KRISHI VIGYAN KENDRA MALAPPURAM

ANNUAL REPORT-2020

(FOR THE PERIOD FROM 01 January, 2020 TO 31 December, 2020)

KrishiVigyan Kendra Malappuram , KCAET campus, Tavanur P.O, Tavanur – 679 573

Kerala Agricultural University, Vellanikkara, K.A.U P.O, Thrissur

PART I - GENERALINFORMATION ABOUT THE KVK

1.1. Name and address of KVK withphone, fax and e-mail

KVK Address	Telephone		E mail	Web Address
	Office	Fax		
KrishiVigyan Kendra MalappuramTavanur – 679 573	0494 2686329	0494 2687640	kvkmalappuram@kau.in	**kvkmalappuram.kau.in**

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

Address	Telephone		E mail	Web Address
	Office	Fax		
Kerala Agricultural University Vellanikkara, KAU P.O, Thrissur	0487-2370150	0487-2370150	de@kau.in	**www.kau.in**

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

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr. Ibraheem Kutty .C		9562497320	ibraheemkutty.c@kau.in

1.4. Year of sanction:

1.5. Staff position as on 31 December 2020

Sl. No.	Sanctioned post	Name of the incumbent	Designation	M/ F	Discipline	Highest Qualification (for PC, SMS and Prog. Asstt.)	Pay Scale	Basic pay	Date of joining KVK	Permanent /Temporary	Category (SC/ST/ OBC/ Others)
1	Head/Senior Scientist	Dr. Ibraheem Kutty .C	Programme Coordinator	M	Animal Reproduction	MVSc, MPH; PhD	57700-162000	75300			OBC
2	Scientist/SMS	Dr. Sajeena .S	Asst. Professor	F	Agrl. Engineering	MSc, PhD	57700-162000	101100	03-09-15	Permanent	OBC
3	Scientist/SMS	Abdul Jabbar P.K	Asst. Professor	M	Extension	MSc,	57700-162000	73000	18-09-19	Permanent	OBC
4	Scientist/SMS	Dr. Prasanth K	Asst. Professor	M	Horticulture	MSc, PhD	57700-162000	59400	08-03-19	Permanent	Others
5	Scientist/SMS	Dr. Najitha Ummer	Asst. Professor	F	Agrl. Entomology	MSc, PhD	57700-162000	59400	18-03-19	Permanent	OBC
6	Scientist/SMS	Dr. Lilia baby	Asst. Professor	F	Home Science	MSc, PhD	57700-162000	59400	14-03-19	Permanent	Others
7	Scientist/SMS	Ms. Prasanthi .K	Asst. Professor	F	Agronomy	MSc.	57700-162000	59400	16-03-19	Permanent	Others
8	Scientist/SMS - DAMU	Ms. Sushna	Asst. Professor	F	Agro Meteorology	MSc (Agro meteorology)		35000		Temporary	Others
9	Programme Assistant (Lab Tech.)	Sri. Ambujan C.V.	Technical Officer	M	Agrl. Engg	B.Tech (Agri.Engg)	55350-101400	89000	01-11-04	Permanent	Others
10	Programme Assistant (Computer)	Rosh kurian	Computer Programmer	M				21000		Temporary	Others

11	Programme Assistant/ Farm Manager	Smt. Sandhya .M	Farm Officer	F		BSc(Agri.)	9300- 34800	40500	18-03-13	Permanent	Others
12	Assistant	Ms. Arachana Lal AM	Asst. Section officer	F			9300- 34800	27800	03-10-07	Permanent	Others
13	Jr. Stenographer	Smt. Silna .A	Computer Asst.	F			5200- 20200	30700	14-12-16	Permanent	Others
14	Agromet observer DAMU	Mr. Ashique	Agromet observer	M		BSc(Agri)		18000		Temporary	OBC
15	Driver - 1	Lakshmanan .A	LDV driver	M			5200- 20200	28500	10-08-19	Permanent	SC
16	Driver - 2	Ashraf	LDV driver	M				18000	-	Temporary	OBC
17	SS-1	Sri. Sreenivasan	Class IV	M			5200- 20200	23400	26-08-16	Permanent	SC
18	SS-2	Sri. Abdul Azeez	Class IV	M			5200- 20200	16500		Permanent	OBC

1.6. Total land with KVK (in ha):…20 ha

S. No.	Item	Area (ha)
1	Under Buildings	4.00
2.	Under Demonstration Units	0.24
3.	Under Crops	14.26
4.	Orchard/Agro-forestry	1.00
5.	Others	0.50

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.	Administrative Building	ICAR	July 2006	546	43,92,000			Completed
2.	Farmers Hostel	ICAR	July 2009	300	24,00,000			Completed
3.	Staff Quarters	ICAR	March 2010	394.95	30,50,000			Completed
	1							
	2							
	3							
	4							
	5							
	6							
4.	Demonstration Units		September 2007	160	5,60,000			Completed
	1 Green house	ICAR						
	2 Vermi compost unit	ICAR						
	3 Poly House	Dept. of Agri						
	4 Rain shelter	Dept. of Agri						
5	Fencing							
6	Rain Water harvesting system							
7	Threshing floor							
8	Farm godown							
9								

10	Machinery yard	State Planning Board	May 2015	80.0	33,00,000			Completed
11	Solar power unit	ICAR award money utilization	2017 June		3,00,000			Completed

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Jeep Bolero LX 2WD	2017	8,00,000	91200	Good
Two wheeler-Bike	2006	38,616	50030	Good (15 years over)
Two wheeler - scooter	2009	43,955	41064	Good

