

## **ANNUAL REPORT OF KVK, KOKRAJHAR FOR THE YEAR 2016-17**

### **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, AAU, Kokrajhar, Telipara, Gossaigaon, Dist.- Kokrajhar, Pin.: 783360, Assam	03669- 292704	-	kvkkokrajhar@gmail.com kvk_kokrajhar@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	0376-2340029	-	kvk.aau@gmail.com dee@aau.ac.in

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

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr. Manoj Kumar Bhuyan	-	9435084843	pcmkbhuyan@gmail.com

#### 1.4. Year of sanction: 1985

#### 1.5. Staff Position (As on 31<sup>st</sup> March, 2017)

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	Programme Coordinator	Dr. Manoj Kumar Bhuyan	Programme Coordinator	Soil Science	37400/- 67000/- G.P. 9000/-	58830/-	11-08-2011	Permanent	Gen
2	Subject Matter Specialist	Mrs Sanchita Brahma	Subject Matter Specialist	Horticulture	15600/- - 39,100/- - G.P. 6000/-	27390/-	07-11-08	Permanent	ST
3	Subject Matter Specialist	Mr. Mahadev Uzir Basumatary	Subject Matter Specialist	Agronomy	15600/- - 39,100/- - G.P. 6000/-	27390/-	29-07-09	Permanent	ST
4	Subject Matter Specialist	Mr. Goutom Bhagawati	Subject Matter Specialist	Plant Protection	15600/- - 39,100/- - G.P. 5400/-	22280/-	03.02.2014	Permanent	Gen
5	Subject Matter Specialist	Mr. Ankur Rajbongshi	Subject Matter Specialist	Fishery Science	15600/- - 39,100/- - G.P. 5400/-	21630/-	19.10.2016	Permanent	OBC

6	Subject Matter Specialist	Mr. Bhupen Kumar Baishya	Subject Matter Specialist	Soil Science	15600/- - 39,100/- G.P. 5400/-	21630/-	19.10.2016	Permanent	Gen
7	Subject Matter Specialist	Mrs. Porna Sarmah	Subject Matter Specialist	Home Science	15600/- - 39,100/- G.P. 5400/-	21630/-	31/01/2015	Permanent	Gen
8	Programme Assistant	Dr. Firfila Basumata ry	Programme Assistant	Animal Science	8000/- - 35000/- G.P. 4900/-	12900/-		Permanent	Gen
9	Computer Programmer	Mr. Mridul Kumar Haloi	Programme Assistant	Computer Application	8000/- - 35000/- G.P. 4900/-	14980/-	13-09-11	Permanent	SC
10	Farm Manager	Mr. Poran Kishore Dutta	Farm Manager	Soil Science	8000/- - 35000/- G.P. 4900/-	12900/-	09-08-2016	Permanent	Gen
11	Accountant / Superintendent	Mr. Akhil Roy Choudhury	Accountant / Superintendent	Accountancy	8000/- - 35000/- G.P. 4900/-	13690/-	10-11-14	Permanent	Gen
12	Stenographer	-	-	-	-	-	-	-	-
13	Driver	Mr. Sabed Ali Sheikh	Driver cum Mechanic	-	5200/- - 20200/- G.P 2200/-	8690/-	22-02-12	Permanent	Gen
14	Driver	Mr. Sikandar Basumata ry	Driver cum Mechanic	-	5200/- - 20200/- G.P 2200/-	7400/-		Permanent	ST
15	Supporting staff	Mr. Robindra Nath Narzary	Watchman	-	5200/- - 20200/- G.P 2200/-	14450/-	01-11-85	Permanent	ST
16	Supporting staff	Mr. Dwijen Basumata ry	Kitchen Attendant	-	5200/- - 20200/- G.P 2200/-	14450/-	15-11 - 85	Permanent	ST
	<b>Total</b>	<b>15</b>							

**Note: No column in the table must be left blank**

- 1.6. a. Total land with KVK (in ha) : 11  
b. Total cultivable land with KVK (in ha) : 7.5  
c. Total cultivated land (in ha) : 6.0

S. No.	Item	Area (ha)
1	Under Buildings (Administrative building+ Farmers' Hostel+ Staff Quarters)	1.5
2.	Under Demonstration Units	0.50
3.	Under Crops (Cereals, pulses, oilseeds etc.)	7.5
4.	Under vegetables	-
5.	Orchard/Agro-forestry	1.5
6.	Others (specify)	-

## 1.7. Infrastructural Development:

## 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. A	Administrative Building (Old)	ICAR	1987-88	157.45	2.00 lakh	-	-	-
B	Administrative Building (New)	ICAR	2015	332	86.73 lakh	-	-	Completed
2.	Farmers Hostel	ICAR	1987-88	910.10	14.00 lakh	-	-	Damaged, need major repairing
3.	Staff Quarters (1)	ICAR	2003	132.76	5.98 lakh	-	-	Working
4.	Demonstration Units							
A	Poultry unit	RKVY	2010	45.00	2.19 lakh			Working
B	Piggery unit	RKVY	2010	145.00	6.06 lakh			Working
C	Goatery Unit	RKVY	2010	18.0	1.32 lakh			Working
D	Display & demonstration unit	RKVY	-	6 m in hexagonal shape	4.48 lakh			Working
E	Rice-fish vegetable farming unit	RKVY	2010	224 running meter	2.0 lakh			Working
F	Polyhouse	ATMA	2011		1.0 lakh			Working
G	Vermicompost unit	RKVY	2010	50.0	1.12 lakh			Working
H	IFS (Poultry-Fish-Horticulture farming)	RKVY	2012	2600msq	5.95 lakh			Working
I	Azolla	RKVY	2012		2.72 lakh			Working
J	Compost & Vermicompost	RKVY	2012		2.20 lakh			Working
5	Fencing	ICAR	1995	0.80km	4.92 lakh	-	-	Need repairing
		ICAR	2015	300 rm	13.24 lakh			Working

## B) Vehicles

Type of vehicle	Regd. No.	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Jeep	AS-03E-0023	2006	490503.00/-	138076	Running
Tractor	AS-16C-0706	2003	Transferred from RARS, Diphu	1242	Not running
	AS-16D-0010	2013	570925.00	2603	Running

## C) Equipments &amp; AV aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
Amplifier	1988	3202.00	Repairable
Black Board	1987	150.00	Damaged
Calculator Machine	1986	252.00	Damaged
Camera	1987	5544.00	Repairable
Desktop Computer	2005	46206.00	Damaged
Digital Camera	2006	15080.00	Damaged
Digital Camera (Sony)	2010	19000.00	Damaged
Duplicating Machine (Manual)	1986	6708.26	Damaged
Duplicating Machine (Automatic)	1995	39050.00	Repairable
Fax Machine (Brother)	2010	15,190.00	Working
Film Rewinder	1988	179.20	Repairable
Flash Gun	1988	570.00	Damaged
Generator	1987	17360.00	Damaged
Horn	1988	358.00	Working
Line Connecting Transformer	1988	616.00	Damaged
Microphone	1988	1891.00	Repairable
Microphone Stand	1988	276.00	Working
Photophone OHP	1988	4256.00	Damaged
Photophone Superlite Sound Projector	1988	12152.00	Repairable
Projection Screen	1988	856.80	Working
Projector Roll (Cinema)	1988	196.00	Damaged
Projector Screen	1988	442.90	Working
Slide Projector	1988	4256.00	Damaged
Television Set	1988	10145.00	Damaged
Xerox Machine (KM – 1635 MFP Printer)	2007	50440.00	Working
Xerox Machine (Kilburn )	2010	101920.00	Working
Digital Inverter (Electra – EEDI 800)	2007	13540.00	Battery damaged
LCD Projector	2010	98331.00	Damaged
UPS (Uniline-800VA FBLI UPS)	2010	5964.00	Damaged
Mechanized Grass Cutter	2009	28000.00	Working
Multipurpose power weeder	2009	42078.00	Working
Power paddy weeder	2009	36254.00	Working
Rice transplanter	2009	188198.00	Working
Earth Auger	2009	56749.00	Working
Water pumps (3 nos.)	2009 & 2010	30,000.00	Working
Seed cleaner	2009	311012.00	Working
Rotavator (2 nos.)	2009	95805.00	Working
Puddler	2009	25896.00	Working
Chaff cutter	2009	15496.00	Working
Voltage stabilizer	2007	3999.00	Working
Poly Sealing Machine	2012	2838.00	Damaged
Desktop Computer	2010	27547.00	Working
Balance	2011	9591.00	Working
BOD Incubator	2011	-	Working
Horizontal Leminar Flow	2011	-	Working
Ph meter	2011	2270.00	Working
Autoclave	2011	93638.00	Working
Hot Air Oven	2011	36888.00	Working
Incubator	2012	-	Working
Laminar Flow	2012	-	Working

Refrigerator	2012	15990.00	Working
Bharat paddy thresher (2)	2013	390001.50	Working
Front mounted vertical conveyance reaper	2013	260001.00	Working
Projector	2013	-	Working
Motorized screen with remote	2013	-	Working
Dehumidifier	2013	-	Working
Digital pH = temperature metre	2013	-	Working
Portable FRP carp Hatchery	2014	-	Working
Hatchery pool	2014	-	Working
Egg/ Spawn collection tank	2014	-	Working
Composite feed mill	2014	-	Working
Egg incubator	2014	-	Not working
Maize shaller	2014	-	Working
Maize dehusker cum sheller	2016	-	Working

1.8. A). Details SAC meeting\* conducted in the year 2016-17

Sl. No	Date	Name and Designation of Participants	Salient Recommendations	Action taken on last SAC recommendation
1.	10.03.2017	1.Dr. H. C. Bhattacharyya DEE, AAU, Jorhat 2.Dr. R.Sarma SCS College of Agriculture , AAU,Dhubri 3.Dr.D.N.Kalita P.C, KVK,Kamrup 4.Dr.C.K.Sarma P.C, KVK, Bongaigaon 5.Dr. S.K. Paul Chief Scientist, RARS, Gossaigaon 6.Mr.Dinesh Banikya CHD, Fishery, Kokrajhar 7.Dr. D.K. Bhuyan District Veterinary Officer, Kokrajhar 8.Mr. Z. Hussain District Soil Conservation Officer, Kokrajhar 9.Mr. N. Dey Junior Engineer, DRDA, Kokrajhar 10.Mr. D. Mushahary ADO, Kochugaon 11.Mr. Binod Deka Asstt. Soil Chemist, Kokrajhar, BTC 12.Mr. G. Basumatary UCO Bank, Kokrajhar 13.Mrs. B. Deuri, DDM, NABARD, Kokrajhar,	1. The OFT of Varietal performance of late sown toria (var.TS-67) should be included in FLD 2. Testing of Sati for weed management. 3. Concentration on doubling the income of farmers through cultivation of pulse and oilseed, 4. Distribution of soil health card to 10,000 farmers within this year. 5. Awareness programme on Prime Ministers Fasal Bima Yojana 6. Assign at least 2-4 OFT to each scientist 7. Introduction of TTB-404 and Motrie variety to the farmers 8. OFT under the discipline of Horticulture should be relevant with Ph.D work. 9. Testing of Arka Nirajan 10. Integrated nutrient management of Kharif Black gram should be included in FLD 11. OFT on Performance assessment of bunch cover in banana should be included in FLD 12. Organized skill development training at least 3-5 days along with practical and bring to an end one day training 13. Work on fox millet along with performance of bio fertilizer, azotobacter. 14. Revision of OFT and FLD under the discipline of plant protection and study on major disease of banana and arecanut problem in Kokrajhar district,	1. Vocational training on fishery organized 2. Analysis of water quality parameters of fish ponds of the district has been done 3. Organizing of Animal Health Camp 4. Awareness Programme on Fodder Production conducted

