33	80.00	56.67	6.67	20.00	43.33
2	Soil and field preparation	100.00	100.00	100.00	0.00	0	0.00
4	Seed treatment	23.33	16.67	13.33	76.67	83.33	86.67
5	Time of sowing	100.00	100.00	100.00	0.00	0.00	0.00
6	Seed rate	93.33	90.00	76.67	6.67	10.00	23.33
7	Recommended spacing	0.00	0.00	0.00	100.00	100.00	100.00
8	Fertilizer application	96.67	80.00	76.67	3.33	20.00	23.33
9	Irrigation Management	100.00	100.00	100.00	0.00	0.00	0.00
10	Weed management	94.00	50.00	20.00	93.33	100.00	100.00
11	Plant protection measure	93.33	86.67	70.00	6.67	13.33	30.00
12	Harvesting and storage	100.00	100.00	93.33	0.00	0.00	6.67

**Table 3. Adoption level of respondents regarding improved Mustard Cultivation Practices**

Sr. No	Statement	Adoption % (N=90)			Gap in adoption		
		17-18	16-17	Non beneficiaries	17-18	16-17	Non beneficiaries
1	Use of high yielding varieties	26.67	16.67	3.33	73.33	83.33	26.67
2	Soil and field preparation	100.00	100.00	100.00	0.00	0.00	100.00
4	Seed treatment	6.67	0.00	0.00	93.33	100.00	6.67
5	Time of sowing	100.00	100.00	100.00	0.00	0.00	100.00
6	Seed rate	90.00	86.67	70.00	10.00	13.33	90.00



7	Recommended spacing	0.00	0.00	0.00	100.00	100.00	0.00
8	Fertilizer application	80.00	70.00	56.67	20.00	30.00	80.00
9	Irrigation Management	100.00	100.00	100.00	0.00	0.00	100.00
10	Weed management	6.67	0.00	0.00	93.33	100.00	6.67
11	Plant protection measure	56.67	46.67	36.67	43.33	53.33	56.67
12	Harvesting and storage	100.00	93.33	76.67	0.00	6.67	100.00

Table 4: Attitude of farmers towards mustard technology

	Statements	Score	Rank
1	The extension personnel possessed the latest knowledge about MPT	86.33	I
2	The extension personnel were not cooperative and helpful to the farmers.	79.33	IV
3	Extension personnel were aware with problems of farmers in adopting new MPT and helping to overcome these problems in your areas.	81.00	III
4	MPT demonstrated through FLDs was need based and location specific	76.44	VII
5	MPT advocated was not proved beneficial to the farmers	82.38	II
6	MPT has not brought about a significant change in cultivation practices of the farmers	66.37	X
7	MPT advocated cheap, trust worthy and can be afforded by the farmers	69.74	IX
8	MPT advocated was technically and ecologically sound and according to farmer's resources.	74.89	VIII
9	Short duration training programme organized during the programme was not sufficient to perform agricultural operation successfully.	21.47	XIII
10	Technology has contributed significantly to increase the mustard production	78.38	VI
11	The demonstrations really served as instructional laboratory for mustard growers and were helpful to build up confidence into mustard growers regarding improved technology.	68.34	XI
12	Training and Field day organized KVK was not useful means of gaining practical knowledge	79.27	V
13	Scientists/extension personnel have visited regularly the beneficiaries' farm and provide immediate solution for their problem.	59.34	XII

**Results:** The study was taken in Burdwan District with an aim to ascertain impact of cluster demonstration on mustard. It was seen that there was 15-20 % increase in area under mustard cultivation. Regarding knowledge on mustard technology it was seen that farmers had knowledge regarding soil and field preparation, time of sowing, irrigation management and harvesting and storing methods (100%) had had fully adopted these practices. At the same time the farmers lack knowledge regarding seed treatment, weeding (0.00%) and did not adopt this practices. Overall they had favourable attitude towards extension personnel and cluster demonstration

### 3.2 Achievements of Frontline Demonstrations

#### A. Details of FLDs conducted during the year

##### Cereals

Sl. No.	Crop	Thematic area	Technology Demonstrated with detailed treatments	Area (ha)		No. of farmers/ demonstration										Reasons for shortfall in achievement
				Proposed	Actual	SC		ST		Others		Total				
						M	F	M	F	M	F	M	F	T		
1.	Jute	Package demonstration	JRO 204 Local Chk. JRO 524	10	10	16	6	2	0	49	12	67	18	85		
2.	Paddy	Integrated crop management in seed village	MTU 7029 Transplanting 16-18 day seedling with line in one direction at 10''x10'' spacing and 1-2 seedling per hill, chemical weeding, soil test based NPK	10	10	20	0	22	0	20	0	62	0	62		
3.	Groundnut	Nutrition management on improved variety	<b>Improved variety:</b> TG-51 <b>Technology:</b> 20:50:75:60 N:P:K:S + Boron (20%) foliar spray 2 times (Pre and post flowering)	20	20	40	12	4	0	77	0	121	12	133		
4.	Mustard	Nutrition management + Improved variety	<b>Improved variety:</b> Keshari <b>Technology:</b> Soil test based N, P, K + 30 kg S/ha+ two foliar spray of boron along with micronutrient mixture (Aquacal)	10	10	12	0	0	0	30	5	42	5	47		
5.	Lentil	Improved production practice	Treatment of seed with rhizobium followed by trichoderma and pseudomonas + Soil application of trichoderma and pseudomonas with FYM + spraying of cholorothonil for prevention of grey mould 35 DAS; 10:40:20 N:P:K and 30 kg S/ha; 2 foliar spray of boron @ pre and post flowering	40	40	56	8	8	0	89	20	153	28	181		
6.	Chickpea	Integrated nutrient	Treatment of seed with rhizobium; 15:40:20 N:P:K and	20	20	38	0	5	0	66	8	109	8	117		

		management	30 kg S/ha; Soil application of ZnSO <sub>4</sub> @ 10 kg/ha; 2 foliar spray of boron @ pre and post flowering												
7.	Green gram (Initiated in 2017-18, Completed 2018-19)	Improved variety with pest management	<b>Variety:</b> IPM 02-14 <b>Technology:</b> Seed priming + seed treatment with carbendazim and imidachloprid+ 2% urea spray at pre flowering and pod development	20	24	44	12	10	12	124	10	178	34	212	
8.	Sesame (Initiated in 2017-18, Completed 2018-19)	Improved variety with nutrient management	30kg sulfur/ha was applied along with 8:40:40 N,P and K.	50	64	63	11	5		179	12	247	23	270	
9.	Groundnut (Summer, 2018-19)	Nutrition management	20:50:75:60 N:P:K:S + Boron (20%) foliar spray 2 times (Pre and post flowering)	15	15	16	14	4	0	12	1	32	15	47	
10.	Greengram (Summer, 2018-19)	Improved variety with nutrient management	<b>Variety:</b> IPM 02-3 <b>Technology:</b> Seed priming + 2% urea spray at pre flowering and pod development	20	20	30	0	4	0	62	4	96	4	100	
11.	Onion	Introduction in Kharif season	Agrifound Dark Red	3	3	0	0	0	0	20	0	20	0	20	
12.	Brinjal	Improve variety	Bhangar	2	2	1	0	0	0	13	1	14	1	15	
13.	Banana	Improve variety	Grand Naine	1	1	0	0	3	0	5	0	8	0	8	
	Maize	Package of demonstration	J-1006	0.5	5	0	0	0	0	0	10	0	10	10	
14.	Rice bean	Improved agronomic practices	Bidan 2	-	4	0	0	0	0	0	15	0	15	15	
15.	Azolla	Cultivation practice		15 nos.	16 nos.	0	0	0	0	1	15	1	15	16	
16.	Oat as fodder	Improved agronomic practices	Improved variety and method of sowing Var. Kent	1	1.5	0	0	0	0	0	10	0	10	10	
17.	Berseem	Package of demonstration	Improved variety, time of sowing, nutrient management, feeding practice	0.7	1.5	0	0	0	0	0	15	0	15	15	
TOTAL				223.2	251	336	63	67	12	747	138	1150	213	1363	

## Details of farming situation

Crop	Season	Farming situation (RF/Irrigated)	Soil type	Status of soil (Kg/ha)			Previous crop	Sowing date	Harvest date	Seasonal rainfall (mm)	No. of rainy days
				N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O					
Jute	Pre Kharif 2018	Irrigated	Loamy	312	68	198	Potato	April 04 - 16 <sup>th</sup> , 2018	July 26 - Aug 05, 2016	605	
Paddy	Kharif 2018	Irrigated	Loam	257	26	178	Fallow	June 26 - 07 July, 2018	Kharif - Nov, 15 -30, 2017	430 mm	
Groundnut	Kharif 2018	Irrigated	Sandy loam to loam	298	56	174	Groundnut/vegetables	July. 6 - 10, 2018	Oct 15 - 22, 2018	870 mm	
Mustard	Rabi	Irrigated	Clay loam to loam	195	24	158	Paddy	Nov. 09 - 13, 2018	Feb. 12 -15 2018	Negligible	
Lentil	Rabi	Irrigated	Clay loam to loam	214	35	165	Paddy	Nov.24-30,2018	March.03-15,2018	Negligible	
Chickpea	Pre kharif	Irrigated	Clay loam to loam	202	26	178	Fallow	Nov.14-18,2018	March 13-19,2018	Negligible	
Green gram (Initiated in 2017-18, Completed 2018-19)	Pre kharif	Irrigated	Clay loam to loam	174	29	182	Fallow	March 25 - April 05, 2018	June.12-22,2018	Negligible	
Sesame (Initiated in 2017-18, Completed 2018-19)	Kharif	Irrigated	Loam	220	43	200	Fallow	March 15 - April 03, 2018	June 10-17, 2018	Negligible	
Groundnut (Summer, 2018-19)	Summer 2019	Irrigated	SandyLoam	256	50	198	Potato	Feb 10-14, 2019	Not yet harvested		
Greengram	Summer 2019	Irrigated	Loam	240	37	175	Vegetables	Mar. 20-25, 2019	Not yet harvested		

(Summer, 2018-19)											
Onion	Kharif	Irrigated	Loam	240	56	190	Vegetables	Aug. 10-15, 2018	Nov.25, 2018-Dec.20, 2018	920 mm	
Brinjal	Rabi	Irrigated	Loam	230	50	200	Vegetables	July 10-16, 2018	Oct. 15, 2018 - Jan.10, 2019	960 mm	
Banana	Kharif	Irrigated	Loam	230	20	210	Vegetables	July15-20, 2018	Not yet started	1005m m	