C) Equipment & AV aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
OHP	2004	24,980	Good but not being used
Xerox machine Toshiba Copier cum Printer	2004	67,158	Irrepairably damaged and needs replacement
Tractor (New Holland Ford 3230 42 HP)	2005	3,43,235	Good
Computer	2005	75,000	Good
Digital camera	2006	19,500	Damaged and needs replacement
LCD Projector	2007	71,640	Not working and needs replacement
Laptop computer	2007	28,200	Irrepairably damaged and needs replacement
Fax machine	2009	14,100	Good but not being used
EPABX	2010	49,900	Good
Kubota mini tractor	2017	6,00,000	Good
Laptop and printer(DAMU)	2019	60000	Good
Laptop	2020	37700	Good

1.8. Details of SAC meeting conducted during 2020

Date	Number of Participants	Salient Recommendations	Action taken	Remarks, if any
25-11-2020	26	**Project Director ATMA** suggested more advisories and technical support should be provided at Krishibhavan level in the form	Technical support given for installing dripand wick irrigation systems, rain shelters, open precision farming and	

		of technology leaflets, Whats app group messages etc. BLAKC meeting should be held minimum one meeting per month. White fly is being a major threat in coconut plantations of Malppuram District, more awareness programmes will be initiated along with*Keragramam*programmes of the Department & fund of *KeraGramam* can be used if required.	farm mechanization. Monthly meetings under BLAKC & technical support to Krishipadasalas at farmers field. Training programmes on scientific techniques as well as whitefly management in coconut cultivation is being given through Krishi Padashaalas	
		District Animal Husbandry Officer: Mineral deficiency is a major problem in livestock sector; it would be very useful if KVK can formulate an ideal mineral mixture for livestock in Malappuram district. Hoof problem in livestock is also a problem in livestock sector. She suggested KVK should start an egger nursery to meet the demand of the district. Conduct more awareness programme to popularise improved fodder varieties among farmers to meet the balanced diet of livestock. Livestock suffer excessive climatic stress due to temperature and humidity. Try to introduce a suitable index for farmers to assess the stress and to make management alterations. Weather bulletin prepared by DAMU, KVK Malppuram should be communicated to Animal husbandry Department.	Formulation of area specific mineral mixture need extensive research. Searching for results of such works already done. Steps initiated to start an egger nursery under the KVK FLD going on fodder cultivation in summer fallows Biweekly weather bulletins prepared by DAMU under the KVK are now being sendto the district animal husbandry office.	
		Sri Latheef, Farmer: He emphasised the importance of Integrated farming system approaches to enhance the farmer income. KVK should identify at least two progressive farmers from each ward to disseminate improved technologies to other farmers by organising farmer field level trainings demonstration & experience sharing. Promote liquid formulation of bio control agents for improved efficacy. Give more off campus training than on campus training.	Given emphasis on integrated farming system approaches in training programmes. Project proposal given for the production and popularization of liquid formulation of bio control agents	

		Dr. Sathian, Dean, KCAET: Importance of scientific nutrient management should be promoted to increase productivity of major crops in the district. Include the participation minor irrigation department officials to SAC meeting	Organized two day training programme on Integrated nutrient management 130 youth participated in 4 batches	
		Sri. Mohammed Riyas, DDM NABARD: Focus on few flagship programme over a period of time through various intervention of KVK. Success of these programmes may evaluated on the level of adoption by farmers. Funds of other departments including NABARD may be utilised in convergence of such projects. KVK may utilise services of farmers societies, Farmers clubs, FPO etc.	Future programmes will be planned as per the this recommendation	
		Smt .Sheeba Khamer, Deputy Director, Dairy Development Department KVK activities should be focussed to tackle the problem faced by the dairy farmers such as high cost of milk production, low resistance animals, infertility problems etc	Training classes on sustainable production and measures to tackle infertility problems, high cost of milk production and increased prevalence of diseases in dairy animals	
		Smt. Bhagyasree, Programme Officer, Kudumbasree Mission: Suggested different areas where KVK can render technical support to Kudumbasree mission viz.; trainings on processing of coconut, mushroom cultivation & value addition and bee keeping trainings. Render the technical support for establishing model plot of paddy, Banana, Vegetable & IFS.	Conducted off campus training on vegetable cultivation at various BLAKCs and Krishi Padashalas	
		Smt. Mariamma K. George, Assistant Soil Conservation Officer Manjeri: Conduct more awareness programme on soil and water conservation technologies in flood and landslide prone areas of Malappuram	Conducted 8 online and 5 off line awareness classes on soil and water conservation, water management and importance of micro rrigation systems for farmers and VHSE students	
		Dr. Ani .S Das, KVK Thrissur: KVK can establish model egger nursery by replicating the one at KVK Thrissur. Similarly chelated mineral mixture can be popularised through the various activities	Visited the egger Nursery at KVK Thrissur and discussed the mode of starting one	

		of KVK to address nutritional problems of livestock sector.		
		Dr. M. J. Chandra Gowda Nodal Officer, ATARI Bengaluru: He appreciated the overall performance of KVK during the SAC period and he suggested that more emphasis should be given in activities like doubling farmer's income, ARYA &Nutri-garden programmes. Popularise bio fortified varieties through nutri-garden activities.	ARYA is continuing and several beneficiaries of ARYA training have started small scale enterprises. Nutrigarden started in five anganwadies and 25 households. Supplied biofortified varieties of sweet potato Bhu Sona and Bhu Krishna through Nutri garden.	
		Dr. V. Venkatasubramanian, Director ATARI, Bengaluru: Efforts should be taken to publish the promising technologies and success story of KVK Malappuram in ICAR news to get national level attention.	Televison and Radio programmes covering KVK activities. Published popular articles as well as research publications	
		Dr. Jiju P. Alex, D E, KAU: Existing minimal processing unit of KVK Malappuram can be upgraded as a common facility centre which can create more impact among stakeholders. Also, advised to start the activities to expand the area of tuber crop seed village.	Supplying high yielding varieties of tapioca and sweet potato to farmers through KVK outlet. Also promoting high yielding & bio fortified tuber crops through IVLP programme linked with DFI Village Aalipparambu Village	