			<p>15. Change the OFT of Application of natural dye on yarn.</p> <p>16. Participate the SMS (Fisheries Science) on the training programme organized by Department of fisheries,BTAD,Kokrajhar</p> <p>17. Introduce Kamrupa to the farmers field and used of vety Department poultry hatchery for kamrupa breed</p> <p>18. Testing and organized awareness programme for AAUVETMIN and convergence with Vety Department.</p> <p>19. Development of cluster with vety department, BTC,Kokrajhar</p> <p>20. Prepared a list of best farmer and submitted to NABARD</p> <p>21. Disseminated the technology by increasing the area through NABARD</p> <p>22. Awareness programme for agri-clinics</p> <p>23. Identification of organic area and importance of organic certification.</p> <p>24. Testing of organic on indigenous and hybrid variety</p> <p>25. Organized the training programme on Organic farming.</p>	
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**\* Proceeding attached in Annexure:4**

## **2. DETAILS OF DISTRICT**

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

Sl. No	Farming system/enterprises
1	Agri + Horti + Dairy Cow + Goatery + Poultry + Duckery
2	Agri + Horti + Dairy Cow + Goatery + Piggery + Poultry + Duckery + Pigeon + Fishery
3	Agri + Horti + Dairy Cow + Piggery + Poultry
4	Agri + Horti + Dairy Cow + Buffalo + Piggery + Poultry + Duckery + Pigeon
5	Agri + Horti + Dairy Cow + Goatery + Poultry + Duckery + Fishery

### **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 (LBVZ) of Assam	The climate is humid sub-tropical in nature characterised by warm – humid summer cool – dry winter. The monsoon months (June-September) are wet receiving 65-70% of the total rainfall while the winter months (December-February) remain virtually dry. The mean maximum and minimum temperature varies from 33-38°C and 8-10°C respectively.
	Agro ecological situation	
a.	Foot hills old mountain valley	Foot hills of Bhutan in northern part of the district. The soil is loamy to clay, rich in organic matter
b.	Flood free riverine old alluvial plain	Plain areas, sandy to sandy loam soil free from flood
c.	Flood prone riverine alluvial plain	Flood prone areas affected by river Champabati, Gaurang, Saralbhag and Sankosh
d.	Hills and hillocks	Hills and Hillocks areas, red clay soil
e.	Beels	Marshy/Swampy land, water logging, low lying areas and covered with water hyacinth

## 2.3 Soil type/s

Sl. No	Soil type	Characteristics	Area in ha
1	Alfisols (mountain valley)	Soil is loamy to clay and built up alluvial materials washed down from the hills slope. Medium to heavy textured soil	93658
2	Inceptisols (old alluvium)	Soils are old riverine alluvial type. Sandy loam to loamy soil and free from flood	162962
3	Entisols (recent alluvium)	Soils are recent riverine alluvial plain. Sandy or loamy sand and light textured soil	20758
4	Ultisols (laterised red)	Old alluvial soils are found. The surface soils are generally red to reddish brown and acidic in nature	37824

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

Sl. No	Crop	Area (ha)	Production (ton)	Productivity (Qtl /ha)
1	Wheat	1513	4093	27.05
2	Millets	325	192	5.91
3	Gram	76	42	5.53
4	Green Gram	495	317	6.4
5	Total Rabi pulse	5398	2848	5.28
6	Mesta	1298	9707	74.78
7	Cotton	20	9	4.5
8	Tapioca	785	8046	102.5
9	Sweet Potato	475	1889	39.77
10	Chillies	487	400	8.21
11	Turmeric	645	580	8.99
12	Onion	360	1060	29.44
13	Ginger	360	2724	75.67
14	Rapeseed & mustard	25135	16243	6.46
15	Niger	1045	549	5.25
16	Linseed	470	269	5.72
17	Sesamum	380	267	7.03
18	Banana	1215	21848	179.82
19	Pineapple	550	8536	155.2
20	Papaya	375	10049	267.97
21	Arecanut	1650	2788	16.9
22	Coconut	400	3118	77.95
23	Orange	498	4774	95.86
24	Castor	90	52	5.78
25	Tobacco	20	9	4.5
26	Lathyrus (Matikalai)	2165	1051	4.85
27	Tur	439	381	8.68

**Source:** District Agriculture Office, Kokrajhar BTC (2014-2015)

## 2.5. Weather data

Month	Rainfall (mm)	Temperature °C		Relative Humidity (%)	
		Maximum	Minimum	Max	Min
April, 2016	205.10	30.8	21.0	88.4	64.2
May, 2016	514.4	30.5	22.0	90.2	72.5
June, 2016	1075.1	32.4	24.6	94.8	76.4
July, 2016	720.1	30.8	25.0	96.5	85.0
August, 2016	148.3	34.3	26.0	93.2	71.9
September, 2016	544.9	31.9	24.0	95.6	77.1
October, 2016	192.7	32.3	21.1	93.0	64.0

November, 2016	0.0	30.0	15.0	91.0	52.5
December, 2016	0.5	27.9	11.0	93.0	47.0
January, 2017	0.0	26.5	8.0	94.2	44.3
February, 2017	0.0	28.3	11.5	94.7	44.3
March, 2017	3.2	28.1	15.0	91.8	55.0

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

Category	Population	Production	Productivity
<b>Cattle</b>			
Crossbred	536	15,22,156 ltrs (Milk)	6 ltrs/day/ Animal
Indigenous	353253		750 ml/day/Animal
<b>Buffalo</b>	<b>14983</b>		1.5 ltrs/day/Animal
<b>Sheep</b>			
Crossbred	-	-	-
Indigenous	13686	14,84,350 kgs (Meat)	8 kg/ Animal
<b>Goats</b>	<b>159979</b>		5 kg /animal
<b>Pigs</b>	<b>98970</b>		
Crossbred	32927		60 kg /Animal
Indigenous	66043		30 kg / Animal
<b>Rabbits</b>			
<b>Poultry</b>			
Hens	189999	4,51,800 Nos.	160 Nos./ year/Bird
Desi			
Improved			
Ducks	132610		120 Nos. /year/ Bird
<b>Turkey and others</b>	-	-	-

Table: Production and productivity of Inland Fisheries in Kokrajhar District

Category	Area (Ha)	Productivity (Kg/ha)	Production (Ton)
River Fisheries	4289.70		75.22
<b>Beel Fisheries</b>			
Registered Beel	1499.00	1500	508.93
Unregistered Beel	567.50	300	
Forest fisheries	35	300	234.80
Community pond and tank	105		-
Ponds and tanks	1700.64	2500	528.44
Swamp and waste land (Low lying area)	371.00	300	108.62
Reservoir Fisheries	-	190	53.92
Paddy field /cannel	-	238	249.36

**Source:** Joint Director cum CHD, Fisheries Department, BTC, Kokrajhar, BTC (2013-14)



## 2.6 Details of Operational area / Villages (2016-17)

Sl. No.	Taluk/ Eleka	Name of the block	Name of the village	Major crops & enterprises	Major problem identified	Identified thrust area
1	Gossaigaon	Gossaigaon	Matiajuri, Rangapara, Padmabil, Joyma, Kusumbil, Bhumka, Chakma, Bashbari, Babubil, Thuribari, Bhawraguri, Natunpara, Guwabari, Sagunhara, Choto Binnyakhata, Gambaribil, Kamalsing Dhauliguri Singimari Kandanpara Mallikpur	Boro Rice and early Ahu, Lentil, Pea, Linseed, Rapeseed, Vegetables, Potato, Flowers	i. Low productivity of Oilseeds and Pulses due to non-adoption of recommended varieties ii. Production problem in Potato	i. Popularisation of HYV of Summer and Boro rice ii. Introduction of high yielding Pulse and Oilseed varieties iii. Commercial potato and fruit production
		Hatidhura	Jacobpur, Fwilaguri, Majadabri, Kamandanga, Haripur, Tamahat, Simaltapu, Grahampur, Srirampur, Palashkandi	Rice, Maize, Rapeseed, Niger, Wheat, Vegetables, Goatery	i. Poor yield in Oilseeds and Pulses ii. Pest and Disease problem iii. Low productivity due to rearing of local breed of goat iv. Sandy and light textured soil	i. Popularisation of improved varieties of Oilseed and Pulse ii. Integrated Pest and Disease management iii. Improvement of productivity of Goatery iv. Soil health and fertility management

		Kachugaon	Ballamguri, Malaguri, Bhadiaguri, Ballimari, Jaymaguri, Dawaguri, Goladangi, Bajugaon, Jaraguri, Maktaigaon, Bhomrabail, Saraibil, Mothambail, Nasrabail, Borobadha, Burichattam, Haoriapet, Hashraobari, Hatigarh, Garufella, Sapkata, Gakulkata, Polashguri, Kachugaon Batabari Chengmari Jambuguri Jiaguri Samdasguri Katribari Khagrabari Gaon chulka Raimona Raikhanbari Modati	Rice, Maize, Vegetables, Rapeseed, Lentil, Pea, Buckwheat, Niger Beekeeping	i. Pre and Post Production problem in Vegetables ii. Poor fertility status of soil iii. Lack of scientific knowledge and skills about rearing of honey bee	i. Low volume – high value Vegetables ii. Soil health and fertility management iii. Commercial fruit production and processing iv. Popularisation of Beekeeping
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2	Kokrajhar	Titaguri	<p>Debargaon, Narabari, Gendrabil, Kunthaibari, Titaguri, Kumguri, Sukanjhara, Chandrapara, Simborgaon, Uttar Patgaon, Amlaguri, Jharbari, Ghoramari, Bhumki, Dakhin Karigaon, Dawkibari, Kakrighola, Nayekgaon, Bandarmari, Harighola, Harigaon, Bamungaon, Diplaibil, Salakati, Bandarchara, Chautaki, Bangaldoba, Diajhajuri, Kalugaon, Janagaon</p>	<p>Piggery, Poultry, Aqua-farming, Sericulture, Agro-forestry, Winter vegetables,</p>	<p>i. Low production of meat and egg ii. Fish seed formulation, feeding technology and pond management iii. Poor quality and low yield of worm due to traditional rearing method iv. Dearth of scientific knowledge regarding agro-forestry plantation</p>	<p>i. Rearing of Pig and Poultry ii. Integrated Fish farming iii. Rearing of Eri, Muga and Silk worm iv. Agro-forestry plantation technology v. Spice production and value addition</p>
		Dotma	<p>Angthihara, Simlaguri, Batabari, Dotma, Barshijhora, Umanagar, Baldiathan, Fakiragram, Saktiashram, Chithilaghob, Athiabari, Ghoshkata, Sikargaon, Laudanga, Dangarkuti, Bhalukmari, Puthimari, Lakhnabari, Ramfalbil, Serfanguri, Medhipara, Pratapkahata</p>	<p>Dairy, Piggery, Mushroom, Fruit preservation, Tailoring and Stitching</p>	<p>i. Low productivity and management problem in Dairy and Piggery ii. Lack of scientific knowledge about mushroom production iii. Storage problem of fruit iv. Lack of technical knowledge and skills regarding tailoring, stitching and knitting</p>	<p>i. Improvement of productivity of Dairy ii. Rearing of Pig iii. Production techniques of Mushroom iv. Processing of fruit v. Tailoring, Knitting and Embroidery techniques for women</p>

