

## PROFORMA FOR ANNUAL REPORT OF KVKS, 2019-20

### 1. GENERAL INFORMATION ABOUT THE KVK

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

Address	Telephone		E mail
	Office	FAX	
Krishi Vigyan Kendra, Dhubri, P.O. Box No 1, Bilasipara – 783348, Dhubri, Assam GPS Location : N= 26° 14' 18" E= 90° 14' 34"	03667-250083	03667-250F083	kvk_dhubri@aau.ac.in

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

Address	Telephone		E mail
	Office	FAX	
Assam Agricultural University, Jorhat -785013, Assam	0376-2340001	0376-2340001	dee@aau.ac.in

#### 1.3. Name of the Sr. Scientist & Head with phone & mobile No

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr. Chandan Kr. Deka	NA	8638471840	drchandan.kr.deka@aau.ac.in

#### 1.4. Year of sanction: 30-06-2006

#### 1.5. Staff Position (As on 31<sup>st</sup> March, 2020)

Sl. No	Sanctioned post	Name of the incumbent	Designation	Discipline	Pay Scale (Rs.)	Present basic (Rs.)	Date of joining	Permanent /Temporary	Category (SC/ST/OBC/ Others)
1	Sr. Scientist & Head	Dr. Chandan Kr. Deka	Sr. Scientist & Head	Argil. Extn. Ed.	37400-6700	147900	07-08-2015	Permanent	Other
2	Subject Matter Specialist	Mr. Abhijit Paul	Subject Matter Specialist	Fishery Science	Level-9	61300	28-01-2014	Permanent	OBC
3	Subject Matter Specialist	Vacant	Subject Matter Specialist	Animal Science	-	-	-	-	-
4	Subject Matter Specialist	Vacant	Subject Matter Specialist	Agronomy	-	-	-	-	-
5	Subject Matter Specialist	Ms. Neelakshi Bhuyan	Subject Matter Specialist	Soil Sc	Level-9	59500	24-05-2018	Permanent	Others
6	Subject Matter Specialist	Mr. Ghana Kanta Sarma	Subject Matter Specialist	Agri Econ & FM	Level-9	57800	10-08-2018	Permanent	Other
7	Subject Matter	Mr. Bipul Kr. Das	Subject Matter	Plant Protection	Level-9	57800	10-08-2018	Permanent	OBC

	Specialist		Specialist						
8	Subject Matter Specialist	Mr. Bikash Jyoti Gharphalia	Subject Matter Specialist (Under GKMS)	Agrometeorology	Level-9	57700	05-08-2019	Permanent	MOBC
9	Programme Assistant	Ms. Nabanita Nath	Programme Assistant	Agriculture	Level - 6	36500	02-11-2018	Permanent	OBC
10	Farm Manager	Mr. Kuladip Talukdar	Farm Manager	Agriculture	Level - 6	35400		Permanent	
11	Computer Programmer	Mr. Dipankar Bora	Computer Programmer	Computer Science	Level - 6	42300	12-9-2011	Permanent	MOBC
12	Accountant / Superintendent	Mr. Sudipta Suman	Accountant / Superintendent	Commerce	Level - 6	41100	28-08-2015	Permanent	Other
13	Stenographer (Attached to DSW)	Ms. Saraswati Prasad Rawat	Stenographer	-	Level - 5	32300	23-3-2012	Permanent	Other
14	Driver	Mr. Akbar Ali	Driver	-	Level - 4	26800	21-2-2012	Permanent	Other
15	Driver	Mr. Mansur Rahman Pradhani	Driver	-	Level - 4	23100	12-05-2018	Permanent	Other
16.	Supporting staff	Mr. Aliul Islam	Supporting staff	-	14000 - 49000	53840	25-3-1985	Permanent	Other
17	Supporting staff	Mr. Safiqul Islam	Supporting staff	-	14000 - 49000	44380	17-12-2007	Permanent	Other
18	Agromet Observer	Mr. Hirok Jyoti Das	Agromet Observer (Under GKMS)	B.Sc. (Physics)		21700	03-07-2019	Permanent	Other
	<b>Total</b>	<b>16</b>							

1.6. a. Total land with KVK (in ha) :13.36 ha

(Remarks: KVK Dhubri is officiating from rented house)

b. Total cultivable land with KVK (in ha): Nil

c. Total cultivated land (in ha):

S. No.	Item	Area (ha)
1	Under Buildings (Administrative building+ Farmers' Hostel+ Staff Quarters)	-
2.	Under Demonstration Units	-
3.	Under Crops (Cereals, pulses, oilseeds etc.)	-
4.	Under vegetables	-
5.	Orchard/Agro-forestry	-
6.	Others (specify)	-

## 1.7. Infrastructural Development :( Remarks: KVK Dhubri is officiating from rented house)

## A) Buildings

S. No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Date	Plinth area (Sq.m)	Expenditure (Rs.)	Starting Date	Plinth area (Sq.m)	Status of construction
1.	Administrative Building							
2.	Farmers Hostel							
3.	Staff Quarters (6)							
4.	Demonstration Units (2)							
5.	Fencing							

## B) Vehicles

Type of vehicle	Regd. No.	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Mahindra Four Wheeler Jeep	AS 03 E 0031	2006	4,90,503.00	1,73,278	In running condition
Mahindra Marazzo 8 STR	AS01 EB 3324	2019	12,00,000.00	11533	In running condition

## C) Equipments &amp; AV aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
HP LaserJet (MFP)	2019	45000.00	Working
Laptop	2019	54000.00	Working
Desktop Computer	2019	99000.00	Working
Fax Machine	2010	15,190.00	Working
Photocopier Machine	2010	101920.00	Working
Desktop Computer	2010	55,094.00	Working
Laser Printer	2010	13000.00	Working
Scanner	2010	2,724.00	Not Working
LCD Projector	2017	49680.00	Working
Price Ticker Board	2010	90,800.00	Not Working
DSLR Camera	2017	49820.00	Working
VSAT System	2009-10	78,014.56	Not working

### 1.8. A). Details SAC meeting conducted in the year 2019-20

SAC meeting for KVK, Dhubri is not yet held in the financial year 2019-20 due to Lock down for Covid-19 problem.

## 2. DETAILS OF DISTRICT

### 2.1 Major farming systems/enterprises (based on the analysis made by the KVK)

Sl. No	Farming system/enterprises
1.	Agriculture—Horticulture
2.	Agriculture—Animal Husbandry
3.	Agriculture--- Fishery
4.	Agriculture—Horticulture-- Animal Husbandry
5.	Agriculture—Horticulture—Fishery
6.	Agriculture--Fishery—Animal Husbandry
7.	Agriculture—Horticulture—Fishery—Animal Husbandry

### 2.2 Description of Agro-climatic Zone & major agro-ecological situations (based on soil and topography)

Sl. No	Agro-climatic Zone	Characteristics
1	Lower Brahmaputra Valley Zone	The soil of the zone is mostly acidic in nature and pH increases towards the river Brahmaputra. The soil is medium to high in Organic carbon and available N, low in available P and medium in K status. The climate is sub-tropical in nature with warm and humid summer followed by dry and cool winter. Average rainfall is 3000 mm. Mean maximum temperature range is 33-38 °C and minimum temperature is 9-10 °C

### 2.3 Soil types

Sl. No	Soil type	Characteristics	Area in ha
1	Sandy loam	Characterized with 50-60% sand, less WHC and CEC, high infiltration rate and hydraulic conductivity	14151
2	Sandy	Characterized with more than 80% sand less WHC and CEC, high infiltration rate and hydraulic conductivity low organic matter, less suitable for crops	1248
3	Tilla/Red soil	Characterized with predominance of oxide of Fe and AL, lacks crystalline structure, high acidic, high P fixation low infiltration rate and less hydraulic conductivity less CEC, less productive relatively suitable for long duration Horticulture and plantation crops	3307
4	Clay Loam	Characterized with 30-35% clay, high WHC and CEC low infiltration rate and hydraulic conductivity	5118
5	Clay	Characterized with 50-55% clay high WHC and CEC low infiltration rate and hydraulic conductivity	1729

## 2.4. Area, Production and Productivity of major crops cultivated in the district

Sl. No	Crop	Area (ha)	Average yield (q/ha)	Production (q/ha)
1.	Winter Paddy (Sali)	38972	2005	503518
2.	Early Ahu	51015	2940	193213
3.	Jute	12690	1962	128294
4.	Maize	1436	3333	3209
5.	Blackgram (Kharif)	3250	648	21060
6.	Rapeseed and Mustard	23450	667	156411
7.	Potato	9440	7499	70790

## 2.5. Weather data

Month	Rainfall (mm)	Temperature ° C		Relative Humidity (%)	
		Maximum	Minimum	Morning	Evening
April, 2019	178.9	29.4	22.4	82	72
May, 2019	281.9	27.9	23.1	88	83
June, 2019	297.8	32.9	26.1	85	79
July, 2019	354.1	31.2	26.4	89	87
August, 2019	457.9	32.7	27.4	83	79
September, 2019	340.3	31.4	26.1	89	78
October, 2019	130.2	29.9	23.7	88	73
November, 2019	18.9	28.2	20.5	85	69
December, 2019	0.6	27.5	19.7	86	69
January, 2020	0	23.5	13.1	83	63
February, 2020	4.4	24.5	15.9	86	68
March, 2020	24.5	29.2	19.0	74	57

## 2.6. Production and productivity of livestock, Poultry, Fisheries etc. in the district

Category	Population	Production	Productivity
<b>Cattle</b>			
<i>Crossbred</i>	3758	38554128	1.056 L/day/animal
<i>Indigenous</i>	505200		
<b>Buffalo</b>	21564	5827094	1.596 L/day/animal
<b>Sheep</b>			
Crossbred	-	NA	NA
<i>Indigenous</i>	114320	NA	NA
<b>Goats</b>	215844	306075	8.39 kg/animal

<b>Pigs</b>			
<i>Crossbred</i>			70.5 kg/animal
<i>Indigenous</i>	8121	257472	
<b>Rabbits</b>			
<b>Poultry</b>			
Hens		23297040 Nos	117 Nos/bird/year
<i>Desi</i>	692122		
<i>Improved</i>	340131	284232	1.8 kg/bird
Ducks	-	-	-
Turkey and others	-	-	-

<b>Category</b>	<b>Area</b>	<b>Production</b>	<b>Productivity</b>
Fish	66647 ha	9688 MT	0.551 MT/ha
<i>Marine</i>	-	-	-
<i>Inland</i>	66647 ha	12184 MT	0.183 MT/ha
Prawn	-	-	-
Scampi	-	-	-
Shrimp	-	-	-

Note: Pl. provide the appropriate Unit against each enterprise

## 2.6 Details of Operational area / Villages (2019-20)

<b>Sl. No.</b>	<b>Taluk/ Eleka</b>	<b>Name of the block</b>	<b>Name of the village</b>	<b>Major crops &amp; enterprises</b>	<b>Major problem identified</b>	<b>Identified thrust area</b>
1	Sapatgram	Mahamaya	Sonamoyee	Rice, toria, Black gram & Winter vegetables	1.Lack of suitable micronutrient management practices in rice 2.Lack of suitable moisture conservation practices in toria	1.Micronutrient Management 2.Moisture Conservation Tillage
2	Sapatgram	Mahamaya	Rabantari	Rice, toria, Black gram & Winter vegetables	Lack of suitable micronutrient management practices in rice	Micronutrient Management
3	Sapatgram	Mahamaya	Dhanpur	Rice, toria, Blackgram, Wheat, Dairy & Winter vegetables	1.Lack of suitable micronutrient management practices in rice 2. Lack of suitable micronutrient management practices in wheat	1.Micronutrient Management in rice 2.Micronutrient Management in wheat
4	Sapatgram	Mahamaya	Khalisatari	Rice, toria, Black gram, Wheat, Dairy & Winter vegetables	1.Lack of suitable micronutrient management practices in rice 2. Lack of suitable moisture conservation practices in toria	1. Micronutrient Management 2. Moisture Conservation Tillage

5	Bilasipara	Ward No.9	Hakama	Rice, toria, Black gram & Winter vegetables	Lack of suitable micronutrient management practices in rice-rapeseed sequence	Micronutrient Management
6	Sapatgram	Mahamaya	Rabantari	Rice, toria, Black gram & Winter vegetables	Lack of suitable micronutrient management practices in rice-rapeseed sequence	Micronutrient Management
7	Howdartari	Raniganj	Sibardabri	Rice, toria, Black gram & Winter vegetables	1.Lack of suitable micronutrient management practices in rice-rapeseed sequence 2. Lack of suitable moisture conservation practices in toria	1.Micronutrient Management 2. Moisture Conservation Tillage
8	Alengmari	Raniganj	Nayapara	Rice, toria, Black gram, Jute, wheat & Winter vegetables	1.Lack of suitable micronutrient management practices in rice-rapeseed sequence 2.Lack of suitable INM practices in wheat	1.Micronutrient Management 2.Biofertilizer
9	Barkanda	Mahamaya	Bowalkamri (Part-2)	Rice, toria, Black gram, Jute, wheat & Winter vegetables	1.Lack of suitable INM practices in wheat 2. Lack of suitable moisture conservation practices in toria	1.Biofertilizer 2.Moisture Conservation Tillage
10	Barkanda	Mahamaya	Salbandha	Rice, toria, Black gram, Jute, wheat & Winter vegetables	Lack of suitable INM practices in wheat	Biofertilizer
11	Futkibari	Raniganj	Futkibari	Rice, toria, Black gram, Jute, wheat & Winter vegetables	Lack of suitable INM practices in wheat	Biofertilizer
12	Lakhiganj	Raniganj	Lakhiganj	Rice, toria, Black gram, Jute & Winter vegetables	Low productivity of toria due to imbalanced crop nutrition	Nutrient Management
13	Salkocha	Chapar-Salkocha	Harkata Muslim Gaon	Rice, toria, Black gram, Jute & Winter vegetables	Lack of suitable moisture conservation practices in toria	Moisture Conservation Tillage
14	Kadamtala	Nayer Alga	Sagunmari (Part-3)	Rice, toria, Black gram, Jute & Winter vegetables	Lack of suitable moisture conservation practices in toria	Moisture Conservation Tillage
15	Kadamtala	Nayer Alga	Kadamtala	Rice, toria, Black gram, Jute & Winter vegetables	Lack of suitable moisture conservation practices in toria	Moisture Conservation Tillage
16	Asarikandi	Debitola	Asarikandi	Rice, toria, Black gram, Jute & Winter vegetables	Lack of suitable moisture conservation practices in toria	Moisture Conservation Tillage

17	Chapar	Chapar-salkocha	Rangamati	Major crops are rice, blackgram, rapeseed & mustard, areca nut, coconut, banana, vegetables, bamboo etc. Major enterprises are cropping, piggery, dairy, duckery, goatery, backyard poultry etc.	-Soil acidity -Yield gap in paddy, pulses, oilseeds, fruits and vegetables -Low rate of seed replacement and poor adoption of HYVs -Poor fertility management -Rainfed farming -Un-organized marketing system -Low productivity in livestock	-Crop planning for rainfed area. -Increasing productivity of major field crops through improved crop management practices -Productivity improvement in fruits and vegetables -Popularization of HYVs -Adoption of INM and IPM technologies. -Formation of SHGs and farmer's club
18	Bilasipara	Raniganj	Futkibari Medhipara	Major crops are rice, blackgram, sesamum, rapeseed & mustard, areca nut, coconut, banana, vegetables, bamboo etc. Major enterprises are cropping, dairy, duckery, goatery, backyard poultry etc.	-Low rate of seed replacement -Yield gap in paddy, pulses, oilseeds, vegetables etc. -Imbalance use of chemical fertilizer -Low productivity in animals	-Production of quality seed of rice, oilseed and pulses -Productivity enhancement in major field crops. - Popularization of HYVs -Scientific live-stock management -Scientific fish farming -Mushroom production for income generation -Formation of SHGs and farmer's club
19	Golakganj	Agomoni	Kachakhana	Rice, rapeseed & mustard, sesame, black gram, banana, kharif & rabi vegetables, etc. are important crops. Major enterprises included cropping, dairy, backyard poultry, goatery, fishery etc.	-Low rate of seed replacement -Yield gap in paddy, pulses, oilseeds, vegetables etc. -Imbalance use of chemical fertilizer -Low productivity in animals -Low production of fish per unit of water body.	- Popularization of HYVs - Commercial production of banana. - Scientific live-stock management - Scientific fish farming.
20	Bilasipara	Raniganj	Hakama Satber	Rice, rapeseed & mustard, Kharif and Rabi Vegetables, coconut, arecanut, banana etc. Major enterprises included cropping, dairy, backyard poultry, goatery etc.	-Yield gap in major field crops and vegetables -Low rate of seed replacement. -Poor adoption of HYVs in field crops. -Inadequate nutrient management. -Low productivity in animals	-Productivity enhancement in major field crops - Popularization of HYVs -Seed and planting material production - Scientific live-stock management - Apiculture -Formation of SHGs and farmer's club



21	Bilasipara	Raniganj	Udmari Part iii, iv & v,	Rice, wheat, rapeseed& mustard, jute, kharif & rabi vegetables, Chilli, etc.  Major enterprises included cropping, dairy, backyard poultry, goatery, fishery etc.	-Flood -Low rate of seed replacement and poor adoption of situation specific HYVs. -Yield gap in paddy, pulses, oilseeds, vegetables etc. -Imbalance use of chemical fertilizer -Low productivity in animals -Low production of fish per unit of water body.	-Productivity enhancement in major field crops. - Popularization of HYVs -Seed and planting material production --Commercial production of vegetables. -Adoption of INM and IPM technologies. -Scientific live-stock management -Scientific fish farming.
22	Bilasipara	Nayer Alga	Nayer Alga, Sagunmari, Gutipara	Rice, Jute, Blackgram, green gram, rapeseed & mustard, chilli, vegetables (kharif & rabi) Major enterprises included cropping, dairy, backyard poultry, goatery, fishery etc.	-Soil acidity -Flood -Low rate of seed replacement -Poor adoption of situation specific HYVs in rice & jute -Yield gap in paddy, pulses, oilseeds, vegetables etc. -Imbalance use of chemical fertilizer -Low productivity in animals -Low production of fish per unit of water body.	-Increasing productivity of major field crops through improved crop management practices -Popularization of HYVs of rice, oilseed and pulse -Seed and planting material production -Adoption of INM and IPM technologies. -Scientific livestock rearing. -Adoption of improved fish production technology. - Formation of SHGs and farmer's club
23	Bilasipara	Raniganj	Charuabakra Sonamukhi Tilapara	Rice, Jute, rapeseed, Major enterprises included cropping, backyard poultry, fishery etc	-Flood -Poor adoption of situation specific HYVs in rice & jute -Yield gap in paddy, pulses, oilseeds, vegetables etc. -Imbalance use of chemical fertilizer -Low production of fish per unit of water body.	-Introduction of fish seed rearing technology in flood affected areas -Pen culture technology in fishery sector - Integrated system of farming - Scientific fish farming - Introduction of HYV

### 3. TECHNICAL ACHIEVEMENTS

#### 3. A. Details of target and achievements of mandatory activities by KVK during 2019-20

Discipline	OFT (Technology Assessment and Refinement)				FLD (Oilseeds, Pulses, Maize, Other Crops/Enterprises)			
	Number of OFTs		Number of Farmers		Number of FLDs		Number of Farmers	
	Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
Soil Sc.	3	4	9	10	3	3	18	17
Agronomy	4	-	6	-	-	-	-	-
Plant Protection	2	3	5	13	4	3	16	13
Animal Science	3	0	50	0	5	2	53	20
Agri Econ	0	2	0	85	0	2	0	100
Fishery Science	3	3	7	5	3	3	6	6
<b>Total</b>	<b>15</b>	<b>12</b>	<b>77</b>	<b>113</b>	<b>15</b>	<b>13</b>	<b>93</b>	<b>156</b>