PART II - DETAILS OF DISTRICT

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

S. No	Farming system/enterprise
1.	Coconut based homesteads
2.	Rice based cropping systems
3.	Banana based farming system
4.	Summer vegetables
5.	Goat rearing
6.	Dairy Enterprise

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

S. No	Agro-climatic Zone	Characteristics
1	Sub humid laterite	Regions where moisture in normally less than under humid conditions but still sufficient for the production of many agricultural crops without irrigation or dryland farming. Annual rainfall varies from 150 -180 cm. Soil is laterite
2	Sub humid alluvium	Soil type is alluvium with above climate
3	Sub humid forest loam	Soil type is forest loam with above climate
4	Humid forest loam	Average annual rainfall is heavy (over 200cm) but varies in amount and in seasonal and areal distribution. Soil is forest loam
5	Per humid laterite	This climate has humidity index values of +100 and above and compares closely to the wet climate. Rainfall is greater than 200 cm.

S. No	Agro ecological situation	Characteristics
1	Zone VI - Malappuram type	Soil type is laterite. Places such as Tirur ,Kuttippuram, Tanur, Tirurangadi, Vengara, Malappuram, Manjery, Kondotty are coming under this zone.
2	Zone II – Coastal Sandy	Soil type is sandy loam. Ponnani area is coming under this zone.
3	Zone VII – Malayoram	Soil type is laterite without B horizon. Area such as Perinthalmanna, Mankada, Vandur are coming under this zone.

2.3 Soil type/s

S. No	Soil type	Characteristics	Area in ha
1	Loamy sand	Well drained soil with cultivation of coconut, paddy, banana and vegetables	20469
2	Gravelly clay loam	Well drained soil with cultivation of coconut, arecanut, banana and fruit trees	163702
3	Gravelly loam	Excessively drained soil with cultivation of cashew	8796
4	Silty clay loam	Imperfectly drained soil with cultivation of paddy, vegetables, banana and pulses	21672
5	Gravelly clay	Well drained soil with cultivation of coconut, cashew and tapioca	63251
6	Gravelly sandy clay loam	Well drained soil with cultivation of coconut, cashew and rubber	10725
7	Gravelly silty loam	Well drained soil with cultivation of rubber and pepper	4245
8	Silty clay loam	Excessively drained soil with forest	28497
9	Clay loam	Excessively drained soil with forest and rubber cultivation	37687

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

S. No	Crop	Area (ha)	Production (Metric tons)	Productivity (kg /ha)
1.	Coconut	105090	855 million nuts	8136 nuts/ha
2.	Rubber	42775	40040	936
3.	Areca nut	17929	15997	892
4.	Paddy	7864	23571	3026
5.	Pepper	2718	523	192
6.	Cashew	1939	322	166
7.	Tapioca	5459	202502	37091
8.	Betel leaves	130	3655	28079
9.	Sesamum	59.89	11.845	198
10.	Vegetables	4929		
11.	Jack	8511	22 million fruits	2585
12.	Mango	8120	33393	4113
13.	Banana	7572	60912	8044
14.	Plantain	4431	25882	5841

* Please provide latest data from authorized sources. Please quote the source

2.5. Weather data

Month	Rainfall (mm)	Temperature ^{0} C		Relative Humidity (%)
		Maximum	Minimum	
January	0	34.7	21.7	57.19
February	0	36.22	22.79	51.19
March	3.6	37.69	24.53	55.35
April	27.0	37.45	24.86	58.66
May	69.0	36.14	24.22	65.22
June	471.4	29.73	20.30	85.40
July	381.5	28.96	19.56	85.64
August	498.9	29.25	19.98	85.00
September	627.8	29.15	20.63	83.36
October	66.1	31.70	21.95	76.25
November	66.0	33.16	20.77	72.46
December	16.2	32.80	20.43	71.29

* ARS Anakkayam, KAU

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

Category	Population	Production	Productivity
Cattle			
Crossbred	84131	98460 mt/yr	2390 Kg/lactation
Indigenous			
Buffalo	19893	4448 mt/yr	1758 Kg/lactation
Sheep			
Crossbred			
Indigenous			
Goats	145187		14
Pigs	945		45
Crossbred		-	2.5
Indigenous			
Rabbits	20014		
Poultry			
Hens	1249813	21.92 lakh eggs/year	205 eggs/bird/year

Desi			
Improved			
Ducks	91376	4.14 lakh eggs/year	130 eggs/bird/year
Turkey and others	97926	-	-
Crossbred			
Category	**Area**	**Production**	**Productivity**
Fish			
Marine			
Inland			
Prawn			
Scampi			
Shrimp			

* Please provide latest data from authorized sources. Please quote the source

2.7 District profile maintained in the KVK has been **Updated** for 2020: Yes / No

2.8 Details of Operational area / Villages

Sl.No.	Taluk	Name of the block	Name of the village	How long the village is covered under operational area of the KVK (specify the years)	Major crops & enterprises	Major problem identified	Identified Thrust Areas
1	Ponani Tirur Ernad Thirurangadi	Ponnani Tirur Tirur Kuttippuram Tirur Malappuram Tirurangadi Tirur Tirur Vandur	Kuttippuram Marakkara Edayur Irimbiliyam Nannambra Moonniyur Vallikkunnu Thennala Vettom AR Nagar Tavanur Edapal Changaramkam Athavanad Parappanangadi	11 5 6 4 5 5 4 5 14 5 13 6 4 11 4	Coconut	Low productivity and income	Enhancing the productivity of homesteads