3	Parbatjhora	Rupsi	Kajigaon, Manglajhora, Tipkai, Molandubi, Kurshakati Belbari Ambari Hatibandha Bamunipara	Ahu, Boro rice, Rapeseed, Potato, Summer vegetables	i. Low yield of Rice due to growing of local varieties ii. Production and management problem of vegetables and spices iii. Pest and Disease problem	i. Popularisation of HYV of Summer, Sali and Boro rice ii. Low volume – high value Vegetables iii. Spice production and value addition iv. Integrated Pest and Disease management
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### 3. TECHNICAL ACHIEVEMENTS

#### 3. A. Details of target and achievements of mandatory activities by KVK during 2016-17

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
Agronomy	2	2	6	6	2	2	10	10
Horticulture	2		6		3		25	
Soil Science	2	3	8	10	6	6	183	183
Plant Protection	2	2	6	6	5	5	138	138
Animal Science	1	-	3	-	1	1	5	5
Fisheries Science	2	2	6	6	4	4	21	21
Home Science	2	-	15	-	3	2	26	11
<b>Total</b>	<b>13</b>	<b>9</b>	<b>48</b>	<b>24</b>	<b>21</b>	<b>17</b>	<b>250</b>	<b>210</b>

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	75	36	1875	897	1870	1549	7199	5965
Rural youth	26	19	520	360				
Extn. Functionaries	13	5	260	120				
Total								
Seed Production (ton.)				Planting material (Nos. in lakh)				
5				6				
Target		Achievement		Target		Achievement		
12.2 t		112.406		1.14 lakh		855 nos		

## 3. B. Abstract of interventions undertaken during 2016-17

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	IPM	Coconut	Insect, pests disease	Integrated management approach against important insect pests and rodents of coconut.	-	Important disease/insect pests of coconut/are canut and their management	-	Group Discussion, Diagnostic visit	
2	IDM	Strawberry	Diseases	Biological management methods of grey mould, leaf spot and phytophthora crown rot disease in strawberry.	-	Diseases of strawberry and their management,	-	Diagnostic visit, group discussion	
3	Energy saving tool	Weaving	Drudgery/fatigue and back Pain during weaving		Ergonomically design weaving chair for fly shuttle weavers	Drudgery reduction technology for farm women	-		Wooden Ergonomically design weaving chair is provided.
4	Organic dye	Dying	Poor use of Organic dye		Application of Natural dye on Cotton yarn	Skilled development training on garment Construction and value addition through tie and dye.			Cotton yarn, Mordant and dye.

5	Breed introduction	Kamrup a birds	Low productivity of the local poultry birds.		Introduction of Kamrupa birds under backyard management condition in Kokrajhar District.	1. Management of poultry diseases  2. Diseases of pig and its management and control.  3. Care and management of pregnant sow and new born piglets.  4. Scientific management of goat.		Animal Health camp cum Awareness Programme conducted with collaboration with IVRI, Eastern Regional Station.	Kamrupa birds
6	Poly culture of carps	Fish	Common carp has some drawbacks i.e.; browsing of pond embankment, prolific breeding nature etc. This results in economic loss to the farm	Study on growth of indigenous minor carps Mali (L calbasu) and Kurhi (L gonius) as an alternative of Common carp (Cyprinus carpio) under composite carp culture technology	-	Management of Composite fish culture	-	Field visit & monitoring	Supply of Fish fingerling along with Lime as per recommended by FRC, AAU, Jorhat

7	Pond Management	Fish	Water retention capacity of soil is poor	Performance evaluation of Low cost polyethylene in highly erodible light textured soil of homestead pond	-	Scientific construction of a fish pond	-	Field visit & monitoring	Distribution of black polyethylene among the farmer
8	Pond Management	Fish	Unscientific management of fish culture	Fertilizer Management of Composite fish culture		Water quality management of fish culture	-	Field visit & monitoring	Distribution of fertilizer and Lime as per recommended by FRC, AAU, Jorhat
9	Integrated Fish Farming	Fish-Rice-Vegetable	Low yield and mono-cropping of rice	Rice-Fish-vegetable IFS module		Integrated Fish farming	-	Field visit & monitoring	Distribution of Fish seed, Paddy Seed (Ranjit), Knolkhol, Frenchbean, Chilli as per recommended by FRC, AAU, Jorhat

10	Composite fish culture	Fish Catla, Rohu, Mrigal and Silver carp, Grass carp and Common carp	Inappropriate stocking with incompatible species	Scientific species combination and ratio in composite fish culture		Scientific species combination and ratio in composite fish culture	-	Field visit & monitoring	Distribution of Fish fingerling as per recommended by FRC, AAU, Jorhat
11	Air-breathing fish culture	Fish (Magur)	Low water level of fish pond	Supply of Fish fingerling along with Lime as per recommended by FRC, AAU, Jorhat		Carp seed raising in homestead pond	-	Field visit & monitoring	Distribution of Fish seed as per recommended by FRC, AAU, Jorhat
12	Varietal evaluation	Black gram	Low productivity due to existing varieties	Varietal performance of Kharif black gram SBC- 40 and PU- 31		-	-	Field visit, group meeting etc.	Seeds, fertilizers, chemicals
13	Integrated Crop management	Grass pea	Monocropping of saline rice due to long duration	“Utter cropping of grass pea with Sali rice		-	-	Field visit, group meeting etc.	Seeds, fertilizers, chemical
14	Crop management	Boro rice	High water requirement during summer	-	FLD on SRI in summer rice	-	-	Field visit, group meeting, field day	Seeds, fertilizers, chemical







A.3. Abstract of the number of technologies **assessed** in respect of livestock / enterprises

Thematic areas	Cattle	Poultry	Sheep	Goat	Piggery	Rabbitery	Fisheries	TOTAL
Evaluation of Breeds	-	-	-	-	-	-	-	-
Nutrition Management	-	-	-	-	-	-	1	1
Disease of Management	-	-	-	-	-	-	-	-
Value Addition	-	-	-	-	-	-	-	-
Production and Management	-	-	-	-	-	-	1	1
Feed and Fodder	-	-	-	-	-	-	-	-
Small Scale income generating enterprises	-	-	-	-	-	-	-	-
<b>TOTAL</b>	-	-	-	-	-	-	<b>2</b>	<b>2</b>

A.4. Abstract on the number of technologies **refined** in respect of livestock / enterprises

Thematic areas	Cattle	Poultry	Sheep	Goat	Piggery	Rabbitery	Fisheries	TOTAL
Evaluation of Breeds	-	-	-	-	-	-	-	-
Nutrition Management	-	-	-	-	-	-	-	-
Disease of Management	-	-	-	-	-	-	-	-
Value Addition	-	-	-	-	-	-	-	-
Production and Management	-	-	-	-	-	-	-	-
Feed and Fodder	-	-	-	-	-	-	-	-
Small Scale income generating enterprises	-	-	-	-	-	-	-	-
<b>TOTAL</b>	-	-	-	-	-	-	-	-

#### 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	Biological management methods of grey mould, leaf spot and phythophthora crown rot disease in strawberry.	The occurrence of leaf spots, grey mould and crown rot detected in some pockets is seen as problems that needs immediate attention.: The occurrence of leaf spots, grey mould and crown rot detected in some pockets is seen as problems that needs immediate attention.	T1 -Application of Bio-Time (Combination of <i>Pseudomonas fluorescens</i> , <i>T. viride</i> and <i>Metarhizium anisopliae</i> ) <ul style="list-style-type: none"> <li>Seedling root dip treatment,</li> <li>Soil application</li> </ul> T2 -Farmers practice & T3 - Without treatment	Strawberry	3	Leaf spot count Treatment - 2(0-4) Control – 8(4-12) Grey mould infected fruit Treatment - 1 (0-4) Control –4(2-6) Rot infected plants Treatment - 0 Control –6(4-12) Yield Treatment – 500 grams per plant Control – 250 gms per plant	Excellent	-	12:1
2	Integrated management approach against important insect pests and rodents of coconut.	Insect pests are diverse and needs selective treatments for management and so is with rodents.	T1 -Cut fronds leaving a petiole length of 120 cm, <ul style="list-style-type: none"> <li>Log trapping with toddy for red palm weevil,</li> <li>Use of pheromone traps @ 20 per ha</li> <li>Setting up of light traps,</li> <li>Trunk branding with aluminum</li> </ul>	Coconut	3	Insect collected in log trapping (Red palm weevil), T-6(4-8) C-0 Insect trapped in pheromone traps (Rhinoceros beetle/red palm weevil),	Satisfactory	Inclusion of disease component	4:1

			sheet, • Spray neem oil+garlic +soap(20ml+20g+5g) • Bromodiolone @ 30 bait points/ha • Trichoderma harzianum fortified need cake application, T2 -Farmers practice & T3 - Without treatment			T- 12 (8-16) C-0 Number of dropped nuts, (rodent damage) T- 0 C-4 (2-6) Number of dropped small nuts (mite), T- 3 C-9 Number of mature nuts in an inflorescence T-23 C-12 YIELD- T-50 C-19			
3	Study on growth of indigenous minor carps Mali ( <i>L. calbasu</i> ) and Kurhi ( <i>L. gonius</i> ) as an alternative of Common carp ( <i>Cyprinus carpio</i> ) under composite carp culture technology	<i>Common carp has some drawbacks i.e.; browsing of pond embankment, prolific breeding nature etc. This results in economic loss to the farm</i>	Study on growth of indigenous minor carps Mali ( <i>L. calbasu</i> ) and Kurhi ( <i>L. gonius</i> ) as an alternative of Common carp ( <i>Cyprinus carpio</i> ) under composite carp culture technology	Fish	3	1.Demonstration unit Av.Weight gain (g) and Av.Length (cm) – <i>C. catla</i> – 559.22g, 33.42cm <i>C. idella</i> - 300.12g, 30.5cm <i>L. rohita</i> - 348.85g, 31.40cm <i>C.mrigala</i> - 387.32g, 32.30cm <i>H.molitrix</i> - 310.10g,	A)Farmers are happy with the growth rate of minor carps Mali ( <i>L. calbasu</i> ) and Kurhi ( <i>L. gonius</i> ) as an alternative of Common carp ( <i>Cyprinu</i>	A) Research on low-cost feed formulation for these species needs immediate attention, as no attempts has been made so far. B)Horizontal expansion for the culture of these	2.7:1