Note: Target set during last Annual Zonal Workshop

Training (including sponsored, vocational and other trainings carried under Rainwater Harvesting Unit)					Extension Activities			
3					4			
Number of Courses			Number of Participants		Number of activities		Number of participants	
Clientele	Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
Farmers	38	36	950	932	Field day =7	20	340	697
Rural youth	33	19	825	519	Diagnostic visit=50	47	200	47
Extn. Functionaries	13	9	325	231	F. S. Interaction = 2	1	300	241
Total	<b>84</b>	<b>64</b>	<b>2100</b>	<b>1682</b>	PRA exercise =2	2	150	50
					Exhibition = 4	3	800	581
					Exposure visit =2	2	80	65
					Celebration of important days=10	14	400	2494
					Animal health camp=2	1	80	7
Seed Production (ton.)					Planting material (Nos. in lakh)			
5					6			
Target		Achievement			Target		Achievement	
Toria (Seeds):		1146.9 q			-		-	
Cereals :		236.66 q			-		-	
Black gram:		50.0 q			-		-	
Lentil		54.45 q			-		-	

Note: Target set during last Annual Zonal Workshop

**3. B. Abstract of interventions undertaken during 2019-20**

Sl. No	Thrust area	Crop/ Enterprise	Identified problems	Interventions					
				Title of OFT if any	Title of FLD if any	Title of Training if any	Title of training for extension personnel if any	Extension activities	Supply of seeds, planting materials etc.
1	Organic production	Winter rice	Injudicious use of chemical fertilizers	Organic nutrition for rice	-	-	-	Scientist Visit to Farmer's Field & diagnostic Field visit	Seed, Biofertilizer consortia, Rock phosphate, Nemazole
2	Biofertilizer	Winter Rice	Higher doses of chemical fertilizers in rice	Exploitation of Potash Solubilising Bacteria in reduction of potassic fertilizers on sali paddy	-	-	-	Scientist Visit to Farmer's Field & diagnostic Field visit	Seed, Urea, SSP, MOP, PSB, PP Chem.
3	Micronutrient Management	Rapeseed	Less use of SSP and Boron in oilseed crop rapeseed	Effect of sulphur and boron on rapeseed	-	-	-	Scientist Visit to Farmer's Field & diagnostic Field visit	Seed, Urea, SSP, DAP, MOP, Borax & PP chem
4	Micro nutrient Management	Winter rice	Lack of suitable micronutrient management practices in rice	-	Use of Zn solubilising bacteria for supplementing Zn in paddy	-	-	Scientist Visit to Farmer's Field & diagnostic Field visit	Seed, Urea, SSP, MOP, Zinc solubilising bacteria, Zinc sulphate & PP chem.
5	Soil health Management	Vermicom post	Dependency on chemical fertilizer and misuse of organic residues	-	Low cost Vermicompost production	-	-	Scientist Visit to Farmer's Field & diagnostic Field visit	Polythene Plastic, Earthworm

6	Biofertilizer	Wheat	Lack of suitable INM practices in wheat	-	Use of biofertilizer on the productivity of wheat	-	-	Scientist Visit to Farmer's Field & diagnostic Field visit	Seed, Urea, SSP,MOP, Borax, Azotobacter, PSB& PP chem.
7	Pest management	Pumpkin	Yield reduction due to Fruit fly infestation in pumpkin	Management of fruit fly in pumpkin (var. Arjuna) by using pheromone traps	-	-	-	Scientist Visit to farmer's field & diagnostic field visit	Seeds, Urea, SSP,MOP, Pheromone traps &PP chemicals
8	Beneficial organism	Mushroom	Dry spell or low production of mushroom during summer season	Year round production of mushroom through Oyster & Milky mushroom cultivation	-	Cultivation technology of milky mushroom	-	Scientist Visit to farmer's field, diagnostic field visit &technical support	Spawn, polythene bag, thread etc.
9	Beneficial organism	Mushroom	Less income generation through conventional mushroom cultivation	Feasibility in production of Button Mushroom (Agaricus spp.) in Dhubri	-	Cultivation technology of button mushroom	-	Scientist Visit to farmer's field, diagnostic field visit &technical support	Spawn, Substrate materials, polythene bag, thread etc.
10	Seed storage	Potato	Reduction of marketability due to cut worm	-	On- farm storage of seed Potatoes	-	-	Scientist Visit to Farmer's Field & diagnostic Field visit	Storage structure, Nylon net, PP chemicals.
11	Apiculture	Honey bee (Indian Bee)	Inefficient utilization of resources	-	Performance of Apis cerana in ISI-A type bee hives in Dhubri district of Assam	-	-	Scientist Visit to Farmer's Field, diagnostic Field visit &technical support	ISI A type Bee box, Bee colony & other accessories
12	IPDM	Jute	Yield loss due pest & diseases	-	Integrated pest and disease management module for <i>Olitarius</i> Jute	Major insect pest & diseases of Jute	-	Scientist Visit to Farmer's Field & diagnostic Field visit	Seeds, Urea, SSP,MOP, Bioagent &PP chemicals

13	Integrated Farming System	Fish and Duck	Sudden occurrence of flood	“Floating Duck House used in Integrated duck cum fish farming in Flood affected Areas”	-	Integrated Duck cum Fish Farming	-	Visit to Farmer’s Field & diagnostic Field visit and Exposure Visit	Floating Duck House, Fish seed, Duckling, Duck Feed, lime & medicine etc.
14	Culture of High Stocking Density fish	Fish ( <i>Pungacius pungacius</i> )	Non availability Quality fish Seed	Monoculture of Pungus Fish ( <i>Pungacius pungacius</i> )	-	“ Cultivation of Air Breathing Fishes”	-	Scientist Visit to Farmer’s Field & diagnostic Field visit	Fish seed, Fish Feed, lime & medicine etc.
15	Culture of high value fish	Fish ( <i>Ompok pabo</i> )	Low income in composite fish farming	Polyculture of <i>Ompok pabo</i>	-	“ Cultivation of Air Breathing Fishes	-	Scientist Visit to Farmer’s Field & diagnostic Field visit	Fish seed, Fish Feed, lime & medicine etc.
16	Integrated Fish Farming	Duck and Fish	Commercialization	-	“ Integrated Duck cum Fish Farming “	Integrated Fish Farming	-	Scientist Visit to Farmer’s Field & diagnostic Field visit	Ducklings, Fish seed , lime, feed & medicine etc
17	Integrated Fish Faring	Fish and Paddy	Commercialization	-	“Rotational Culture of Rice and Fish in Integrated Paddy cum Fish Farming”	Integrated Fish Farming	-	Scientist Visit to Farmer’s Field & diagnostic Field visit	Fish seed , Paddy seed lime, Ferromon Trap & medicine etc
18	Integrated Farming System	Fish and Pig	Commercialization	-	“ Integrated Pig cum Fish Farming”	Integrated Fish Farming	-	Visit to Farmer’s Field & diagnostic Field visit and Exposure Visit	Fish seed, Piglets, Pig House, Pig feed, lime, & medicine etc.
19	Breed evaluation	Poultry	Inferior productivity of local chicken	-	FLD on improved dual type backyard chicken var. <i>Kamrupa</i>	Training on improved management practices o improved backyard chicken	-	Visit to Farmer’s Field & vaccination for Ranikhet disease	Chicks, medicine, feed, vaccines etc.

20	Introduction of improved variety of duck	Duckery	Inferior productivity of local duck	-	FLD on improved duck var- White Pekin	-	-	Visit to Farmer's Field & vaccination for Duck plaque disease	Ducklings, medicine, feed, vaccines etc.
21	Cropping pattern	Farmers existing crop practices	Flood affected area	A Study on the Farming Practices of Major Crops (Jute, Chilli, Summer rice, Black gram, Sugarcane) adopted by the Farmers in Char areas of Dhubri district	-	-	-	Group discussion	-
22	Efficient market channel	-	Low price of jute fiber	Efficiency of different marketing channels of Jute used by farmers in Dhubri district of Assam	-	-	-	Group discussion with farmers & JCI officials	-
23	Fertilization improvement in Toria	Toria	Low production of Toria	-	A Study on Mobile Honey bee keeping in Dhubri district of Assam	-	-	Group discussion	-
24	Climate resilient farming	Farmers existing crop practices	Crop damaged by flood	-	A Study in Farmers Copping Mechanism in the context of climate change	-	-	Group discussion	-







### A.5. Results of On Farm Testing

Sl. No.	Title of OFT	Problem Diagnosed	Name of Technology Assessed	Crop/Cropping system/ Enterprise	No. of Trials	Results of Assessment/ Refined (Data on the parameter should be provided)	Feedback from the farmer	Feedback to the Researcher	B.C . Ratio (if applicable)
1	Organic nutrition for rice	Injudicious use of chemical fertilizers	<b>Treatment:</b> Enriched composed @ 5 ton /ha + Bio fertilizers consortia ( <i>Azospirillum</i> + PSB) as seedling root dip treatment <b>Control :</b> Farmer's practice	Rice	3	Yield (Demo): 57q/ha Yield (Check): 54q/ha	Farmers willing to adopt the technology	-	B:C (Demo) : 1.89 B:C (Check): 1.71
2	Exploitation of Potash Solubilising Bacteria in reduction of potassic fertilizers on sali paddy	Higher doses of chemical fertilizers in rice	<b>Treatment: NPK @ 40:20:10 kg/ha + Consortia of KSB @3.5 kg/ha.</b> <b>Control</b> = Application of N: P <sub>2</sub> O <sub>5</sub> : K <sub>2</sub> O @ 40:20:20 kg/ha	Rice	3	Yield (Demo): 48q/ha Yield (Check): 45q/ha	Farmers willing to adopt the technology	-	B:C (Demo) : 1.74 B:C (Check): 1.65
3	Effect of sulphur and boron on rapeseed	Less use of SSP and Boron in oilseed crop rapeseed	<b>T1:</b> 11 kg SSP as S source + 950 g Borax as Boron Source + R.D. NPK (5 kg urea, 3 kg DAP, 1.5 kg MOP per half bigha plot) <b>T2:</b> RDF	Toria	3	Yield (Demo): 10.7q/ha Yield (Check): 9.5q/ha	Farmers willing to adopt the technology	-	B:C (Demo) : 2.28 B:C (Check): 1.96
4	Promising sali rice line, CN1758-2-TTB7	-	T1: CN1758-2-TTB7 T2: Ranjit	Rice	1	Yield (Demo): 54.0q/ha Yield (Check): 51.0q/ha	-	-	B:C (Demo) : 1.54 B:C (Check): 1.40

5	Integrated management of Yellow mosaic virus of Black gram (Summer)  <b>(started in 2018-19)</b>	Severe infestation of YMV	T1: IDM module (Resistant variety + Optimum seed rate @ 30 kg/acre + Seed treatment with Thiomethoxam 70 WS @ 3 g/ kg seed + Removal of infected plant at initial stage + One spray of Thiomethoxam 25 WG @ 100 g/ ha T2: Farmer's practice (No treatment)	Black gram	3	Date of Sowing: 23/03/2019 Disease intensity : Demo : 5% Check : 25%  Yield Demo : 8.6 q/ha Check : 7.4 q/ha	Farmer prefer to grow the crop in kharif season due to indiscriminate bearing during summer season	Purity of the variety to be maintained properly.	B: C Ratio Demo= 2.12 Check= 1.91
6	Management of fruit fly in pumpkin (var. Arjuna) by using pheromone traps	Yield reduction due to Fruit fly infestation in pumpkin	<b>Technology:</b> Application of Pheromone traps @ 35 nos/ha <b>Farmer's practice:</b> Poison baiting with Malathion	Pumpkin	3	<b>Observation:</b> Date of sowing: 15.11.19 Per cent seed germination: 93% Date of pheromone trap installation: 29.01.20 <b>Results:</b> <b>First infestation of fruit borer observed:</b> Technology: 07.02.2020 FP : 02.02.2020 <b>Fruit flies /trap/ week:</b> Technology: 23.41 <b>Per cent Infested fruit:</b> Technology: 9.36 FP : 16.41 <b>Production (q/ ha):</b> Technology: 196.00 FP : 167.00	Farmers prefer the technology, but they can't effort the same, because pheromone trap is not easily assessable to them.	Integrated management approach to be tried for effective control of fruit fly	Technology: 2.46 FP : 2.25

7	Year round production of mushroom through Oyster & Milky mushroom cultivation	Dry spell or low production of mushroom during summer season	<b>Technology:</b> Year round mushroom cultivation through Oyster & Milky mushroom production <b>Farmers' Practice:</b> Only winter mushroom cultivation	Mushroom	8	<b>Observations on Oyster Mushroom (during winter season)</b> Date of bed preparation: 06.11.19 Days required for shifting of beds to cropping room: 17 days Days for pin head initiation: 27 days <b>Results:</b> <b>Yield (Kg per bed):</b> <b>Technology:</b> First harvest : 0.78 Second harvest: 0.32 Third harvest : 0.22 Total : 1.32 <b>FP:</b> First harvest : 0.72 Second harvest: 0.35 Third harvest : 0.18 Total : 1.25	Farmers are able to get additional income by incorporating mushroom as a component in their farming situation.	More study on Cultivation of summer mushroom is required for stabilize its production.	Technology: 3.32 FP : 3.15
8	Feasibility in production of Button Mushroom ( <i>Agaricus</i> spp.) in Dhubri	Less income generation through conventional mushroom cultivation	<b>Technology:</b> Button mushroom cultivation <b>Farmers' Practice:</b> Oyster mushroom cultivation	Mushroom	2	<b>Observation Recorded</b> Volume of compost: 200 Kg (Button mushroom) No. of beds: 200 nos. (Winter Oyster mushroom) Starting of compost preparation: 15.11.19 Date of spawning: 16.12.19 Date of casing: 28.12.19	-	-	The experiment was failed
9	A Study on the Farming Practices of Major Crops (Jute, Chilli, Summer rice,	Flood affected area	-	-	80 respondents		-	The farmers generally practice traditional method of cultivation.	*

	Black gram, Sugarcane) adopted by the Farmers in Char areas of Dhubri district							They grow crops based on the time of occurrence of flood	
10	Efficiency of different marketing channels of Jute used by farmers in Dhubri district of Assam	Low price of jute fiber	-	Jute	5 jute marks	-	-	Jute is a very important cash crop in the district. It has a direct link with the terminal market of jute	**
11	Evaluation of Kuchia (M kuchia) culture technology (started in 2018-19)	Non availability of seeds, culture technology	Area: 40 Sq. meter Number of trials: 02 Size /Unit: : 4m x 2m x 2m . type of culture unit : Cement tanks with clay loam soil with high organic matter from wet land i.e.beel at the bottom of the tank about 0.5m layer Stocking Density : 10 seeds/Sq.met Culture period : 10 months Feeding of the fish: Fish Meal/ Dry Fish/ Preparation of boil rice i.e. bhat Viscera, Trace Fish, Earth worm, frog,	M kuchia	1 (@ Chamber )	<b>Fish Seed Stocked:</b> Chamber 01: 200nos Chamber 02 : 200nos  <b>Fish Recovered:</b> Chamber 01: 115 nos Chamber 02: 128 nos  Total fish recovered in Chamber 01= 45.00kg  Total fish recovered in Chamber 01= 60.00kg	Farmers are quite satisfied with the technology , but the main problem is the seed. The technology mainly depends on the wild collection of seed.	Breeding and seed production technology should be immediately be taken to popularize the technology. The fish shows canabolism, the affect the overall fish production.	3.67

			Snails etc. Liming : 2.5 kg/unit depending on the soil and water pH size of the fish seed at the time of stocking : 7gm to 10gm Stocking Time : February-march						
12	Incorporation of N chitala in poly culture of carps (started in 2018-19)	Culture of High value Fish	**	Fish	2	<b>Fish Stocked :</b> Pond 1 : 80 Pond 2 : 80 <b>Fish Recovered :</b> Pond 1 : 68 Pond 2 : 60 Wt of Fish From Pond 1 : 76 kg Wt. of Fish from Pond 2 : 70 kg	Non availability of Quality fish Seed at right time	.	3.5
13	Cultivation of Vietnam Kaoi (started in 2018-19)	Culture of High value Fish	***	Fish	2	<b>Fish Stocked per unit :</b> 2000  Avg. Fish recovered per unit : 1300 nos.  Total wt of Fish <b>Recover per unit : 156 kg</b>  Gross Return from Fish : Rs.31200.00  Total Cost per unit : Rs.8000.00	Non availability of Quality fish Seed at right time.	-	3.9
14	Duck cum fish farming in flood affected area by using floating duck	Poor survival rate of improved variety of Duck and sudden occurrence of flood	a. Fish species stocked :IMC b. Species ratio: Catla: ahu:Mrigal :: 4:4:2 c. Stocking size of fishes: 10-15cm sized	<u>Fish (IMC) &amp; Duck</u>	1	Demo : Total Fish Production: 600kg/bigha Return from fish : 90,000.00 Return from Duck	-	Plz find out the lime doses in ppm basis rather than kg/ha.	Demo : 4.15 Check : 2.91

	house		seeds d. Stocking Density of fishes :8000nos./ha e. Culture period of fish :11 months f. Feeding of the fish :Balanced feed @2% of the body weight of fishes if sufficient natural fish food organisms are not present. g. Stocking density of Poultry Bird :300 birds/ha h. Duck breed :Khaki Campbell/Chara Chembelli i. integration type :Direct j. Liming : 500-600kg/ha depending on the pH of water. k. Stocking Time :June-July l. Duck House material: Wood and tin Float-Plastic Drum float		(Duck+ egg) : 13,750.00 Gross Return : 1,03,750.00 Gross Cost : 25,000.00 Net Return : 78,750.00  Check: Total Fish Production : 350 kg Return from Fish : 52,500.00 Gross cost : 18,000.00 Net Return : 34,500.00				
15	OFT on Monoculture of Pungus Fish ( <i>Pungacius pungacius</i> )	Low income per unit pond area	Area: 40 Sq. meter 1. Total Area: 2600 Sq. m 2. Number of trials : 02 (0.13ha each) 3. Type of culture : Mono Culture of Fish 4. Stocking Density : 3000 seeds/0.13ha 5. Depth of the culture tank : 1.5 m	Pungus Fish ( <i>Pungacius spungacius</i> )	2	Demo: Total fish Production : 1000kg/bigha Return from Fish : Rs.1,00,000.00 Total Cost : Rs.30,000.00 Net Return : 70,000.00  Check (Composite culture with IMC): Total Fish Production :	Fish Grows best at 2 <sup>nd</sup> Year	-	Demo B:C Ratio 3.33  Check B:C Ratio 2.91