## Performance of FLD

### Frontline demonstrations on oilseed crops

Crop	Thematic Area	Name of the technology demonstrated	No. of Farmers	Area (ha)	Yield (q/ha)		% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
					Demo	Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Groundnut	Varietal	Improved variety (TG-51) + nutrient management	113	20	18.2	15.6	16.7	42250	81495	39245	1.92	39520	70140	30620	1.77
Mustard	Nutrition management in improved variety	Improved variety (Keshari) + nutrient management	47	10	15.25	13.61	12.0	30200	62525	32325	2.07	29850	55814	25964	1.86
Sesame	Nutrition management in improved variety	Improved variety (RT 351) + Sulfur nutrition	270	64	9.61	7.82	23.0	20626	40471	19845	1.96	17850	28748	10898	1.61
<b>Total</b>			<b>430</b>	<b>94</b>											

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

\*\* BCR= GROSS RETURN/GROSS COST

*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
Lentil	Production technology	Improved production practice	181	40	10.41	8.25	26.2	15950	43722	27772	2.74	14250	34000	19750	2.39
Chickpea	Nutrient management	Improved variety (JAKI 9218) + INM	117	20	10.34	9.22	12.1	19600	46980	27380	2.40	16500	36765	20265	2.23
Green gram	Varietal	Improved variety	212	24	10.65	8.84	20.47	25750	63900	38150	2.48	25450	48895	23445	1.92
<b>Total</b>			<b>510</b>	<b>84</b>											

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

\*\* BCR= GROSS RETURN/GROSS COST

*Other crops*

Crop	Thematic area	Name of the technology demonstrated	No. of Farmer	Area (ha)	Yield (q/ha)		% change in yield	Other parameters		*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
					Demonstration	Check		Demo	Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Jute	Production technology	Improved production technology	85	10	29.45	25.64	14.9	--	--	62450	98657	36207	1.58	64450	79484	15034	1.23
Paddy	Production technology	Integrated crop management	95	15	56.25	48.48	16.0	--	--	46500	90000	43500	1.94	47000	70296	23296	1.50
Onion	Introduction in Kharif season	Agrifound Dark Red	20	3	220	No existing variety	-	-	-	105000	196000	91000	1.86	-	-	-	-

Brinjal	Improve variety	Bhangar Selection	15	2	265	225	17.8	-	-	98500	212000	113500	2.15	98500	178700	80200	1.81
Banana	Improve variety	Grand Naine	8	1	Standing crop , result awaited												
Maize	Package of demonstration	African Tall	50	5	No germination due to bad quality seed												
Rice bean	Improved agronomic practices	Bidan 2	40	5	No germination due to bad quality seed												
Oat as fodder	Improved agronomic practices	Improved variety and method of sowing Var. Kent	10	1.5	420	346	17.61			12120	21950	9830	1.81	12220	19150	6930	1.57
Berseem	Package of demonstration	Improved var. Wardan	10	1.5	458	388	15.28			12300	24150	11850	1.96	11700	19390	7690	1.65
Azolla	Introduction of azolla as animal feed		16	40 sq mtr	4550kg /10 sq mtr/year	-	-	Increase in fat by 0.7%	-	13000	36200	23200	2.77				

## Livestock

No demonstration on livestock was conducted

## Fisheries

Category	Thematic area	Name of the technology demonstrated	No. of Farmer	No. of units	Major parameters^		% change in major parameter	Other parameter		*Economics of demonstration (Rs.)				*Economics of check (Rs.)			
					Demonstration	Check		Demonstration	Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Fishery	Management practices	Monosex culture of tilapia	05	0.5	35.6	17.5	103			87209	242485	155276	2.78	67567	145269.1	77702.	2.15
Fishery	Management practices	Culture of Singhi	05	03	14.5	9.4	54.25			77702	251754	174052	3.24	59000	127440	68440	2.16
Fishery	Management practices	Culture of Amur carp in composite fish culture	05	0.5	25.0	15.0	66.2			74872	172206	97334	2.3	65239	117430	52191	1.8
Fishery	Management practices	Jayanti Rohu	05	0.5	32.0	19.0	68.3			91569	228923	137354	2.5	84236	172684	88448	2.05

\* 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

^ Quintal/Ha

## Other enterprises

None

## Women empowerment

None

## Farm implements and machinery

None



**Demonstration details on crop hybrids**

None

**Technical Feedback on the demonstrated technologies**

S. No	Crop	Feed Back
1	Jute	Cost of production is reduced by some margin and quality of fibre has enhanced. As such farmers fetched average of Rs. 250/- more per quintal of jute. Seed of improved varieties like JRO 204, CO-58, and CRIJAF SONA to be made available in local market.
2	Paddy	Transplanting 1-2 seedling is bit risky where seedbed is grown in clay soil but from seedbed in sandy to loamy soil no. of tillers per hills significantly increased with more test weight resulting in more production. Also farmers fetched higher return for a lion share of their produce being taken as seed material thereby fetching higher price.
3	Groundnut	Application of K and S in enhanced rate is a must for optimum production.
4	Mustard	Keshari is an excellent variety. Oil percentage is less than B 9 but much enhanced productivity makes up for the lower oil content.
5	Lentil	Fusarium wilt damage was much less. Seed is not easily available in market.
6	Chickpea	JAKI 9218 is a very good variety. Infestation of pod borer was less.
7	Green gram (Initiated in 2017-18, Completed 2018-19)	--
8	Sesame (Initiated in 2017-18, Completed 2018-19)	RT 351 is a promising variety. Its drying time is more
9	Groundnut (Summer, 2018-19)	--
10	Greengram (Summer, 2018-19)	--
11	Onion	Seed of Agrifound Dark Red to be made available in local market
12	Brijal	Seed production of Bhargar Selection to be popularized

**Extension and Training activities under FLD**

Sl. No.	Activity	Date	No. of activities organized	Number of participants	Remarks
1.	Field days	20.09.18, 11.11.18	2	65	Field day on banana and onion

		24.12.18	1	20	Field Day/ Field visit on Deshi Magur
		01.10.18, 10.10.18, 17.08.18, 12.10.18, 22.08.18	5	183	Field Day/ Field visit on Groundnut
		18.02.19, 07.03.19	2	100	Field Day/ Field visit on Mustard
		26.05.18, 02.06.18	5	210	Field Day/ Field visit on Sesame
		14.02.19, 18.02.19, 07.03.19	3	140	Field Day/ Field visit on Lentil and Chickpea
		25.05.18, 26.05.18, 02.06.18	5	252	Field Day/ Field visit on Greengram
2.	Farmers Training	15.10.18, 01.11.18, 02.11.18, 22.12.18	4	100	Training on Deshi Magur cultivation
		01.10.18	1	34	Training on Groundnut cultivation
		17.11.18, 22.11.18	2	86	Training on Mustard cultivation
		25.05.18	1	42	Training on Sesame cultivation
3.	Media coverage				
4.	Training for extension functionaries				

### Performance of the demonstration under CFLD on Pulse and Oilseed Crops during Kharif 2018 and Rabi 2018-19:

#### 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	Groundnut	TAG 24	15.43q	- 23 kg/ha	- 73 kg/ha	+407 kg/ha	<b>Improved variety:</b> TG-51 <b>Technology:</b> 20:50:75:60 N:P:K:S + Boron (20%) foliar spray 2 times (Pre and post flowering)	113	20	21.9	15.3	18.11	--	--	34.15
2.	Mustard	B - 9	12.47	+ 80	+ 90	-240	<b>Improved variety:</b> Keshari <b>Technology:</b> Soil test based N, P, K + 30 kg S/ha+ two foliar spray of boron along with micronutrient mixture (Aquacal)	47	10	17.1	11	15.25	--	--	100
3.	Sesame	Rama	8.83	+ 70	+ 90	-240	30kg sulfur/ha was applied along with 8:40:40	270	64	14.01	4.98	9.61	--	--	30

							N,P and K.								
4.	Lentil	Ranjan	8.3	+50	+70	-280	Treatment of seed with rhizobium; 15:40:20 N:P:K and 30 kg S/ha; Soil application of ZnSO <sub>4</sub> @ 10 kg/ha; 2 foliar spray of boron @ pre and post flowering	181	40	12.6	7.2	10.41	--	--	82.5
5.	Chickpea	Mahamaya	8.1	+40	+80	-390	Treatment of seed with rhizobium followed by trichoderma and pseudomonas + Soil application of trichoderma and pseudomonas with FYM + spraying of chlorothalonil for prevention of grey mould 35 DAS; 10:40:20 N:P:K and 30 kg S/ha; 2 foliar spray of boron @ pre and post flowering	117	20	12.5	7	10.34	--	--	57
6.	Greengram	Sonali	8.8	+ 50 (8.3 q/ha)	+ 40 (8.4 q/ha)	- 250 (11.3 q/ha)	<b>Variety:</b> IPM 02-14 <b>Technology:</b> Seed priming + seed treatment with carbendazim and imidachloprid+ 2% urea spray at pre flowering and pod development	212	24	14.9	7.2	10.65	--	--	74

### B. Economic parameters

Sl. No.	Variety demonstrated & Technology demonstrated	Demonstration plot				Farmer's Existing plot			
		Gross Cost (Rs/ha)	Gross return (Rs/ha)	Net Return (Rs/ha)	B:C ratio	Gross Cost (Rs/ha)	Gross return (Rs/ha)	Net Return (Rs/ha)	B:C ratio
1	Groundnut; Improved variety, TG 37A	42250	81495	39245	1.92	39520	70140	30620	1.77
2.	Mustard	30200	62525	32325	2.07	29850	55814	25964	1.86
3.	Sesame	20626	40471	19845	1.96	17850	28748	10898	1.61
4.	Lentil	15950	43722	27772	2.74	14250	34000	19750	2.39
5.	Chickpea	19600	46980	27380	2.40	16500	36765	20265	2.23
6.	Greengram	25750	63900	38150	2.48	25450	48895	23445	1.92

**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 (Mandays/house hold)
1.	Groundnut, TG-51	36000	210	45	10200	2070	Household activities	1.6
2.	Mustard; Keshari	9660	200	40	110	150	Household activities	2.3
3.	Sesame; RT 351	34000	80	40	8750 (kept with farmers for coming season)	4550	Household activities	0.9
4.	Lentil WBL-77	21100	100 kg	42	1200	1800	Household	0.8
5.	Chickpea JAKI-9218	15240	120 kg	45	750	450	Household activities	1.5
6.	Green gram; IPM 02-14	25560	95	60	1200	2400	Household activities	2.5