					<p>32.00cm  <i>L. calbasu</i>-  280.23g,  28.12cm  <i>L. gonius</i>-  300.23g,  32.13cm  2. Farmer  Practice  Av. Weight gain  (g) and  Av. Length (cm)  –  <i>C. catla</i> –  365.22g,  25.66cm  <i>C. idella</i> -  229.63g,  25.45cm  <i>C. carpio</i> -  327.33g,  28.32cm  <i>L. rohita</i> -  200.28g,  25.53cm  <i>C. mrigala</i>-  309.78g,  29.09cm  <i>H. molitrix</i>-  241.03g,  26.40cm  3.  Demonstration  unit-  production(t/ha)  -2.8 and Farmer  practice(t/ha)-  2.5  4. Demonstration  unit-B:C-2.7</p>	<p><i>s carpio</i>)  B) The  initial  growth  rate  minor  carps is  fast,  being  advantageous  in short  duration  culture in  seasonal  water  bodies  C)  Farmers  are  interested  to take  up the  culture  minor  carp in  the form  of  monoculture  or  composite  fish  culture.</p>	<p>species are  required,  covering  both season  and  perennial  water  bodies  which are  unutilized at  present  b)  Research  on maintain  of  temperature  during  summer.</p>	
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						<i>and Farmer Practice-1.8</i>			
4	Performance evaluation of Low cost polyethylene in highly erodible light textured soil of homestead pond	<b>Water retention capacity of soil is poor</b>	Performance evaluation of Low cost polyethylene in highly erodible light textured soil of homestead pond	Fish	3	<p>1. Demonstration unit- Average Water storage capacity Monsoon-4.54 lakh litres Post monsoon-3.82lakh liter Fish Production(t/ha) -2.6 B:C-2.5:1</p> <p>2.Farmer Practice Average Water storage capacity- Monsoon-4.36 lakh litres Post monsoon-1000 liter Fish Production(t/ha) -1.8</p>	<p>a)Multiple use of harvested water. b)Effective storage of harvested water by hindering seepage losses c) Farmer are used pond for fish culture up to December during off season.</p>	<p>a) The technology can be adopted for higher fish production as well as irrigation and drinking water. b) Research on effect of water quality parameter on fish growth.</p>	1.4:1
5	Varietal performance of Black gram (SBC-47 & PU 31)		<p>Technology: Crop: Blackgram Variety:SBC 40, SBC 47 Sowing of seeds in mid Aug to Mid Sept.) Check Var. KU-301</p>	Black gram	3	<p>1.Av. Plant height -55 cm 2. No. of branches- 6.5 3. No. of pods /plant: 40.5 4.Grain yield of SBC 47- 7.8q/hq PU- 31 -7.1 q/ha Local check</p>	Farmer were satisfied with the result of the new HYV of Black gram	Timely sowing of the black gram variety is important for higher yield	1.93

						yield PU-19 = 5.5q/ha			
6	Uttera cropping of Grass pea with Sali rice"		Technology: Application of 6 kg DAP to the relay crop (Grass pea)and cutting of stubble height of rice at 20 cm	Grass pea (Lathyrus)	3	1. Av. Plant height -80 cm 2. No. of branches- 16 3. No. of pods per plant- 120 4. No. seeds per pod -2 5. Grain yield – 8.5 q/ha	Farmer were impressed with the higher yield of newly introduced lathyrus var. Ratan	Timely sowing of relay crop and cutting of stubble height are the problem for the farmer	2.67
7	Phosphorus management in Rice- Linseed sequence	Low availability of phosphorus	In Rice T1-75% of RD of P2O5 + PSB In Linseed 75% of RD of P2O5 T2- Recommended doses of NPK in rice and linseed T3- Farmers practice	Rice- linseed	3	Rice T1= 3.8 t/ha T2= 4.10 t/ha T3= 3.0 t/ha Linseed T1= 0.07 t/ha T2= 0.08 t/ha T3= 0.060 t/ha	Farmers expressed willingness to use of PSB as crop yield in PSB applied plot was 26.66% (Rice) and 28.28 % (linseed) more than the farmers practice	. Non availability of good quality bio fertilizer in the market	Rice T1= 1.72:1 T2= 1.74:1 T3= 1.4:1  Linseed T1= 1.77:1 T2= 1.79:1 T3= 1.56 :1



8	Combine application of Zn and Boron on rice – rapeseed sequence	Deficiency of Zn and Boron in Kokrajhar district	T1- 1.5 kg B/ha +5 kg Zn/ha +RD of NPK fertilizer T2-State recommendation T3- Farmers practice	Rice- Rapeseed	5	Rice T1= 4.20 t/ha T2= 4.15 T3= 3.3 Rapeseed T1= 0.112 T2= 0.106 T3= 0.089	Farmers desired to apply both boron and zinc fertilizer as yield of rice 27.27% (rice) and 25.84 % (rapeseed) over their no fertilizer practice	Rice T1= 1.89 :1 T2= 1.75:1 T3= 1.4:1 Rapeseed T1 = 1.75:1 T2 = 1.61:1 T3 = 1.58:1
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### 3.2 Achievements of Frontline Demonstrations during 2016-17

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

List of technologies demonstrated during previous year and popularized during 2016-17 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	Weaving	Use of Ergonomically design weaving chair in fly shuttle loom with loom height 40 foot	2	2	
2	Organic Dye	Use of natural dye ( Annato, Dhatura and Termeric) and mordant as alum	9	9	
3	Kamrupa breed introduction	Introduction of Kamrupa birds under backyard management condition in Kokrajhar District.	5	5	30 birds
4	Paddy	Light trap	3	3	0.8
5	Maize	Reflective ribbon	5	5	1.5

6	Rapeseed	Honey bee	5	5	1.0
7	Rapeseed	1. Seed, TS36 2. Boron application @10kg/ha 3. Integrated pest management 4. Honey bee colonization	3	75	30
8	Linseed	1. Organic manure application	2	50	20
9	Fish (Pond Management)	Fertilizer Management of Composite fish culture	7	9	1.17 ha
10	Fish, Rice and Vegetable (IFS system)	Rice-Fish-vegetable IFS module	3	3	0.39 ha
11	Fish Composite culture (Other)	Scientific species combination and ratio in composite fish culture	4	6	1.04 ha
12	Fish (Magur) Air-breathing culture	Raising air-breathing fishes like Magur (Clarias batrachus) in small swallow pond	3	3	0.03 ha
13	Toria	75% RD of N and P fertilizer along with seed treatment of biofertilizers (Azotobacter & PSB @ 40 g/kg seed) and RD of K fertilizer	5	5	1.5
14	Chilli	Chilli under rice fallow medium land situation  50% of RDF+ Vermicompost 1.0 t/ha(2 split dose) + Biofertilizer (Azotobacter, Azospirillum and PSB @ 0.2% of the compost)	4	4	0.2
15	Vermicomposting	Low cost vermicomposting with dimension of 2.5 m (L) X 0.91 m (B) X 0.91 m (D)	10	10	10 units

**\* 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 and commercial crops.**)

Sl. No.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement	Farmin g situatio n (Rainfe d/ Irrigate d, Soil type, altitude , etc)	Status of soil (Kg/ha)		
					Proposed	Actual	SC/ST	Others	Total			N	P	K
1.	Paddy	Mechanical methods of pest management	Light trap for managing insect pests	Winter 2016-17	0.8	0.8	2	1	3	NA	Irrigated	355.5	26.8	321.4
2.	Maize	Mechanical methods of pest management	Reflective ribbon against depredatory birds	Winter 2016-17	1.5	1.5	4	1	5	NA	Rainfed	352.4	23.9	324.1
3.	Rapeseed	Beneficial insects	Honey bee for increasing productivity	Rabi 2016-17	1.0	1.0	1	4	5	NA	Rainfed	366	22.65	341.4
4	Rapeseed	Cluster Frontline Demonstration	1.Seed, TS36 2.Boron application @10kg/ha 3.Integrated pest	Rabi 2016-17	30	30	75	-	75	NA	Rainfed	385.2	24.77	311.3

			managem nt 4.Honey bee colonization											
5.	Linseed	Cluster Frontline Demonstrati on	Organic manure application	Rabi 2016-17	20	20	-	50	50	NA	Rainfe d	320.3	31.9	137.3 4
6	Summer rice	Resource conservatio n	Technology : SRI practice: transplantin g of seedlings at 10-12 days Var. used: HHY(Joym ati)	Summer, 16-17	5	5	-	5	5		Irrigate d	L	M	L
7	Maize	Varietal evaluation	Technology Variety : Hybrid Maize- BN- 1 Fertilizer: N:P2O5:K2 O: 150:250:65 kg/ha	Rabi 16- 17,	5	5	5	-	5		Rainfe d	L	M	L
8	Black gram	Varietal evaluation	Technology :  1.Seed treatment with Rhizobium	Kharif, 16	20	20	50	-	50	-	Rainfe d	L	M	L

			@ 1.0 kg /25 kg of seed (for 1 ha) and application of organic manure @ 125 kg/ha along with Seed rate @25 kg/ha											
9	Toria	Soil health	T1- 75% RD of N and P fertilizer along with seed treatment of biofertilizers (Azotobacter & PSB @ 40 g/kg seed) and RD of K fertilizer	Rabi,2016-17	1.5	1.5	2	3	5	-	Rainfed	475.25	18.66	180.23
10	Chilli	Soil health	50% of RDF+ Vermicompost 1.0 t/ha(2 split dose) + Biofertilizer (Azotobacter	Rabi, 2016-17	0.2	0.2	2	2	4	-	Rainfed			

			er, Azospirillum and PSB @ 0.2% of the compost)											
11	Lentil Var Moitree - and KLS (Cluster demonstration)	Varietal Evaluation	Scientific cultivation of Lentil	Rabi 2016-17	20.0	20.0	83	-	-	-	Rainfed	M	L	M
12	Field Pea Var.VL-42 (Cluster demonstration)	Varietal Evaluation	Scientific cultivation of field pea.	Rabi 2016-17	20.0	20.0	50	44	94	-	Rainfed	M	L	M
13	Lathyrus Var. Rtan	Varietal Evaluation	Scientific cultivation of Lentil	Rabi 2016-17	10.0	10.0	25	-	25	-	Rainfed	M	L	M



		ation technolo gy							and disea se incide nce	and disea se incide nce								
6.	Maize	Varietal evaluati on	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	On Goin g
7	Black gram	Integrat ed crop manage ment	20	6.7	5.4	24	7.6	5.8	The demo variet y was susce ptible to YMV .	No such pest and disea se incide nce	15950	40200	24250	1.52	11800	32400	20600	1.74
8	Toria Var. TS-36	Soil manage ment	1.5	9.25	8.0	15.62	11.15	7.85	No such pest and disea se	No such pest and disea se	17112.6	30987.5	13874.9	1.81:1	16100	27135	4662.4	1.68:1
9	Chilli	Soil health	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	ongoing	
10	Lentil	Soil manage ment	20.0	9.5	7.9	20.2	10.5	8.5			28913.04	66500	37586.96	2.3:1	26333.33	55300	28966.67	2.18:1
11	Lathyr us	Soil manage ment	10.0	9.2	8.0	18.75	10.10	8.3			20909.09	46000	25090.91	2.20:1	19200	40000	20800	2.08:1
12	Field Pea	Soil manage ment	20.0	9.8	8.0	22.5	10.5	9.1			15680	39200	23520	2.5:1	14300	32000	17809.52	2.2:1



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

Sl.No.	Activity	No. of activities organized	Date	Number of participants			Remarks
				Gen	SC/ST	Total	
1	Field days	4	22-3-17 21-1-17 28-1-17 22-2-17	58	89	147	
		1	03-03-2017	6	44	50	
		1	06-03-2017	32	-	32	
		1	18-03-2017	3	47	50	
		1	24-03-2017	3	47	50	
2	Farmers Training	1	20-11-2016	-	25	25	
		1	24-11-2016	-	25	25	
3	Media coverage						
4	Training for extension functionaries						
5	Any other (Pl. specify)	1		6	10	16	
	<b>Total</b>	<b>11</b>	<b>-</b>	<b>108</b>	<b>287</b>	<b>395</b>	