			<p>6. Culture period : 11 months</p> <p>7. Feeding of the fish : Fish Meal/ Dry Fish/ Chopped Viscera, Trace Fish, Earth worm , Snails etc</p> <p>8. Liming : depending on the soil and water pH</p> <p>9. Stocking Time : July- August</p>			<p>350 kg Return from Fish : 52,500.00 Gross cost : 18,000.00 Net Return : 34,500.00</p>			
16	OFT on Poly culture of <i>Ompok pobo</i> with carps	Culture of High value Fish	<p>a. Total Area: 2600 Sq. m</p> <p>b. Number of trials: 02 (0.13ha each)</p> <p>c. Type of culture unit: Earthen pond preferably with compact bottom</p> <p>d. Stocking Density: 6-8 seeds/Sq.met</p> <p>e. Depth of the culture tank: 1.5 m</p> <p>f. Culture period: 6-8 months</p> <p>g. Feeding of the fish: Fish Meal/ Dry Fish/ Chopped Viscera, Trace Fish, Earth worm , Snails etc</p> <p>h. Liming: depending on the soil and water pH</p> <p>ij. Size of the fish seed at the time of stocking: Av. Wt. 5 gm to 7gm</p>	<i>Ompok pobo</i> Fish	2	<p>Ongoing Initial data</p> <p>Initial Avg. Length of Fish = 15 cm Avg. Wt of Fish = 18gm</p>	-	-	Ongoing

			j. Stocking Time: July-August k . Critical inputs: Fish seed, feed. lime						
17	Mechang type goat house in flood affected areas ( Started in 2018-19)	Inferior productivity of goat in traditional house	<i>Mechang</i> (platform) type goat house Parameters to be studied: a) Growth performances b) Disease incidence etc. c) Economics	Goat	3	<b>DEMO:</b> Av. Body weight of local goat at 1 year of age: 14 kg Disease incidence: None <b>CHECK:</b> Av. Body weight of local goat at 1 year of age: 11 kg Disease incidence: Pneumonia, cold etc.	The farmers expressed their satisfaction over the technology particularly in flood effected area	This type of housing creates a favourable housing environment for the animal as kids are highly vulnerable to cold and water during flood.	<b>1.95</b>
18	Evaluation of cross bred pig var. Rani (Started in 2018-19)	Inferior productivity of local pig	<i>Rani</i> (50% Hampshire X 50% Ghungroo) pig Parameters to be studied: a) Growth performances b) Disease incidence etc. c) Economics	Pig	3 (9 animals)	<b>DEMO:</b> Av. Adult Body weight: Male : 88 Kg Female: 74 Kg Age at sexual maturity: 192 days Age at first Farrowing: 310 days Litter Size: 7 Av. Birth weight of piglet: 2.75 kg Disease incidence: none <b>CHECK:</b> Av. Adult body weight: Male : 63 Kg Female: 58 Kg	This pig grows faster and produces more number of healthy piglets than our local pig	The pig can also be reared under traditional system of management.	<b>3.15</b>



						Age at sexual maturity: 315 days Age at first Farrowing: 432 days Litter Size: 4 Av. Birth weight of piglet: 2.15 Kg Disease incidence: none			
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**\* Result of OFT A Study on the Farming Practices of Major Crops (Jute, Chilli, summer rice, Black gram, Sugarcane) adopted by the Farmers in Char areas of Dhubri district**

**Table 1 : Technology adopted by farmers**

Parameters	Char area					Non-char area				
	Summer rice	Jute	Chilli	Black gram	Sugarcane	Summer rice	Jute	Chilli	Black gram	Sugarcane
Varieties used	Pioneer, PAN 2423, Advanta	JRO 524, JRO 632	Local	Local	Local: both yellow stem and brown stem	China, 29,28, Karishma, Ranjana	Tossa, JRO 524	Local, Suryamukhi, Saraki, Alipuri	PU 31, Local	-
Seed treatment	Not practiced	Not practiced	Not practiced	Not practiced	Not practiced	Not practiced	Not practiced	Not practiced	Not practiced	Not practiced
Land preparation	Bullock plough (20%) and tractor (80%)	Bullock plough (20%) and tractor (80%)	Bullock plough (20%) and tractor (80%)	Bullock plough (20%) and tractor (80%)	Human for making tunnels	Bullock plough (20%) and tractor (80%)	Bullock plough (20%) and tractor (80%)	Bullock plough (20%) and tractor (80%)	Bullock plough (20%) and tractor (80%)	-
Seed rate (kg/ bigha)	Hybrid: 40 kg/ ha, Local: 75 kg/ ha	7.5 kg/ ha	Local: 7.5 - 10.0kg / ha	22.5 kg / ha	75 q/ ha	Hybrid: 40 kg/ ha, Local: 75 kg/ ha	7.5 kg/ ha	Hybrid: 40 kg/ ha, Local: 75 kg/ ha	22.5 kg / ha	-
Sowing/ planting method	Both Line and Broadcasting	Broadcasting	Both Line planting and Broadcasting	Broadcasting	Line	Both Line and Broadcasting	Broadcasting	Both Line planting and Broadcasting	Broadcasting	-
Time of sowing	Last week of Dec.- Mid	March/ Mid April	August/ September	August/ September	Last week of Dec.-	Last week of Dec.- Mid	April/ May	February/ March and	August/ September	-

	Jan.				Mid Jan.	Jan.		August/ September		
Time of trans-planting	End of January to mid February	-	Sept/ Oct	-	-	End of January to mid February	-	March/ April and Sept/ Oct	-	-
Fertilizer dose (kg/bigha)										
Urea (kg/ha)	110	112	75	88	350	110	112	120	23	
SSP (kg/ha)	225	150	270	300	500	200	180	300	200	
MOP (kg/ha)	45	30	60	66	100	37	35	70	20	
DAP (kg/ha)	55	-	55	40	-	35	-	34	-	-
Micro nutrients (ZnSO <sub>4</sub> )	10	-	10	-	-	10	-	10	-	-
Manure (t/ha)	5	-	6	-	8	6	-	8	3	-
Irrigation of crops	6-7 irrigations	Not required	2-3 irrigations	-	6-7 irrigations	6-7 irrigations	Not required	2-3 irrigations	-	-
Time of application of fertilizers/ manures	1 <sup>st</sup> : Urea SSP, MOP and DAP as Basal dose 2 <sup>nd</sup> : Urea 30 DAP	1 <sup>st</sup> : Part of Urea SSP, MOP as Basal dose 2 <sup>nd</sup> : Urea 30 -35DAP	1 <sup>st</sup> : Urea SSP, MOP and DAP as Basal dose 2 <sup>nd</sup> : Urea 30 DAP	1 <sup>st</sup> : Urea SSP, MOP and DAP as Basal dose 2 <sup>nd</sup> : Urea 20 DAP	1 <sup>st</sup> : Urea SSP, MOP and DAP as Basal dose 2 <sup>nd</sup> : Urea 30 DAP 3 <sup>rd</sup> : 75 DAP	1 <sup>st</sup> : Urea SSP, MOP and DAP as Basal dose 2 <sup>nd</sup> : Urea 30 DAP	1 <sup>st</sup> : Part of Urea SSP, MOP as Basal dose 2 <sup>nd</sup> : Urea 30 -35DAP	1 <sup>st</sup> : Urea SSP, MOP and DAP as Basal dose 2 <sup>nd</sup> : Urea 30 DAP	1 <sup>st</sup> : Urea SSP, MOP and DAP as Basal dose 2 <sup>nd</sup> : Urea 20 DAP	-
PP Measures	Cypermethrin, Malathion, Chloropyripos @ 2.0 ml/ lit water	Chloropyripos @ 2.0 ml/ lit water	Cypermethrin, Malathion, Chloropyripos @ 2.0 ml/ lit water	Cypermethrin @ 2.0 ml/ lit water	Cypermethrin, Malathion, Chloropyripos @ 2.0 ml/ lit water	Cypermethrin, Malathion, Chloropyripos @ 2.0 ml/ lit water	Malathion, Chloropyripos @ 2.0 ml/ lit water	Cypermethrin, Malathion, Chloropyripos l/ lit water	Chloropyripos @ 2.0 ml/ lit water	-
Weed management	Two weedings: Hand weeding and	Two hand weedings	Two hand weedings at 25 DAS and 60 DAS	-	Three Hand weeding	Two weedings: Hand weeding and	Two hand weedings	Two hand weedings at 25 DAS and 60 DAS	-	-

	chemical weeding					chemical weeding				
Method of harvesting	Using sickle	Using sickle	Plucking of matured green chillies	Uprooting of plant	Using sickle	Using sickle	Using sickle	Plucking of matured green chillies	Uprooting of plant	-
No. of plucking	-	-	7-10 Plucking	-	-	-	-	7-10 Plucking	-	-
Retting tank	-	-	-	-	-	-	Closed pond	-	-	-
Drying method	-	Sundry	-	-	-	-	Sundry	-	-	-

**Table 2 : Economics and cost of cultivation of different crops (Rs./ha) according to cost concept**

Cost items (Rs.)	Char area					Non-char area				
	Summer Rice	Jute	Chilli	Blackgram	Sugarcane	Summer Rice	Jute	Chilli	Blackgram	Sugarcane
Cost A1										
Hired human labour	24300	32300	18900	5400	38000	23500	30600	16700	7000	-
Land preparation (Tractor/ Power tiller/ manual)	3375	3200	3560	2300	0	3200	3080	3600	2300	-
Seeds	2250	900	1350	1800	18750	2465	900	1300	1800	-
Fertilizers	6460	3160	6530	6188	10300	6230	3550	6712	2590	-
Manures	1150	0	1200	0	0	1270	0	1600	0	-
Plant protection chemicals	1240	1300	1400	1000	2600	1400	1500	1280	1000	-
Irrigation	15000	0	6000	0	0	14700	0	5600	0	-
Nursery preparation	1490	0	1500	0	0.0	1500	0	1000	0	-
Repairing	3000	3600	2200	3175	0	2350	2340	2780	1300	-
Total working capital	58265	44460	42640	19863	69650	56615	41970	40572	15990	-

Interest on working capital @6%	3496	2668	2558	1192	4179	3397	2518	2434	959	-
Depreciation	395	450	430	450	450	480	525	600	550	-
Land revenue	670	649	670	680	680	556	580	575	560	-
Miscellaneous (transportation, baskets, rope etc.)	1100	2300	1800	1400	5450	1300	3420	2200	1620	-
Total of Cost A1	63926	50527	48098	23585	80409	62348	49013	46381	19679	-
Cost A2										
Cost A1	63926	50527	48098	23585	80409	62348	49013	46381	19679	-
Rent paid for leased in land	0	0	0	0	0	0	0	0		-
Total of Cost A2	63926	50527	48098	23585	80409	62348	49013	46381	19679	-
Cost B1										
Cost A1	63925.9	50526.6	48098.4	23584.78	80409	62348	49013	46381	19679	-
Interest on value of owned fixed capital (excluding land) @10% on depreciated value of fixed capital	1430	1540	1600	1460	1540	1200	1340	1500	1400	-
Total of Cost B1	65356	52067	49698	25045	81949	63548	50353	47881	21079	-
Cost B2										
Cost B1	65356	52067	49698	25045	81949	63548	50353	47881	21079	-
Rental value of owned land (Actual value to be paid for use of own land)	3000	1500	3000	3000	2800	2650	2600	2800	1900	-
Total of Cost B2	68356	53567	52698	28045	84749	66198	52953	50681	22979	-
Cost C1										

Cost B1	65356	52067	49698	25045	81949	63548	50353	47881	21079	-
Imputed value of family labour	15400	28500	17080	6200	14500	3280	26600	14750	5400	-
Total of Cost C1	80756	80567	66778	31245	96449	66828	76953	62631	26479	-
Cost C2										
Cost B2	68356	53567	52698	28045	84749	66198	52953	50681	22979	-
Imputed value of family labour	15400	28500	17080	6200	14500	3280	26600	14750	5400	-
Total of Cost C2	83756	82067	69778	34245	99249	69478	79553	65431	28379	-
Cost C3										
Cost C2	83756	82067	69778	34245	99249	69478	79553	65431	28379	-
10% of Cost C2	8376	8207	6978	3424	9925	6948	7955	6543	2838	-
Total of Cost C3	92131	90273	76756	37669	109174	76426	87509	71974	31217	-
Yield (kg/ha)	8400	4000	8000	785	83000	5400	3920	8280	610	-
Price (Rs. /kg)	14.00	37.50	22.60	80.00	2.50	13.85	35.60	23.10	80.00	-
Gross return (Rs.)	117600	150000	180800	62800	207500	74790	139552	191268	48800	-
B:C ratio	1.40	1.83	2.59	1.83	2.09	1.08	1.75	2.92	1.72	-

**\*\* Result of OFT Efficiency of different marketing channels of Jute used by farmers in Dhubri district of Assam**

**Salient points are –**

- Peak period of marketing of jute fibre : August – October
- About 1000 – 1200 q of jute fibre selling takes place per market day
- Average price of jute (per quintal ) : Rs. 4000/- - Rs. 5000/-
- No. of intermediaries involved : 3-4

**Identified marketing channels**

1. Producers – consumer : (10% sale)
2. Producers–local traders (I & II)–Whole sellers : (40% sale)
3. Producers – local trader I – Wholesellers : ( 30% sale)
4. Producers – Wholesellers : ( 20% sale)

**Price of jute in different marketing channels (per quintal):**

1. Producers – consumer : Rs. 4000/- - Rs. 5000/-
2. Producers–local traders (I & II)–Wholesellers: Rs.130/- more
3. Producers – local trader I – Wholesellers : Rs. 60/- more
4. Producers – Wholesellers : Rs. 4000/- - Rs. 5000/-

**Major terminal markets identified for jute:**

1. Boxirhat - 34% total produce  
(Sales at Rs. 60/- more than purchased price)
2. Tufanganj - 33% total produce  
(Sales at Rs. 62/- more than purchased price)
3. Dinhata - 33% total produce  
(Sales at Rs. 62/- more than purchased price)

- Grading of fibre is done visually based on its silkiness: Grade I and Grade II: Nil, Grade III: 20 %, Grade IV: 65 %, Grade V): 15 %

**OFT \*\* Technology of N chitala**

a. Total Area	0.26 ha / 2600 sq m
b. Unit	02
c. species to be stocked	Fingerling of N chitala and IMC /Exotic Carps
d. Species ratio for IMC	Catla:Rahu:Mrigal :: 3:2:1
e. Stocking size	Fingerling of <i>N chitala</i> when the other IMC attains about 150-200gm
f. Stocking Density of N chitala	800 nos/ 0.13 ha
g. Stocking Density of IMC	1000nos/ 0.13 ha
h. Culture period	11 months
i. Feeding of the fish Fry	Balanced feed @2% of the body weight of fishes
j. Liming	500-600kg/ha depending on the pH of water.
k. Stocking Time	Sept - October
l. . Critical inputs	Fish Seed, Feed, Lime,
m . Observations to be recorded	Water pH, temperature, water depth during stocking and culture period, date of stocking and harvesting, individual length-weight of fishes during harvesting, number of fish stocked and recovered , B: C Ratio and farmers reaction

**OFT Fishery \*\*\* Technology of Vietnam Kaoi**

a. Total Area	1200 Sq. m
b. Number of trials	03 (400 sq.m each)

c. type of culture unit	Earthen pond preferably encircled the dykes with barrier.
d. Stocking Density	7-10 seeds/Sq.met
e. Depth of the culture tank	1.5 m
f. Culture period	6months
g. Feeding of the fish	Fish Meal/ Dry Fish/ Viscera, Trace Fish, Earth worm, frog, Snails etc.
h. Liming	10 kg/unit depending on the soil and water pH
ij. size of the fish seed at the time of stocking	Av. Wt. 5gm to 7gm
j. Stocking Time	July-August
k . Critical inputs	Fish seed, feed. lime
l. Observations to be recorded	Water and soil pH, temperature, water depth during stocking and culture period, date of stocking and harvesting, depth of bottom soil, individual length-weight of fishes during time of stocking and harvesting, number of fish stocked and recovered and farmers reaction

*\*Field crops – ton/ha, \* for horticultural crops -= kg/t/ha, \* milk and meat – litres or kg/animal, \* for mushroom and vermicompost*

*\*Field crops – ton/ha, \* for horticultural crops -= kg/t/ha, \* milk and meat – litres or kg/animal, \* for mushroom and vermicompost kg/unit area.*

*\*\* Give details of the technology assessed or refined and farmer's practice*

### 3.2 Achievements of Frontline Demonstrations during 2019-20

a. Follow-up for results of FLDs implemented during previous years

List of technologies demonstrated during previous year and popularized during 2018-19 and recommended for large scale adoption in the district

Sl. No	Crop/ Enterprise	Technology demonstrated	Horizontal spread of technology		
			No. of villages	No. of farmers	Area in ha
1	Rice	Use of Zn solubilising bacteria for supplementing Zn in paddy	2	6	2.0
2	Vermicompost	Low cost Vermicompost production	3	5	Size: 7 ft x 3 ft x 3 ft (5 nos.)
3	Wheat	Use of biofertilizer on the productivity of wheat	2	6	1.0
4	Potato	On- farm storage of seed Potatoes	3	3	20 kg unit in 9 replications
5	Jute	Integrated pest and disease management module for Olitorius Jute	4	4	2.0
7	Honeybee	Performance of <i>Apis cerana</i> in ISI-B type bee hives with super chamber in Dhubri district of Assam	5	6	6 units

8	Poultry	FLD on Improved backyard dual type Chicken var. Kamrupa	1	10	200 nos
9	Duck	FLD on improved Duck var. White Pekin	1	10	200 nos
10	Fish	Integrated Duck cum fish Farming	3	3	0.39
11	Fish	Integrated Paddy cum Fish Farming (Rotational type)	2	2	1.0 ha
12	Fish	Integrated Pig cum Fish Farming	1	1	0.20 ha

\* *Thematic areas as given in Table 3.1 (A1 and A2)*

- b. Details of FLDs conducted during reporting period (Information is to be furnished in the following **three tables** for each category i.e. **cereals, horticultural crops, oilseeds, pulses, cotton, Jute, forage crops & commercial crops.**)

Sl. No	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement	Farming situation (Rainfed/Irrigated, Soil type, altitude, etc)	Status of soil (Kg/ha)		
					Proposed	Actual	SC/ST	Others	Total			N	P	K
1.	Rice	Micro nutrient Management	Use of Zn solubilising bacteria for supplementing Zn in paddy	Kharif, 2019	2.0	2.0	-	6	6	Achieved	Rainfed	-	-	-
2.	Vermicompost	Soil health Management	Low cost Vermicompost production	April, 2019 to March, 2020	Size: 7 ft x 3 ft x 3 ft (5 nos.)	Size: 7 ft x 3 ft x 3 ft (5 nos.)	-	5	5	Achieved	Rainfed	-	-	-
3	Wheat	Biofertilizer	Use of bio fertilizer on the productivity of wheat	Rabi, 2019	1	1	-	6	6	Achieved	Rainfed	-	-	-
4	Potato	Seed storage	On- farm storage of seed Potatoes	Summer, 2019	20 kg unit in 9 replicati ons	20 kg unit in 9 repli catio ns	-	3	3	-	Rainfed, sandy loam	-	-	-



5	Jute	IPDM	Integrated pest and disease management module for Olitorius Jute	Summer, 2020	2.0	2.0	1	3	4	-	Rainfed, clay loam	-	-	-
6	Maize (started in 2018-19)	Crop management	High protein containing Maize Var. HQPM 1 following recommended doses of fertilizer	Rabi, 2018	2	2	-	5	5	-	Irrigated, sandy loam	-	-	-
7	Sugarcane (started in 2018-19)	Varietal evaluation	Improved Sugarcane variety Nambor following recommended dose of fertilizer	Summer, 2019	1	1	-	3	3	-	Rainfed, sandy loam	-	-	-

### c. Performance of FLD on Crops

Sl. No.	Crop	Thematic area	Area (ha.)	Avg. yield (Q/ha.)		% increase in Avg. yield	Additional data on demo. yield (Q/ha.)		Data on parameters other than yield, e.g., disease incidence, pest incidence etc.	Econ. of demo. (Rs./ha.)				Econ. of check (Rs./Ha.)			
				Demo.	Check		H*	L*		GC*	GR*	NR*	BCR**	GC	GR	NR	BCR
1	Rice	Micro nutrient Management	2.0	48	42	6.67	54.0	45.0	Stem borer infestation = 8%, Leaf folder infestation = 5%	3500.00	7200.00	3700.00	2.06	3200.00	6750.00	3750.00	1.63