						Scarcity and high cost of organic manure	Promoting on-farm organic source of nutrients
						Labour scarcity	Small scale farm mechanization
						Pest and Disease Incidence	IPDM
						Scarcity of water for irrigation	Soil and moisture conservation
						Yield decline of intercropped turmeric	Enhancing the productivity of homesteads
2	Nilambur Perinthalmanna Ernad Kuttippuram	Ponnani Tirur Tirur Kuttippuram Tirur Malappuram Tirurangadi Tirur Tirur Vandur	Oorangattiri Keezhuparamba Edayur Athavanadu Morayur Vattamkulam Parappanangadi Edapal Ullanam Angadippuram Kuttippuram Thenjippalam	7 3 6 11 4 10 4 10 8 6 11 4	Vegetables	Pest & Disease incidence	IPDM
						Low productivity in rainy season	Enhancing fruit and vegetable productivity
						Labour scarcity	Small scale mechanization
						Water scarcity and high cost on drip irrigation	Soil and water conservation
						Unavailability of land in urban areas	Enhancing fruit and vegetable productivity
						Low	

3	Ponani Tirur Nilambur	Ponnani Tirur Kuttippuram Malappuram Tirurangadi Tirur Vandur	Perumpadappa Maranchery Nannammukku Alamkode Vattamkulam Thavanur Kalady Purathur Triprangode Thirunavaya Mangalam Chungathara Vazhikkadavu Angadaippuram AR Nagar Koloopalam	9 7 5 5 10 12 5 4 5 10 4 8 5 6 5 3	Paddy	Decrease in fertility of rice soils and high cost of organic manure	Promoting on-farm organic source of nutrients
						Labour scarcity	Small scale mechanization
						Pests diseases and weeds	IPDM
						High acidity in kole areas	Enhancing kole rice productivity
						Fallowing of rice fields	Utilisation of rice fallows
						Attack of grains by baya weaver bird	IPDM
						Yield decline due to drought	Drought mitigation
4	Ponani Tirur	Ponnani Kuttippuram Tavanur Tanur	Edappal Vattamkulam Kalady Edapal Kololamba Parappanangadi	5 5 10 12 5 4	Dairying	High cost of feed and lack of fodder grass	Enhancing the productivity of homesteads
						Low performance of hybrid napier in shade	Enhancing the productivity of homesteads

						Ecto-parasite infestation	Scientific management of cattle and goat
5	Tirur	Tirur	Tirur Thirunavaya Thanalur Niramaruthur Chembra Vylathur	8 11 8 8 5 5	Betelvine	High cost of organic manure	Promoting organic sources
						Pest & disease incidence	IPDM
						Scarcity of water for irrigation	Soil & water conservation
6	Tirur Ernad	Tirur Perinthalmanna Vandur Tavanur Kuttippuram Manjeri	Irimbiliyam Edayur Morayur Kondotty Vazhakkad Nediyirippu Edapal Vattamkulam Athavanad Kuttippuram Tirunavaya	8 6 5 5 10 12 5 4 5 11 11	Banana	Scarcity of water for irrigation	Soil and moisture conservation
						Pest and disease incidence	IPDM
						Labour scarcity	Small scale mechanization
						Fluctuating price	Fruit and vegetable productivity
						Yield decline due to micronutrient deficiency	Soil health management
7	Tirur Nilambur	Vandur Tirur Tavanur	Kondotti Tirur Vazhikkadav Tavanur	5 8 5 12	Pepper	Low yield due to drought Yield decline due to micronutrient deficiency	Drought mitigation Enhancing the productivity of homesteads

8	Ponani	Tavanur	Tavanur Ponani Edapal	12 6 10	Perennial fruit crops	*Drudgery in processing of fruit pulp*	Value addition
9	Perinthalmanna	Malappuram	Moonniyoor	5	*Tapioca*	Fluctuating price	Small scale mechanization
10	Ponnani Tirur Nilambur Perinthalmanna	Tavanur Tirur	Tavanur, Kalady Edappal Ezhuvathuruthy Vettom Mangalam Purathur Thirunavaya Nilambur Vazhikkadavu Amarambalam Oorgattiri Muthuvalloor Kondotti changaramkulam	12 5 10 5 12 5 4 10 8 8 3 4 4 5 6	*Homestead farming*	*Lack of integration and low income*	Enhancing the productivity of homesteads
						Pest incidence in mushrooms	IPDM
						Destruction of crops by wild boars	IPDM
						Yield decline in oyster mushrooms	Enhancing the productivity of homesteads

11	Ponani Tirur Ernad		Tavanur Kalady Edappal Thirunavaya Morayur Kondotty Mangalam Purathur	12 5 10 10 5 5 4 4	*Arecanut*	Pest and disease management	IPM practices
						Nutrient deficiency	INM practices