**e. Details of FLD on Enterprises**

(i) Farm Implements

[illegible]

## (ii) Livestock Enterprises

Sl. No.	Enterprise/Category (e.g., Dairy, Poultry etc.)	The matic area	Name of Technology	No. of farmers	No. of units	No. of animals, poultry birds etc.	Major Performance parameters / indicators		% change in the parameter	Other parameters (if any)		Econ. of demo. (Rs./Ha.)				Econ. of check (Rs./Ha.)				Remarks
							Demo	Check		Demo	Check	GC**	GR**	NR**	BCR**	GC	GR	NR	BCR	
1	Poultry	Breed introduction	Kamrupa bird	5	5	30	-	-	-	-	-	-	-	-	-	-	-	-	-	On going

## (iii) Fisheries

Sl. No.	Category, e.g. Common carp, ornamental fish etc.	The matic area	Name of Technology	No. of farmers	No. of units	No. of fish/fingerlings	Major Performance parameters / indicators		% change in the parameter	Other parameters (if any)		Econ. of demo. (Rs./Ha.)				Econ. of check (Rs./Ha.)				Remarks
							Demo	Check		Demo	Check	GC**	GR**	NR**	BCR**	GC	GR	NR	BCR	
1.	Fish	Pond Management	Fertilizer Management of Composite fish culture	9	9	734	Production - 2.6t/ha	Production - 1.5t/ha	100	No Diseases incidence	Few cases of disease attack reported.	1000/bigha	39,000/bigha	29,000/-	2.9	6000/bigha	15000/bigha	9,000/bigha	1.5	Research on effect of water quality on fish

2.	Rice ,fish, vegetable	Integrated Fish Farming	Rice-Fish-vegetable IFS module	3	3	1330 nos	Paddy (ton/ha)-4.6 Fish (t/ha)-0.90 French bean(t/ha)-4.5 Knolkhol (t/ha)-5.4 Chilli-(t/ha)-3.3	Paddy (ton/ha)-3.9	100	No Diseases incidence	Monocropping of rice.	11,000/-	40,000/-	29,000/-	2.6	900	2000	1100	1.22	Horizontal spread of technology
3.	Fish	Composite fish culture	Scientific species combination and ratio in composite fish culture	6	6	734 nos	Fish stocked (per bigha)-734 Mortality -10% Production (t/ha)-2.5	Fish stocked (per bigha)-2000 Mortality-60% Production –(t/ha) 1.9	100	Mortality rate less only - 10 %	Mortality rate less only-60%. and some pond diseases also occurred%	12,000/-	41,000/-	29,000/-	2.4	14,000/-	30,00/-	16000/-	1.1	Mortality rate was more higher in Farmer Practice due to over stocking

4	Magur	Air-breathing fish culture	Raising air-breathing fishes like Magur ( <i>Clarias batrachus</i> ) in small swallow pond	3	3		Avg. Fish Stocked per pond = 700nos. Avg. Wt. of fish stocked : 5 gm Avg. No. of fish harvested per pond = 350nos. Avg. wt of fish harvested = 100gm, Harvested fish 35kg/100 sq. m pond	Fish are not reared Pond are utilized for household purpose. Mainly unwanted and uneconomical fishes are stocked from other unwanted sources it production only 10kg It is used for only home consumption	100	-	-	4000/-	14000/-	10,000/-	2.5	-	-	-	-	Increase horizontal spread of technology due to the underutilized home fish pond. Research on local feed formulation for magur
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## (iv) Other enterprises

S I. N o.	Categor y/ Enterpri se, e.g., mushro om, vermico mpost, apicultu re etc.	The mati c area	Name of Technol ogy	No. of far mer s	N o. of un its	Major Performance parameters / indicators		% chan ge in the para meter	Other parameters (if any)		Econ. of demo. (Rs./Ha.)				Econ. of check (Rs./Ha.)				Rem arks
						Demo	Check		Demo	Check	G C* *	G R* *	N R* *	BCR**	G C	G R	N R	B C R	
1	Weaving Chair	Drud gery reduc tion	Ergonom ically designed weaving chairfor fly shuttle weavers	2	2	Efficie ncy of weavin g chair.	Weavin g in Ordinar y chair. Time consu mption	80% efficie ncy in loom height is 40 foot.( meas ured in 9 point hedon ic scale)	Time Consu mption	Time Consu mption while sitting in ordinar y bench or chair weavin g				1 h 15 min time was less consu med while weavi ng 1 <i>Dokho na</i>					
2	Organic Dye	Orga nic dye	Applicati on of natural dye on cotton Yarn with annatto, Termeric , Onion and Dhatura Leaves	9	9	Differe nce of colour shades with alum.	Differe nce of colour shade s with alum.	Dyed yarn treate d with alum gives darker shade s than untrea ted yarn.	Yarn dyed with dhatur a and Onion are more colour fast than yarn dyed with	Untreat ed yarn are poor in colourfa stness specialll y in case of yarn dyed with termeri c and				Dhatur a dyed yarn are colouf ast to sunlig ht, wash ing and pressi ng follwe					



### ***f. Performance of FLD on Crop Hybrids***

[illegible]

### 3.3. Achievements on Training

**3.3.1. Farmers and Farm Women in On Campus including Sponsored On Campus Training Programmes**  
(Campus training programmes sponsored by external agencies)

(\*Sp. On means On

[illegible]









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																						
Soil and Water Conservation																						
Integrated Nutrient Management																						
Production and use of organic inputs	1		1	20	-	-		20		5				5		25				25		25







[illegible]







XI Agro-forestry																						
Production technologies																						
Nursery management																						
Integrated Farming Systems																						
TOTAL	7	0	7	44	0	0	0	42	0	109	0	17	0	103	0	128	25	17	0	170	0	170
3.3.2. Achievements on Training of <u>Farmers and Farm Women</u> in <u>Off Campus</u> including <u>Sponsored Off Campus</u> Training Programmes (*Sp. Off means Off Campus training programmes sponsored by external agencies)																						
Thematic area	No. of Courses/ prg.			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*	
I. Crop Production																						
Weed Management																						
Resource Conservation Technologies																						
Cropping Systems																						
Crop Diversification	1	-	1	1	-	-	-	1	-	26	-	-	-	-	-	27	-	-	-	-	-	27





### c) Ornamental Plants

[illegible]

**d) Plantation crops**

[illegible]

**e) Tuber crops**

[illegible]



Production and use of organic inputs																						
Management of Problematic soils																						
Micro nutrient deficiency in crops	2		2	38		12																50
Nutrient Use Efficiency	1	-	1							25												25
Soil and Water Testing																						
<b>IV Livestock Production and Management</b>																						
Dairy Management																						
Poultry Management																						
Piggery Management	1	-	1	-	-	-	-	0	-	12	-	13	-	25	-	12	-	13	-	25	-	25
Rabbit Management																						
Disease Management																						
Feed management	1	-	1	16	-	-	-	16	-	8	-	1	-	9	-	24	-	1	-	25	-	25























**3.3.4. Achievements on Training of Rural Youth in Off Campus including Sponsored Off Campus Training Programmes**  
 (\*Sp. Off means Off Campus training programmes sponsored by external agencies)

[illegible]



Composite fish culture																						
Freshwater prawn culture																						
Shrimp farming																						
Pearl culture																						
Cold water fisheries																						
Fish harvest and processing technology																						
Fry and fingerling rearing																						
Small scale processing																						
Post Harvest Technology																						
Tailoring and Stitching																						
Rural Crafts																						
<b>TOTAL</b>	5	1	4	28	0	2	0	5	0	67	0	28	0	95	0	95	0	30	0	125	0	125









designing																						
Production and use of organic inputs																						
Gender mainstreaming through SHGs																						
<b>TOTAL</b>	5	0	5	65	0	1	0	40	13	52	0	3	0	32	0	69	0	1	0	70	0	120

**(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					
Garment construction and value addition	28/11/16 to 01/12/2016	4 days	Garment construction and value addition through tie and dye	Skilled development training on 'children garment construction and value addition through tie and dye'.	0	10	10	0	10	10	0	20	20	Tailoring unit	2	6	5000-6000 per month	Not yet



Honey bee	16-19th March, 2017	4	Beneficial organisms	Honey production technology	7	1	8	17	-	17	24	1	25	4	2	-	-	-
Mushroom	22-25th Feb, 2017	4	Other Beneficial organisms	Production technology of oyster mushroom	3	4	7	10	8	18	13	12	25	5	2	2	-	-
Fish	25/10/2016 to 28/10/2016	4 days	Ornamental fisheries	Ornamental Fish culture and breeding	17	-	17	3	-	3	20	-	20	Aquarium shop	2	-	Just started	No
		4 days		Entrepreneurship Development through Mega seed production of Exotic ornamental Species	5	5	10	-	-	-	5	5	10	Aquarium shop	1	-	Just started	No
	1/3/2017 to 6/3/2017	5 days	Integrated Fish Farming	Integrated fish Farming system	13	1	14	12	4	16	25	5	30	Fish and piglet production	3	-	Just started	(NFDB), (Rs-0.53 Lakh)
	20/3/2017 to 24/3/2017	5 days	Composite fish culture	Composite Fish Culture	17	3	20	10	-	10	27	3	30	Fish production	5	-	Just started	(NFDB), (Rs-0.53 Lakh)
IFS	22.2.17 to 26.2.17	5	Productivity enhancement	Integrated farming system	15	-	15	10	-	10	25	-	25	Diary farm, fishery farm	5	10	Rs. 60,000 per annual	KVK fund

Tapioca	4.3.17 to 7.3.17	4	Skill enhan ceme nt for post harve st mana geme nt of tapioc a	Entreprene urship developme nt through post harvest manageme nt of tapioca	-	-	-	13	12	25	13	12	25	Tapio ca proce ssing	1	10	Rs.50,000 per annual	<b>KVK/ICA R Fund</b>
Tapioca	14.3.1 7 to 17.3.1 7	4	Skill enhan ceme nt for post harve st mana geme nt of tapioc a	Entreprene urship developme nt through post harvest manageme nt of tapioca	-	-	-	19	6	25	19	6	25	Tapio ca proce ssing	1	10	Rs. 50,000 Per annual	<b>KVK/ICA R Fund</b>

**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 2016-17**

Sl. No.	Extension Activity	Topic	Date and duration	No. of activities	Participants											
					General			SC/ST			Extension Officials			Grand Total		
					1			2			3			(1+2)		
					M	F	T	M	F	T	M	F	T	M	F	T
1	Advisory services		Apr, 16 to March 17	225	83	41	124	187	28	215	0	0	0	270	69	339
2	Diagnostic visit		Apr, 16 to March 17	66	84	27	111	120	14	134	0	0	0	204	41	245
3	Field day		Apr, 16 to March 17	8	33	12	45	278	73	351	0	0	0	311	85	396
4	Group Discussion		Apr, 16 to March 17	12	58	9	67	97	11	108	0	0	0	155	20	175
5	Kishan Gosthi		Apr, 16 to March 17	3	13	3	16	23	6	29	0	0	0	36	9	45
6	Kishan Mela		Apr, 16 to March 17	2	141	36	177	198	58	256	21	0	21	339	94	433
7	Film show		Apr, 16 to March 17	4	46	39	85	52	18	70	0	0	0	98	57	155
8	Scientists visit to farmers fields		Apr, 16 to March 17	107	244	113	357	226	53	279	0	0	0	470	166	636
9	Animal Health camp		Apr, 16 to March 17	3	40	13	53	181	56	237	17	0	17	221	69	290
10	Method demonstration		Apr, 16 to March 17	14	31	47	78	149	49	198	0	0	0	180	96	276
11	Extension literature		Apr, 16 to March 17	6	0	0	0	0	0	0	0	0	0	0	0	0
12	Newspaper coverage		Apr, 16 to March 17	9	0	0	0	0	0	0	0	0	0	0	0	0
13	TV talk			1	0	0	0	0	0	0	0	0	0	0	0	0
14	Awareness camp		Apr, 16 to March 17	4	36	6	42	132	78	210	6	1	7	168	84	252