2	Vermicompost	Soil health Management	Size: 7 ft x 3 ft x 3 ft (5 nos.)	18 q/unit/year	16 q/unit/year	11.11	21.0	16.0	-		4000.00	2160.00	1760.00	5.40	4000.00	1920.00	1520.00	4.80
3	Wheat	Biofertilizer	1	32	29	10.0	35	22	Stem borer infestation = 5%,	Stem borer infestation = 8%,	1790.00	3973.40	2183.40	2.22	1725.00	3573.40	1848.4	2.07
4	Potato	Seed storage	20 kg unit in 9 replications	-	-	-	-	-	Per cent of rotten tubers due to bacterial wilt/ Late blight = 36.2 Per cent of rotten tubers due to infestation by PTM = 10.4 Per cent of total tuber damage = 64.0 Av. No. of sprouts per tuber at planting = 4.47 Av. length	-	25000	31500	6500	1.26	-	-	-	-

									of sprouts per tuber at planting = 8.69 mm									
5	Jute	IPDM	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	O ng oi ng	
6	Maize ( <b>started in 2018- 19)</b> )	Crop managem ent	2.0	42.0	35.0	20%	45. 0	39. 0	Less infestation	5 to 10%	3500 0.00	7560 0.00	4060 0.00	2.16	3400 0.00	6300 0.00	2900 0.00	1 . 8 4
7	Sugarcane ( <b>started in 2018- 19)</b> )	Varietal evaluation	1.0	720. 0	600. 0	20%	74 0.0	65 0.0	-	Red rot infestation seen	9270 0.00	2160 00.00	1233 00.00	2.33	9200 0.00	1800 00.00	8800 0.00	1 . 9 6

\*H-Highest recorded yield, L- Lowest recorded yield

\*\* GC- Gross Cost, GR- Gross Return, NR- Net Return, BCR- Benefit-Cost Ratio

Produce Sale Price must be as per MSP or Registered Marketing Society

Pl. apply the formula: Net Return= Gross Return-Gross Cost, BCR= GR/GC

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

**d. Extension and Training activities under FLD on Crops**

SLNo.	Activity	No. of activities organized	Date	Number of participants			Remarks
				Gen	SC/ST	Total	
1	Field days( KVK)	2	04.02.2020	38	8	46	Field day on Bayers hybrid paddy, , paddy cum fish farming
	08.02.2020		46	0	46		
	Field Days Under CFLD Programme	1	27.01.2020	19	0	19	Field day on Toria



			var. Kamrupa				Body weight Female: 850 gm	weight Female: 450 gm	Female: 89 %												
2	Duckery	Improved type duck	Improved duck var. White Pekin	10	10	200	Body weight Male: 2800 gm Body weight Female: 2500 gm	Body weight Male: 800 gm Body weight Female: 700 gm	Body weight Male : 250 % Body weight Female: 257%	-	-	-	-	-	-	-	-	-	-	-	(Ongoing)
3	Piggery	Improved breed (HDK - 75)	Fld on cross breed pig	3	3	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Ongoing
4	Duckery	Improved dual type duck	Improved duck var. Chara chem balli	10	10	200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Ongoing
5	Poultry ( started in 2018-19)	Improved dual type backyard chicken	Improved dual type chicken var. Kamrupa	10	10	200	Av. Body weight at 1½ yr. of age: Male: 2135g Female: 1885	Av. Body weight at 1½ yr.: Male: 1355 g Female: 1185 g	Up to 1½ yr. of age: Body weight : Male: 157.0 Female: 159	-	-	U p to 1 ½ yr. of age: Rs . 23	U p to 1 ½ yr. of age: Rs . 90	U p to 1 ½ yr. of age: Rs . 67	3.83	Up to 1½ yr. of age: Rs. 215 0.00	Up to 1½ yr. of age: Rs. 658 0.00	U p to 1 ½ yr. of age: Rs . 44	3.06	The productive performances can be increased by supplemental feeding	

							g	%			75	95	20				30			
											.0	5.	.0				.0			
											0	00	0				0			
6	Duckery (2018-19)	Improved meat type duck	Improved duck var. <i>White Pekin</i>	10	10	200	Av. Body weight at 1½ yr.: Male: 2845g Female: 2585g Age at sexual maturity: 176 Days Egg production up to 1½ yr of age: 125 nos. per duck	Av. Body weight at 1½ yr.: Male: 1525g Female: 1325g Age at sexual maturity: 220 Days Egg production up to 1½ yr of age: 55 nos. per duck	Up to 1½ yr. of age: Body weight : Male: 186.5 Female: 195.09 Egg production: 227%	-	-	U p to 1 ½ yr of ag e: Rs	U p to 1 ½ yr of ag e: Rs	U p to 1 ½ yr of ag e: Rs	1. 75	Up to 1½ yr of age: Rs. 270 0.00	Up to 1½ yr of age: Rs. 601 5.00	U p to 1 ½ yr of ag e: Rs	0.8 5	The technology is suitable under agro-climatic conditions of Assam.
7	Poultry (2018-19)	Higher egg and meat production	Quail var. <i>Japanese quail</i>	5	5	120	Av. Body weight at 4 month Male: 245 g Female: 265 g	-	-	-	-	U p to 1 yr. of ag e: Rs	U p to 1 yr. of ag e: Rs	U p to 1 yr. of ag e: Rs	1. 02	-	-	-	2.9 6	The technology is suitable under agroclimatic conditions of Assam









		ement in toria	Dhubri district of Assam																
3	Crops	Croping system improv ement	A Study in Farmers Copping Mechanism in the context of climate change	80	80	-	-	-	-	-	-	-	-	-	-	-	-	-	**
4	Mush room (Started in 2018- 19)	Mushr oom cultiva tion	Performance of year round production of Oyster and Milky Mushroom	10	3	<i>P. sajor caju:</i> 1.35 kg/be d	-	-	Date of preparati on of beds: 20.11.18 Date of first fruiting: 18.12.18 Date of first harvest: 28.12.18 Date of second harvest : 07.01.19 Date of third harvest: 19.01.19	-	55.8	190.0	134. 2	3.40	-	-	-	-	-
						<i>Caloc ybe indic a</i> Avg. yield:	-	-	Date of preparati on of beds: 03.06.18 Date of	-	60.00	113.0 0	53.0 0	1.88	-	-	-	-	-

						0.75 kg/be d			casing: 15.06.18 Date of first fruiting: 30.06.18 Date of first harvest: 08.07.18 Date of second harvest : 19.07.18										
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**\*Result of A Study on Mobile Honey bee keeping in Dhubri district of Assam**

**Results: Salient points are –**

- ❖ All honey bee keepers come from Malda, West Bengal
- ❖ On an average they carry 280 nos. of honey bee boxes
- ❖ Average no. of persons in a group is 4 and all are having their own boxes
- ❖ All groups come by end of November and establish their boxes at about 1 – 1.5 km distance
- ❖ Average honey extraction/box/batch : 3 kg (based on weather condition)
- ❖ Honey is extracted at every 10-12 days interval
- ❖ Atleast Four (4) extractions from every box
- ❖ Total honey extracted from one box: 3kg X 4 extractions X 280 boxes  
= 3360 kg
- ❖ Price of honey/ kg is Rs. 80/-
- ❖ Total income = Rs.80/- X 3360 kg = Rs. 268800/-
- ❖ Covers two batches of crops in one season
- ❖ Gross Income = Rs. 268800 /- X 2 batches = Rs. 5,37,600/-
- ❖ Cost of one box : Rs. 500/-
- ❖ Price of frames/ box: 1750/- (7 framed box)
- ❖ Travelling expenditure (up and down) : Rs. 60,000/-
- ❖ Money paid to landlord : Rs.2000/- -3000/-
- ❖ Fooding cost = Rs.100/- X 90 days = Rs. 9,000/-
- ❖ The extracted honey is collected by different Co-operative societies from the field. Some of them are:

1. Malda Bee Keeping Cooperative Society, Malda
2. Samaita Apiary, Malda
- ❖ 3. Kezriwal Bee Care India Pvt. Ltd., Punjab
- ❖ These organizations supply the honey to the following Companies:
- ❖ 1. Dobur India Ltd.
- ❖ 2. Baidyanath
- ❖ 3. Apis
- ❖ 4. Shakti
- ❖ 5. Patanjali
- ❖ The honey is exported to some of the cold countries like USA, Iran etc.
- ❖ They move to Malda from Assam to take the opportunity to long duration mustard , Dhaniya and Kaljira crops. Then to Bihar for litchi and Mango crops and Hoogly for Sesame.

## \*\* Results of A Study in Farmers Copping Mechanism in the context of climate change

**Table 1 : Technology adopted by farmers**

Parameters	Climate resilient situation						Normal situation					
	Winter rice	Summer rice	Toria	Black gram	Chilli	Maize	Winter rice	Summer rice	Toria	Black gram	Chilli	Maize
Varieties used	Swana Sub1, Ranjit sub 1,	PHB 71, PAN 2423, Advanta, Ranjana, Karishma	Local, M 27, TS 36	Local, PU 31	Local, Suryamukhi	DKC 9149, DKC 9099, Makka 4, Prakash	Swana Sub1, Ranjit sub 1,	China, 29,28, Karishma, Ranjana	Local, TS 67	Local, Suryamukhi, Saraki, Alipuri	Surya mukhi, Local	DKC 9149, DKC 9099, Makka 4, Prakash
Seed treatment	Not practiced	Not practiced	Not practiced	Not practiced	Not practiced	Not practiced	Not practiced	Not practiced	Not practiced	Not practiced	Not practiced	Not practiced
Land preparation	Bullock plough (10 %) and tractor (90%)	Bullock plough (10 %) and tractor (90%)	Bullock plough (10 %) and tractor (90%)	Bullock plough (10 %) and tractor (90%)	Bullock plough (10 %) and tractor (90%)	Bullock plough (10 %) and tractor (90%)	Bullock plough (20 %) and tractor (80%)	Bullock plough (20 %) and tractor (80%)	Bullock plough (20 %) and tractor (80%)	Bullock plough (20 %) and tractor (80%)	Bullock plough (20 %) and tractor (80%)	Bullock plough (20 %) and tractor (80%)
Seed rate (kg/ bigha)	Hybrid: 20 kg/ ha,	Hybrid: 20 kg/ ha, HYV: 40	11.25 kg/ ha	22.5 kg / ha	Broadcast: 7.5 kg / ha Line: 700g/	25 kg/ ha	Hybrid: 20 kg/ ha,	Hybrid: 20 kg/ ha, HYV: 40	12 kg/ ha	22.5 kg / ha	Broadcast: 4.0 kg / ha	25 kg/ ha

	HYV: 40 kg/ha, Local: 75 kg/ ha	kg/ha, Local: 75 kg/ ha			ha		HYV: 40 kg/ha, Local: 75 kg/ ha	kg/ha, Local: 75 kg/ ha			Line: 700g/ ha	
Sowing/ planting method	Broadca sting	Both Line and Broadcasti ng	Broadcasti ng	Broadcas ting	Broadcastin g and line	Line	Broadca sting	Both Line and Broadcasti ng	Broadca sting	Broadcastin g	Broadca sting and line	Line
Time of sowing	April/ May	Last week of Dec.- Mid Jan.	October	August/ Septemb er	August/ September	October/ November	May/Jun e	Last week of Dec.- Mid Jan.	Late October - Novemb er	August/ September	August/ Septemb er and Februar y/ March	October - Decemb er
Time of trans- planting	May/Ju ne	End of January to mid February	-	-	Oct./ Nov.	-	May/Jun e	End of January to mid February	-	-	Oct./ Nov.	-
Urea (kg/ha)	135	120	110	50	88	250	125	150	100	50	70	230
SSP (kg/ ha)	200	225	200	120	300	300	220	200	240	120	300	270
MOP (kg/ ha)	40	45	30	35	45	100	40	45	50	35	45	100
DAP (kg/ha)	45	55	-	-	-	-	35	30	-	-	-	-
Micro nutrients (ZnSO <sub>4</sub> )		10	10	-	10	-		10	10	-	-	-
Manure (t/ha)	4	5	0	-	6	6	3	4	0	-	-	4
Irrigati on of crops	-	6 -7 irrigations	2 irrigations	Not required	2-3 irrigations	2 irrigations	-	7 – 8 irrigations	2 irrigatio ns	Not required	2-3 irrigatio ns	2 irrigatio ns
Time of applicati on of	1 <sup>st</sup> : Urea SSP, MOP	1 <sup>st</sup> : Urea SSP, MOP and DAP	Basal dose	Basal dose	1 <sup>st</sup> : Urea SSP, MOP and DAP as	1 <sup>st</sup> : Urea SSP, MOP and DAP as	1 <sup>st</sup> : Urea SSP, MOP	1 <sup>st</sup> : Urea SSP, MOP and DAP	Basal dose	Basal dose	1 <sup>st</sup> : Urea SSP, MOP	1 <sup>st</sup> : Urea SSP, MOP

fertilizer s/ manures	and DAP as Basal dose 2 <sup>nd</sup> : Urea 25 DAP	as Basal dose 2 <sup>nd</sup> : Urea 30 DAP			Basal dose 2 <sup>nd</sup> : Urea 20 DAP	Basal dose 2 <sup>nd</sup> : Urea 30 DAP 3 <sup>rd</sup> : 75 DAP	and DAP as Basal dose 2 <sup>nd</sup> : Urea 25 DAP	as Basal dose 2 <sup>nd</sup> : Urea 30 DAP			and DAP as Basal dose 2 <sup>nd</sup> : Urea 20 DAP	and DAP as Basal dose 2 <sup>nd</sup> : Urea 30 DAP 3 <sup>rd</sup> : 75 DAP
PP Measure s	Cyperm ethrin, Malathi on, Chlorop yriphos @ 2.0 ml/ lit water	Cypermeth rin, Malathion, Chloropyri phos @ 2.0 ml/ lit water	Chloropyri phos @ 2.0 ml/ lit water	Malathio n, Chloropy riphos @ 2.0 ml/ lit water	Malathion, Chloropyri phos @ 2.0 ml/ lit water	-	Cyperm ethrin, Malathi on, Chlorop yriphos @ 2.0 ml/ lit water	Cypermeth rin, Malathion, Chloropyri phos @ 2.0 ml/ lit water	Chlorop yriphos @ 2.0 ml/ lit water	Malathion, Chloropyri phos @ 2.0 ml/ lit water	Malathi on, Chlorop yriphos @ 2.0 ml/ lit water	-
Weed manage ment	Need based	Two weeding: one chemical weeding and one hand weeding	-	-	1 <sup>st</sup> : 25 DAP 2 <sup>nd</sup> : 50-60 DAP	1 <sup>st</sup> : 25 DAP 2 <sup>nd</sup> : 50-60 DAP	Need based	Two weeding: one chemical weeding and one hand weeding	-	-	1 <sup>st</sup> : 25 DAP 2 <sup>nd</sup> : 50- 60 DAP	1 <sup>st</sup> : 25 DAP 2 <sup>nd</sup> : 50- 60 DAP
Method of harvestin g	Using sickle	Using sickle	Uprooting	Uprootin g	Plucking by hand	Using sickle	Using sickle	Using sickle	Uprooti ng	Uprooting	Pluckin g by hand	Using sickle
No. of plucking		-	-	-	7-10 Plucking	-		-	-	-	7-10 Pluckin g	-

**Table 2: Economics and cost of cultivation of different crops (Rs./ha) according to cost concept**

Cost items (Rs.)	Climate resilient situation						Normal situation					
	Winter rice	Summer Rice	Toria	Blackgram	Chilli	Maize	Winter rice	Summer Rice	Toria	Blackgram	Chilli	Maize
Cost A1												
Hired human labour	20400	23500	9000	8500	18400	16400	17800	23500	9660	9200	18900	15600
Land preparation (Tractor/ Power tiller/ manual)	3375	3375	3000	2400	3560	3560	3375	3375	3300	2400	3560	3600
Seeds	2250	2200	450	1800	1380	4640	1860	1900	450	1800	1450	5000
Fertilizers	5330	6460	4440	2330	5410	7300	4760	5700	4640	2400	5560	7000
Manures	800	1150	0	0	1200	1200	1000	1150	0	0	1100	1400
Plant protection chemicals	1300	1240	1000	1000	1560	1000	1200	1240	1300	1100	1600	1700
Irrigation	0	15000	0	0	7400	7400	0	15500	0	0	7400	7400
Nursery preparation	1500	1500	0	0	1500	1500	1500	1500	0	0	1500	1500
Repairing of machinaries	1500	2000	1200	1300	2200	1700	1640	2100	1050	0	2400	1250
Total working capital	36455	56425	19090	17330	42610	44700	33135	55965	20400	16900	43470	44450
Interest on working capital @6%	2187	3386	1145	1040	2557	2682	1988	3358	1224	1014	2608	2667
Depreciation	395	395	450	450	450	450	395	395	450	450	450	450
Land revenue	670	670	670	670	670	670	670	670	670	670	670	670
Miscellaneous (transportation, baskets, rope etc.)	1000	1100	1000	1300	1800	1800	1130	1300	1000	1300	1800	2300
Total of Cost A1	40707	61976	22355	20790	48087	50302	37318	61688	23744	20334	48998	50537

Cost A2												
Cost A1	40707	61976	22355	20790	48087	50302	37318	61688	23744	20334	48998	50537
Rent paid for leased in land	0	0	0	0	0	0	0	0	0	0	0	0
Total of Cost A2	40707	61976	22355	20790	48087	50302	37318	61688	23744	20334	48998	50537
Cost B1												
Cost A1	40707	61976	22355	20790	48087	50302	37318	61688	23744	20334	48998	50537
Interest on value of owned fixed capital (excluding land) @10% on depreciated value of fixed capital	1330	1530	1260	1140	1400	1460	1250	1330	1260	1140	1400	1460
Total of Cost B1	42037	63506	23615	21930	49487	51762	38568	63018	25004	21474	50398	51997
Cost B2												
Cost B1	42037	63506	23615	21930	49487	51762	38568	63018	25004	21474	50398	51997
Rental value of owned land (Actual value to be paid for use of own land)	3000	3000	3000	1500	3000	1800	2700	2700	3000	1900	3200	2000
Total of Cost B2	45037	66506	26615	23430	52487	53562	41268	65718	28004	23374	53598	53997
Cost C1												
Cost B1	42037	63506	23615	21930	49487	51762	38568	63018	25004	21474	50398	51997
Imputed value of family labour	13400	15400	7200	9400	18500	11300	16700	13900	9200	10400	19200	14300
Total of Cost C1	55437	78906	30815	31330	67987	63062	55268	76918	34204	31874	69598	66297
Cost C2												
Cost B2	45037	66506	26615	23430	52487	53562	41268	65718	28004	23374	53598	53997



Imputed value of family labour	13400	15400	7200	9400	18500	11300	16700	13900	9200	10400	19200	14300
Total of Cost C2	58437	81906	33815	32830	70987	64862	57968	79618	37204	33774	72798	68297
Cost C3												
Cost C2	58437	81906	33815	32830	70987	64862	57968	79618	37204	33774	72798	68297
10% of Cost C2	5844	8191	3382	3283	7099	6486	5797	7962	3720	3377	7280	6830
Total of Cost C3	64281	90096	37197	36113	78085	71348	63765	87580	40924	37151	80078	75127
Yield (kg/ha)	4600	8600	970	620	8250	4200	4500	8000	950	600	8100	3970
Price (Rs. /kg)	14.00	14.00	40.00	80.00	23.10	22.50	14.00	13.90	40.00	80.00	22.50	22.50
Gross return (Rs.)	64400	120400	38800	49600	190575	94500	63000	111200	38000	48000	182250	89325
<b>B:C ratio</b>	<b>1.10</b>	<b>1.47</b>	<b>1.15</b>	<b>1.51</b>	<b>2.68</b>	<b>1.46</b>	<b>1.09</b>	<b>1.40</b>	<b>1.02</b>	<b>1.42</b>	<b>2.50</b>	<b>1.31</b>

**\*\* GC- Gross Cost, GR- Gross Return, NR- Net Return, BCR- Benefit-Cost Ratio**

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

**(v) Farm Implements and Machinery: Nil**

Sl. No.	Name of implement	Crop	Name of Technology demonstrated	No. of farmers	Area (In ha.)	Field observation (Output/ man-hours)		% change in the parameter	Labour reduction (Man days)	Cost reduction (Rs. per ha. or Rs. per unit etc.)	Remarks
						Demo	Check				
-	-	-	-	-	-	-	-	-	-	-	-