2.8 Details of Benchmark Information collected from DFI villages

Sl.No.	Taluk	Name of the block	Name of the village	Name of the Head of Household	Annual Gross Income (Rs.)	Annual Expenditure (Rs.)	Annual Net Income (Rs.)
1.	Tirur	Valanchery	Edayur	Seythalikkutty	200000	144000	60000
2.	Tirur	Valanchery	Edayur	Siafu C.P	240000	234000	7000
3.	Tirur	Valanchery	Edayur	Abdu Rahman	175000	120000	55000
4.	Tirur	Valanchery	Edayur	Safiya	60000	50000	10000
5.	Tirur	Valanchery	Edayur	Mariya	60000	55000	5000
6.	Tirur	Valanchery	Edayur	Muhammad Mannath	60000	55000	5000
7.	Tirur	Valanchery	Edayur	Abdu Chittakath	60000	54000	6000
8.	Tirur	Valanchery	Edayur	Khamarunnisa	120000	96000	24000
9.	Tirur	Valanchery	Edayur	Abdul Fathah	180000	144000	36000
10.	Tirur	Valanchery	Edayur	Basheer	150000	120000	30000
11.	Tirur	Valanchery	Edayur	Beerankutty	600000	540000	60000
12.	Tirur	Valanchery	Edayur	Asees Chakkal	180000	150000	30000
13.	Tirur	Valanchery	Edayur	Unneenkutty	132000	61200	70800
14.	Tirur	Valanchery	Edayur	C P Rasheed	75000	60000	15000
15.	Tirur	Valanchery	Edayur	Mammikkutty	150000	138000	12000
16.	Tirur	Valanchery	Edayur	Cp Muhammadali	72000	66000	6000
17.	Tirur	Valanchery	Edayur	Alavi	72000	48000	24000

18.	Tirur	Valanchery	Edayur	Muhammad Palakkari	72000	66000	6000
19.	Tirur	Valanchery	Edayur	Usman	192000	180000	12000
20.	Tirur	Valanchery	Edayur	Abdul Basheer	300000	170000	130000
21.	Tirur	Valanchery	Edayur	Muhammad Pattamarthody	150000	120000	30000
22.	Tirur	Valanchery	Edayur	Abdul Majeed	60000	48000	12000
23.	Tirur	Valanchery	Edayur	Alavi Kanjiram Kattil	70000	60000	10000
24.	Tirur	Valanchery	Edayur	Abdul Jabbar	240000	180000	60000
25.	Tirur	Valanchery	Edayur	Abu Palakkal	120000	90000	30000
26.	Tirur	Valanchery	Edayur	Aboobakkar Madambath	180000	120000	60000
27.	Tirur	Valanchery	Edayur	Hassan, Kolamban	72000	60000	12000
28.	Tirur	Valanchery	Edayur	Moideen Kutty	240000	168000	72000
29.	Tirur	Valanchery	Edayur	Khaneefa	144000	120000	24000
30.	Perinthalmanna	Perinthalmanna	Pulamanthole	Abdu Palliyalil	570000	504000	66000
31.	Perinthalmanna	Perinthalmanna	Pulamanthole	Khalid Kallethodi	632000	540000	92000
32.	Perinthalmanna	Perinthalmanna	Pulamanthole	Kuttan Vengattupalliyalil	204000	192000	12000
33.	Perinthalmanna	Perinthalmanna	Pulamanthole	Ummar Pulakkattuthodi	150000	120000	30000
34.	Perinthalmanna	Perinthalmanna	Pulamanthole	Salam Kallethodi	150000	132000	18000
35.	Perinthalmanna	Perinthalmanna	Pulamanthole	Suresh Njaloor	350000	288000	62000
36.	Perinthalmanna	Perinthalmanna	Pulamanthole	Husain P T	750000	720000	30000
37.	Perinthalmanna	Perinthalmanna	Pulamanthole	Gafoor P T	175000	120000	55000
38.	Perinthalmanna	Perinthalmanna	Pulamanthole	Cholakkal Chandran	75000	60000	15000
39.	Perinthalmanna	Perinthalmanna	Pulamanthole	Abdul Sammad K T	100000	72000	28000
40.	Perinthalmanna	Perinthalmanna	Pulamanthole	Vadissery Raman	62500	48000	14500
41.	Perinthalmanna	Perinthalmanna	Pulamanthole	Koottaplavil Kunji Kammu	62500	50400	12100
42.	Perinthalmanna	Perinthalmanna	Pulamanthole	Moidunni Kutty M	100000	66000	34000
43.	Perinthalmanna	Perinthalmanna	Pulamanthole	Pulakkatuthody Muhammed	212500	168000	44500
44.	Perinthalmanna	Perinthalmanna	Pulamanthole	Aboobakkar Haji K	200000	144000	56000
45.	Perinthalmanna	Perinthalmanna	Pulamanthole	Muhammed K	225000	180000	45000
46.	Perinthalmanna	Perinthalmanna	Pulamanthole	Aboobakkar T	200000	156000	44000
47.	Perinthalmanna	Perinthalmanna	Pulamanthole	Karattu Parambil Hamsa	225000	168000	57000
48.	Perinthalmanna	Perinthalmanna	Pulamanthole	Aboobakkar Palakkeery	400000	360000	40000
49.	Perinthalmanna	Perinthalmanna	Pulamanthole	Vaishyan Abu	125000	96000	29000
50.	Perinthalmanna	Perinthalmanna	Pulamanthole	Usman Thekkethil	200000	120000	80000

51.	Perinthalmanna	Perinthalmanna	Pulamanthole	Ummar Palakkeri	150000	120000	30000
52.	Perinthalmanna	Perinthalmanna	Pulamanthole	Cherooth Muhammed	225000	168000	57000

2.10 Priority thrust areas

S. No	Thrust area
1	Enhancing the productivity of homesteads
2	Integrated pest and disease Management (IPDM)
3.	Soil health management
4	Enhancing fruit and vegetable productivity
5	Production of quality seeds and planting materials
6	Small scale farm mechanization
7	Enhancing Kole rice productivity
8	Utilization of rice fallows
9	Promotion of organic inputs in crop production
10	Soil moisture conservation and drought mitigation
11	Scientific management of cattle and goat
12	Household waste management
13	Value addition