15	Lecture delivered as resource person		Apr, 16 to March 17	25	227	58	285	381	155	536	0	0	0	608	213	821
16	Farmers Visit to KVK		Apr, 16 to March 17	1050	478	61	539	437	74	511	0	0	0	915	135	1050
17	Celebration of Pradhan Mantri Fasal Bima Yojna		May, 16	1	169	39	208	197	43	240	22	2	24	366	82	448
18	Celebration of Swachata pakhwara week		May, 16	1	16	4	20	0	0	0			0	16	4	20
19	Agricultural Workshop on Conservation on Petroleum Products		June, 16	1	19	0	19	6	0	6			0	25	0	25
20	Ceremonial distribution of Soil Health Card		Aug, 16	1	93	2	95	5	0	5	8	0	8	98	2	100
21	Diagnostic Practical		Dec, 16	4	27	8	35	37	5	42			0	64	13	77
22	Celebration of Jai Kisan Jai Vigyan Week		Dec-16	1	30	45	75	12	8	20			0	42	53	95
23	Celebration of National Science Day		Feb, 17	1	38	12	50	25	12	37	6	0	6	63	24	87
<b>Total</b>				<b>1549</b>	<b>1906</b>	<b>575</b>	<b>2481</b>	<b>2743</b>	<b>741</b>	<b>3484</b>	<b>80</b>	<b>3</b>	<b>83</b>	<b>4649</b>	<b>1316</b>	<b>5965</b>

### 3.5 Production and supply of Technological products during 2016-17

#### A. SEED MATERIALS

Major group/class	Crop	Variety	Quantity (qt)	Value (Rs.)	Number of recipient/ beneficiaries		
					General	SC/ST	Total
<b>CEREALS</b>	Buckwheat (2016-17)	Local	8.1	-	-	-	-
	Buckwheat (2015-16)	Local	4.5	13050.00	4	1	5
	Sali Paddy (2016-17)	Ranjit	11.0	-	-	-	-
	Sali Paddy (2015-16)	Ranjit	11.0	60522.00	5	20	25
	Sali Paddy (2016-17)	Gitesh	23.0	-	-	-	-
	Sali Paddy (2015-16)	Gitesh	16.0	14091.00	5	15	20
	Sali Paddy (2016-17)	TTB 404	24.0	-	-	-	-
	Sali Paddy (2015-16)	TTB 404	8.0	1980.00	2	1	3
<b>OILSEEDS</b>	Sesamum (2016-17)	Local	1.0	-	-	-	-
	Sesamum (2015-16)	Local	1.5	14335.00	7	8	15
	Niger (2016-17)	NG-1	2.5	-	-	-	-
	Niger (2015-16)	NG-1	5.0	34300.00	5	9	14
	Rapeseed (CFLD)	TS-36	255.0	-	-	-	-
	Linseed (CFLD)	Local	136.00	-	-	-	-
<b>PULSE</b>	Blackgram	PU-19	134.00	-	-	-	-
	Lentil	Moitree	190.0	-	-	-	-
	Lathyrus	Ratan	92.0	-	-	-	-
	Field Pea	VL-42	196.0	-	-	-	-
<b>FIBRE CROPS</b>	Mesta (2016-17)	HC-583	3.3	-	-	-	-
	Mesta (2015-16)	HC-583	2.16	-	-	-	-

#### A1. SUMMARY of Production and supply of Seed Materials during 2016-17

Sl. No.	Major group/class	Quantity (ton.)	Value (Rs.)	Number of recipient/ beneficiaries		
				General	SC/ST	Total
1	CEREALS	10.56	89643.00	17	37	53
2	OILSEEDS	40.1	48635.00	12	17	29
3	PULSES	61.2	-	-	-	-
4	FIBRE CROPS	0.546	-	-	-	-
<b>TOTAL</b>		<b>112.406</b>	<b>138278</b>	<b>29</b>	<b>54</b>	<b>82</b>

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

Major group/class	Crop	Variety	Numbers	Value (Rs.)	Number of recipient beneficiaries		
					General	SC/ST	Total
<b>Fruits</b>	Lemon	Assam Lemon	400	3600.00	15	25	40
	Coconut	Kamrupa	25	-	-	2	2
	Banana	Malbhog	250	-	10	-	10
	Pineapple	Kew	100	-	3	2	5
<b>Spices</b>	Turmeric	Megha turmeric-1	198 kg	3960.00	3	4	7
<b>Ornamental Plants</b>	Mussenda	-	60	-	28	12	40
	Gerbera	Redgem	20	-	7	8	15

**B1. SUMMARY of Production and supply of Planting Materials during 2016-17**

Sl. No.	Major group/class	Numbers	Value (Rs.)	Number of recipient beneficiaries		
				General	SC/ST	Total
1	<b>Fruits</b>	775	3600.00	28	29	57
2	<b>Spices</b>	198 kg	3960.00	3	4	7
3	<b>Ornamental Plants</b>	80	-	35	20	55
<b>TOTAL</b>		855 198 kg	7580	66	53	119

**C. Production of Bio-Products during 2016-17**

Major group/class	Product Name	Species	Quantity		Value (Rs.)	Number of Recipient /beneficiaries		
			No	(qt)		General	SC/ST	Total
BIOAGENTS	Earth worm	Eisenia foteda	10000	-	20000.00	10	-	10
BIOFERTILIZERS								
1.	Vermicompost	-	-	5.4	5400.00	25	14	39
BIO PESTICIDES								
1	-	-	-	-	-	-	-	-

**C1. SUMMARY of production of bio-products during 2016-17**

Sl. No.	Product Name	Species	Quantity		Value (Rs.)	Number of Recipient beneficiaries		Total number of Recipient beneficiaries
			Nos	(kg)		General	SC/ST	
1	BIOAGENTS	<i>Eisenia foteda</i>	10000	-	20000.00	10	-	10
2	BIO FERTILIZERS	Vermicompost	-	540	5400.00	25	14	39
3	BIO PESTICIDE	-	-	-	-	-	-	-
	<b>TOTAL</b>	-	<b>10000</b>	<b>5.4</b>	<b>25400.00</b>	<b>35</b>	<b>14</b>	<b>49</b>

**D. Production of livestock during 2016-17**

Sl. No.	Type of livestock	Breed	Quantity		Value (Rs.)	Number of Recipient beneficiaries		
			(Nos)	Kgs		General	SC/ST	Total
1	Goat	Beetel	6	-	15100.00	2	3	5
2	Piggery							
3	Poultry	Kamrupa		6.56	1050.00	-	1	1

**D1. SUMMARY of production of livestock during 2016-17**

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	Beetel	6	-	15100.00	2	3	5
3	POULTRY	Kamrupa	-	6.56	1050.00	-	1	1
4.	PIGGERY							
5	FISHERIES							
6	OTHERS (Pl. specify)							
	<b>TOTAL</b>	-	<b>6</b>	<b>6.56</b>	<b>16150.00</b>	<b>2</b>	<b>4</b>	<b>6</b>

### 3.6. Literature Developed/Published (with full title, author & reference) during 2016-17

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

(B) Articles/ Literature developed/published

Item	Title /and Name of Journal	Authors name	Number of copies
Research papers			
1.			
2.			
3.			
Training manuals			
Technical Report			
1.			
2.			
3.			
Book/ Book Chapter			
Popular articles			
Technical bulletins			
Extension bulletins	Protection of Plant varieties and Farmer's Rights (Assamese )	M. U. Basumatary, Dr. M.K. Bhuyan, G. Bhagowati, Ankur Rajbangshi, B.K. Baishya, Dr. Firfila Basumatry, P.K. Dutta, Porna Sharma, S. Brahma	1000
	Protection of plant varieties and Farmer's right act, 2001 (Bodo)	M. U. Basumatary, Dr. M.K. Bhuyan, G. Bhagowati, Ankur Rajbangshi, B.K. Baishya, Dr. Firfila Basumatry, P.K. Dutta, Porna Sharma, S. Brahma	1000
	Scientific method for Integrated Fish Farming System (Assamese)	Ankur Rajbangshi, Dr. M.K Bhuyan. G. Bhagowati, B.K. Baishya, Dr. Firfila Basumatary Porna Shrama, P.K. Dutta, Mahadev Uzir Basumatry	
	Scientific cultivation practices of Black gram (Bodo)	M. U. Basumatary, B. K. Baishya. G. Bhagowati	1000
	Lathyrus as potential relay crop with Sali rice	M. U. Basumatary, B. K. Baishya. G. Bhagowati, Ankur Rajbanshi	1000
	Improved cultivation practices of Rape seed (Assamese)	M. U. Basumatary, B. K. Baishya. G.	1000



		Bhagowati, Ankur Rajbangshi	
	Scientific production technology of Pea (Bodo)	M. U. Basumatary, G. Bhagowati	1000
	Scientific cultivation practices of lentil (Bodo)	M.U. Basumatary, B. K. Baishya, G. Bhagowati	1000
Newsletter			
Conference/ workshop proceedings			
Leaflets/folders			
e-publications			
Any other (Pl. specify)			
<b>TOTAL</b>	-	-	<b>7000</b>

**(C) Details of Electronic Media Produced**

S. No.	Type of media (CD / VCD / DVD / Audio-Cassette)	Title of the programme	Number produced
-	-	-	-

**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)**

**Prosperity through Scientific Production of Oyster Mushroom Production**

Kokrajhar district is known for different types of local delicacies. Both wild and cultivated mushrooms are very popular among the Bodos, Adivashis and Rajbongshis. Mrs. Alpana Hembrom, 62 of Restekpur village is a simple housewife with about 0.2 ha of wasteland on her backyard. Few years back, she saw the Oyster mushroom production techniques demonstrated by KVK Kokrajhar during Republic day at Gossaigaon town. She developed a strong urge to grow it. In her initial years she tried to grow it by following literatures available in books and through production tips from friends. She failed to gain benefit due to various irregularities in preparation.

**KVK Intervention:**

She approached KVK for guidance on scientific production during October 2014 and took scheduled 4 days vocational training on scientific production technology on Oyster mushroom at KVK Kokrajhar campus where she learned basic techniques of production process and rectified the wrong process of using chemical during production process. On constant interaction and guidance from Scientists from KVK she is the leading mushroom producer of Gossaigaon area and has a larger stake in the market of both fresh and dried mushroom.