**f. Performance of FLD on Crop Hybrids( Boro Season): Nil**

Sl. No.	Crop	Name of hybrids	Area (ha.)	No. of farmers	Avg. yield (Q/ha.)		% increase in Avg. yield	Additional data on demo. yield (Q/ha.)		Econ. of demo. (Rs./Ha.)				Econ. of check (Rs./Ha.)			
					Demo.	Check		H*	L*	GC**	GR**	NR**	BCR**	GC	GR	NR	BCR























Ornamental Plants																						
<b>d) Plantation crops</b>																						
Production and Management technology	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Processing and value addition	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>e) Tuber crops</b>																						
Production and Management technology	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Processing and value addition	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>f) Spices</b>																						
Production and Management technology	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Processing and value addition	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>g) Medicinal and Aromatic Plants</b>																						
Nursery management	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Production and management technology	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Post harvest technology and value addition	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>III Soil Health and Fertility Management</b>																						
Soil fertility management	1	-	1	25	-	-	-	25	-	-	-	-	-	-	-	25	-	-	-	25	-	25



















products																							
Dairying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sheep and goat rearing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Quail farming	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Piggery	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rabbit farming	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Poultry production	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ornamental fisheries	1	-	1	12	-	13	-	25	-	-	-	-	-	-	-	12	-	13	-	25		25	
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	2	-	2	43	-	15	-	58	-	-	-	-	-	-	-	43	-	15	-	58	-	58	
Tailoring and Stitching	1	-	1	12	-	16	-	28	-	-	-	-	-	-	-	12	-	16	-	28	-	28	
Rural Crafts										-	-	-	-	-	-								
<b>TOTAL</b>	11	-	11	229	-	61	-	290	-	16	-	5	-	21	-	262	-	66	-	328	-	328	

### C. Extension Personnel

**3.3.5. Achievements on Training of Extension Personnel in On Campus including Sponsored On Campus Training Programmes**  
 (\*Sp. On means On Campus training programmes sponsored by external agencies)



Household food security	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Women and Child care	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Low cost and nutrient efficient diet designing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Production and use of organic inputs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gender mainstreaming through SHGs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**3.3.6. Achievements on Training of Extension Personnel in Off Campus including Sponsored Off Campus Training Programmes  
(\*Sp. Off means Off Campus training programmes sponsored by external agencies)**

Thematic area	No. of Courses/ prog.			Participants																		Grand Total
	Off	Sp Off*	Total	General						SC/ST						Total						
				Male		Female		Total		Male		Female		Total		Male		Female		Total		
				Off	Sp Off*	Off	Sp Off*	Off	Sp Off*	Off	Sp Off*	Off	Sp Off*	Off	Sp Off*	Off	Sp Off*	Off	Sp Off*	Off	Sp Off*	
Productivity enhancement in field crops	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Integrated Pest Management	2	-	2	10	-	39	-	49	-	-	-	2	-	2	-	10	-	41	-	51	-	51
Integrated Nutrient management	2	-	2	12	-	43	-	55	-	-	-	-	-	-	-	12	-	43	-	55	-	55
Rejuvenation of old orchards	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Protected cultivation technology	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Formation and Management of SHGs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Group Dynamics and farmers organization	2	-	2	-	-	48	-	48	-	-	-	-	-	-	-	-	-	48	-	48	-	48
Information networking among farmers	2	-	2	1	-	49	-	50	-	-	-	-	-	-	-	1	-	49	-	50	-	50





**Annexure 2: Details of Training Programme (Off Campus including Sponsored Off Campus) for Farmers, Farm Women, Rural Youth and Extension Personnel**

Discipline	Area of training	Title of the training programme	Date (From – to)	Duration in days	Venue	Please specify Beneficiary group (Farmer & Farm women/ RY/ EP and NGO Personnel)	General participants			SC/ST			Grand Total		
							M	F	T	M	F	T	M	F	T
Soil Sc.	Production and use of organic inputs	Organic Farming	27-06-2019	1	Asharikandi	RY	6	0	6	15	5	20	21	5	26
Soil Sc.	Production and use of organic inputs	Use of biofertilizers in agriculture with special reference to rice	08-07-2019 to 09-07-2019	2	Ghungunikhata	PF	25	0		0	0	0	25	0	25
Soil Sc.	Soil Health Management	Green manuring and its importance in maintenance of Soil Health	10-07-2019 to 11-07-2019	2	Rabantari	PF	25	0		0	0	0	25	0	25
Soil Sc.	Nutrient management	Integrated nutrient management	12-07-2019	1	Futkibari	PF	25	0		0	0	0	25	0	25
Soil Sc.	Soil fertility management	Management practices for sustained soil fertility	16-08-2019	1	Nayapara	EF	0	30		0	0	0	0	30	30
Soil Sc.	Production and use of organic inputs	Production of compost and low cost vermicompost for income generation	30-08-2019 to 31-08-2019	2	Khudnamari	RY	27	0		0	0	0	27	0	27
Soil Sc.	Production and use of organic inputs	Use of biofertilizers in agriculture with special reference to rice	09-09-2019 to 10-09-2019	2	Hakama	PF	25	0		0	0	0	25	0	25

Soil Sc.	Soil & Water management	Need and ways of conserving soil and water	31-10-2019 to 02-11-2019	3	Gaurangtari	PF	20	5		0	0	0	20	5	25
Soil Sc.	Production and use of organic inputs	Production and use of organic inputs	11-11-2019 to 14-11-2019	3	Khoilsatari	PF	25	1		0	0	0	25	1	26
Soil Sc.	Integrated Nutrient Management	Principles of manure and fertilizer application for higher efficiency	20-12-2019	1	Sonaluguri	EF	12	13		0	0	0	12	13	25
Soil Sc.	nutrient management	Integrated nutrient management	21-12-2019	1	Gobardhanpara	PF	14	11		0	0	0	14	11	25
Soil Sc.	Soil Health Management	Soil testing and its importance in agriculture	09-01-2020 to 10-01-2020	2	Agomoni	RY	25	0		0	0	0	25	0	25
Plant Protection	Integrated Pest Management	Integrated management of important pests & diseases of winter rice with special reference to bio-control	14-06-2019	1	Ghunghunikhata	PF	22	9	31	0	0	0	22	9	31
Plant Protection	Integrated Pest Management	Proper handling and safe use of pesticides and fungicides	23-08-2019	1	Bamunpara Pt-IV	PF	24	1	25	0	0	0	24	1	25
Plant Protection	Bio-control of pests and diseases	Bio intensive integrated pest and disease management in cucurbits	28-08-2019 to 29-08-2019	2	Bhalukmari, Ravantari	PF	25	0	25	0	0	0	25	0	25
Plant Protection	Integrated Pest Management	On-farm low cost mass production techniques of common bio pesticides	30-08-2019 to 31-08-2019	2	Medhipara	RY	24	0	24	1	0	1	25	0	25
Plant Protection	Bio pesticides	Integrated management of important pest and diseases of winter rice with special reference	04-09-2019 to 05-09-2019	2	Bakuabhangi	PF	0	0	0	9	18	27	9	18	27

		to bio control													
Plant Protection	Integrated Pest Management	Integrated management of important pest & disease of boro rice	31-10-2019	1	Gaurangtari	PF	20	5	25	0	0	0	20	5	25
Plant Protection	Integrated Pest Management	Proper handling & safe use of pesticides and fungicides	21-11-2019	1	Chapar	EF	0	24	24	0	2	2	0	26	26
Plant Protection	Integrated Pest Management	Organic winter vegetables production by using bio intensive IPDM	19-12-2019 to 20-12-2019	2	Dhanpur	RY	10	15	25	0	0	0	10	15	25
Plant Protection	Integrated Pest Management	Pest and disease management in nursery of winter vegetables crops	23-12-2019	1	Nayapara	PF	7	18	25	0	0	0	7	18	25
Plant Protection	Integrated Pest Management	Proper handling & safe use of pesticides and fungicides	27-12-2019	1	Khudnamari	PF	21	5	26	0	0	0	21	5	26
Plant Protection	Integrated Pest Management	Integrated diseases in Jute	21-03-2020	1	Koimari	PF	21	5	26	0	0	0	21	5	26
Plant Protection	Integrated Pest Management	Recent advances in management of insect pest & diseases in winter vegetables	20-03-2020	1	Nayahat	EF	10	15	25	0	0	0	10	15	25
Animal Science	Poultry Management	Scientific rearing of duck	13-08-2019	1	Udmari	PF	0	14	14	0	0	0	0	14	14
Animal Science	Poultry Management	Scientific rearing of duck	17-08-2019	1	Raniganj	EF	0	25	25	0	0	0	0	25	25

Animal Science	Disease management	Disease of livestock and poultry, their prevention and control measures	21.02.2020 to 22.02.2020	2	Nayeralga	PF	24	0	24	1	0	1	25	0	25
Animal Science	Sheep & Goat Production	Scientific rearing of sheep and goat for rural employment	24.02.2020 to 25.02.2020	2	Nayeralga	PF	25	0	25	0	0	0	25	0	25
Animal Science	Dairy Management	Scientific rearing of dairy cattle and buffalo for increased milk production	27.02.2020 to 29.02.2020	3	Mahamaya	PF	0	26	26	0	0	0	0	26	26
Animal Science	Poultry Management	Scientific rearing of improved backyard poultry for egg and meat production at village level	02.03.2020 to 04.03.2020	3	Mahamaya	PF	0	26	26	0	0	0	0	26	26
Fishery Science	Integrated Fish Farming	Management of fish pond in flood affected areas	05-08-2019 to 06-08-2019	2	Santoshpur	PF	25	0	25	0	0	0	25	0	25
Fishery Science	Carp breeding and hatchery management	Feeding and water quality management in fish pond	08-08-2019 to 09-08-2019	2	Charuabakra	PF	25	0	25	0	0	0	25	0	25
Fishery Science	Integrated Fish Farming	Integrated duck cum fish farming	23-08-2019 to 24-08-2019	2	Bamunpara Pt-IV	PF	24	1	25	0	0	0	24	1	25
Fishery Science	Integrated Fish Farming	Integrated paddy cum fish farming	27-08-2019 to 28-08-2019	2	Dhanpur	PF	25	0	25	0	0	0	25	0	25
Fishery Science	Carp fry and fingerling rearing	Nursery pond management and fish seed rearing	29-08-2019 to 30-08-2019	2	Charuabakra Bazar	PF	25	0	25	0	0	0	25	0	25
Fishery Science	Value addition	Preparation of fish pickle	02-09-2019 to 03-09-2019	2	Nayapara	PF	1	24	25	0	0	0	1	24	25

Fishery Science	Carp breeding and hatchery management	Cultivation of air breathing fish	16-10-2019 to 17-10-2019	2	Pasuarkhal, Pt-I	PF	24	1	25	0	0	0	24	1	25
Fishery Science	Integrated Fish Farming	Management of fish pond in flood affected area	24-10-2019 to 25-10-2019	2	Koimari, Pt-I	PF	25	0	25	0	0	0	25	0	25
Fishery Science	Integrated Fish Farming	Fish disease & health management in fish ponds	05-11-2019 to 06-11-2019	2	Charuabakra	PF	21	4	25	0	0	0	21	4	25
Fishery Science	Composite fish culture	Composite Fish farming	19-11-2019 to 20-11-2019	2	Khalsatari	PF	25	2	27	0	0	0	25	2	27
Fishery Science	Aquaculture (Aquarium Preparation)	Preparation of Aquarium for rearing local ornamental fishes	11-12-2019 to 12-12-2019	2	Halakura	RY	12	13	25	0	0	0	12	13	25
Agril Econ & FM	Entrepreneurial development of farmers/youths	Importance of Farm Planning and management for higher income generation	25/06/2019	1	Ghunghunikhata	PF	24	2	26	0	0	0	24	2	26
Agril Econ & FM	Entrepreneurial development of farmers/youths	Crop Insurance and its importance	26/06/2019	1	Rabantari	PF	16	6	22	3	0	3	19	6	25
Agril Econ & FM	Entrepreneurial development of farmers/youths	Crop insurance and its importance	27/06/2019	1	Asarikandi	PF	7	0	7	15	13	28	22	13	35
Agril Econ & FM	Information networking among farmers	Economic importance of the use of agro chemicals in crop production	11/07/2019	1	Chapor, Bhakatpara	RY	26	0	26	0	0	0	26	0	26
Agril Econ & FM	Farm Management	Training on Farm Management	09/08/2019	1	Ghunghunikhata	PF	22	9	31	0	0	0	22	9	31

Agril Econ & FM	Information networking among farmers	Agricultural Market Intelligence and Future Commodity market	17/08/2019	1	Ranjiganj	EF	1	24	25	0	0	0	1	24	25
Agril Econ & FM	Grading and standardization	Grading and standardization of Agricultural products	22/08/2019	1	Alamganj	RY	17	13	30	0	0	0	17	13	30
Agril Econ & FM	Grading and standardization	Grading and standardization of Agricultural products	04/09/2019	1	Charuabakra	RY	26	2	28	0	0	0	26	2	28
Agril Econ & FM	Entrepreneurial development of farmers/youths	Importance of farm planning and management for higher income generation	05-09-2019	1	Jamduar	PF	17	12	29	0	0	0	17	12	29
Agril Econ & FM	Information networking among farmers	Economic importance of the judicious use of agro chemicals & scope of use of organic nutrition / Plant Protection measures in crop production	15-11-2019	1	Nayeralga	RY	44	2	46	0	0	0	44	2	46
Agril Econ & FM	Group formation among farmers	Organizing farmers through FIG, FPO, Farmers club	20-11-2019	1	Raniganj	EF	0	25	25	0	0	0	0	25	25
Agril Econ & FM	Group formation among farmers	Organizing farmers through FIG, FPO, Farmers club	21-11-2019	1	Chapar, Salkocha block	EF	0	23	23	0	2	2	0	25	25
Agril Econ & FM	Information networking among farmers	Agricultural Market Intelligence and Future Commodity market	21-11-2019	2	Chapar, Salkocha block	EF	0	25	25	0	0	0	0	25	25
Agril. Extension	Entrepreneurial development of farmers/youths	Marketing and value addition of Agricultural produce	14-11-2019 (1 day)	1	Satrasal	PF	32	0	32	0	0	0	32	0	32

Agril. Extension	Entrepreneurial development of farmers/youths	Employment opportunity through agriculture and allied sector	19-12-2019 to 21-12-2019	3	Dhanpur	RY	12	16	28	0	0	0	12	16	28
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## (D) Vocational training programmes for Rural Youth

Crop / Enterprise	Date (From – To)	Duration (days)	Area of training	Training title*	No. of Participants									Impact of training in terms of Self-employment after training				Whether Sponsored by external funding agencies (Please Specify with amount of fund in Rs.)					
					General			SC/ST			Total			Type of enterprise ventured into	Number of units	Number of persons employed	Avg. Annual income in Rs. generated through the enterprise						
					M	F	T	M	F	T	M	F	T										
Vermi compost	24-09-2019 to 28-09-2019	5 days	Value addition	Self-employment generation through production of low cost vermicompost	2	5	0	2	5	0	0	0	2	5	0	2	5	Low cost vermi compost	4 women SHG	-	-	No	
Jute	03-12-19 to 12-12-2019	10 days	Entrepreneurship development	Entrepreneurship development of rural women through product making from Jute	0	3	0	3	0	0	0	3	0	0	3	0	3	0	Product making from Jute	5 women SHG	-	-	No

Fishery	27-12-2019 to 02-01-2020	7 days	Entrepreneurship development	Entrepreneurship Development through value added fish products	0	24	24	0	2	2	2	26	26	Product making from Fish	4 women SHG	-	-	No
Water Hyacinth	27-12-2019 to 05-01-2020	10 days	Entrepreneurship development	Entrepreneurship development of rural women through product making from Water Hyacinth	0	26	26	0	0	0	0	26	26	Product making from Water Hyacinth	5 women SHG	-	-	No
Bee keeping	20-01-2020 to 26-01-2020	7 days	Entrepreneurship development	Vocational training on Scientific bee keeping as a venture of income generation.	20	0	20	6	0	6	26	0	26	Bee keeping	Rural Youth	-	-	No
Mushroom	27-01-2020 to 31-01-2020	5 days	Entrepreneurship development	Vocational training on Commercial production & value addition of oyster mushroom	18	7	25	0	0	0	18	7	25	Mushroom Production	5 women SHG	-	-	No
Vermi compost	29-01-2020 to 02-02-2020 ( 5 day)	5 days	Entrepreneurship development	Production and use of organic inputs	25	0	25	0	0	0	25	0	25	Low cost vermi compost	4 SHG group	-	-	No
Fruits and vegetables	13-02-2020 to 19-02-2020	7 days	Entrepreneurship development	Entrepreneurship development of rural women through processed food product making from locally available fruits and vegetables	0	20	20	0	5	0	0	25	25	Product making from locally available fruits and vegetables	5 women SHG	-	-	No

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



**Annexure 3: Only Sponsored Training Programmes (On, Off and Vocational):**

On/ Off/ Vocational	Beneficiary group (F/ FW/ RY/ EP)	Date (From- To)	Duration (days)	Discipline	Area of training	Title	No. of Participants									Sponsoring Agency	Amount of fund received (Rs.)
							General			SC/ST			Total				
							M	F	T	M	F	T	M	F	T		
Off	PF & RY	24-02-2020 to 19-03-2020	25 days	Plant Protection	Mushroom	Mushroom growers	5	15	20	0	0	0	5	15	20	AS CI	19600 0.00
Off	PF & RY	24-02-2020 to 19-03-2020	25 days	Fishery Sc	Fishery	Hatchery Production Workers	20	0	20	0	0	0	20	0	20	AS CI	21560 0.00

**Training programme under PKVY:**

Sl. No.	Date	Topic	Category	Place	ST /SC		Other		Total		Grand Total
					M	F	M	F	M	F	
1	04-02-2020	Plant protection measures in oilseeds (Torla)	PF	Gaurangtari	1	0	10	17	11	17	28
2	08-02-2020	Plant protection measures in oilseeds (Torla)	PF	Rabantari	0	0	30	3	30	3	33

**Training programme under CFLD:**

Sl. No.	Date	Topic	Category	Place	ST /SC		Other		Total		Grand Total
					M	F	M	F	M	F	
1	18-09-2019	Training on improved cultivation of pulses	PF	Agomoni	1	0	24	1	25	0	25
2	25-09-2019	Plant protection measures in pulses	PF	Koimari	0	0	17	8	17	8	25
3	04-02-2020	Plant protection measures in oilseeds (Torja)	PF	Gaurangtari	6	2	13	25	19	27	46

**Training programme under APART Project:**

Sl. No.	Date	Topic	Category	Place	ST /SC		Other		Total		Grand Total
					M	F	M	F	M	F	
1	21-12-2019	Training on Blackgram	PF	Gobardhanpara	0	0	21	9	21	9	30
2	21-12-2019	Training on Blackgram	PF	Gobardhanpara	0	0	11	17	11	17	28
3	28-12-2019	Training on Blackgram	PF	Kursakati	0	0	14	16	14	16	30
4	09-01-2020	Training on Lentil	PF	Agomoni	3	0	45	2	48	2	50
5	09-01-2020	Training on Maize	PF	Agomoni	10	4	44	1	54	5	59
6	11-01-2020	Training on Maize	PF	Pukhuripara	3	4	20	3	23	7	30
7	11-01-2020	Training on Rapeseed & Mustard	PF	Pukhuripara	3	2	19	6	22	8	30
8	29-01-2020	Training on Lentil	PF	Koimari	0	0	19	11	19	11	30

9	30-01-2020	Training on Maize	PF	Koimari	0	0	23	15	23	15	38
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**3.4. Extension Activities (including activities of FLD programmes) (Please mention specific Extension Activity conducted by the KVK such as Field Day, Kisan Mela, Exhibition, Diagnostic Visit, etc) during 2019-20**