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

Crop	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
Groundnut	Nutrient management Technology: 20:50:75:60 N:P:K:S + Boron (20%) foliar spray 2 times (Pre and post flowering)	Suitable for Groundnut - potato - groundnut	Excellent variety	Affordable	Nil	Acceptable	Very good variety.
Mustard	Soil test based N, P, K + 30 kg S/ha+ two foliar spray of boron along with micronutrient mixture (Aquacal)	Suitable for Rice-Fallow	Excellent variety	Though seed price is bit higher than the commonly practiced one, it is affordable for small and medium farmers	Nil	Very much acceptable for Rice - Mustard cropping sequence	Nil

Sesame	(Var. RT 351) Sulfur Management	Suitable for summer	Excellent variety	Affordable	Nil	Acceptable	Manpower requirement for threshing of the variety is more due to late drying of pods. Need varieties with early drying capabilities.
Lentil	Var:WBL-77 Treatment of seed with rhizobium followed by trichoderma and pseudomonas + Soil application of trichoderma and pseudomonas with FYM + spraying of cholorothalonil for prevention of grey mould 35 DAS; 10:40:20 N:P:K and 30 kg S/ha; 2 foliar spray of boron @ pre and post flowering	Suitable for rice –pulse/oilseed /rice, rice-fallow, Rice-lentil-sesame	Very good and better yield than existing variety	Seed price affordable; sulphur application is costly and not very much affordable by marginal farmers	Nil	Yes. Overall 66% farmers would continue cultivation using the technology	Rhizobium, Trichoderma and pseudomonas are not easily available
Chickpea	Var: JAKI-9218 Treatment of seed with rhizobium; 15:40:20 N:P:K and 30 kg S/ha; Soil application of ZnSO <sub>4</sub> @ 10 kg/ha; 2 foliar spray of boron @ pre and post flowering	Suitable for rice –pulse/oilseed /rice, rice-fallow, Rice-lentil-sesame	Very good variety with bold seed and better yield than existing variety	Seed price affordable, sulphur application is costly and not very much affordable by marginal farmers	Nil	Yes. Overall 66% farmers would continue cultivation using the technology.	Rhizobium is not easily available
Greengram	Green gram IPM- 02-14 <b>Technology:</b> Seed priming + seed treatment with carbendazim and imidachloprid+ 2% urea spray at pre flowering and pod development	Suitable	Excellent technology in controlling thrips and increasing yield	Affordable	Nil	Yes	Nil

#### E. Specific Characteristics of Technology and Performance

Specific Characteristic	Performance	Performance of Technology vis-a vis Local Check	Farmers Feedback
<b>Groundnut</b>			

Yield	Very Good	Better than existing variety	Acceptable
<b>Mustard</b>			
Yield	Very high yielding	Average 18% increase in yield over local check	Excellent variety
Oil content	Good	Although total oil content of the variety was less as compared to the locally practiced one (B 9), total oil production is higher by 5.6% due to increase in yield	Very much acceptable
<b>Lentil</b>			
Decrease in disease incidence	Very good. The technology was very effective in controlling the fusarium wilt in lentil	The local check was spraying of carbendazim or mancozeb. It was not being effective in controlling the disease	As per farmers feedback 72% farmers overall would apply the technology next year
<b>Greengram</b>			
Seed priming	Germination was 98%	Productivity increased an average of 9.64%	Seed priming must be done
Seed treatment	Pest infestation was minimum	Pest attack reduced by 60% over local practice	Seed treatment to be done
Spraying of 2% urea	Increased productivity	Productivity was increased by 19% over farmers practice	Technology must be practiced

#### F. Extension activities under FLD conducted:

Sl. No.	Extension Activities organized	Date and place of activity	Number of farmer attended
Groundnut	Training	01.10.18 at Gopalpur colony, Ausgram-II	34
	Field visit/Field day	01.10.18 at Siali, Jamalpur	30
		10.10.18 at Gopalpur colony, Ausgram-II	50
	Field visit/Field day	17.08.18/12.10.18 at Puratangram, Galsi - I 22.08.2018 at Fatepur, Galsi - I	34/44 25
Mustard	Training	17.11.18 at Gopalpur colony (Ausgram-II)	46
		22.11.18 at KVK campus	40
	Field visit/Field day	18.02.19 at Uchchagram (Galsi-I)	50
		07.03.19 at Napur (Raniganj)	50
Sesame	Training	25.05.2018 Chaktentul	42
	Field visit/Field day	26.05.2018 Uchchagram, Hitta, Warishpur	40,34,35
	Field visit/Field day	02.06.2018 Kubajpur- Erachya, Anukhal	56,45

Lentil and Chickpea	Field day	14.02.19 at Sukdal, Galsi-I	40
		18.02.19 at Uchchagram, Ausgram-I	60
		07.03.19 at Napur, Raniganj	40
Greengram	Field visit	25.05.2018 Chaktentul	42
	Field visit	26.05.2018 Uchchagram, Hitta, Warishpur	40,34,35
	Field Day	02.06.2018 Kubajpur, Erachya, Anukhal	56,45

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

Given as Annexure II

### H. Farmers' training photographs

Given as Annexure III

### I. Quality Action Photographs of field visits/field days and technology demonstrated.

Given as Annexure IV

### J. Details of budget utilization

#### 1. Crop: Groundnut; Season: Kharif 2017

Area: 40 ha; Budget sanctioned = 8500.00 x 40 = Rs. 340000.00

Crop (provide crop wise information)	Items	Budget Sanctioned (Rs.)	Budget Received (Rs.)	Budget Utilization (Rs.)	Balance (Rs.)
Groundnut (TG 37A)	i) Critical input			260500	
	ii) TA/DA/POL etc. for monitoring			28200	
	iii) Extension Activities			22300	
	iv) Publication of literature			--	
	<b>Total</b>	<b>340000</b>	<b>340000</b>	<b>311000</b>	<b>29000</b>

#### 2. Crop: Mustard

Season: Rabi 2017-18

Area: 40 ha; Budget sanctioned = 6000.00 x 40 = Rs. 240000.00

Crop (provide crop wise information )	Items	Budget Sanctioned (Rs.)	Budget Received (Rs.)	Budget Utilization (Rs.)	Balance (Rs.)
Mustard (JD 6)	i) Critical input			172475	
	ii) TA/DA/POL etc. for monitoring			20000	
	iii) Extension Activities			23000	
	iv) Publication of literature			11000	
	<b>Total</b>	<b>240000</b>	<b>120000</b>	<b>226475</b>	<b>(-) 106475</b>

Crop (provide crop wise information )	Items	Budget Sanctioned (Rs.)	Budget Received (Rs.)	Budget Utilization (Rs.)	Balance (Rs.)
Lentil (WBL77)	i) Critical input			245800	
	ii) TA/DA/POL etc. for monitoring			10000	
	iii) Extension Activities			23000	
	iv) Publication of literature			11000	
	<b>Total</b>	<b>300000</b>	<b>132956</b>	<b>289800</b>	<b>(-) 156844</b>

### 3. Crop: Chickpea

Season: Rabi 2017-18

Area: 10 ha; Budget sanctioned = 7500.00 x 10 = Rs. 75000.00

Crop (provide crop wise information )	Items	Budget Sanctioned (Rs.)	Budget Received (Rs.)	Budget Utilization (Rs.)	Balance (Rs.)
Chickpea (JAKI 9218)	i) Critical input			66250	
	ii) TA/DA/POL etc. for monitoring				
	iii) Extension Activities				
	iv) Publication of literature				
	<b>Total</b>	<b>75000</b>	<b>Nil</b>	<b>66250</b>	<b>(-) 66250</b>



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

**A) Farmers and farm women (on campus)**

[illegible]

[illegible]

[illegible]

[illegible]

### B) Rural Youth (on campus)

[illegible]

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
Integrated Farming													
Planting material production													
Vermi-culture	1	12	2	14	0	1	1	0	0	0	12	3	15
Sericulture													
Protected cultivation of vegetable crops													
Commercial fruit production													
Repair and maintenance of farm machinery and implements													
Nursery Management of Horticulture crops	1	14	0	14	1	0	1	1	0	1	16	0	16
Training and pruning of orchards													
Value addition													
Production of quality animal products													
Dairying													
Sheep and goat rearing													
Quail farming													
Piggery													
Rabbit farming													
Poultry production													
Ornamental fisheries													
Enterprise development													
Para vets													
Para extension workers													
Composite fish culture													
Freshwater prawn culture													
Shrimp farming													
Pearl culture													
Cold water fisheries													
Fish harvest and processing technology													
Fry and fingerling rearing	1	9	0	9	9	0	9	3	0	3	21	0	21
Small scale processing													
Post Harvest Technology													
Tailoring and Stitching													
Rural Crafts	1	0	17	17	0	3	3	0	0	0	0	20	20
Others	1	15	1	16	2	1	3	1	0	1	18	2	20
TOTAL	5	50	20	70	12	5	17	5	0	5	67	25	92

### C) Extension Personnel (on campus)

[illegible]

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

[illegible]

[illegible]



[illegible]

[illegible]

[illegible]

[illegible]

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
Nursery Management of Horticulture crops													
Training and pruning of orchards													
Value addition													
Production of quality animal products													
Dairying													
Sheep and goat rearing													
Quail farming													
Piggery													
Rabbit farming													
Poultry production													
Ornamental fisheries													
Para vets													
Para extension workers													
Composite fish culture													
Freshwater prawn culture													
Shrimp farming													
Pearl culture													
Cold water fisheries													
Fish harvest and processing technology													
Fry and fingerling rearing													
Small scale processing													
Post Harvest Technology													
Tailoring and Stitching													
Rural Crafts													
Others, if any													
TOTAL													

#### F) Extension Personnel (Off Campus)

Thematic Area	No. of Courses	No. of Participants			Grand Total
		Other	SC	ST	

### **i. Farmers & Farm Women**

[illegible]

[illegible]

[illegible]



[illegible]

[illegible]

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
Others, if any	1	1	2	3	0	1	1	5	21	26	6	24	30
TOTAL	7	160	11	171	20	1	21	26	25	51	206	37	243
IX. Production of Inputs at site													
Seed Production													
Planting material production													
Bio-agents production													
Bio-pesticides production													
Bio-fertilizer production													
Vermi-compost production	1	11	0	11	9	0	9	0	0	0	20	0	20
Organic manures production													
Production of fry and fingerlings													
Production of Bee-colonies and wax sheets													
Small tools and implements													
Production of livestock feed and fodder													
Production of Fish feed													
Others, if any													
TOTAL	1	11	0	11	9	0	9	0	0	0	20	0	20
X. Capacity Building and Group Dynamics													
Leadership development													
Group dynamics													
Formation and Management of SHGs													
Mobilization of social capital													
Entrepreneurial development of farmers/youths													
WTO and IPR issues													
Others, if any													
TOTAL													
XI Agro-forestry													
Production technologies													
Nursery management													
Integrated Farming Systems													
TOTAL													
XII. Others (Pl. Specify)													
TOTAL	43	1030	57	1087	308	36	344	69	47	116	1407	140	1547