**Impact**

Earlier she could hardly earn any profit so that she could think for adopting this enterprise as a business. But after acquiring the scientific techniques for production she could earn a profit of Rs.2500/- to Rs. 3000/- per day, from both dry and fresh mushroom during peak season from October to April. She is now well established in her enterprise and could give employment to 3 more unemployed youths in her unit. She got assurance from department for a drier at her unit. From a meager 30 packets in her unit at the beginning she has now four new units with more than 150 running bags with fresh mushroom all the time. Her success has inspired nearby farming folks and nearly 30 individuals and few self help groups have started taking oyster mushroom production on commercial scale as means of livelihood. From last

year she started a vermicompost unit with full support from KVK Kokrajhar, both trainings and inputs to use the left over straws bags of oyster mushroom.

Following are the statistics of mushroom production and vermi compost at her unit.

Sl. No	2013-14	2014-15	2015-16	2016-17
Oyster mushroom (Raw) (kilogram)	55	85	125	200
Oyster mushroom (Dry) (kilogram)	2	12	22	27
Prepared mushroom bags	-	10	22	59
Vermicompost (kg)	-	-	25	55

### **Prosperity through Integrated Fish Farming (IFS)**

#### **Pig for prosperity: The case of *Mr. Hemkanta Narzary***

**Mr. Hamkanta Narzary** is a farmer from Gurufella area of Kokrajhar district who is having vast experience in farming. He is the holder of a farm of 40 bigha land and a pond of about 1300m<sup>2</sup> attached to his homestead garden. He had never kept the pond with fingerling. Farm pond was operated for irrigating the crops rarely and other household purposes. Some local species of fish were naturally existing in that pond which was used for home consumption. He is skilled in rearing local breed of pigs and had two local female and one male pig. The female pigs used to give birth to 4-5 piglets per cycle and the body weight gain of pig was also very low compared to feed consumption. By selling the piglets he used to earn a profit of Rs.10, 000.00 only per year at the annual cost of Rs. 8,000/-. He was interested in scientific rearing of improved breed of pig, but due to lack of knowledge and sufficient capital, he could not take up the enterprise. He had approached different banks at different times seeking financial help for the same but all in vain.

#### **KVK Intervention:**

Primarily, a pigsty was constructed, in participatory mode, on one side of the bank of fishpond in such in a way that the pigsty waste can flow down to the pond water. The remaining farm pond was renovated and cleaned of weeds etc. Liming was also done under the guidance of the scientific staff of KVK, Kokrajhar. During 2015, he was given 2 nos of female piglets (local) and 1 exotic male piglet (Hampshire) from the TSP scheme in addition to vaccination and medicine on time. A total of 734 nos. of fingerlings of five different species of fish (Rohu, Catla, Mrigal, Silver-carp and Grass-carp) along with starter fish feed (Mustard Oil Cake and rice bran) and medicine were also provided.

## Impact

In the month of November, 2015, the two female pigs (sow) gave birth to 17 (8+9) nos of piglets. One of the significant additional achievements is that the non-beneficiary farm families in the other village are now hiring the service of the male Hampshire pigs provided on the basis of precondition that one piglet born from each furrowing will be given to Mr. Narzary in the mode of payment in kind for the service of the male. Thus, he got another 6 nos of piglets from his neighboring farmers for servicing 6 nos. of female pigs (sow) till date. In the next cycle, the female pigs gave birth to another 19 (9+10) piglets. The piglets were sold after 2 months. Thus, the scientific intervention has resulted two distinct benefits, signifying a continuous horizontal extension. Likewise, from the fishery, he sold 270 kg of fish in that year.. The economics of Pig cum Fish farming is described in Table -1.

Table-1: Economics of Pig cum Fish farming

Sl. No.	Items	Traditional Practice				IFS with Improved practice			
		Production	Cost (Rs.)	Gross Income (Rs)	Net Income (Rs)	Production	Cost (Rs.)	Gross Income (Rs)	Net Income (Rs)
1	Piglets (nos/ 2 cycle/ 2 female piglets)	15	8000.00	18000.00	10000.00	32	22000.00	64000.00	42000.00
2	Piglets as charge for servicing	-	-	-		5	-	1000.00	1000.00
3	*FFEW (q)	-	-	-		2.4	-	5000.00	5000.00
4	Fish (Pond area 1300m <sup>2</sup> )(q)	-	-	-		2.6	2320.00	35000.00	32680
6	Total	15	8000.00	18000.00	10000.00	-	24320.00	105000.00	80680.00
7	Labour employed (man days)	45				159			
8	Benefit cost ratio	1.2:1				3.3:1			

\*FFEW: Fish Feed Equivalent Waste

Mr. Narzary is a gratified farmer with the technology provided under the KVK, Kokrajhar. The willingness to learn new things and adopt new technologies helped Mr. Narzary to become a successful farmer. The knowledge on pig rearing and his affection towards the animal also helped him to get good return from the Integrated farming system. At present, he is having the male Hampshire and the female pig (local) given from the TSP, project and also rearing one crossed (with Hampshire) adult female pig. Presently Mr. Narzary is planning to stock fingerlings in the pond at his own cost. The neighboring farmers are encouraged by his success.

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

- i) Use of Short duration high yielding variety of Toria like (TS-46). It can be grown under late condition after harvesting of Sali rice. The productivity is high. The average productivity is 10.5 q/ha. This variety was used for demonstration in TSP project
- ii) Relay cropping of lathyrus with improved practices under cluster Demo. encouraged the local farmer. As a result of which, farmer started to grow relay crop such as lentil, lathyrus and large area under double cropping was increased in Kokrajhar.

### 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)

SI	Crop / Enterprise	ITK Practiced	Purpose of ITK
1.	Paddy	<u>SEBING SEREB (A local herb)</u> <ol style="list-style-type: none"> <li>Local Name: - <i>Sebing Sereb</i></li> <li>Scientific Name: - Plant sent for identification</li> <li>Plant Part Used: - Leaf/Stem</li> <li>Time of Appearance of Plant: - All through the year but profound growth during the rainy season.</li> <li>Habitat: - Besides road/ Barren Land</li> <li>Method of Application: - Stems broken and put on the crop field and Leaves/stem grinded and extract sprayed in the crop field</li> </ol>	Insect controlled : - Gundhi bug (ear bug) in paddy and Rice Leaf folder
2.	Paddy	<ol style="list-style-type: none"> <li>Besongali</li> <li>Local Name: -Besongali</li> <li>Scientific Name: - Plant sent for identification.</li> <li>Plant Part Used: - Whole plant</li> <li>Time of Appearance of Plant: - During dry season/pre monsoon</li> <li>Habitat: - Lowland (ponds/lakes/nalas).</li> <li>Method of Application: - Whole plant grinded and sprayed in the crop</li> </ol>	Insect controlled: - Rice yellow stem borer/other borers
3.	Paddy	<u>Ooaa Kol (Bamboo trap)</u> <ol style="list-style-type: none"> <li>It is an indigenous trap used against rodents in Kokrajhar district. The trap is placed in front of rodent hole or ways frequented by rodent. Advantages of the device -</li> <li>Eco friendly rodent control device,</li> <li>Economical and helps reduction of chemicals,</li> <li>Made to locally available bamboo,</li> </ol>	Rodent Management
	Maize/paddy	<u>Kakee (Cane spine trap)</u> <p>It is an indigenous rodent trap made from spines of mature cane. It is made in such a way that while entering the trap the spines make way for the rodent but block the way for returning.</p> <p>Advantages of the device -</p> <ol style="list-style-type: none"> <li>Eco friendly rodent control device,</li> <li>Economical and helps reduction of chemicals,</li> <li>Made of locally available cane and bamboo,</li> </ol>	Rodents

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

- Identification of courses for farmers/farm women

PRA techniques, SAC meeting, ZREAC meeting, Farmers visit to KVK, Bimonthly/Quarterly Zonal Workshop, Interaction with extension functionaries, Discussion with district and primary Pathar Parichalana Samiti (PPS) etc.

-Rural Youth

PRA techniques, SAC meeting, ZREAC meeting, Farmers visit to KVK, Bimonthly/Quarterly Zonal Workshop, Discussion with district and primary Pathar Parichalana Samiti (PPS), Extension Functionaries, Youth organizations, NGOs, SHGs etc

- In-service personnel

Bimonthly/quarterly Zonal Workshop, SAC meeting, ZREAC meeting, Interaction with extension functionaries, PRA techniques, Interaction with youth organizations, NGOs, SHGs etc.

**3.11 Field activities**

- i. Number of villages adopted :6
- ii. No. of farm families selected :350
- iii. No. of survey/PRA conducted: 6

**3.12. Activities of Soil and Water Testing**

Status of establishment of Lab : Working

1. Year of establishment : 2009
2. List of equipments purchased with amount :

Sl. No	Name of the Equipment			Qty.	Cost
	S&WT lab	Mini lab/ Mridaparikshak	Manufacturer		
1	-	2 nos	Nagarjuna Agro Chemical Pvt. Ltd, Hyderabad	2 nos	180,600.00
Total				2 nos	180,600.00

**3. Details of samples analyzed (2016-17):**

Details	No. of Samples analysed	No. of Farmers	No. of Villages	Amount ( In Rupees) realized
Soil Samples	1760	1760	25	-
Water Samples	-	-	-	-
Plant Samples	-	-	-	-
Petiole Samples	-	-	-	-
Total	1760	1760	25	-

#### 4. Details of Soil Health Cards (SHCs) (2016-17)

- No. of SHCs prepared: 1760
- No. of farmers to whom SHCs were distributed: 1760
- Name of the Major and Minor nutrients analysed: N, P, K, S, Zinc & Boron
- No. of villages covered: 25
- Soil health card based nutrient management in different crops

Sl.No	Crop	Nutrient management					Remarks
		FYM (t/ha)	Lime (kg/bigha )	Nutrient status			
				Low	Medium	High	
1	Paddy (Sali)	10	-	25% more than recommended doses of fertilizer	Recommended doses of fertilizer	25% less than recommended doses of fertilizer	Recommended doses of fertilizer for different crops as per AAU, Jorhat
2	Rapeseed	2-3	65.5				
	Linseed	-	65.5				
3	Mesta	7-8	-				
4	Blackgram (Kharif)	1	-				
5	Maize(Rabi)	4.5	-				
7	Potato	10	-				

#### 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	65	78455	12	14484	29	35003					2	2414	108	130356
Voice only	1	500	-	-	-	-	-	-	-	-	-	-	1	500
Voice and Text both	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>66</b>	<b>78955</b>	<b>12</b>	<b>14484</b>	<b>29</b>	<b>35003</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2414</b>	<b>109</b>	<b>130856</b>

### 3.14 Contingency planning for 2016-17

#### 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
Flood	Introduction of new short duration and flood tolerant variety or crop	5.5	10	20	30
	Introduction of Resource Conservation Technologies	5.0	10	25	35
	Distribution of seeds and planting materials	13.3	31	61	92
	Any other (Please specify)				

#### 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
Disease outbreak	200 chicks	4	Health camp :2 Awareness camp:2	Animal: 500 Bird: 500	70	130	200

## 4.0. IMPACT

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

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.)	
			Before (Rs./Unit)	After (Rs./Unit)
Oyster mushroom production technology – scientific chemical less production process.	80 (During different times of the year)	20	Rs.500.00	Rs. 2000.00
Production technology of <i>Panchagavya</i>	25	50	Rs. 600.00	Rs. 1200.00

## 4.2. Cases of large scale adoption

Gitesh, a flagship variety of paddy was adopted by farmers of the area based on the performance in experimental field and in farmers' field. The quality of rice is very acceptable as stable rice. The rice is fine, non sticky and easily cooked. The productivity is also very good.