Sl. No.	Extension Activity	Topic	No. of activities	Participants											
				General (1)			SC/ST (2)			Extension Officials (3)			Grand Total (1+2)		
				M	F	T	M	F	T	M	F	T	M	F	T
1.	Advisory services	-	100	98	2	100	0	0	0	0	0	0	98	2	100
2.	Diagnostic visit	-	47	45	0	45	2	0	2	0	0	0	45	2	47
3.	Field day	Field Days	11	323	12	335	5	0	5	0	0	0	328	12	340
		Field Days under PKVY (4-2-2020)	1	13	25	38	6	2	8	0	0	0	19	27	46
		Field Days under CFLD (27-1-2020)	1	10	9	19	0	0	0	0	0	0	10	9	19
		Field day Toria under PKVY (8-2-2020)	1	41	5	46	0	0	0	0	0	0	41	5	46
		Field day under APART	13	344	161	505	0	0	0	0	0	0	344	161	505
4.	Farmers visit to KVK	-	-	296	46	342	55	12	67	0	0	0	351	58	409
5.	Scientists visit to farmers fields	-	-	101	5	106	9	0	9	0	0	0	110	5	115
6.	Plant/ Animal Health camp	Vaccination programme for FMD & Brucellosis under NACDP & National AI programme	1	7	0	7	0	0	0	0	0	0	7	0	7
7.	Farm science club	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.	Ex-trainee Sammelan	-	1	30	16	46	-	-	-	-	-	-	-	-	46
9.	Farmers seminar/ workshop	PCRA	1	34	0	34	1	0	1	0	0	0	35	0	35
10.	Method		4	30	4	34	31	0	31	0	0	0	61	4	65

	demonstration														
11.	Celebration of important days	Celebration of AAU Foundation Day, 2019	1	25	10	35	0	0	0	0	0	0	25	10	35
		World Environment Day Celebration, 2019	1	16	14	30	0	0	0	0	0	0	16	14	30
		International Yoga Day' 2019	1	74	55	129	8	3	11	0	0	0	82	58	140
		KVK, Foundation Day , 2019	1	99	7	106	0	0	0	0	0	0	99	7	106
		Webcasting of live inauguration prog on PM-KISAN , PM-KMY & launching of NADCP for FMD & Brucellosis & National AI programme	1	74	27	101	0	0	0	0	0	0	74	27	101
		Large scale tree plantation campaign	1	114	84	198	0	0	0	0	0	0	114	84	198
		150th Birth Anniversary of Mahatma Gandhi	1	85	88	173	15	20	35	0	0	0	100	108	208
		Swachhta He Seva	7	166	59	225	8	5	13	0	0	0	174	64	238
		World Soil Health Day, 2019	1	100	55	155	100	55	155	0	0	0	200	110	310
		World Food Day, 2019	1	108	78	186	20	8	28	0	0	0	128	86	214
		Celebration of Kisan Divas, 2019	1	15	20	35	0	0	0	0	0	0	15	20	35
		Kisan Mela under NICRA	1	138	107	245	12	4	16	0	0	0	150	111	261
Web casting on the occasion of Global	1	44	164	210	0	0	0	0	0	0	44	164	208		

		Potato Conclave													
		International Women Day	1	90	0	90	0	0	0	0	0	0	90	0	90
		Kisan Mela under NEH Component		256	64	320	0	0	0	0	0	0	256	64	320
12	Exposure visits	-	2	44	21	65	0	0	0	0	0	0	44	21	65
13	Exhibition	-	3	406	175	581	0	0	0	0	0	0	406	175	581
14	Animal Health Camp	Vaccination programme for FMD & Brucellosis under NACDP & National AI programme	1	7	0	7	0	0	0	0	0	0	7	0	7
15	Electronic media (CD/DVD)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	Extension literature	-	6	-	-	-	-	-	-	-	-	-	-	-	-
17	Newspaper coverage	-	5	-	-	-	-	-	-	-	-	-	-	-	-
18	Popular articles	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	Radio talk	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	TV talk	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	Training manual	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	Soil health camp		3	75	0	75	0	0	0	0	0	0	75	0	75
23	Awareness camp	14th Parthenium awareness week (16th to 22nd Aug 2019)	1	122	86	208	0	0	0	0	0	0	122	86	208
		Awareness programme on Jal Shakti Abhiyan	1	25	2	27	0	0	0	0	0	0	25	2	27
		Fertilizer Awareness programme	1	146	24	170	25	10	35	0	0	0	171	34	205
		Awareness Programme under DAMU	3	242	86	328	0	0	0	0	0	0	242	86	328
26	Lecture delivered as resource person		12	310	0	310	0	0	0	0	0	0	310	0	310

27	PRA	-	2	32	18	50	-	-	-	-	-	-	32	18	50
30	Farmer-Scientist interaction		1	136	105	241	0	0	0	0	0	0	136	105	241
31	Soil test campaign	-	4	34	42	76	16	8	24	0	0	0	50	50	100
32	SHG meet	-	1	-	50	50	-	-	-	-	-	-	0	50	50
<b>Grand Total</b>				<b>4355</b>	<b>1726</b>	<b>6083</b>	<b>313</b>	<b>127</b>	<b>440</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4636</b>	<b>1839</b>	<b>6521</b>

### 3.5 Production and supply of Technological products during 2019-20:

#### A. SEED MATERIALS

Major group/class	Crop	Variety	Quantity (qt)	Value (Rs.)	Number of recipient/ beneficiaries		
					General	SC/ST	Total
<b>CEREALS</b>	Paddy	Ranjit Sub1	86.0	129000.00	5	0	5
		Gitesh	77.2	115800.00	5	0	5
		Naveen	73.4	110100.00	5		5
<b>OILSEEDS</b>	Toria	TS-38	17.3	60550.00	7		7
	Toria	TS-67	16.8	58800.00	7		7
<b>OILSEEDS ( Under CFLD Programme)</b>	Toria	TS-38	1112.8	3500000.00	626	0	626
<b>PULSES( Under CFLD Programme)</b>	Blackgram	Beki	50.0	35000.00	60	3	63
	Lentil	KLS-218	54.45	326700.00	50	9	59
<b>VEGETABLES (Seedlings)</b>	Tomato	Arka Abed	10000	10000.00	5	0	5
	Brinjal	PH-5	2500	2500.00	3	0	3
	Cauliflower	Moti	6500	6500.00	3	0	3
	Chilli	G-4	6500	6500.00	2	0	2
<b>FLOWER CROPS</b>	-	-	-	-	-	-	-
<b>OTHERS (Specify)</b>	-	-	-	-	-	-	-

#### A1. SUMMARY of Production and supply of Seed Materials during 2019-20:

Sl. No.	Major group/class	Quantity (ton.)	Value (Rs.)	Number of recipient/ beneficiaries		
				General	SC/ST	Total
1	CEREALS	23.66	354900.00	15	0	15
2	OILSEEDS	114.69	3619350.00	605	35	640

3	PULSES	10.45	361700.00	110	12	122
4	VEGETABLES (Seedlings)	25500	25500.0	13	0	13
5	FLOWER CROPS					
6	OTHERS					
<b>TOTAL</b>		<b>148.8</b>	<b>4361450.00</b>	<b>743</b>	<b>47</b>	<b>790</b>

**B. Production of Planting Materials(Nos. in lakh):**

Major group/class	Crop	Variety	Numbers (In Lakh)	Value (Rs.)	Number of recipient beneficiaries		
					General	SC/ST	Total
<b>Fruits</b>	-	-	-	-	-	-	-
<b>Spices</b>	-	-	-	-	-	-	-
<b>Ornamental Plants</b>	-	-	-	-	-	-	-
<b>VEGETABLES</b>	Tomato	Arka Abed	10000	10000.00	5	0	5
	Brinjal	PH-5	2500	2500.00	3	0	3
	Cauliflower	Moti	6500	6500.00	3	0	3
	Chilli	G-4	6500	6500.00	2	0	2
<b>Forest Spp.</b>	-	-	-	-	-	-	-
<b>Plantation crops</b>	-	-	-	-	-	-	-
<b>Medicinal plants</b>	-	-	-	-	-	-	-
<b>OTHERS (Pl. Specify)</b>	-	-	-	-	-	-	-

**B1. SUMMARY of Production and supply of planting Materials (In Lakh) during 2019-20: Nil**

Sl. No.	Major group/class	Numbers (In Lakh)	Value (Rs.)	Number of recipient beneficiaries		
				General	SC/ST	Total
<b>1</b>	<b>Fruits</b>	-	-	-	-	-
<b>2</b>	<b>Spices</b>	-	-	-	-	-
<b>3</b>	<b>Ornamental Plants</b>	-	-	-	-	-
<b>4</b>	<b>VEGETABLES (Seedlings)</b>	25500	25500.0	13	0	13
<b>5</b>	<b>Forest Spp.</b>	-	-	-	-	-
<b>6</b>	<b>Medicinal plants</b>	-	-	-	-	-
<b>7</b>	<b>Plantation crops</b>	-	-	-	-	-
<b>8</b>	<b>OTHERS (Specify)</b>	-	-	-	-	-
<b>TOTAL</b>		<b>25500</b>	<b>25500.0</b>	<b>13</b>	<b>0</b>	<b>13</b>

**C. Production of Bio-Products during 2019-20:**

Major group/class	Product Name	Species	Quantity		Value (Rs.)	Number of Recipient /beneficiaries		
			No	(qt)		General	SC/ST	Total
BIOAGENTS	-	-	-	-	-	-	-	-
BIOFERTILIZERS	-	-	-	-	-	-	-	-
BIO PESTICIDES	-	-	-	-	-	-	-	-
BIO PRODUCTS	Vermicompost	-	-	120.0	144000.00	5	-	5
	Mushroom	-	-	8.85	82500.00	4	-	4

**C1. SUMMARY of production of bio-products during 2019-20:**

Sl. No.	Product Name	Species	Quantity		Value (Rs.)	Number of Recipient beneficiaries		Total number of Recipient beneficiaries
			Nos	(kg)		General	SC/ST	
1	BIOAGENTS	-	-	-	-	-	-	-
2	BIO FERTILIZERS	-	-	-	-	-	-	-
3	BIO PESTICIDE	-	-	-	-	-	-	-
4	BIO PRODUCTS	Vermicompost	5	12000.00	144000.00	5	-	5
		Mushroom	4	885.0	82500.00	4	-	4
	<b>TOTAL</b>		<b>9</b>	<b>12885.00</b>	<b>226500.00</b>	<b>9</b>	-	<b>9</b>

**D. Production of livestock during 2019-20**

Sl. No.	Type of livestock	Breed	Quantity		Value (Rs.)	Number of Recipient beneficiaries		
			(Nos)	Kgs		General	SC/ST	Total
3	Piggery (Piglets)		-	-	-	-	-	-
4	Poultry ( Chicken hatching egg)		-	-	-	-	-	-
	Duck egg		-	-	-	-	-	-
5	Fisheries (Fingerlings)		1000000	-	450000.00	2	-	2
6	Others (Specify)	-	-	-	-	-	-	-
	<b>Total</b>		<b>1000000</b>		<b>450000.00</b>	<b>2</b>	-	<b>2</b>



**D1. SUMMARY of production of livestock during 2019-20:**

Sl. No.	Livestock category	Breed	Quantity		Value (Rs.)	Number of Recipient beneficiaries		Total number of Recipient beneficiaries
			Nos	(kg)		General	SC/ST	
1	CATTLE	-	-	-	-	-	-	-
2	SHEEP & GOAT	-	-	-	-	-	-	-
3	POULTRY (Duck egg)	-	-	-	-	-	-	-
4.	PIGGERY (Piglets)	-	-	-	-	-	-	-
5	FISHERIES (Fingerlings)	IMC	1000000	-	450000.00	2	-	2
6	OTHERS (Pl. specify)	-	-	-	-	-	-	-
	<b>TOTAL</b>		<b>1000000</b>		<b>450000.00</b>	<b>2</b>	<b>-</b>	<b>2</b>

**3.6. Literature Developed/Published (with full title, author & reference) during 2019-20**

(A) KVK News Letter (Date of start, Periodicity, number of copies distributed etc.): 1

(B) Articles/ Literature developed/published

Item	Title /and Name of Journal	Authors name	Number of copies
Research papers	Empowering Rural Women through vocational and Skill training programme of KVK: A study in Dhubri District of Assam.  Published in National Conference on Women Empowerment through Entrepreneurship and Skill Development, held on 7 <sup>th</sup> March, 2020 at SCSCA, Bahalpur, Dhubri	Dr. C. K. Deka, Mr. B.K. Das, Mr. A. Paul, Ms. Bhuyan, Mr. G.K. Sarma, Mr. Bikash Gharphalia. Kuladip Talukdar and Ms. N. Nath	-
	Socio-Economic Profile And Management Practices Adopted By Sheep Farmers In Dhubri District Of Assam.  Published in Indian Journal of Veterinary and Animal Sciences Research.	Rafiqul Islam, Mustafizur Rahman and Chandan Kr. Deka	
Abstracts	Empowering Rural Women through vocational and	Dr. C. K. Deka, Mr. B.K. Das, Mr. A. Paul, Ms.N.	-

	Skill training programme of KVK: A study in Dhubri District of Assam.  Published in National Conference on Women Empowerment through Entrepreneurship and Skill Development, held on 7 <sup>th</sup> March, 2020 at SCSCA, Bahalpur, Dhubri	Bhuyan, Mr. G.K. Sarma, Mr. Bikash Gharphalia. Kuladip Talukdar and Ms. N. Nath	
<b>Technical Report</b>			
1.	Annual Report 2019-20	Dr. C. K. Deka, Mr. B.K. Das, Mr. A. Paul, Ms. N. Bhuyan, Mr. G.K. Sarma, Mr. B. Gharphalia, Ms. N. Nath, Mr. K. Talukdar, Mr. D. Bora, Mr. S. Suman	1
2.	Annual Action Plan, 2020-21	Dr. C. K. Deka, Mr. B.K. Das, Mr. A. Paul, Ms. N. Bhuyan, Mr. G.K. Sarma, Mr. B. Gharphalia, Ms. N. Nath, Mr. K. Talukdar, Mr. D. Bora, Mr. S. Suman	1
3.	ZREAC Report (Kharif,& Rabi 2019-20)	Dr. C. K. Deka, Mr. B.K. Das, Mr. A. Paul, Ms. N. Bhuyan, Mr. G.K. Sarma, Mr. B. Gharphalia, Ms. N. Nath, Mr. K. Talukdar, Mr. D. Bora, Mr. S. Suman	2
4.	Monthly Report	Dr. C. K. Deka, Mr. D. Bora, Ms. N. Nath	12
5.	Quarterly Report	Dr. C. K. Deka, Mr. D. Bora, Ms. N. Nath	4
6.	NICRA ZMC Report	Dr. C. K. Deka, Mr. B. K. Das, Mr. D. Bora	1
Booklet	-	-	-
Popular articles	-	-	-
Technical bulletins	-	-	-
Extension bulletins	<i>Mou Palon : Gramya Yobokor Atma Santhaponor Ek Upai</i>	C. K. Deka, B.K. Das, A. Paul, N. Bhuyan, P. Sutradhar, R. Islam, G.K. Sarma, N. Nath, G. Bordoloi, K. Baruah	1000
	<i>Farmers Club (Krisok Sangha)</i>	C. K. Deka, B.K. Das, A. Paul, N. Bhuyan, P. Sutradhar, R. Islam, G.K. Sarma, N. Nath	1000
	<i>Hah Palon : Swaniyojonor Ane Ek Upai</i>	C. K. Deka, B.K. Das, A. Paul, N. Bhuyan, P. Sutradhar, R. Islam, G.K. Sarma, N. Nath, G. Bordoloi, K. Baruah	1000
	<i>Sashyat Bipodmukta Rasayonik Kitnasokor Prayog aru yar Baboharik Gyan</i>	C. K. Deka, B.K. Das, A. Paul, N. Bhuyan, P. Sutradhar, R. Islam, G.K. Sarma, N. Nath, G. Bordoloi, K. Baruah	1000

	<i>Sagoli Palon : Sawajonor Anaya ek upai</i>	C. K. Deka, B.K. Das, A. Paul, N. Bhuyan, P. Sutradhar, R. Islam, G.K. Sarma, N. Nath, G. Bordoloi, K. Baruah	1000
	<i>Utkrista Protinjukta Makoi Unnata Krishi Podhoti</i>	C. K. Deka, B.K. Das, A. Paul, N. Bhuyan, P. Sutradhar, R. Islam, G.K. Sarma, N. Nath	1000
	<i>Seujiya Sar Dhaincha khetir abasyakiyota</i>	C. K. Deka, B.K. Das, A. Paul, N. Bhuyan, G.K. Sarma, B Gharphalia. K.Talukdar and N. Nath	1000
	<i>Dhuburi Jilat Prakritik Durjog Prasamanar babe Krishi Parikalpana aru Krishi Prajukti</i>	C. K. Deka, B.K. Das, A. Paul, N. Bhuyan, G.K. Sarma, B Gharphalia. K.Talukdar and N. Nath	1000
Newsletter	KVK Dhubri Newsletter, 2019-20	Dr. C. K. Deka, Dr. P. Sutradhar, Mr. B.K. Das, Mr. A. Paul, Ms.N. Bhuyan, Mr. G.K. Sarma, Dr. R. Islam Ms. N. Nath, Mr. D. Bora, Mr. S. Suman, Mr. A. Das	100
Conference/ workshop proceedings	-	-	-
Leaflets/folders	-	-	-
e-publications	-	-	-
Any other (Pl. specify)	-	-	-
<b>TOTAL</b>			

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

**3.7. Success stories on horizontal spread of the technologies/Case studies, if any (two or three pages write-up on each case/ successes with suitable action photographs)**

**Raising of Farm Income through Improved Technologies and Crop Diversification: A Success Story from NICRA Village**

**A. Background information of the farmers:**

Udmari, the NICRA village of KVK, Dhubri is a regularly flood affected village of Raniganja Development Block of Bilasipara subdivision in Dhubri District of Assam. Every year flood causes heavy damage to the crops as well as livestock of this village. Although winter rice is the main crop grown by the farmers of this village but it is a chance crop for them. Sometimes they can harvest their crop and sometimes not. Mr. Kshitish Nath is a 41 yrs old progressive farmer of Udmari Pt III having 2.93 ha (22 bighas) land of his own. His father Lt.Suresh Ch. Nath was also a farmer and followed conventional

method of cultivation due to which he could not earn much profit. Due to the poor economic condition, Khitish could not complete his education beyond class X and he had to engage himself in cultivation with his father.

## **B. Journey in timeline :**

### **Starting point:**

After the death of his father (when he was 25 yrs old) he had to take the responsibility of his family with his mother, wife and two sons. Mr. Khitish is an innovative farmer and always tries to do the crop cultivation in scientific way. He thought himself that earning from one source is not sufficient and he joined in a painting class for 6 months at Bilasipara by thinking that it will give him an extra income to his family in addition to agriculture. After completion of the painting class, he started painting work commercially and earned an extra income.

Out of 2.93 ha (22 bighas) land, he cultivated rice in 1.33 ha (10 bighas), toria in 0.26 ha (2 bigha) and vegetables in 0.07 ha (0.5 bigha) land and remaining 1.27 ha (9.5 bighas) land was kept fallow. He cultivated low yielding local varieties of rice like Malsira, Goyasri, Phulpakhari and local toria varieties. By cultivating these varieties he could not earn much profit as these varieties are low yielder and many a times got damaged by flood water which was the major problem for his area.

### **Turning Points:**

In 2014, he came in contact with KVK, Dhubri through the NICRA project run by KVK, Dhubri which was the turning point for him. He considered it as his most important moment because of which he got the information and knowledge of improved technologies which increased his income many fold.