PART III - TECHNICAL ACHIEVEMENTS (2020)

3.A. Target and Achievements of mandatory activities

OFT				FLD			
1				2			
OFTs (No.)		Farmers (No.)		FLDs (No.)		Farmers (No.)	
Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
8	2 (6 ongoing)	37	37	11	11 ongoing	90	90

Training				Extension Programmes			
3				4			
Courses (No.)		Participants (No.)		Programmes(No.)		Participants (No.)	
Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
100	116	5000	6299	1000	1083	7000	7744

Seed Production (Q)		Planting material (Nos.)	
5		6	
Target	Achievement	Target	Achievement
10	12.76	100000	176252

Livestock, poultry strains and fingerlings (No.)		Bio-products (Kg)	
7		8	
Target	Achievement	Target	Achievement
		8000	8691
		Fertilizer mixtures (Kg)	
		2000	5170

3.B1. Abstract of interventions undertaken

S. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions										
				Title of OFT if any	Title of FLD if any	Number of Training (farmers)	Number of Training (Youths)	Number of Training (extension personnel)	Extension activities (No.)	Supply of seeds (Qtl.)	Supply of planting materials (No.)	Supply of livestock (No.)	Supply of bio products	
													No.	Kg
	IPDM	Bhindi	Incidence of yellow vein mosaic in varieties cultivated in the district	Assessment of different bhindi varieties/ hybrids						0.0015 Qtl each of Arka Anamika, CoBhH1& Manjima				
		coconut			CPS level management of rhinoceros beetle in coconut using metarrhiziumanisopliae	1 (cattle farmers)							Metarhizium	117
		Banana			Prophylactic Management of rhizome weevil and pseudo stem weevil in Banana								10 bottle of (100ml) neem oil 10 bottle of (250ml) nanma	Beauveriabassiana 20 kg (2 Kg to 10 farmers each)
	Scientific dairy production	Dairy			Demonstration of topical application of Ceylon oak oil for ectoparasite control and to heal bite injuries	1 (cattle farmers)							3 liters of Ceylon oak oil	
		fodder			Shade tolerant guinea grass COGG3 in densely planted coconut home steads	1 (cattle farmers) 1 (IFS Farmers)					2000			
		fodder		Assessment of fodder grass and fodder cow pea varieties intercropping in coconut based home steads		1 (IFS Farmers)				500 gram	600			

	Enhancing the productivity of homesteads	Coconut	Low yield and income from coconut	Management protocol for enhancing income from coconut		5 farmers								
	Soil health managemen t	Rice	Low yield and income from paddy	Demonstratio n of management protocol for enhancing income from paddy in other than kole lands		5 farmers								
	Utilization of rice fallows	Pulses	Yield reduction of ruling sesamum crop due to drought	Assessment of short duration heat tolerant pulses in rice fallows		3 farmers								
	Enhancing fruit and vegetable productivity	Vegetables	Yield reduction due to heavy incidence of wilt		Wilt resistant tomato variety manuprabha with ICM					Seeds = .001 Qntl				Psuedomonas1 Kg Dolomite 20 Kg
		Vegetables	Incidence of mosaic and yield reduction	Assessment of cow pea varieties for malappuram district						0.72 Qntl				
		Spice	Yield reduction due to drought		ICM practices in short duration turmeric variety IISR Pragati						125 kg			GRB 35 capsule= 5 nos
		Banana	Yield reduction due to secondary and micro nutrient deficienc y		Sampoorna-secondarymicronutrient mixture for banana									NPK fertilizer and Lime Smpoorna Banana

	Soil moisture conservation and draught mitigation		water scarcity, lack of availability of existing wick material	Assessment of coir pith wick for wick irrigation system							Planting material = 90 Nos Planting media = 90 No.			Drip irrigation materials , Bunch covering equipments
					In-situ moisture conservation measures in coconut garden									Labour contribution

3.B2. Details of technology used during reporting period

S.No	Title of Technology	Source of technology	Crop/enterprise	No.ofprogrammes conducted			
				OFT	FLD	Training	Others (Specify)
1	2	3	4	5	6	7	8
1	Assessment of high yielding musk melon varieties for Malappuram district	ICAR IIHR	Musk melon	5		1	
2	Assessment of high yielding Amaranthus varieties for Malappuram district	ICAR IIHR, KAU	Amaranthus	5		1	
3	Assessment of performance of short duration Tapioca varieties under integrated nutrient management practices	CTCRI & KAU	Tapioca	5		2	
4	Evaluation of Amorphophallus under different nutrient management practices in rice based cropping system	CTCRI & KAU	Tubers	5		1	
5	Assessment of native isolates of *Beauveria bassiana and Lecanicillium saksenae* against rice bug infestation in Malappuram	AICRP	Paddy	5		2	
6	Assessment of varying feeding strategies to counteract negative energy balance	KVASU	Dairy	4		2	
7	Assessment of improved Thalassery breed of chicken under backyard rearing	KVASU	Poultry	5		2	
8	Assessment of mechanical methods for repelling wild boar	AINP on VPM	Others	3		2	
9	Demonstration of management protocol for enhancing income from paddy in other than kole lands	KAU	Paddy		5	2	
10	Management of Bacterial leaf blight in Rice	KAU	Paddy		10	1	
11	AESA based IPM in Edayur Chilli	NIPHM	Chilli		10	1	
12	Demonstration of ridge gourd hybrid 'KRH-1' with ICM	KAU	Ridge gourd		10		
13	Demonstration of macro propagation of in banana	KAU	Banana		10		
14	Demonstration of fodder maize in summer fallows	KAU	Fodder		10	1	