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

[illegible]

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
Freshwater prawn culture													
Shrimp farming													
Pearl culture													
Cold water fisheries													
Fish harvest and processing technology													
Fry and fingerling rearing	1	9	0	9	9	0	9	3	0	3	21	0	21
Small scale processing													
Post Harvest Technology													
Tailoring and Stitching													
Rural Crafts	1	0	17	17	0	3	3	0	0	0	0	20	20
Enterprise development													
Others if any (ICT application in agriculture)	1	15	1	16	2	1	3	1	0	1	18	2	20
<b>TOTAL</b>	<b>5</b>	<b>50</b>	<b>20</b>	<b>70</b>	<b>12</b>	<b>5</b>	<b>17</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>67</b>	<b>25</b>	<b>92</b>

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

[illegible]

Information networking among farmers													
Capacity building for ICT application	2	57	12	69	5	0	5	0	0	0	62	12	74
Care and maintenance of farm machinery and implements													
WTO and IPR issues													
Management in farm animals													
Livestock feed and fodder production													
Household food security													
Women and Child care													
Low cost and nutrient efficient diet designing													
Production and use of organic inputs													
Gender mainstreaming through SHGs													
Crop intensification													
Others if any	2	38	0	38	2	0	2	0	0	0	40	0	40
<b>TOTAL</b>	<b>5</b>	<b>119</b>	<b>12</b>	<b>131</b>	<b>8</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>127</b>	<b>12</b>	<b>139</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
Agriculture	PF	Rice cultivation through SRI	2	On	89	0	89	14	0	14
	PF	Vermicompost production at farmers level	1	On	20	0	20	9	0	9
	RY	STRY training on Vermicomposting and Mushroom production technique	7	On	16	0	16	2	0	2
	EF	Vermicompost production at farmers level	2	On	40	0	40	2	0	2
	PF	Seed production of Paddy	2	Off	76	4	80	22	3	25
	PF	Need for soil testing and soil test based fertilizer application	2	Off	50	0	50	22	0	22

	PF	Post harvest operations of jute	1	Off	30	10	40	10	7	17
	PF	Improved production technology of Lentil	3	Off	161	7	168	51	2	53
	PF	Improved production technology of Mustard	3	Off	172	7	179	66	3	69
	PF	Improved production technology of Chickpea	3	Off	149	5	154	42	2	44
Horticulture	PF	Layout and Management of Orchards	1	On	35	0	35	3	0	3
	PF	Plant propagation techniques of Sub-tropical fruit crops	2	On	66	0	66	16	0	16
	RY	STRY training on Nursery Management in Horticulture	7	On	16	0	16	2	0	2
	PF	Improved cultivation of Tissue Culture Banana	2	Off	58	2	60	15	0	15
	PF	Improved cultivation of kharif onion	2	Off	60	0	60	19	0	19
	PF	Management of young plants/orchards	1	Off	30	0	30	0	0	0
	PF	Rejuvenation of old orchards	1	Off	31	0	31	6	0	6
Fishery	PF	Integrated fish farming	2	On	54	06	60	11	0	11
	PF	Disease management & prophylactic measures in composite fish culture	1	On	30	6	36	0	0	0
	PF	Effects of liming in fish ponds	1	On	30	0	30	17	0	17
	RY	ASCI training for Hatchery Production Worker	25	On	21	0	21	12	0	12
	PF	Aquatic weeds and algal blooms in fish ponds, their control and utilization	1	Off	06	24	30	03	01	04
	PF	Schedule of fertilization & liming in fish culture ponds	1	Off	52	0	52	9	0	9
	PF	Scientific management of IMC fish hatchery	1	Off	28	7	35	04	04	08
Agril. Exstension	PF	Production technology of different fodder crops	2	On	20	20	40	03	16	19
	RY	Vocational Training on Kantha Stitch	15	On	0	20	20	0	3	3
	RY	ASCI training for Agricultural Extension Service Provider	25	On	18	2	20	3	1	4
	EF	Refresher course for ATMA functioneries	3	On	31	7	38	3	0	3
	EF	Refresher course for ATMA functioneries	3	On	31	5	36	2	0	2
	PF	Cultivation of Azolla	1	Off	14	11	25	3	9	12
	PF	Production technology of different fodder crops	2	Off	46	3	49	2	0	2
Plant Protection	PF	IPM in Aman Rice	2	On	50	3	53	18	1	19
	PF	Improved cultivation of Milky White Mushroom	1	On	14	6	20	2	3	5

	PF	Improved cultivation of Oyester Mushroom	2	Off	30	21	51	8	7	15
	EF	IPM in Aman Rice	1	Off	20	0	20	1	0	1

### 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	
Tailoring and Stitching	Entrepreneurial development of farmers/youths	Vocational Training on Kantha Stitch	15	0	20	20				

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

### I) Sponsored Training Programmes

Sl.No	Title	Thematic area	Month	Duration (days)	Client	No. of courses	No. of Participants										Sponsoring Agency
					PF/R/Y/EF		Male			Female			Total				
							Others	SC	ST	Others	SC	ST	Others	SC	ST	Total	
1	Cultivation of Azolla	Production of quality animal products	October, 2018	1	PF	1	11	3	0	2	0	9	13	9	3	25	ATMA, Burdwan District
2	Refresher course for ATMA functioneries	Capacity buildings	June, 2018	3	EF	2	57	5	0	12	0	0	69	5	0	74	ATMA, Burdwan District



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

Nature of Extension Activity	No. of activities	Farmers				Extension Officials			Total		
		M	F	T	SC/ ST (% of total)	Male	Female	Total	Male	Female	Total
Field Day	10	296	26	322	46	4	0	4	300	26	326
Kisan Mela	2	756	157	913	30	6	0	6	762	157	918
Kisan Ghosthi	3	92	40	132	35				92	40	132
Exhibition	4	2477	577	3054	27	34	2	80	2511	579	3134
Film Show	37	942	272	1214	18	0	0	0	942	272	1214
Method Demonstrations	3	56	12	68	42	2	0	2	58	12	70
Farmers Seminar	4	92	12	104	28	18	4	22	110	16	126
Workshop	3	74	0	74	32	4	0	4	74	4	78
Group meetings	6	221	54	275	38	18	3	21	239	57	296
Lectures delivered as resource persons	8	61	19	80	28	0	0	0	61	19	80
Advisory Services	62	5334697	2286299	7620995	35	0	0	0	5334697	2286299	7620995
Scientific visit to farmers field	26	343	125	468	24	0	0	0	343	125	468
Farmers visit to KVK	565	6589	940	7529	20	0	0	0	6589	940	7529
Diagnostic visits	15	31	12	43	65	0	0	0	31	12	43
Exposure visits	13	151	26	177	34	0	0	0	151	26	177
Ex-trainees Sammelan	4	67	7	74	12			0	67	7	74
Soil health Camp	6	162	12	174	15	4	0	4	166	12	178
Animal Health Camp											
Agri mobile clinic	23	543	37	580	18	0	0	0	543	37	580
Soil test campaigns	4	106	26	132	24	0	0	0	106	26	132
Farm Science Club Conveners meet	11	119	8	127	19	4	0	4	123	8	131
Self Help Group Conveners meetings	9	60	103	163	24	0	0	0	60	103	163
Mahila Mandals Conveners meetings											
Celebration of important days (specify)	6	234	92	326	0	0	0	0	234	92	326
Sankalp Se Siddhi											
Swatchta Hi Sewa	15	450	244	694	35	2	0	0	452	244	696
Mahila Kisan Divas	1	0	50	50	24	0	2	2	0	52	52
Any Other (Specify)											
<b>Total</b>	<b>840</b>	<b>5348619</b>	<b>2289150</b>	<b>7637768</b>	<b>673</b>	<b>92</b>	<b>11</b>	<b>149</b>	<b>5348711</b>	<b>2289165</b>	<b>7637918</b>

## B. Other Extension activities

Nature of Extension Activity	No. of activities
Newspaper coverage	4
Radio talks	1
TV talks	2
Popular articles	
Extension Literature	17
Other, if any	5

## 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
Paddy	MTU 7029	460	920000	95	43	6	189	238
Total		460	920000	95	43	6	189	238

*KVK farm*

Crop	Variety	Quantity of seed (q)	Value (Rs)	Number of farmers to whom seed provided			
				SC	ST	Other	Total
Brinjal	Bhangar Selection	0.02	-	3	3	14	20
Paddy	MTU 7029	220	1144000.00	47	5	212	264
	MTU 1010	14	52000.00	7	1	19	27
	Rajendra Masuri	12	52000.00	5	0	17	22
	Pusa 1612	4	4000.00	2	0	6	8
<b>Grand Total</b>		<b>225.02</b>	<b>900000.00</b>	<b>64</b>	<b>9</b>	<b>268</b>	<b>341</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							
Cabbage							
Tomato	Arka Samrat, Arka Rakshak	20000	-	3	2	20	25
Brinjal	Bhangar Selection	20000	-	4	4	32	40
Chilli							
Onion							
Others							
<b>Fruits</b>							
Mango							
Guava	Baruipur, L49	150	4500	4	6	20	30
Lime	Kagzi	200	6000	3	2	20	25
Papaya							
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>40350</b>	<b>10500</b>	<b>14</b>	<b>14</b>	<b>92</b>	<b>120</b>

### Production of Bio-Products

Name of product	Quantity	Value (Rs.)	No. of Farmers benefitted			
	Kg		SC	ST	Other	Total
Bio-fertilizers						
Bio-pesticide						
Bio-fungicide						
Bio-agents						
Others, Vermicompost	4000	15000.00	5	1	16	22
<b>Total</b>	<b>4000</b>	<b>15000.00</b>	<b>5</b>	<b>1</b>	<b>16</b>	<b>22</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)							
Small ruminants							
Sheep							
Goat							
Other, please specify							
Poultry							
Broilers							
Layers							
Duals (broiler and layer)							
Japanese Quail							
Turkey							
Emu							
Ducks							
Others (Pl. specify)							

Piggery							
Piglet							
Hog							
Others (Pl. specify)							
Fisheries							
Indian carp							
Exotic carp							
Mixed carp							
Fish fingerlings	Rohu, Catla, Mrigal	4120	10300	0	0	50	50
Spawn							
Others (Pl. specify)							
<b>Grand Total</b>		4120	10300	0	0	50	50