### **End points:**

By studying the cultivation history, KVK scientists suggested him a farm plan to him to go ahead. KVK advised him to go for cultivation of HYV of rice like Ranjit, Mashuri and some submergence tolerance new rice varieties like Swarna Sub 1, Bahadur Sub 1 Ranjit Sub1 and Gitesh instead of cultivating low yielding local varieties of rice. KVK arranged all these varieties through programmes of NICRA and from other reliable sources. He also increased the rice area from 1.33ha to 1.87 ha. By cultivating these varieties he got almost double production and income than ever before as these varieties are well suited for his area.

He was also suggested to go for HYVs of toria like TS-36, TS-38 and TS-67 instead of low yielding local varieties and able to earn more profit as these varieties are well suited to their situation. Although he cultivated toria in 0.27 ha at first, later on with the advice of KVK, he expanded the area up to 0.53 ha under toria cultivation.

Most of the farmers of Dhubri district practiced single crop for commercial cultivation in their land suitable for vegetable cultivation. Khitish Nath has 0.13 ha (1 bigha) of upland at his home where he used to cultivate single crop i.e. cabbage only in 0.07 ha. But KVK scientists advised him to go for more



Kharif vegetables grown by farmers					B.C. Ratio
Sl. No.	Crop	Area (Sq.m)	Expenditure (Rs.)	Income (Rs.)	
1.	Sponge gourd	200	800	3000	3.75
2.	Ridge gourd	200	650	2000	3.08
3.	Cucumber	100	700	2500	3.57
4.	Ash gourd	200	800	3000	3.75
5.	Colocasia	200	1500	7500	5.00
6.	Sugarcane	200	4000	9000	2.25
7.	Bean	50	500	2000	4.00
8.	Pumpkin	150	500	1500	3.00
<b>Sub Total</b>		<b>1300</b>	<b>9450</b>	<b>30500</b>	<b>3.23</b>
Rabi Vegetables grown by farmers					
1.	Cabbage	300	3000	10000	3.33
2.	Cauliflower	200	3000	10000	3.33
3.	Brinjal	300	2000	12000	6.00
4.	Tomato	150	1500	4000	2.67
5.	Chilli	30	300	1000	2.33
6.	Coriander	30	300	1000	2.33
7.	Garlic	30	500	4000	8.00
8.	Potato	300	1500	2500	1.67
<b>Sub Total</b>		<b>1340</b>	<b>12100</b>	<b>44500</b>	<b>3.68</b>
<b>Grand Total</b>		<b>2640</b>	<b>21550</b>	<b>75000</b>	<b>3.48</b>

#### Challenges Confronted:

Poor economic condition, no other helping hand in his family and every year the village is affected by flood were the major challenges for him.

#### Opportunities Captured: (offered by KVK and support from other organization)

##### Intervention from KVK:

- Provided improved technologies of rice, toria, sugarcane, vermicompost, vegetables , diversified agriculture etc through training and demonstration
- Technical advice as and when needed through field visit, phone call, whatsapp etc.
- Introduced the seed bank for easy availability of HYVs of seed of rice and toria for his own as well as for other farmers of his locality.

##### Support from other organization:

Received sprayer, SRI wheel marker, STW from Deptt. of Agriculture. He got one Gobar gas plant from department forest, Govt of Assam which he installed at his home and he is using the gobar gas for cooking of food

**C. Special strength/ traits/ advantages/technologies/ innovations/ circumstances that could be attributed to his success:**

**Special Strength of Khitish:**

- Hard worker and sincerity in work
- Good time manager
- Innovative and positive thinking
- Good relation with officials and with villagers

**Technologies which helped him in getting success are:**

- Replacement of local varieties with HYVs of rice ( Varieties like Ranjit, Ranjit Sub-1, Swarna Sub 1, Gitesh, Bahadur Sub-1) and toria (TS-36, TS-38, TS-67 )
- Crop diversification concept & Technologies
- Seed bank of rice and toria
- Low cost vermicompost production technology.

**D. Impact of the success in his life (income resource growth etc.):**

- His income increased more than double
- Got popularity in the areas because of his work
- Got recognition from District Administration and KVK as best farmer of the district
- Dr. A.K.Tripathi, Director, ATARI Zone VI after visiting his farm advised KVK to install one Micro irrigation Unit at his farm and MI unit is already being established at his farm by KVK, Dhubri.

**E. Lessons for the fallow farmers/ communities and also for KVK and others:**

- He has become the role model for other fellow farmers of his areas
- KVK can sight the example of Khitish to other farmers for his real success in farming
- KVK organized many exposure visit of farmers and students to his farm for getting the first-hand experience for the farmers





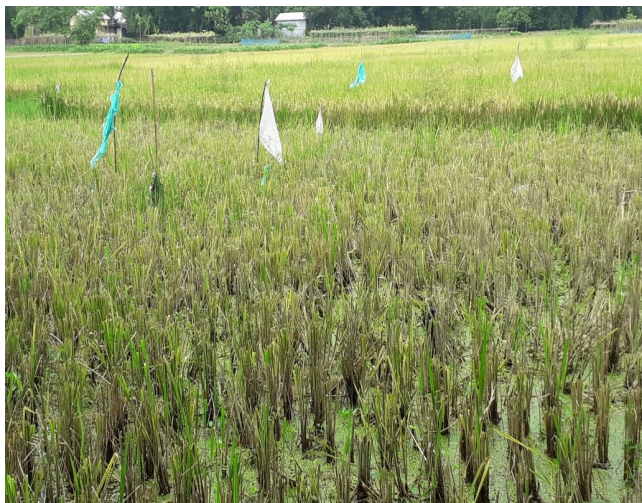
### 3.8 Give details of innovative methodology/technology developed and used for Transfer of Technology during the year

- \* Working through progressive farmers /successful farmers in training for motivating other farmers, identification of other well to do farmers through them, arranging training and other programmes in their areas.
- \* Working through NGOs, FPOs for arranging training, beneficiary selection for various programme

### 3.9 Give details of indigenous technology practiced by the farmers in the KVK operational area which can be considered for technology development (in detail with suitable photographs)

S. No.	Crop Enterprise	ITK Practiced	Purpose of ITK
1	Rice	Keeping plastic sheet in a pole in the rice field at tillering stage	This technique is used by farmers for control of Rat in rice field. The farmers keep this plastic sheet in a pole in different places of the rice field. The reasons is that while air blows , the plastic sheet makes a sound which make the rat alert that something is coming and they immediately ran away from that area in fear. Thus farmers use this ITK to control rat problem in the paddy field.
2	Banana	Wrapping the cut portion of banana blossom of Banana Bunch	When farmers cut the banana blossom from the Banana bunch, they wrap the cut portion which helps in increasing the size of Banana in the bunch and reduce the attack of scaring beetle.





### 3.10 Indicate the specific training need analysis tools/methodology followed for

- Identification of courses for farmers/farm women
- Rural Youth
- Extension personnel

### 3.11 Field activities

- i. Number of villages adopted: 11 Adopted village of KVK
- ii. No. of farm families selected: 605
- iii. No. of survey/PRA conducted: 2

### 3.12. Activities of Soil and Water Testing

Status of establishment of Lab : Nil

1. Year of establishment : Nil

2. List of equipments purchased with amount :

3. Details of samples analyzed (2019-20) :

Details	No. of Samples analyzed	No. of Farmers	No. of Villages	Amount ( In Rupees) realized
Soil Samples	25	250	25	7250.00
Water Samples	-	-	-	-
Plant Samples	-	-	-	-
Petiole Samples	-	-	-	-
Total	25	250	25	7250.00

#### 4. Details of Soil Health Cards (SHCs) (2019-20)

- No. of SHCs prepared:250
- No. of farmers to whom SHCs were distributed:250
- Name of the Major and Minor nutrients analyzed: N, P, K, pH, Organic Carbon ...etc.
- No. of villages covered:25
- Soil health card based nutrient management in different crops (pl. submit in brief in separate page) :-

#### 3.13. Details of SMS/ Voice Calls sent on various priority areas

Message type	Crop		Livestock		Weather		Marketing		Awareness		Other Ent.		Total	
	No. of Message	No. of Beneficiary	No. of Message	No. of Beneficiary	No. of Message	No. of Beneficiary	No. of Message	No. of Beneficiary	No. of Message	No. of Beneficiary	No. of Message	No. of Beneficiary	No. of Message	No. of Beneficiary
Text only	57	2400	12	2400	40	2400	-	-	-	-	-	-	109	109
Voice only	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Voice and Text both	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>57</b>	<b>2400</b>	<b>12</b>	<b>2400</b>	<b>40</b>	<b>2400</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>109</b>	<b>2400</b>

#### 3.14 Contingency planning for 2020-21

##### a. Crop based Contingency planning

Contingency (Drought/ Flood/ Cyclone/ Any other please specify)	Proposed Measure	Proposed Area (In ha.) to be covered	Number of beneficiaries proposed to be covered		
			General	SC/ST	Total
	<b>Introduction of new variety or crop</b>				
<b>Flood</b>	Submergence tolerant rice varieties such as Swarna Sub 1./ Ranjit Sub 1 in chronically flood affected areas	10.0	10	5	15
	Short duration rice varieties Luit under post flood situation	5.0	5	2	7
	Short duration rice varieties Luit for pre flood situation	5.0	5	2	7
	Popularization of improved varieties and production technology of rabi crops	20.0	20	10	30

	Drainage in oilseed and pulses	5.0	5	2	7
<b>Flood/Drought like situation</b>	Popularization of staggered planting rice varieties such as Gitesh	10.0	10	5	15
<b>Drought like situation</b>	Integrated farming system module demonstration as alternative livelihood support	5 units	4	1	5
	Irrigation management in major field crops	5.0	5	2	7
	Soil fertility management (N &K) in rice	5.0	5	-	5
	Renovation of farm ponds for multiple use	5 units	4	1	5
	Mulching in horticultural crops	1.0	7	-	7
<b>Drought like situation</b>	<b>Introduction of Resource Conservation Technologies</b>				
	Zero tillage in field crops	1.0	3	-	3
<b>Flood</b>	<b>Distribution of seeds and planting materials</b>				
	<b>Community nursery</b>	5.0	70	5	75
	Seed production	2.0	3	1	4
	<b>Any other (Please specify)</b>				
<b>Flood/Drought</b>	Custom Hiring Centre for timeliness of operation	-	25	10	35
<b>Livestock &amp; Fishery</b>	Demonstration on cultivation of perennial fodder	1.0	4	2	5
	Demonstration of low cost poultry house /Goat house in flood affected areas	10 units	8	2	10
	Placement of plastic net along the periphery of fish pond	1000m	8	2	10
	Pen culture technology in low lying areas	2.0 ha	5	2	7

**a. Livestock based Contingency planning**

Contingency (Drought/ Flood/ Cyclone/ Any other please specify)	Number of birds/ animals to be distributed	No. of programmes to be undertaken	No. of camps to be organized	Proposed number of animals/ birds to be covered through camps	Number of beneficiaries proposed to be covered		
					General	SC/ST	Total
<b>Flood (Animal Sc.)</b>	100	2	4	400	200	50	150
<b>Flood (Fishery)</b>	200000	2	4	100 ponds	80	20	100
<b>Drought (Fishery)</b>	-	-	1	50 ponds	40	10	50

#### 4.0. IMPACT

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

Name of specific technology/skill transferred	Area covered (in ha)	% of adoption	Change in income (Rs.)	
			Before (Rs./Unit)	After (Rs./Unit)
Demonstration of low cost vermicompost Production technology	50 unit	25%	-	18000.00/ unit
Demonstration of Oyster Mushroom	20 unit	25%	-	40000.00/ unit of 200 beds
Crop diversification with toria variety “TS-36”	64	42%	9,3000.00/ha	20,400.00/ha
Crop diversification with toria variety “TS-38”	60	43%	9,3000.00/ha	20,400.00/ha
Crop diversification with toria variety “TS-67”	14	25%	9,3000.00/ha	20,400.00/ha
Scientific cultivation of HYV of <i>Sali</i> rice var. Ranjit Sub-1	300	48%	21,600.00/ha	34,200.00/ha
Demonstration on submergence tolerance rice variety ‘Swarna sub1’	200	35%	28,000.00/ha	76,000.00/ha
Demonstration on staggered planting rice variety ‘ Gitesh’	25	20%	8,058.00/ha	23,448.00/ha

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

##### 1.1. Cases of large scale adoption

1. Quality seed plays an important role in increasing the crop yield; however, seed replacement rate in the district is only 11-12 % which may be attributed to ignorance of farmers on seed production technology. KVK, Dhubri has initiated massive seed production programme in rice in the farmer’s field through technology showcasing programme. Training programme, front line demonstration programme, advisory services etc. were also being conducted regularly to popularize seed production technology in the district.
2. The Submergence tolerant rice varieties Ranjit Sub-1, Bahadur Sub-1 and Swarna Sub-1 were introduced by KVK in the flood affected areas and now this variety is popular among the farmers and the Department of Agriculture has also given demonstration of this varieties in the district. At present Rice variety Ranjit Sub 1 is also gaining popularity among the farmers as submergence tolerance rice variety.
3. Toria is the most important oilseed crop of the district grown during rabi season; however productivity of this crop is low which may be attributed to poor adoption of HYVs of toria with scientific management practice. KVK Dhubri introduced HYV of Toria ‘TS 36’, TS-38 and TS-67 in the farmer’s field

through demonstration programme. This variety recorded 10.5 q av. yield per hectare as compared to 8.0 q/ha in existing variety with higher net returns and benefit cost ration in the farmer's field. After visualizing the result, many farmers adopted this variety and also gaining popularity among the farmers.

4. Rice is the most important crop of the district which occupies more than 70% of the total rice growing areas. *Kharif* rice is cultivated in more than 44,000ha area. In the farmer's field, adoption of improved production technology in *Kharif* rice was not satisfactory and KVK, Dhubri is trying hard to popularize improved technology through various activities like training, front line demonstration, on farm testing, advisory service etc. Because of the sincere effort, farmers have started adopting improved production technology in Sali rice especially in respect of quality seed, fertility management and pest management. At present HYV of *Kharif* rice is cultivated more than 40% of rice growing areas of the district. Considering the high yield potential of HYVs of Sali rice, it is expected that more farmers will come forward to adopt HYVs in near future.
5. Low cost Vermicompost production technology is also gaining popularity among the farmers. Many farmers are taking this venture as a source of income generation and earning a handsome profit by selling the Vermicompost.

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

Name of specific technology/skill transferred	No. of participants	% of adoption	Before (Rs./Unit)	After (Rs./Unit)
High yielding variety of rice 'Ranjit Sub-1'	30	50.0	8,058.00/ha	23,448.00/ha
Composite fish farming	50	30.0	15,025.00	26,850.00
Low cost Vermicompost Production	30	35.0	-	18000.00/ unit
Mushroom Production	20	30.0	-	40000.00/ unit of 200 beds

#### 5.0. LINKAGES ESTABLISHED

##### 5.1. Functional linkage with different organizations

Name of organization	Nature of linkage
State Dept of agriculture	<p><b>Technical assistance to the programme</b></p> <ul style="list-style-type: none"> <li>-Bringing green revolution to eastern India</li> <li>-Implementation of technology showcasing</li> <li>-Implementation of National Bamboo Mission</li> <li>-Implementation of Technology Mission</li> <li>-Implementation of Technology showcasing programme.</li> </ul>

RRLRRC, Gerua, Hajo	- Implementation of the programme “Bringing green revolution to eastern India”.
State Dept of Animal Husbandry & Vety	-Technical assistance -Joint vaccination programme -Awareness programme
College/Research stations / KVKs of AAU	-Supply of quality seed -Implementation of FPARP in the farmer’s field. -Survey work -Collaborative training, OFT, FLD, health camp etc.
Bank (SBI, AGVB, UBI, NABARD etc.)	-Formation of farmer’s club -Project approval & subsidy claim for JLG -Resource person
NGOs	-Demonstration -Technical assistance -Organizing training
ATMA, Dhubri	-Technical assistance -Resource persons in training programme -Preparation of block action plan
State Dept of Fisheries	-Establishment of fish seed village Technical assistance
National Fisheries Development Board	-Exposure visit -Skill development Programme
National Rural Livelihood Mission (NRLM)	-Technical assistance -Resource persons in training programme
College of Fishery Science, Raha	- Collaborative training
ASCI	-Skill Training

**5.2 List special programmes undertaken by the KVK, which have been financed by State Govt./Other Agencies during 2019-20**

Name of the scheme	Activity	Date/ Month of initiation	Funding agency	Amount (Rs.)
National Initiative on Climate Resilient Agriculture	Demonstration of climate resilient agricultural technologies in flood affected areas	2019-20	Indian Council of Agricultural Research	890000.00
Cluster FLD on Oilseeds (Rabi)	Demonstration	2019-20	Indian Council of Agricultural Research	170000.00
Additional Cluster FLD on Oilseeds (Rabi)	Demonstration	2019-20	Indian Council of Agricultural Research	780000.00
Cluster FLD on Pulses ( Rabi)	Demonstration	2019	Indian Council of Agricultural Research	180000.00
Cluster FLD on Pulses ( Kharif)	Demonstration	2019	Indian Council of Agricultural Research	90000.00
PCRA	Awareness	2019	PCRA	8300.00
Skill Development Training under ASCI	Training	2019	ASCI, GOI	411600.00

**5.3 Details of linkage with ATMA**

a) Is ATMA implemented in your district : Yes

Sl. No.	Programme	Nature of linkage	Remarks
1.	Technology demonstration / Training programme	<ul style="list-style-type: none"> <li>Member of ATMA GB and AMC</li> </ul>	<ul style="list-style-type: none"> <li>Technical support in planning and formulation of DAP&amp;BAP</li> <li>Resource person for training of farmers</li> </ul>

**5.4 Give details of programmes implemented under National Horticultural Mission: No**

S. No.	Programme	Nature of linkage	Constraints if any

**5.5 Nature of linkage with National Fisheries Development Board: NA**





<b>Vegetables</b>									
i.									
ii.									
a. Others (specify)									
i.									