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

### Impact:

#### Technological benefits:

- i) Area: Area under single cropping was reduced due to growing of rabi crops including oilseed, pulses. Area under double cropping was increased due to introduction of new varieties of toria, lentil etc. Seed replacement rate was also very high. Some old varieties was replaced by new varieties giving higher yield. It was mainly due to the training programme, FLD and OFT programme undertaken at the Kujabguri villages by KVK Kokrajhar.
- ii) Livestock : The number of high breed livestock mainly poultry, dairy, piggery increased over the time.

Sl. No.	Items	Breeds introduced	No. of farmer benefitted
1.	Poultry	Bonraja	10
2.	Pig	Hemshire	3
3.	Dairy	Cross breed	2

iii) Use of farm machinery & tool: Use of farm machinery and tool were markedly influenced by the various interventions taken up by KVK, Kokrajhar

iv) Changes in Production and productivity: Both production and productivity markedly influenced by the introduction of various HYV of paddy, oilseeds and pulses. The productivity of rice was increased by 35 percent which was realized after the large block demonstration in rice. The cluster demonstration programme replaced the old variety of Lathyrus and increased the yield by 30 percent as relay crop.

## 5.0. LINKAGES ESTABLISHED

### 5.1 Functional linkage with different organizations

Name of organization	Nature of linkage
1. Department of Agriculture, Kokrajhar	Training, Diagnostics visit, Reviewing departmental projects, Beneficiary selection
2. Department of AH & Vety., Kokrajhar	Training organization, selection of cluster of farmers
3. Dept. of Fishery, Kokrajhar	Training, Diagnostics visit, Reviewing departmental projects, Beneficiary selection
4. Department of Soil Conservation, Kokrajhar	Integrated Water shed management Project, Training
5. NABARD, Kokrajhar	Training, Farmers group formation



6. SIRD, Assam	Backyard rearing of Chara Chembelli ducks for women empowerment, Exposure visit
7. National Research Centre on Pig, ICAR, Rani	Artificial Insemination of Pig in Kokrajhar District
8. Discovery Club, Kokrajhar	Livelihood promotion through integrated farming system (NAIP)
9. LWS, Gossaigaon	Resource person
10. NERSWN, Kokrajhar	Guidance, resource person, preparation of work plan
11. Socio Economic Development, Haraputa	Guidance, resource person, preparation of work plan
12. UCORSETTI, Kokrajhar	Action plan formulation resource person
13. ATMA, Kokrajhar	Action plan formulation resource person
14. Department of Sericulture, Kokrajhar	Training organization, selection of cluster of farmers
15. Department of Agricultural Engineering, Kokrajhar	Reviewing departmental projects, Beneficiary selection
16. District Rural Development Agency (DRDA), Kokrajhar	Reviewing departmental projects, Beneficiary selection
17. District Industries of Commerce Centre (DICC), Kokrajhar	Reviewing departmental projects, Beneficiary selection

## 5.2 List of special programmes undertaken by the KVK, which have been financed by State Govt./Other Agencies during 2016-17

Name of the scheme	Activity	Date/ Month of initiation	Funding agency	Amount (Rs.)
Pradhan Mantri Fasal Bima Yojana	Exhibition, SHC distribution, Awareness camp	30-05-2016	ICAR	181000.00
Mera Gaon Mera Gaurav	Awareness camp, Farmer scientist interaction, group meeting etc.	Round the year	-	-
Rabi Campaign	Exhibition	05-12-2016	ICAR	80000.00
Kharif Campaign				
PPV&FRA awareness programme	Awareness camp, Farmers Scientist Interaction	21-03-2017	ICAR	80000.00
World Soil Health Day	Exhibition, SHC Distribution	05-12-2016	-	-
Jai Kisan Jai Vigyan	Method Demonstration, Farmers visit to KVK Farm Drawing Completion	23-12-2016 to 28-12-2016	-	-
Technology Week	Exhibition, Method demonstration, Diagnostic practical, Film show, Planting material distribution, farmers scientist interaction	23-12-2016 to 30-12-2016	-	-
Agricultural Workshop on Conservation on Petroleum Products	Awareness cum training programme	14-06-2016	Petroleum Conservation Research Association (PCRA), Guwahati	Rs. 4150.00

Training programme under NFDB	Skill development training	01-03-17 to 06-03-17 & 20-03-17 to 24-03-17	NFDB	107500.00
Programme of STRY & FCAC	Training	28-03-17	SAMETI, Khanapar, Ghy-22	8000.00

### 5.3 Details of linkage with ATMA

a) Is ATMA implemented in your district      Yes

Sl. No.	Programme	Nature of linkage	Remarks
1.	Army worm – a detail discussion.	Collaborative awareness programme and diagnostic visit.	Successfully conducted.
2	Joint field visit – paddy, rapeseed, pulse (Lentil)	Collaborative training programme on scientific production technology	Successfully conducted.

### 5.4 Give details of programmes implemented under National Horticultural Mission: Nil

S. No.	Programme	Nature of linkage	Constraints if any
-	-	-	-

### 5.5 Nature of linkage with National Fisheries Development Board

S. No.	Programme	Nature of linkage	Remarks
1	Skill development programme on "Integrated fish farming system" 1 <sup>st</sup> -6 <sup>th</sup> March, 2017	Credit linkage, training organization	Successfully conducted.
2	Skill development programme on "Composite fish farming" 20 <sup>th</sup> -24 <sup>th</sup> March, 2017	Credit linkage, training organization	Successfully conducted.

## 6. PERFORMANCE OF INFRASTRUCTURE IN KVK DURING 2016-17

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

Sl. No.	Demo Unit	Year of estd.	Area	Details of production			Amount (Rs.)		Remarks
				Variety	Produce	Qty.	Cost of inputs	Gross income	
1.	Piggery	2010	145 sq m	Hampshire & T & D					
2.	Poultry	2010	45 sq m	Kamrupa					
3.	Goat	2010	-	Bettle cross					
4.	Vermicomposting	2010	50 sq m	<i>Eisenia foetida</i>	Vermicompost	340 kg			
5.	Compost and vermicompost								
6.	Azolla								
7.	Rice fish vegetable	2010	224 r m						

## 6.2 Performance of instructional farm (Crops) including seed production

[illegible]

Soy bean	-	-	-	-	-	-	-	-	-
Groundnut	-	-	-	-	-	-	-	-	-
Any other	-	-	-	-	-	-	-	-	-
<b>Fibers</b>									
i.	-	-	-	-	-	-	-	-	-
ii.	-	-	-	-	-	-	-	-	-
<b>Spices &amp; Plantation crops</b>									
i.	-	-	-	-	-	-	-	-	-
ii.	-	-	-	-	-	-	-	-	-
<b>Floriculture</b>									
i.	-	-	-	-	-	-	-	-	-
ii.	-	-	-	-	-	-	-	-	-
<b>Fruits</b>									
i.	-	-	-	-	-	-	-	-	-
ii.	-	-	-	-	-	-	-	-	-
<b>Vegetables</b>									
i.	-	-	-	-	-	-	-	-	-
ii.	-	-	-	-	-	-	-	-	-
<b>a. Others (specify)</b>									
i.	-	-	-	-	-	-	-	-	-
ii.	-	-	-	-	-	-	-	-	-

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

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)

Sl. No	Name of the animal / bird / aquatics	Details of production			Amount (Rs.)		Remarks
		Breed/ species	Type of Produce	Qty.	Cost of inputs	Gross income	
-	-	-	-	-	-	-	-

## 6.5 Rainwater Harvesting

### Training programmes conducted by using Rainwater Harvesting Demonstration Unit

Date	Title of the training course	Client (PF/RV/EF)	No. of Courses	No. of Participants including SC/ST			No. of SC/ST Participants		
				Male	Female	Total	Male	Female	Total
-	-	-	-	-	-	-	-	-	-

## 6.6. Utilization of hostel facilities (Month-Wise) during 2016-17

Accommodation available (No. of beds) : Nil

Months	Title of the training course/Purpose of stay	Duration of Training	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
-	-	-	-	-	-
<b>Total</b>	-	-	-	-	-
<b>Grand total</b>	-	-	-	-	-

## 7. FINANCIAL PERFORMANCE

### 7.1 Details of KVK Bank accounts

Bank account	Name of the bank	Location/ Branch	Account Number
With Host Institute	-	-	-
With KVK	SBI	Gossaigaon	11378641024
Revolving Fund	SBI	Gossaigaon	11378660228

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

Item	Released by ICAR/ZPD		Expenditure		Unspent balance as on 31 <sup>st</sup> March, 2015
	Year	Year	Year	Year	
Inputs	-	-	-	-	-
Extension activities	-	-	-	-	-
TA/DA/POL etc.	-	-	-	-	-
<b>TOTAL</b>	-	-	-	-	-

### 7.3 Utilization of KVK funds during the year 2016 -17

S. No.	Particulars	Sanctioned (in Lakh)	Released (in Lakh)	Expenditure (in Lakh)
<b>A. Recurring Contingencies</b>				
1	<b>Pay &amp; Allowances</b>	88.10	81.63	81.63
2	<b>Traveling allowances</b>	2.50	2.09	2.06
3				<b>Contingencies</b>
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	17.00	8.46	8.46
B	POL, repair of vehicles, tractor and equipments		0.373	0.373
C	Meals/refreshment for trainees			
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)		2.02	2.02
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)		2.63	2.63
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)		1.09	1.09
G	Training of extension functionaries		2.29	2.29
H	Maintenance of buildings			
I	Establishment of Soil, Plant & Water Testing Laboratory			
J	Library			
<b>TOTAL (A)</b>		<b>17.00</b>	<b>16.86</b>	<b>16.86</b>
<b>B. Non-Recurring Contingencies</b>				
1	<b>Works</b>	48.35	-	-
2	<b>Equipments including SWTL &amp; Furniture</b>	1.55	-	-
3	<b>Vehicle</b> (Four wheeler/Two wheeler, please specify)		-	-
4	<b>Library</b> (Purchase of assets like books & journals)	0.75	-	-
<b>TOTAL (B)</b>		<b>50.63</b>	<b>-</b>	<b>-</b>
<b>C. REVOLVING FUND</b>				
<b>GRAND TOTAL (A+B+C)</b>		<b>158.25</b>	<b>100.58</b>	<b>100.58</b>

**7.4 Status of Revolving Fund (Rs. in lakhs) for last three years**

Year	Opening balance as on 1 <sup>st</sup> April	Income during the year	Expenditure during the year	Net balance in hand as on 1 <sup>st</sup> April of each year
April 2014 to March 2015	2.81	1.98	2.31	2.48
April 2015 to March 2016	2.48	1.49	2.73	1.24
April 2016 to March 2017	1.24	2.83	1.73	2.34

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

-

**8.1 Constraints**

<b>(a) Administrative</b>
1. Manpower Shortage – Stenographer post is still vacant
2. Farmers hostel is required
<b>b) Financial</b>
1. Timely release of fund for smooth functioning of KVK,.
<b>(c) Technical</b>
1. Library facility in KVK of far-flung areas from may be upgraded to state of art standard.
2. Supporting technical staff is deeply felt

(Signature)

**Sr. Scientist cum Head**