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

Not applicable

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

Item	Title	Author's name	Number	Circulation
Research paper	Line x Tester Analysis of Combining Ability in Chilli (Int. J.Curr.Microbiol.App.Sci(2019) 8(3): 2436-2442)	S. Sarkar, S. S. Kundu, S. Chatterjee and D. Chetri	1	-
Seminar/conference/symposia papers	Leadership development vis-à-vis technology dissemination in agriculture: An experience from Purba Bardhaman district of West Bengal	P. K. Jain and D. Ghorai	1	--
	Integrated farming system enhancing Rural Livelihood – a case study of Burdwan	G. Ziauddin and D. Ghorai	1	300
Books				
Bulletins	Vegetative Propagation of Fruits and Ornamental Plants	S. Sarkar, M.S. Singh , S.S. Kundu, D. Ghorai and S.M.A Rahaman		30
News letter				
Popular Articles				
Book Chapter	The Sundarbans: A Flight into the Wilderness	H.S. Sen and D. Ghorai	1	--
Extension Pamphlets/literature	Use of Fish Meal in Supplementary Fish Feed	G. Ziauddin, D.Ghorai and S.M.A Rahman	1	500
	Insect Pests of Tomato	S. Sarkar, S.S. Kundu and S.M.A Rahaman	1	500

	Scientific Cultivation of Oyster Mushroom	S. Garai, F.H. Rahman and S.M.A Rahman	1	500
	Culture of Deshi Magur Fish	G. Ziauddin, F.H.Rahman and S.M.A Rahman	1	500
	Bio-pesticide Preparation	S. Sarkar, F.H.Rahman and S.M.A. Rahman	1	500
	Integrated Pest Management of Rice	S.S. Kundu, D. Ghorai, F.H. Rahman and S.M.A Rahman	1	500
	Kitchen Gardening	S. Sarkar, M.S. Singh, F.H. Rahman and S.M.A. Rahman	1	500
	Use of Liming in Scientific Fish Culture & its Importance	G. Ziauddin, F.H.Rahman and S.M.A Rahman	1	500
	Improved Cultivation Practices of Mustard	D.Ghorai, S. Garai, F.H. Rahman and S.M.A Rahman	1	500
	Seedling Raising of Vegetables	S. Sarkar, M.S. Singh, F.H. Rahman and S.M.A. Rahman	1	500
	Production of Vermicompost to restore Soil Health	D. Ghorai, F.H. Rahman and S.M.A Rahman	1	500
	Cultivation Technology of Berseem	S.S. Kundu, M.S. Singh, S. Sarkar, and S.M.A Rahaman	1	500
	Improved Cultivation Practices of Groundnut	D. Ghorai, S. Garai and S.M.A Rahman	1	500
	Importance of Nutrition in our Health	S. Garai, D.Ghorai, M.S. Singh and S.M.A Rahman	1	500
	Management of fish I stocking ponds	G. Ziauddin & S.M.A. Rahman	1	1000
	Nursery pond management	G. Ziauddin & S.M.A. Rahman	1	500
	Disease management and prevention of carps	G. Ziauddin & S.M.A. Rahman	1	1000
Technical reports	Comprehensive district agriculture plan, Purba Bardhaman for 2017-18 to 2019-20	D. Ghorai, G. Ziauddin, S. Sarkar, M.S. Singh, J. Chatterjee, S. Ghatak, G. Sinha, P. Ghosh	1	
	Comprehensive district agriculture plan, Paschim Bardhaman for 2017-18 to 2019-20	D. Ghorai, G. Ziauddin, S. Sarkar, M.S. Singh, J. Chatterjee, S. Ghatak, G. Sinha, P. Ghosh	1	
Electronic Publication (CD/DVD etc)				
TOTAL				

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

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

Sl. No.	Name of programme	Name of course	Name of KVK personnel and designation	Date and Duration	Organized by
1.	HRD Training	Capacity building programme on soil and water management at ICAR-IIWM, Bhubaneswar	Dr. Dipankar Ghorai	21.01.2019 – 24.01.19	ICAR- ATARI, Kolkata
2.	HRD Training	Workshop – cum – training on Production Practice Survey under CSISA	Dr. Dipankar Ghorai	12.03.19 – 13.03.19	ICAR- ATARI, Kolkata
3.	Training & Workshop	ASCI, Trainers training and workshop : SDMS Portal Trainers training and Workshop in Lake Hall, BCKV, Kalyani	Dr. Golam Ziauddin, SMS(Fishery)	18.09.2018 to 20.09.2019 03 days	ICAR-ATARI, Kolkata and funded by Agricultural Skill Corporation of India.
4.	Workshop	Doubling farmers' income through animal husbandry and fishery sectors : role of kvk	Dr. Golam Ziauddin, SMS(Fishery)	09/10/2018 to 11/10/2018 03 days	Directorate of Research, Extension & Farms of West Bengal University of Animal & Fishery Sciences
5.	Training & Workshop	ASCI, Trainers training and workshop : SDMS Portal Trainers training and Workshop in Lake Hall, BCKV, Kalyani	Dr. Monica Suresh singh, SMS(Agril. Extension)	18.09.2018 to 20.09.2019 03 days	ICAR-ATARI, Kolkata and funded by Agricultural Skill Corporation of India.
6.	HRD Training	Training cum Workshop on Plant Protection	Mr. Sandipan Garai, Programme Assistant (T-6)	13.12.2018 to 15.12.2018	ICAR-ATARI, Kolkata
7.	HRD Training	Model Training Course on 'Scientific Bee-keeping for Alternative Livelihood & Higher Yield of Crop Plants through Efficient Pollination'	Mr. Sandipan Garai, Programme Assistant (T-6)	01.02.2019 to 08.02.2019	ICAR-CISH, Regional Research Station, Malda (W.B.)

## 3.7.

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

Name of farmer	Noorjahan Khatun, Integrated farming					
Address	Fatepur, Kosba, Galsi I, Purba Bardhaman					
Contact details (Phone, mobile, email Id)	9134210375					
Landholding (in ha.)	5 ha (Including 3 ha leased land)					
Name and description of the farm/ enterprise	<p>Noorjahan Khatun is an agile women farmer under the KVK who has stamped her authority in the male dominated agricultural scenario of the district and presently leading around 2500 women farmers in the area. For her contricution she has won “Best Women Farmer” award by Doordarshan, Govt. of India.</p> <p>She has a land holding of around 5 ha wth 3 ha taken on lease. After being trained by KVK on cultivation of crops using scientific methods as well as in animal husbandry practices, she applied them in growing crops like, paddy, mustard, groundnut, chickpea, lentil, potato, onion, cauliflower, vegetables and marigold to good effect. She started rearing of cattles, poultry and duck with scientific management practices. She took one pond of 1 acre on lease and started culture of major and minor carps as well.</p>					
Economic impact	(i) Field crops					
	S. No.	Crop	Variety	Area (ha.)	Total Production (q.)	Productivity (q/ha.)
	1	Paddy	MTU-7029	1.33	90.0	67.5
	2	Mustard	B-9, JD-6,	0.67	12.33	18.5
	3	Lentil	WBL-77	0.07	0.97	14.5
	4	Chick Pea	JAKI 9218	0.07	0.92	13.8
		Groundnut	TAG 24, TG 37 A, Kadiri 6	0.33	7.93	23.8
	5	Potato	S1, Kufri Pokraj, Kufri Jyoti	1.33	500.0	375
	(ii) Horticulture crops					
	S. No.	Crop	Variety	Area (ha.)	Total Production (q.)	Productivity (q/ha.)
	1	Onion	Sukhsagar	0.67	40	60
	2	Cauliflower	Pusa synthetic, Pusa Snowball	0.13	10000 pcs	60000 pcs/ha
						Net income (Rs.)
						49500
						20500
						3625
						3400
						21125
						101500



	3	Cabbage	Improved bahar	0.07	5000 pcs	58000 pcs/ha	60000
	4	Marigold	African marigold	0.13	135	1012.5	82000
	(iii) Livestock						
	Sl. No.	Name of animal/bird	Breed	No. of units	Total Production	Productivity (per animal/bird)	Net income (Rs.)
	1	Cow	Desi	3	1095 lt milk	2-3lt/day	19710
	2	Poultry	Desi	40	1650 eggs	170 egg/year	17500
	3	Duck	Desi	8	750 eggs	180 egg/year	7500
	(iv) Fisheries						
	Size of pond 20 bigha ( 4 ponds)						
	Sl. No.	Breed of fish		Total Production (q.)		Net income (Rs.)	
	1	Ruhu, Katla, Chital, Bhetki		40q		400000	
	(v) Processing and value addition						
	S. No.	Crop/Enterprise			Type and Qty. of value added product produced		Net income (Rs.)
	1	Rice			Puffed rice		10000
Social impact	Mrs. Khatun led by example in the area and is presently leading about 400 women SHGs involving over 2500 women.						
Environmental impact							
Horizontal/ Vertical spread	28 women is following her suit and started there agripreneurship in 5 adjoining villages.						

Name of farmer	Bapi Sk
Address	Vill - Mirjapur, Post.: Nandai, Block - Kalna I, Dlst. - Purba Bardhaman
Contact details (Phone, mobile, email Id)	9734213386
Landholding (in ha.)	1 ha
Name and description of the farm/ enterprise	Bapi Shaikh is a medium farmer-cum-rural youth of village <b>Mirjapur, Block Kalna-I</b> of the district Burdwan. Although being a rural youth he has got a pragmatic view towards latest agricultural technologies and is keen to learn. <b>He has total of 5 acres of land which he used to cultivate for support</b>