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

Sl. No.	Name of the Product	Qty	Amount (Rs.)		Remarks
			Cost of inputs	Gross income	

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

**6.5 Rainwater Harvesting: NIL**

**Training programmes conducted by using Rainwater Harvesting Demonstration Unit: NA**

**6.6. Utilization of hostel facilities (Month-Wise) during 2019-20: NA**

**7. FINANCIAL PERFORMANCE**

**Details of KVK Bank accounts**

Bank account	Name of the bank	Location/ Branch	Account Number
With Host Institute	-	-	-
With KVK	SBI, Bilasipara	Bilasipara	11782335300
Revolving Fund	-	-	-

**7.2 Utilization of funds under FLD on Maize (Rs. In Lakhs) if applicable: NA**

Item	Released by ICAR/ZPD		Expenditure		Unspent balance as on 31 <sup>st</sup> March, 2019
	Year	Year	Year	Year	
Inputs					
Extension activities					
TA/DA/POL etc.					
<b>TOTAL</b>					

### 7.3 Utilization of KVK funds during the year 2019 -20

S. No.	Particulars	Sanctioned (in Lakh)	Released (in Lakh)	Expenditure (in Lakh)
<b>A. Recurring Contingencies</b>				
1	<b>Pay &amp; Allowances</b>	120.00	136.81	136.81
2	<b>Traveling allowances</b>	2.50	2.50	2.50
3				
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	15.50	15.27	15.27
B	POL, repair of vehicles, tractor and equipments			
C	Meals/refreshment for trainees			
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)			
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)			
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)			
G	Training of extension functionaries			
H	Maintenance of buildings			
I	Establishment of Soil, Plant & Water Testing Laboratory			
J	Library			
<b>TOTAL (A)</b>		15.50	15.27	15.27
1	<b>Works</b>			
2	<b>Equipments including SWTL &amp; Furniture</b>			
3	<b>Vehicle</b> (Four wheeler/Two wheeler, please specify)			
4	<b>Library</b> (Purchase of assets like books & journals)			
<b>TOTAL (B)</b>				
<b>C. REVOLVING FUND</b>				
<b>GRAND TOTAL (A+B+C)</b>		<b>15.50</b>	<b>15.27</b>	<b>15.27</b>

### 7.4 Status of Revolving Fund (Rs. in lakhs) for last three years: Nil (KVK Dhubri is operating from a rented house)

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
April 2019 to March 2020	-	-	-	-

Note: No KVK must leave this table blank

## 8.0 Please include information which has not been reflected above.

(a) National Initiative on Climate Resilient Agriculture : Interventions undertaken under National Initiative on Climate Resilient Agriculture Programme are given in ANNEXURE II

(b) Other Programmes during 2019-20:

### 1. CLUSTER FRONTLINE DEMONSTRATIONS:

#### a) CLUSTER FRONTLINE DEMONSTRATIONS OF OIL SEED (2018-19) FUNDING UNDER NMOOP:

Sl.No	Name of crop	Area (ha)	Location	No. of beneficiaries	District Average Yield (q/ha)	Average Yield (q/ha)		% increase in yield
						Demo	Check	
1	Niger	10	Kuthipara, Kodomtola, Rabantari, Sagunmari Pt-III, Koimari	32	4.7	4.6	3.7	24
2	Toria	150	Kholsatari, Kodomtola, Bhalukmari, Saltari, Ghunghunikhata, Lohajan, Charuabakra, Pasuarkhal Pt-II, Siberdabri, Ramraikuti Pt-II, Jhapusabari, Kherbari Pt-III	626	8.7	8	7.5	7

#### Economics of Cultivation:

Crop	Gross Cost(Rs)		Gross Return (Rs)		Net Return (Rs)		BC ratio	
	Demo	Check	Demo	Check	Demo	Check	Demo	Check
Niger	12000.00	11000.00	18600.00	15400.00	6600.00	4400.00	1.55	1.40
Toria	18750.00	18000.00	34800.00	31600.00	16000.00	13600.00	1.86	1.76

#### b) Cluster Frontline Demonstrations of PULSE(2018-19) FUNDING UNDER NFSM:

Sl.No	Name of crop	Area (ha)	Location	No. of beneficiaries	District Average Yield (q/ha)	Average Yield (q/ha)		% increase in yield
						Demo	Check	
1	Blackgram (Var. Beki)	10	Sasargaon Pt-I, Dautpara, Gaurangtari Pt-II, Bakuabhangi Pt-II, Haraltari, Saltari,	63	8.1	7.2	6.8	5.88
2	Lentil (Var. KLS-218)	20	Nayapara, Alengmari, Singimari, Koimari, Sagunmari Pt-III,	59	9.0	8.89	7.8	13.97

**Economics of Cultivation:**

Crops	Gross Cost(Rs)		Gross Return (Rs)		Net Return (Rs)		BC ratio	
	Demo	Check	Demo	Check	Demo	Check	Demo	Check
Blackgram (Beki)	15842.00	13500.00	43350.00	35190.00	27508.00	21690.00	2.73	2.60
Lentil (KLS-218)	23565.00	21625.00	44450.00	38600.00	20885.00	16975.00	1.88	1.78

**2. Wheat FLD (From Indian Institute of Wheat and Barley Research, Karnal):**

Sl.No	Name of crop	Variety	Area(Ha)	Location	No. of beneficiaries
1	Wheat	(HD 3086)	9.6	P.Medhipara, Kuthipara, Kholisatari	51

**3. PKVY Demonstration :**

Sl. No	Name of crop	Area (ha)	Location	No. of beneficiaries	Average Yield (q/ha)
1.	Toria	20	Gaurangtari, Rabantari	47	9.5

**4. FLD ON POTATO**

Sl. No	Crop	Variety	Area (Ha)	No. of Beneficiary	Average Yield (q/ha)
1	Potato	Kufri Jyoti	1.9	83	155 q/ha
		Kufri Bahar	1.9	50	165 q/ha

**5. Demonstration under APART, KVK, Dhubri**

Year	Crop	Variety	Total area (ha)	No. of beneficiary	Yield (t/ha)	Remarks if any
2018-19	Summer Paddy	Bina Dhan 11	28.94	72	5.6	
2019-20	Sali Paddy	Ranjit sub1	261.25	667	5.6	
		Swarna sub1			5	
		Bahadur sub1			5.4	
2019-20	Summer Paddy	Improved paddy seed	18.86	35	At harvesting stage	
2019-20	Blackgram	IPU 02-43	6.25	35	0.86	

	(Kharif)				
2019-20	Lentil	KLS 218	6.25	23	0.98
2019-20	Rapeseed & Mustard	NRCHB-101	11.25	39	1.27
2019-20	Maize	Bio-9637	6.25	29	6.2
2019-20	Brinjal	Hybrid-33	1.25	5	9.2
2019-20	Cauliflower	Madhuri	1.25	5	15.1

### 6. Demonstration under NEH Components :

Crop	Variety	Technology demonstration	Area (ha)	No. of farmers	Yield				Economics of Local Check (Rs./ha)				Economics of Demonstration (Rs./ha)			
					Local check (q/ha)	Demo (q/ha)	% increase	District Avg. (q/ha)	Gross Cost	Gross return	Net Return	BC ratio	Gross Cost	Gross return	Net Return	BC ratio
Maize	HQPM-1	Improved package of practice	16.44	53	25.3	30	18.58	29.11	40300	72600	32300	1.8	39000	69000	30000	2.3
Chilli	G-4	Improved package of practice	0.13	2	75	84	12	8.86	55400	157500	102100	2.84	52300	158000	105700	3.02
Brinjal	PH-5	Improved package of practice	0.13	3	200	225	12.5	-	53600	133200	79600	2.49	56100	141300	85200	2.52
Cauliflower	MOTI	Improved package of practice	0.13	3	150	-	-	-	52500	123600	71100	2.35	-	-	-	-
Garden Pea	Arkel	Improved package of practice	4.53	38	20.8	22.4	7.69	-	20700	37440	16740	1.81	19540	40300	20760	2.06

**Note : The vegetable cauliflower was damaged due to premature curd formation**

**7. Demonstration programme under SCSP component 2019-20 :**

Sl. No	Crop	No of beneficiaries	No of village	Area (ha) / Nos
1	Arecanut	4	1	0.4
2	Coconut	1	1	0.13
3	Assam Lemon	8	1	0.65
4	Improved poultry (Kamrupa)	20	2	300 birds
5	Improved Duck ( Chara chemballi/ White Pekin)	20	1	400 birds

**8. Other Demonstration programme 2019-20 :**

Sl. No	Crop	No of beneficiaries	No of village	Area (ha) / Nos
1	Turmeric (Var. Megha turmeric)	4	1	0.13
2	Banana (Var. Malbhog)	1	1	0.13

**9. Adopted village :**

**Under Prime Minister's Mera Gaon Mera Gaurav Programme)**

**Village I : Futkibari**

**VillageII : Bhakatgaon**

**Village III : Charuabakra**

**Village IV : Laliapara**

**Village V : Jamduar**

**Village adopted for Doubling Farmers Income by 2022:**

Village I: Paschim Medhipara

Village 2: Ghunghunikhata

**Village adopted under NICRA Project:**

Village1. Udmari Pt IV  
Village2. Udmari Pt V  
Village3. Udmari Pt III  
Village4. Barshi Pt. I

**8.1 Constraints****(a) Administrative**

- Lack of permanent office building and other infrastructure facilities hinders smooth functioning of KVK activities

**(b) Financial**

- Allocation of fund for trainee's meal and training material is not sufficient.
- \* Release of fund lately causes problem in smooth conducting of the programme

**(c) Technical**

- Other than mandated activities affect normal function.
- Shortage of SMS creates problems in proper implementation of the programmes
- Information in respect of recent technology or technology in the pipeline for various OFT and FLD programmes are lacking.

**(C. K. Deka)**  
**Sr. Scientist & Head**  
**KVK, Dhubri**





recharge measures													
Water saving irrigation methods (Drip/sprinkler/raingun etc...)													
Crop residue incorporation instead of burning													
Low cost vermicompost	Low cost raised base vermi-composting unit	Bamboo, Plastic, Mother culture	10	10	-	-	-	Ongoing					

### Module 2: Crop Production Interventions

Interventions	Technology demonstrate	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmer	Area (ha)	Measurable indicators of yield* (q/h)		% increase	Economics of demonstration (Rs./ha)				Economics of Local (Rs./ha)			
					Demo	Local		Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net Return	BCR
Introducing flood tolerant varieties	Scaling up of submergence tolerant varieties of rice 'Ranjit sub 1' in rice toria cropping system of flash flood affected areas	Seed, Urea, SSP, MOP & Plant Protection Chemicals	46	10	42.3	38.2 (Ranjit)	10.73	30350.00	48645.00	18295.00	1.60	28500/-	43930/-	15430/-	1.54
	Demonstration of submergen	Seed, Urea, SSP,	27	5.0	41.8	37.6 (Ranjit)	11.17	30350.00	48070.00	17720.00	1.58	28500/-	43240/-	14740/-	1.51



Frost management in horticulture through fumigation															
Community nurseries for delayed monsoon															
Custom hiring centres for timely planting															
Location specific intercropping systems with high sustainable yield index															
Crop diversification	Introduction of high yielding variety of Toria 'TS-46'	Seed, Urea, SSP, MOP, Borax & Plant Protection Chemical	32	5.0	8.65	6.78	27.58	20900.00	34600.00	13700.00	1.66	19230.00	26960.00	7730.00	1.40
	Introduction of high yielding variety of Toria 'TS-38' to compensate losses during kharif crop	Seed, Urea, SSP, MOP, Borax Plant Protection & Chemical	32	5.0	8.52	6.70	27.16	20900.00	34080.00	13180.00	1.63	19230.00	26800.00	7570.00	1.39

	Up scaling of high yielding of late sown variety of Toria 'TS-67' to sustain livelihood in flood affected areas.	Seed, Urea, SSP, MOP, Borax Plant Protection & Chemical	32	5.0	8.60	6.12	40.52	21800.00	34400.00	12600.00	1.57	20230.00	24480.00	4250.00	1.21
	Cultivation of Black gram in flood affected areas in post flood situation	Seed, Urea, SSP, MOP & Plant Protection Chemicals	15	2.0	Crop failed due to prolonged rainy period										
Control of stem borer															
Income generation crop															
Introducing temperature tolerant varieties															
Staggered planting rice variety during kharif season under aberrant weather condition	Up scaling of delayed planting rice variety 'Gitesh' under aberrant weather condition	Seed, Fertilizer & Plant Protection Chemicals	26	5	38.9	28.2	37.94	30500.00	44735.00	14235.00	1.47	28800/-	32430/-	3630/-	1.13



Introduction of improved breeds																	
Integrated duck cum fish farming	Demonstration on Integrated duck cum fish farming	Cost of duck shed, fingerlings, ducklings, feed etc.	2	2/ 0.5 ha	-	-	-	Ongoing									
Others (Pl. specify) Low cost shelter for poultry	Low cost improved <i>Mechang</i> type poultry house for flood affected area	Cost of Bamboo, roof etc	5	5	-	-	-	Ongoing									
Low cost shelter for goat	Low cost improved <i>Mechang</i> type Goat house for flood affected areas	Cost of Bamboo, roof etc	4	4	-	-	-	Ongoing									

\* Output is in terms of litres (\*milk), number (eggs), kgs (meat), kg/ha (fodder yield)

\* Good relevant photographs

#### Module-4: Institutional Interventions

Interventions	Details of activity			Critical input (Breed / Variety / Medicine doses)	No. of farmers involved	Unit / No. / Area (ha)
	Name of crops /varieties Commodity groups / Implements	Quantity produced/ Number / Rent / Charges	Technology used in seed / fodder bank & function of groups			
Seed bank	Paddy variety <b>Ranjit Sub1</b>	86.0	Seed production	Seed, Urea, SSP, MOP and PP Chemicals	8	2.0
	Paddy variety	73.4	Seed production	Seed, Urea, SSP,	13	2.0

	<b>Naveen</b>			MOP and PP Chemicals		
	Paddy variety <b>Gitesh</b>	77.2	Seed production	Seed, Urea, SSP, MOP and PP Chemicals	15	2.0
	Toria variety <b>TS-38</b>	17.3	Seed production	Seed, Urea, SSP, MOP and PP Chemicals	5	2.0
	Toria variety <b>TS-67</b>	16.8	Seed production	Seed, Urea, SSP, MOP and PP Chemicals	8	2.0
Fodder bank						
Community Nursery	Establishment of community nursery in flood affected area with short duration rice variety	Transplanted area 5.0 ha	Seedling production and distribution as contingency measure	Seed, land preparation cost	9	0.60
Commodity groups	-	-	-	-	-	-
Custom hiring centre	Power tiller, sprayer, pump set, reaper, plant protection kit, hoe, sickle, rack, wheel hoe, SRI marker, weighing balance, power sprayer, drum, bucket, rope, measuring cylinder, Manual Duster etc.	-	Utilize the agricultural machineries and implements for cultivation of crops on hiring basis	-	63	1
Collective marketing	-	-	-	-	-	-
Climate literacy through a village level weather station						
Any other (Pl. specify)	-	-	-	-	-	-

**\*Good Relevant Photographs**

**Module-5: Capacity Building taken up (HRD)**

Sl. No.	Thematic area	Title of training	No. of Courses	No. of beneficiaries		Date	
				Male	Female	from	To
1	Crop diversification	Crop diversification through oilseed crop for sustainable livelihood	1	16	32	16.03.20	-
2	INM	Soil health card based INM in summer rice to increase crop productivity in changing climatic condition	1	33	11	18.03.20	-

- **Good relevant Photographs**

**Module-6: Extension Activities**

Name of the activity	Details about the activity	Number of programmes	Time of the programme conducted (From---to -)	No. of beneficiaries		Remarks
				Male	Female	
Exposure visit	Exposure visit of School Student to NICRA village	1	20 <sup>th</sup> November, 2018	20	24	Students were exposed to basic agriculture
Kisan Mela	Celebration of Kisan Mela on the occasion of World Soil Day	1	5 <sup>th</sup> December, 2019	170	130	Farmer were acquainted with new agril. technologies
Strengthening SHGs		-				
Strengthening kisan clubs		-				
Integrated farming system						
Field day	Field Day on Staggered planting rice variety Gitesh	1	20 <sup>th</sup> November, 2018	21	30	Farmer were convince with the result of the technology





**8. Impact of contingency measures (Relate the dry spells with crop and their growth stages):**

S. No	Dry spell ( no. of days)	Duration (from-- to--)	Crop name*	Crop stage	Intervention taken up	Number of farmers involved	Impact on crop yields (q/ha)	
							Farmers' practice	Demo
1	30 days	1 <sup>st</sup> Dec – 31 <sup>st</sup> Dec	Toria	Active vegetative stage	One light irrigation	52	-	-
4	31 days	1 <sup>st</sup> Jan – 31 <sup>st</sup> Jan	Toria	Siliqua formation stage	One light irrigation	41	7.1	6.7
			Summer rice	Seedling transplanted at main field	Irrigation	60	-	-
5	16 days	7 <sup>th</sup> Feb – 22 <sup>nd</sup> Feb	Summer rice	Tillering stage	Irrigation	51	-	-

\* List the interventions taken up for each crop

**9. Adoption of successful interventions in the NICRA village & the adjoining villages**

Successful interventions including crops and varieties	Extent of adoption in the village in ha.															
	2012		2013		2014		2015		2016		2017		2018		2019	
Demonstration on Submergence tolerance paddy variety 'Swarna Sub1'	-	-	2	-	4	-	5	-	6	-	1630 (Dept of Agriculture Scheme) 857.5 (Seed Village Scheme) 100 (Assam Seed Certification Scheme)	-	15	-	19	5

Demonstration on staggered planting paddy variety 'Gitesh'	0.27	-	2	-	4	-	4	-	6	-	8	-	8	-	16	8
Demonstration on semi deep water Rice Variety "Dipholu"	-	-	-	-	-	-	-	-	0.4	-	5	-	8	-	11	3
Demonstration on Boro paddy variety 'Joymati'	8	-	10	-	12	-	21.21	-	22	-	25	-	28	-	35	18
Crop Diversification with Toria variety "TS-36"	-	-	5	-	5	-	8	-	21	-	25	-	20	9	36	29
Crop Diversification with Toria variety "TS-46"	-	-	-	-	-	-	-	-	5	-	5	50** (CFLD programme)	8	60**	14	12
Crop Diversification with late sown Toria variety "TS-67"	-	-	-	-	-	-	-	-	5	-	9	-	12	7	27	9

\* Deptt of Agriculture, Assam has taken up demonstration on Submergence tolerance rice variety 'Swarna sub1'

\*\* CFLD programme was taken up by KVK, Dhubri

#### 10. Popularization of Climate Resilient Varieties

Crop*	Climate Resilient Varieties incorporated in the Kharif 2018 plan of the State Department	Approx. area brought under the variety by the state department during the Kharif 2018 (ha)
Rice	Submergence tolerance rice variety 'Swarna sub1'	152

	Submergence tolerance rice variety 'Bahadur Sub 1'	60
	Submergence tolerance rice variety 'Ranjit Sub 1'	95
	Staggered planting rice variety 'Gitesh'	23
	Summer rice variety Joymati	75
<b>Toria</b>	Timely sown Toria Variety "TS-36" in Rice (short duration) - Toria cropping sequence	25
	Timely sown Toria Variety "TS-46" in Rice (short duration) - Toria cropping sequence	85
	Late sown Toria Variety "TS-67" in Rice (long duration) - Toria cropping sequence	65
<b>Black Gram</b>	HYV Black gram variety Pratap & PU-31	80

**11. Awards Received during the year for the work related to NICRA : NIL**

Name of the award	Given by whom	When the award was given

**12. Distinguished visitors to the NICRA village during the year: Nil**

Name of the person	When the visit occurred	Significant comments/ suggestions

**13. Amount (Rs.) mobilized through convergence from various departments : Nil**

S. No.	Activity/ Intervention	Coverage [No. of farmers/Area (ha)]	Convergence established with (Name of the programme or department)	Approx. amount (Rs.) mobilized

#### 14. Publications and other products developed during the year

Item	Title /and Name of Journal	Authors name
Leaflet	Flood tolerant rice varieties	Dr. C. K. Deka, Mr. A. Pal, Dr. R. Islam, Dr. P. Sutradhar, Mr. G. Sharma, Mr. B. K. Das, Ms. N. Bhuyan, Ms. N. Nath, Mr. B. Borah, Ms. K. Boruah, Mr. G. S. Bordoloi
	Crop diversification through HYVs of Toria	Dr. C. K. Deka, Mr. A. Pal, Dr. R. Islam, Dr. P. Sutradhar, Mr. G. Sharma, Mr. B. K. Das, Ms. N. Bhuyan, Ms. N. Nath, Mr. B. Borah, Ms. K. Boruah, Mr. G. S. Bordoloi

#### 15. Significant observations about the project/ the performance of interventions/ adoption of interventions/ livelihood improvement etc.

1. The farmers of NICRA village have shown interest for adopting HYV of rice like Swarna Sub 1, Ranjit Sub 1, Bahadur Sub 1, Gitesh & Dipholu (for *Sali* season) and Joymati (for *Boro* season)
2. Also adopting HYV Toria varieties TS-38 & TS 46 (as timely sown crop) and TS-67 (as late sown crop)
3. Few farmers are maintaining seed bank of rice varieties Swarna Sub1, Gitesh & Dipholu and Toria variety TS-67 and serving the fellow farmers by providing seeds, also generating subsidiary income for livelihood improvement.
4. Low cost raised bed vermicomposting Unit are adopted by most of the farmers of the village and nearby ones.
5. Low cost improved goat house and poultry house become highly popular among the farmers specially for flood affected areas
6. Farmers become alert for maintaining fodder bank (Hybrid Napier) for animal feed especially during the time of flood.

Farmers getting attracted towards IFS as it minimize the risk in farming.