15	Demonstration of management protocol for enhancing income from coconut (2nd year)	**KAU & CPCRI**	**Coconut**		**5**	**2**	
16	CPS level management of rhinoceros beetle in coconut using *Metarrhizium anisopliae*	**CPCRI**	**Coconut**		**5**	**2**	
17	In-situ moisture conservation measures in coconut garden	**KAU**	**Coconut**		**5**	**2**	
18	Demonstration of high yielding sweet potato variety 'Bhu Sona' with ICM	**ICAR-CTCRI**	**Potato**		**10**	**1**	
19	Demonstration of high yielding CMD resistant Cassava hybrid 'Sree Reksha' with ICM	**ICAR-CTCRI**	**Tapioca**		**10**	**1**	
20							

3.B2 contd..

No. of farmers covered															
OFT				**FLD**				**Training**				**Others (Specify)**			
General		**SC/ST**		**General**		**SC/ST**		**General**		**SC/ST**		**General**		**SC/ST**	
M	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**
9	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**
2	**1**	**1**	**1**					**2**	**1**	**1**	**1**				
2	**2**	**1**						**2**	**2**	**1**					
2	**1**	**2**						**2**	**1**	**2**					
3	**2**							**3**	**2**						
2	**2**	**1**						**2**	**2**	**1**					
2		**2**						**2**		**2**					
3	**2**							**3**	**2**						
2	**1**							**2**	**1**						
				2	**1**	**2**		**2**	**1**	**2**					
				4	**2**	**2**	**2**	**4**	**2**	**2**	**2**				
				5	**3**	**1**	**1**	**5**	**3**	**1**	**1**				
				3	**2**	**3**	**2**	**3**	**2**	**3**	**2**				
				2	**2**	**3**	**3**	**2**	**2**	**3**	**3**				
				4	**1**	**3**	**2**	**4**	**1**	**3**	**2**				
				5	**3**	**2**		**5**	**3**	**2**					
				3	**1**	**4**	**2**	**3**	**1**	**4**	**2**				
				5	**2**	**1**	**2**	**5**	**2**	**1**	**2**				
				4	**2**	**2**	**2**	**4**	**2**	**2**	**2**				
				5	**3**	**1**	**1**	**5**	**3**	**1**	**1**				

PART IV - On Farm Trial(2020)

4.A1. Abstract on the number of technologies assessed in respect of crops

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	TOTAL
Integrated Nutrient Management									2	2
Varietal Evaluation					1	1				2
Integrated Pest Management	1									1
Integrated Crop Management										
Integrated Disease Management										
Small Scale Income Generation Enterprises										
Weed Management										
Resource Conservation Technology										
Farm Machineries										
Integrated Farming System										
Seed / Plant production										
Value addition										
Drudgery Reduction										
Storage Technique										
Cropping Systems										
Farm Mechanization										
Mushroom cultivation										
others					1					1
Total	1				2	1			2	6

4.A2. Abstract on the number of technologies refined in respect of crops

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	TOTAL
Integrated Nutrient Management										
Varietal Evaluation										
Integrated Pest										

Management										
Integrated Crop Management										
Integrated Disease Management										
Small Scale Income Generation Enterprises										
Weed Management										
Resource Conservation Technology										
Farm Machineries										
Integrated Farming System										
Seed / Plant production										
Value addition										
Drudgery Reduction										
Storage Technique										
Cropping Systems										
Farm Mechanization										
Mushroom cultivation										
Others										
Total										

4.A3. Abstract on the number of technologies assessed in respect of livestock

Thematic areas	Cattle	Poultry	Piggery	Rabbit	Fisheries	TOTAL
Evaluation of Breeds		1				1
Nutrition Management						
Disease of Management						
Value Addition						
Production and Management						
Feed and Fodder	1					1
Small Scale income generating enterprises						
Dairy						
Others (Pl. specify)						
TOTAL	1	1				2

4.A4. Abstract on the number of technologies refined in respect of livestock

Thematic areas	Cattle	Poultry	Piggery	Rabbit	Fisheries	TOTAL
Evaluation of Breeds						
Nutrition Management						
Disease of Management						
Value Addition						
Production and Management						
Feed and Fodder						
Small Scale income generating enterprises						
Dairy						
Others (Pl. specify)						
TOTAL						

4.B. Achievements on technologies Assessed and Refined

4.B.1. Technologies Assessed under various Crops

Thematic areas	Crop	Name of the technologies	No. of trials	Number of farmers / locations	Area in ha (Per trial covering all Technological Options in a farm)
Integrated Nutrient Management	Tapioca	Assessment of Performance of short duration Tapioca varieties under integrated nutrient management practices	5	5	
	Amorphophallus	Assessment of performance of short duration Tapioca varieties under integrated nutrient management practices	5	5	
Varietal Evaluation	Musk Melon	Musk melon varieties Arka siri, Pusa madhurima	5	5	
	Amaranthus	Amaranthus varieties KAU- Arun,Vaiga, Arka Arunima,	5	5	
Integrated Pest Management	Paddy	Assessment of native isolates of *Beauveria bassiana and Lecanicillium saksenae* against rice bug infestation	5	5	
	All	Assessment of mechanical methods for repelling wild boar	3	3	

Integrated Crop Management					
Integrated Disease Management					
Small Scale Income Generation Enterprises					
Weed Management					
Resource Conservation Technology					
Farm Machineries					
Integrated Farming System					
Seed / Plant production					
Value addition					
Drudgery Reduction					
Storage Technique					
Mushroom cultivation					
Total					