	<p><b>livelihood of his family.</b> He used to cultivate jute in 3 acres of land and rest for paddy. <b>But proposition of jute cultivation, was gradually becoming cost-ineffective due to high labour requirement, weed infestation causing diminished productivity, non availability of suitable retting water etc.</b></p> <p>To overcome the situation, he has <b>started cultivating jute intercropping with pulse like black gram and green gram and with leafy vegetable like Amaranthus.</b> This has given to cost effective return from jute cultivation apart from securing protein nutrition of his family from the additional pulse crop.</p>
Economic impact	<p>He obtained the necessary training on improved package of practices of jute cultivation from KVK Burdwan and since 2013, he was using improved technologies on jute like <b>Multiple row Seed Drill, Nail Weeder and Microbial retting consortium</b> developed by ICAR- CRIJAF, Barrackpore for sowing, weeding and retting of jute respectively which in turn has resulted in higher grade of fibre and higher return from fibre to the tune of Rs. 350 – 550/- per quintal.</p> <p>Besides field crop he has a pond of around 1 acre and 1.5 acre of land in bund area. He has constructed one vermicompost unit in the bund area besides sheds for poultry birds and goats and <b>planted various fruit plants like mango, guava, tissue cultured banana around the pond</b> and used to water the plants with pond water. The pond is used for pisciculture and jute retting purposes. Having had training from State fishery department and KVK Burdwan, <b>he has successfully using the pond for multitier carp culture prior to retting and air breathing fish culture in the post retting period. This has augmented his income in the range of Rs. 3500 – 6000/- per season.</b> The adjoining bund area is utilized for cultivating multiple vegetables which are irrigated using the pond water. <b>He has preparing Panchagavya and organic pesticides using the animal and poultry bird excreta and other organic wastes which are used for pest control in vegetables as well as fish feed.</b></p> <p>He has diminished the area under paady and diversified it towards cultivating various crops like, <i>kharif</i> onion, brinjal, early cauliflower, coriander, radish, cucurbits etc. that has helped him to fetch good amount of additional income. As a result his total income was doubled after 2014-15 to the tune of 3.6 lakhs / annum from a mere 1.8 lakhs prior 2014.</p>
Social impact	<p>As recognition for his expertise in various niche areas of crop production, he was awarded <b>Krishak Ratna by Govt. of West Bengal, Kriti Krishak by Govt of West Bengal</b>, recognition from KVK etc. For his expertise, <b>he was being regularly hired by the state department and KVK for farmers training at various locations.</b> He also inspired an estimated number of 60 progressive farmers/rural youths to follow his cue for sustainable and profitable farm management</p>
Environmental impact	
Horizontal/ Vertical spread	At present 25 small farmers have developed IFS unit at their farm level following Bapi Sk's suit

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

Whatapp groups of farmers (3 nos)

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)

None

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)
1	Brinjal, cabbage, tomato, chili	15 ha	462 tonnes	24	No

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

1. Developing questionnaire 2. Targeting and interviewing

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

Sl. No	Name of the Equipment	Qty.
1	Flame photometer	One
2	Spectrophotometer	One
3	Shaker	One
4	Hot air oven	One
5	Hot plate	One
6	Glass distillation unit	One
7	Conductivity bridge	One
8	pH meter	One
9	Electronic balance	Two
20	Grinder	One
11	Kjeldahl N analyser	One
12	Mridaparikshak	One
13	Atomic absorption spectrophotometer	One
14	PUSA STFR Meter	One

## 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			
56	264	320	254	15	--

## 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
1.	Awareness programme on soil health and distribution of soil health card	64	-	-	15	15

## 3.12. Activities of rain water harvesting structure and micro irrigation system

No of training programme	No of demonstrations	No of plant material produced	Visit by the farmers	Visit by the officials
2	5	20000 seedling	100	5

## 3.13. Technology week celebration

Type of activities	No. of activities	Number of participants	Related crop/livestock technology
Mass awareness programme	2	365	Agriculture, Horticulture, Livestock & Fishery
Farmers training	5	254	Agriculture, Horticulture, Livestock & Fishery
TV show	2	82	Agriculture, Horticulture, Livestock & Fishery
Farmer-Scientist interaction	1	115	Agriculture, Horticulture, Livestock & Fishery

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

No of student trained	No of days stayed
Not applicable	

ARS trainees trained	No of days stayed
--	--

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

Date	Name of the person	Purpose of visit
24.02.2019	Shri Sunil Mandal, Hon'ble MP, Bardhaman Purba	District Kisan Mela
24.02.2019	Dr. Mrs. Mamta Sanghamita, Hon'ble MP, Bardhaman Durgapur	District Kisan Mela
24.02.2019	Shri Alok Maji, MLA, Galsi	District Kisan Mela

## 4. IMPACT

## 4.1. Impact of KVK activities (2014-15 to 2018-19).

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.)	
			Before (Rs./Unit)	After (Rs./Unit)
Vermicomposting	154	88	0	2600
Mushroom cultivation	40	80	0	850
Quality Seed grower	20	95		
Solanaceous crop cultivator	20	90		
Hatchery Production Worker	20	--		
Extension service provider	20	--		

NB: Should be based on actual study, questionnaire/group discussion etc. with ex-participants

## 4.2. Cases of large scale adoption

(Please furnish detailed information for each case)

Horizontal spread of technologies	
Technology	Horizontal spread
Sulfur and boron nutrition in mustard	The soils of the district are largely deficient in two essential nutrients required for mustard, namely, Sulfur and Boron. KVK after successfully establishing the fact that supplemenatation of sulphur and boron can augment productivity significantly through OFT, applied the technology in CFLD on mustard during Rabi 2015 -16. Farmers were greatly encouraged by the results and as a result of which the technology has spreaded to 5 blocks of the district, namely Kalna, Purbasthali, Ausgram, Galsi I and Galsi II.
Seed treatment for crops	Farmers in this region were not used to treat seeds of different crops while sowing before KVK intervention. After intervention of KVK, not only the farmers in the adopted village but farmers in the adjoining villages as well are now practicing seed treatment for crops like paddy, jute, pulses, potato etc. The technology has spread to as much as 18 blocks of the district.
Azolla production for livestock feeding and green manuring	<p>i) A low cost azolla production unit was established in KVK farm and maintained (<i>Azolla microphylla</i>) throughout the year.</p> <p>iii) In our adopted villages, 25 production units were set up for multipurpose use specially as livestock and poultry feed.</p> <p>iv) In this year, Block Livestock Development Officer of Galsi-I indented the culture and technical know-how for 50 demonstrations in his block.</p> <p>v) A training programme was conducted on the theme area of azolla production and its use as green manure in rice field in collaboration with ICAR-IARI, New Delhi.</p>

Give information in the same format as in case studies

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

Nil

## 4.4. Details of innovations recorded by the KVK

Thematic area	Farm mechanization
Name of the Innovation	Hand driven zero till-cum-potato ridge maker
Details of Innovator	Dinabandhu Pal, Warispur, Ausgram II
Back ground of	The area of Warispur is a relatively low lying area by the side of river Khari where during heavy rain field inundate and

innovation	paddy crop is largely damaged. Shri Pal realized that if he could sow paddy a bit early then crop stand will be enough not to be damaged by flooding. He has seen Zero-till seed cum fertilizer drill working in one training programme he attended in KVK. Since, he could not get access to one such machine in his nearby area, he went on to device one such machine which can be nahd driven as well as bullock driven.
Technology details	Shri Pal devised the Zero till drill-cum-potato ridge maker in such a way that it can be operated by man or can be bullock driven. The machine is very user friendly and costs only around Rs. 700/-
Practical utility of innovation	Using the same machine Shri Pal used to cultivate paddy in about 6 bighas of land that he has and has been successful in preventing loss due to flooding by early cultivation.

#### 4.5. Details of entrepreneurship development

##### Entrepreneurship 1

Entrepreneurship development	
Name of the enterprise	Quality paddy seed grower
Name & complete address of the entrepreneur	Shri Pranab Mandal, Block: Galsi-I , Purba Bardhaman
Intervention of KVK with quantitative data support:	Sh. Pranab Mandal underwent skill development training on quality seed grower in the KVK. He started his own enterprise on production of quality paddy seed in 2018. He formed a group of farmers of 12 and used to collect foundation paddy seed from KVK. With his gain in knowledge and aided by KVK experts he produced about 200 q of paddy seed.
Time line of the entrepreneurship development	2017: Obtained training from KVK. 2018: Started growing paddy seed from Kharif season of 2018 March, 2019: Sold paddy seed @ RS. 30/kg and the group gained Rs. 280000/-
Technical Components of the Enterprise	--
Status of entrepreneur before and after the enterprise	Earlier he used to seel paddy @ Rs. 15/kg and his income from his 5 bigha of land was to the tune of Rs. 21000/-. After seeling paddy as seed material his income raised by RS. 35000/-
Present working condition of enterprise in terms of raw materials availability, labour availability, consumer preference, marketing the product etc. ( Economic viability of the enterprise):	The enterprise is extremely viable economically.
Horizontal spread of enterprise	--

## Entrepreneurship 2

<b>Entrepreneurship development</b>	
Name of the enterprise	Mushroom grower
Name & complete address of the entrepreneur	Sk. Gafur Ali Mandal Guskara, Ausgram I, Purba Bardhaman
Intervention of KVK with quantitative data support:	KVK imparted 3 days training on production of mushroom in 2018. After getting training Sk. Gafur started his own enterprise on mushroom production. He constructed a low cost house (20 ft x 12 ft) and innovatively stacked mushroom beds ( 40 nos.) in a cost effective manner.
Time line of the entrepreneurship development	September, 2018: Obtained training from KVK. November, 2018: Started growing mushroom commercially.
Technical Components of the Enterprise	The enterprise is household enterprise where self labour is the critical input.
Status of entrepreneur before and after the enterprise	As the enterprise is in initial stage he got a net profit of Rs. 7500/- from the 40 beds of mushroom.
Present working condition of enterprise in terms of raw materials availability, labour availability, consumer preference, marketing the product etc. ( Economic viability of the enterprise):	The business is gradually growing. He collects quality spawn from the contact provided by the KVK. He along with his family members used to lend support in production of mushroom and no outsourced labour is required. Since there is a substantial market for fresh mushroom nearby his farm, he is expanding his production capacity to 200 beds.
Horizontal spread of enterprise	--

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

#### DAESI Course

In Purba and Paschim Bardhaman there are about 2500 practicing agri-input dealers, who are the prime source of farm information to the farming community. The first contact point for majority of farmers is the agri-input dealer. While purchasing different inputs required for farming operations, the farmer naturally tries to find out from the input dealer about the usage of inputs, both in terms of quality and quantity. However, most of these input dealers do not have formal agricultural education. With the objective of shaping these input dealers as para-extension professionals by providing requisite knowledge, one self-financed course of 40 input dealers was sanctioned by SAMETI and the batch was started in August, 2018. Till 31.03.19, 32 no. of classes on different aspects of agriculture and 8 exposure visits were conducted.



## 5. LINKAGES

### 5.1. Functional linkage with different organizations

Name of organization	Nature of linkage
Agriculture Skill Council of India	Skill development training
ICAR-Indian Institute of Water Managemnt , Bhubaneswas	HRD training of KVK official
ICAR-Central Institute of Subtropical Horticulture, Malda	HRD training of KVK official
Directorate of Agriculture, Govt. of W.B.	<ul style="list-style-type: none"> <li>▪ Input supply for Seed village program</li> <li>▪ Supply of new variety pulse and oil seed</li> </ul>
Animal Resource Development Department, Govt. of W.B.	<ul style="list-style-type: none"> <li>• Vaccination camp</li> </ul>
Office of Assistant Director of Fisheries, Meen Bhawan, Burdwan	<ul style="list-style-type: none"> <li>• Fish fingerlings supply</li> <li>• Training on fish culture, management</li> <li>• Awareness camp on subsidized loan scheme, fisherman identity card, Formation of Self help group, Fish production group, cooperative societies etc.</li> </ul>
ATMA	<ul style="list-style-type: none"> <li>• Governing body and management committee member</li> <li>• Collaborative programmes:-  <b>Trainings – 4 nos.</b>  <b>Demonstration – 20 nos.</b>  <b>Trials - 02 nos.</b> </li> </ul>
RKVY	<ul style="list-style-type: none"> <li>• Governing body and management committee member</li> </ul>
NREGS	Convergence programmes were <ul style="list-style-type: none"> <li>• Training of NREGA technical staff on Vermi-compost, Rainwater harvesting, horticulture, Composite fish culture, Integrated farming</li> <li>• Field demonstrations by KVKs on NREGA works on IMC culture, Duck rearing, integrated farming (Fish-livestock- horticulture)</li> <li>• Skill development of NREGA workers under SGSY through Preparation of jute handicrafts, kantha-stitch.</li> </ul>
National Seed Corporation, State Seed Corporation, Bidhan Chandra Krishi Viswavidyalaya, Mohanpur	Foundation and certified paddy and potato, pulses and oil seed etc.
	<ul style="list-style-type: none"> <li>• Time to time planning execution</li> <li>• Planting material collection</li> <li>• Bio fertilizers collection</li> <li>• Resource persons</li> </ul>

Vishwabharati University	• Trainings / demonstrations
West Bengal University of Animal and Fishery Science	Feed and milk sample analysis
Regional Station for Forage Production Demonstration, Kalyani	Training and fodder seed collection
CIFA, Kalyani	Exposure visit
State Agricultural Management Extension Training Institute, Narendrapur	DAESI programme, skill training for rural youths
NABARD, CBI, SBI & RRBs ,Burdwan Region	Farmers; club, Credit facility for farmers
NGOs like Men at Work, Ujjiban, SSSNS, Meghdhoot, Mangal Chandi Self help group	Farmers' tour , Training etc

5.2. List of special programmes undertaken during 2018-19 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.)
Training and designated expert support form KVK at district level	Training of specific need and infrastructure development of KVK taining hall	March, 2019	ATMA, Purba Bardhaman	49,000.00

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

Name of the programme/scheme	Purpose of programme	Date/ Month of initiation	Funding agency	Amount (Rs.)
Technology transfer through Training and demonstration	Training of specific need and demonstration of technology at farmers field	September, 2018	ATMA, Purba Bardhaman	5,00,000.00
Sub mission on agricultural mechanization	Procurement of farm implements	October, 2018	DAC&FW, Govt. of India	40,00,000.00
District Kisan Mela, Purba and Paschim Bardhaman	Mass awareness of farmers on efficient agricultural technologies	March, 2019	DAC&FW, Govt. of India	8,00,000.000

## PERFORMANCE OF INFRASTRUCTURE IN KVK

### 6.1. Performance of demonstration units (other than instructional farm)

Sl. No.	Name of demo Unit	Year of estt.	Area (Sq. mt)	Details of production			Amount (Rs.)		Remarks
				Variety/ breed	Produce	Qty.	Cost of inputs	Gross income	
1.	Orchard	2009	8000	Mango, Guava, Citrus	Fruits	0.8 q	5000	10000	
	Total					0.8 q	5000	10000	

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

Name Of the crop	Date of sowing	Date of harvest	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Type of Produce	Qty.(q)	Cost of inputs	Gross income	
Cereals (paddy)	June 2018	December, 2018	4.5	MTU 7029	Foundation seed	220 q	400,000	11,40,000.00	
			0.3	MTU 1010	Foundation	14 q	25000.00	70,000.00	
			0.3	Rajendra Masuri	seed	12 q	20000.00	60,000.00	
			0.13	Pusa 1612	TL seed	4 q	3500.00	10,000.00	
Brinjal	5/8/18	multiple time	0.01	Bhangar Selection	seed	0.02	-	-	used for FLD
Guava	-	-	-	Baruipur, L49	saplings	150 nos.	500	4500	
Lime	-	-	-	Kagzi	saplings	200 nos.	500	6000	

### 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.	Vermicompost	4 tonnes	15000	--	Used in KVK farm land for production of seed, seedlings, banana etc.

## 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.	Fish fingerling	IMC	Fingerling	85 kg	15000	25300	

## 6.5. Utilization of hostel facilities

Accommodation available (20 No. of beds)

Months	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
April 18	-	-	x
May 18	-	-	
June 18	18	36(2)	
July 18	3	3(1)	
August 18	7	14 (2)	
September 18	5	5(1)	
October 18	-	-	
November 18	5	10 (2)	
December 18	15	90 (6)	
January 19	15	90 (6)	
February 19	10	30(3)	
March 19	4	8(2)	
Total	82	286	

(For whole of the year)

## 6.6. Utilization of staff quarters

Whether staff quarters has been completed: Completed

No. of staff quarters: 06 nos.

Handover of quarter on 31.01.2013 and completion of road and electrical work on 31.03.13:

Occupancy details:

Months	Q I	QII	Q III	QIV	Q V	QVI
April 2019	04 staff quarters have been occupied by official staff. One is occupied by contractual staff with permission. One quarter is vacant.					

## FINANCIAL PERFORMANCE

### 7.1. Details of KVK Bank accounts

Bank account	Name of the bank	Location	Account Number
With Host Institute	State Bank of India Railway Station Branch, Barrackpore	Barrackpore	10391779335
With KVK	State Bank of India Mankar	Mankar	30466431682

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

Item	Released by ICAR		Expenditure		Unspent balance as on -
	Kharif	Rabi	Kharif	Rabi	
Groundnut	<b>340000</b>		<b>311000</b>		29000
Mustard (JD 6)		<b>120000</b>		<b>226475</b>	<b>(-) 106475</b>
Sesame		Nil		80000	<b>(-) 80000</b>

### 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 2018
	Kharif	Rabi	Kharif	Rabi	
Lentil (WBL77)		<b>132956</b>		<b>289800</b>	<b>(-) 156844</b>
Chickpea		Nil		<b>66250</b>	<b>(-) 66250</b>
Greengram		Nil		<b>65900</b>	<b>(-) 65900</b>
	Nil			376050	

## 7.4. Utilization of KVK funds during the year 2018-19 (Not audited)

Sl. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	Pay & Allowances	11350000	10627453	11105634
2	Traveling allowances	80000	80000	78977
3	Contingencies			
A	Stationary, tephone bill, POL,			
B				
C	Training of farmers, training material, training of youth, exposure visit			
D	Training of extension functionaries			
E	FLD other than pulse and oilseeds			
J	Swachhata Expenditure			
TOTAL (A)		1300000	1075772	1199054
1	Wastes			
2	Vehicle			
3	Equipment & Furniture			
4	Soil & water testing			
TOTAL (B)				
C. REVOLVING FUND			1057145	898606
GRAND TOTAL (A+B+C)		12730000	12840370	13282271

## 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)
2016-17	1,39,563.00	9,61,400.00	6,06,847.00	4,94,116.00
2017-18	494116.00	900930.00	443919.00	950327.00
2018-19	50197.00	1006948.00	8986063	1358539.00

## 7.6. (i) Number of SHGs formed by KVKs- 26

(ii) Association of KVKs with SHGs formed by other organizations indicating the area of SHG activities- 85

(iii) Details of marketing channels created for the SHGs

KVK mobilized the marketing channel for the SHG, especially women SHGs, associated with the production of rural and other handicrafts, by linking them with yearly Krishi melas, rural fairs and town based cooperatives dealing with selling of crafts etc. KVK has also connected SHG doing katha stich with traders from Bolpur.

KVK has created financial opportunity for many of the SHGs formed by linking them with NABARD, rural banks etc.

## 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
Joint visits	12	Kharif 2018 and Rabi 2018-19	Dept. of Agriculture, West Bengal	-	-
Sponsored trainings	5	Kharif 2018	Dept. of Agriculture, West Bengal	-	-

## 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

Not applicable

## 9.2. PPV &amp; FR Sensitization training Programme

Not applicable

9.3. *m Kisan* Portal (National Farmers' Portal/ SMSPortal)

Type of message	No. of messages	No. of farmers covered
Crop	11	1411914
Livestock	7	933831
Fishery	6	753296
Weather	6	725299
Marketing	8	880990
Awareness	10	1244017
Training information	9	1105218
Other	5	566430
<b>Total</b>	<b>63</b>	<b>7620995</b>



## 9.4. KVK Portal and Mobile App

Sl. No.	Particulars	Description
1.	No. of visitors visited the portal	24,619
2.	No. of farmers registered in the portal	2,33,567
3.	Mobile Apps developed by KVK	01
4.	Name of the App	<i>Soil Test Based Fertilizer Application for Burdwan District</i>
5.	Language of the App	<i>English</i>
6.	Meant for crop/ livestock/ fishery/ others	<i>Crop</i>
7.	No. of times downloaded	-

## 9.5. a. Observation of Swacha Bharat Programme

Sl no.	Date of Observation	Activities undertaken
1.	15.09.18	Planting of trees in village
2.	16.09.18	Cleaning of residential quarters
3.	17.09.18	Farmers sensitization programme on cleanliness
4.	18.09.18	Cleaning of office store room
5.	19.09.18	Cleaning of KVK surrounding
6.	20.09.18	Village sanitization programme in school
7.	22.09.18	Liming of KVK pond
8.	24.09.18	Awareness camp on cleanliness
9.	25.09.18	Cleaning of public place
10.	27.09.18	Cleaning of KVK pond
11.	28.09.18	Cleaning of vermicompost unit
12.	29.09.18	Cleaning of pond and surrounding
13.	01.10.18	Seminar on hygiene and sanitation
14.	02.10.18	Cleaning of drain of KVK farm

## b. Details of Swachhta activities with expenditure

Activities	Number	Expenditure (in Rs.)
1. Digitization of office records/ e-office		
2. Basic maintenance		3750
3. Sanitation and SBM		5015
4. Cleaning and beautification of surrounding areas		2570
5. Vermicomposting/ Composting of biodegradable waste management & other activities on generate of wealth for waste		
6. Used water for agriculture/ horticulture application		
7. Swachhta Awareness at local level	2	3526
8. Swachhta Workshops		1240
9. Swachhta Pledge		
10. Display and Banner	06	4680
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)	100	5340
14. No of Staff members involved in the activities		
15. No of VIP/VVIPs involved in the activities		
16. Any other specific activity (in details)		
<b>Total</b>		<b>26121</b>

## 9.6. Observation of National Science day

Not observed

## 9.7. Programme with SeemaSurakshaBal (BSF)

Not applicable

## 9.8. Agriculture Knowledge in rural school:

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

Give good quality 1-2 photograph(s)

## 9.9. 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 ZilaPanchayat	Distt. Collector/ DM	Bank Officials	Farmers	Govt. Officials, PRI members etc.	Total		
26.03.19	--	--	--	--	--	--	--	100	2	102	No	No

## 9.10. Details of Swachhta Hi Sewa programme organized

Date	Place of cleanliness/activity	Place	Entrusted Officials/staff
16.12.18	Display and Banner at prominent places, taking Swachhta pledge, Stock taking & briefing of the activities to be organized during the Pakhwada	K VK, bank and post office	All officials
17.12.18	Basic maintenance: Stock taking on digitization of office records/ e-office implementation. Cleanliness drive including cleaning of offices, corridors and premises.	KVK	Dr. G. Ziauddin, Sk. Goalm Rasul, Mr. S. Garai, Mr. N. Ray, Mr. S. Pal, Mr. J. Pal, Mr. S. Bhanja
18.12.18	Cleanliness and sanitation drive within campuses and surroundings including residential colonies, common market places. Stock taking of biodegradable and non-biodegradable waste disposal status and providing on the spot solutions.	KVK residential campus	Dr. S. Sarkar, Mr. S. Garai, Mr. S. S. Kundu, Mr. S. Pal, Mr. S. Bhanja
19.12.18	Cleanliness and sanitation drive in the villages adopted by KVK involving village community	KVK	Dr. D. Ghorai, Dr. M. S.

		adopted village	Singh, Mr. S. S. Kundu, Mr. S. Garai
20.12.18	Promoting clean & green technologies and organic farming practices in kitchen gardens of residential colonies/ one nearby village and proving on the spot technology solution	Uchhagram	Dr. D. Ghorai, Dr. S. Sarkar, Mr. S. Garai
21.12.18	Water harvesting for agriculture/ horticulture application/kitchen gardens in residential colonies/ 1-2 nearby villages.	Sukdal village	Dr. D. Ghorai, Dr. M. S. Singh, Dr. S. Sarkar, Mr. S. Garai
22.12.18	Debate on Swachhta at the DARE/ICAR establishments, Seminars, awareness camps, rallies, street plays and expert talks.	Gopalpur	Dr. D. Ghorai, Dr. G. Ziauddin, Dr. M. S. Singh, Mr. S. Garai, Mr. S. Pal
23.12.18	Celebration of Special Day- Kisan Diwas (Farmer's Day)	KVK	Dr. D. Ghorai, Dr. M. S. Singh, Mr. S. Garai, Mr. S. S. Kundu
24.12.18	Swachhta Awareness at local level in non adopted village	Bud Bud village	Dr. S. Sarkar, Sk. Golam Rasul, Mr. S. Pal
25.12.18	Cleaning of public places, community market places and/or nearby tourist spots	Rondiha	Dr. D. Ghorai, Dr. M. S. Singh, Mr. S. Garai, Mr. S. Bhanja, Mr. S. Pal, Mr. J. Pal
26.12.18	Quiz, assay & drawing competitions for school children	KVK	Dr. S. Sarkar, Dr. G. Ziauddin, Mr. S. Pal
27.12.18	Stock taking of waste management & other activities including utilization of organic wastes/ generation of wealth from waste, polythene free status, composting of kitchen and home waste materials	Napur village	Dr. D. Ghorai, Dr. S. Sarkar, Mr. S. Garai, Sk. Golam Rasul
28.12.18	Cleaning of Farmers hostel and its surroundings of KVK	KVK	Dr. S. Sarkar, Dr. G. Ziauddin, Mr. S. S. Kundu, Mr. J. Pal, Mr. S. Bhanja
29.12.18	Visits of community waste disposal sites/ compost pits, cleaning and creating awareness on treatment & safe disposal of bio-degradable/ non bio-degradable wastes by involving civil/ farming community.	Jagulipara	Dr. S. Sarkar, Dr. G. Ziauddin, Mr. S. S. Kundu, Mr. J. Pal
30.12.18	Planting of trees in KVK farm	KVK	Mr. S. S. Kundu, Mr. J. Pal
31.12.18	Organization of press conference for highlighting the activities of Swachh Bharat Pakhwada by involving all stake holders including farmers/ VIPs/ press and electronic media	KVK	All officials

## 9.11. 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)
1	1	8	50	0	-

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

Sl. No.	Name of Farmer	Address of the farmer with contact no.	Innovation/ Leading in enterprise
1	Agriculture		
	Dinabandhu Pal	Warishpur, Ausgram 7699870386	Farm mechanization
	Mahadeb Porey	Bharatpur, Galsi I 9732914451	Groundnut seed production
	Prabir Samanta	Bharatpur, Galsi I	Groundnut seed production
	Gopi Mohan Ghosh	Simnori, Galsi I 9775702856	Quality seed grower
	Basudeb Sutradhar	Simnori, Galsi I 9732333697	Quality seed grower
2	Horticulture:		
	Bapi Sk	Mirjapur, Kalna 9734213386	Solanaceous crop cultivator
	Sk. Shorabuddin	Galsi 8926025062	Banana cultivation
3	Fisheries:		
	Bipul Mallick		Aquaculture

## 9.13. Revenue generation

SL.No.	Name of Head	Income (Rs.)	Sponsoring agency
1.	Paddy seed - 250 q	12,00,000)	
2.			
3.			

## 9.14. Resource Generation:

SL.No.	Name of the programme	Purpose of the programme	Sources of fund	Amount (Rs. lakhs)	Infrastructure created
1.	Technology transfer	To transfer improved technologies through training, demonstration, farmer-scientist interaction and exposure visit	ATMA, Purba Bardhaman	5.0	--
2	Refresher course for ATMA functionaries	To transfer improved technologies through training, demonstration, farmer-scientist interaction and exposure visit	ATMA, Purba Bardhaman	1.8	--
3	Training and designated expert support form KVK at district level	Training and infrastructure development	ATMA, Purba Bardhaman	0.49	--

## 9.15. Performance of Automatic Weather Station in KVK

Not applicable

## 9.16. Contingent crop planning

Not required

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

## Report on Cereal Systems Initiative for South Asia (CSISA)

a) Year: 2019

b) Introduction / General Information: The programme will start from May 2019

	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

12. Progress report of NICRA KVK (Technology Demonstration component) during the period  
(Applicable for KVKs identified under NICRA)

Not applicable

1. Awards/Recognition received by the KVK

Nil

Award received by Farmers from the KVK district

Sl. No.	Name of the Award	Name of the Farmer	Year	Conferring Authority	Amount	Purpose
1.	Best women farmer	Noorjahan Khatun	2018	Doordarshan, Govt. of India		

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

Nil

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

Sl. No.	Name of the organization/ Society	Trust Deed No.& date	Date of Trust Registration Address	Proposed Activity	Commodity Identified	No. of Members	Financial position (Rupees in lakh)	Success indicator
1	Sabuj Sathi Farmer Producer Organization							

16. Integrated Farming System (IFS)  
Details of KVK Demo. Unit

Sl. No.	Module details (Component-wise)	Area under IFS (ha)	Production (Commodity-wise)	Cost of production in Rs. (Component-wise)	Value realized in Rs. (Commodity-wise)	No. of farmer adopted practicing IFS	% Change in adoption during the year
1							

17. Technologies for Doubling Farmers' Income

Sl. No.	Name of the Technology	Brief Details of Technology (3- 5 bullet points)	Net Return to the farmer (Rs.) per ha per year due to the technology	No. of farmers adopted the technology in the district	One high resolution 'Photo' in 'jpg' format for each technology
1	Vermiculture and vermicomposting	<ul style="list-style-type: none"> <li>• Vermiculture</li> <li>• Production of vermicompost</li> </ul>	Rs. 482000/-	45	
2	Crop diversification	<ul style="list-style-type: none"> <li>• Crop diversification with TCB</li> <li>• Crop diversification with vegetables</li> </ul>	Rs. 136000/-	23	
	Integrated farming system	<ul style="list-style-type: none"> <li>• Crop</li> <li>• Fish</li> <li>• Livestock</li> <li>• Value addition</li> </ul>	Rs. 154000/-	16	



## 18. 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)	353	5600	01.02.18	Dr. D. Ghorai Mr. J. Chatterjee Sk. G. rasul Sk Amir Hossain Sk. Janab Ali Bapi Sk Noorjahan Khatun	<ul style="list-style-type: none"> <li>Capacity building</li> <li>Exposure visit</li> <li>Whatappgroup</li> </ul>
II (up-to 24.04.2018)	819	27400			
Total	1172	33000			

## 19. Information on Visit of Ministers to KVKs, if any

Date of Visit	Name of Hon'ble Minister	Name of Ministry	Salient points in his/ her observation (2-3 bulleted points)
--	--	--	--

20.a) Information on **ASCI** Skill Development Training Programme, if undertaken during 2017-18 and 2018-19

Year	Name of the Job role	Name of the certified Trainer of KVK for the Job role	Date of start of training	Date of completion of training	No. of participants	Whether uploaded to SDMS Portal (Y/N)	Fund utilized for the training (Rs.)
2017-18							
2018-19	Hatchery production worker	Dr. G. Ziauddin	19.02.19	26.03.19	20	Yes	161043.5
	Extension service provider	Dr. M. S. Singh	22.02.19	22.03.19	20	Yes	161043.5

b) Information on Skill Development Training Programme (**Other than ASCI or less than 200 hrs.**, if any) if undertaken during 2018-19

Thematic area of training	Title of the training	Duration (in hrs.)	No. of participants										Fund utilized for the training (Rs.)
			SC		ST		Other		Total				
			M	F	M	F	M	F	M	F	T		
Skill training for rural youth	Vermicompost and mushroom production	50 hrs	0	1	0	0	1	2	1	3	15	80000.00	
							2		2				
Skill training for rural youth	Nursery management in Horticulture	50 hrs	1	0	1	0	1	0	1	0	15	80000.00	
							3		5				

## 21. Information on NARI Project (if applicable)

Not applicable

## 22. Information on Krishi Kalyan Abhiyan Phase- I/ Phase-II/ Phase-III, if applicable

Not applicable

## 23. Any other programme organized by KVK, not covered above

Sl. No.	Name of the programme	Date of the programme	Venue	Purpose	No. of participants

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

Given overleaf