4.B.2. Technologies Refined under various Crops

Thematic areas	Crop	Name of the technologies	No. of trials	Number of farmers/locations	Area in ha (Per trial covering all Technological Options in a farm)
Integrated Nutrient Management					
Varietal Evaluation					
Integrated Pest Management					

Integrated Crop Management					
Integrated Disease Management					
Small Scale Income Generation Enterprises					
Weed Management					
Resource Conservation Technology					
Farm Machineries					
Integrated Farming System					
Seed / Plant production					
Value addition					
Drudgery Reduction					
Storage Technique					
Mushroom cultivation					
Total					

4.B.3. Technologies assessed under Livestock

Thematic areas	Name of the livestock	Name of the technologies	No. of trials	No. of farmers/locations
Evaluation of breeds	Chicken	Improved Thalassery breed of chicken under backyard rearing	5	5
Nutrition management	Cattle	Assessment of varying feeding strategies to counteract negative energy balance	4	4
Disease management				
Value addition				
Production and management				
Feed and fodder				
Small scale income generating enterprises				
Total				

4.B.4. Technologies Refined under Livestock and other enterprises

Thematic areas	Name of the livestock	Name of the technologies	No. of trials	No. of farmers/locations
Evaluation of breeds				
Nutrition management				
Disease management				
Value addition				
Production and management				
Feed and fodder				
Small scale income generating enterprises				
Total				

4.B.5. T**echnologies assessed under various enterprises by KVKs**

Sl.	Thematic areas	Name of the enterprise	Name of technology(s)	No. of trials	No. of locations
1	Drudgery reduction				
2	Entrepreneurship Development	Food processing	Development demonstration of technology	1 SHG	1

			for functional pasta from various agri produce		
3	Health and nutrition				
4	Processing and value addition				
5	Energy conservation				
6	Small-scale income generation				
7	Storage techniques				
8	Household food security				
9	Organic farming				
10	Agroforestry management				
11	Mechanization				
12	Resource conservation technology				
13	Value Addition				
14	Others				

4.B.6.T**echnologies assessed under various enterprises for women empowerment**

	Thematic areas	**Name of enterprise**	**Name of technology(s)**	**No. of trials**	**No. of locations**
1	Drudgery Reduction				
2	Entrepreneurship Development				
3	Health and Nutrition				
4	Value Addition				
5	Women Empowerment				
6	Others(Home science)				

4.C1.Results of Technologies Assessed

OFTs 2019-20

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Source of technology	Yield	Unit of yield	Observations other than yield	Gross Return Rs. / unit	Net Return Rs. / unit	BC Ratio (Gross income/ Gross Cost)
1	2	3	4	5	6	7	8	9	10	11	12	13
Paddy	Irrigated	Soil acidity	Assessment of granular dolomite for soil acidity management	5	T.O.1 (no lime)	FP	57.5	(q/Ha)	Change in pH 5-5.7	164962.5	87400	2.1
					T.O.2 (Powdered dolomite)	KAU	62.5	(q/Ha)	Change in pH 5-5.7	178437.5	104475	2.4
					T.O.3 (granular dolomite)	UAHS, Shimoga	67.5	(q/Ha)	Change in pH 5-5.7	191912.5	117550	2.6
Vegetable	irrigated	water scarcity, lack of availability of existing wick material	Assessment of coir pith wick for wick irrigation system	3	T.O.1 (glass wool)	CWRDM	47.2	Kg / 30 plant unit	Water saving - 37-58% Water use efficiency -93-98% Moisture content %-31.35	1888	338	1.22
					T.O.2 (cotton)		43.4		Moisture content %-29.34	1736	366	1.27
					T.O.3 (coir pith)		45.8		Moisture content %-34.50	1832	672	1.58
Cow pea	irrigated	Incidence of mosaic and yield reduction	Assessment of cow pea varieties for malappuram district	3	T.O.1 (Vellayani Jyothika)		142.41	(q/Ha)	Incidence of Mosaic disease (Per cent)-18.34 Pod length-48.44 Pod weight-22.24	376025	135791	1.56
					T.O.2 (Manjari)	KAU 2018	156.80		Incidence of Mosaic disease (Per cent)-5.24 Pod length-39.24 Pod weight-17.96	392000	151766	1.63
					T.O.3 (Geethika)		168.83		Incidence of Mosaic disease (Per cent)-2.13	422075	181841	1.75

									Pod length-45.81 Pod weight-22.54			
Bhindi	irrigated	Incidence of yellow vein mosaic in varieties cultivated in the district	Assessment of different bhindi varieties/ hybrids	3	T.O.1 (ArkaAnamika)		101.5	q/ha	Percent disease incidence - 56.67	253839.30	93691.8	1.58
					T.O.2 (CO BhH1)	TNAU	187.7		6.67	469375.00	304977.5	2.85
					T.O.3 (Manjima)	KAU	149.0		23.33	372571.04	182673.9	1.96
sesamum	Rain fed	Yield reduction of ruling sesamum crop due to drought	Assessment of short duration heat tolerant pulses in rice fallows	3	T.O 1 (Sesamum-Tilak)		2.50	q/ha	Days to maturity - 90	28700	8200	1.40
					T.O.2 (green gram-CO 8)	TNAU	4.50		60	40500	20180	1.99
					T.O.3 (Cow pea-PGCP6)	GBPUAT	3.77		68	34000	12750	1.60
Fodder	irrigated	Inadequate crude protein content of fodder	Assessment of fodder grass and fodder cow pea varieties intercropping in coconut based home steads	3	T.O.1 (HNCO 3+ Co(FC9))	TNAU	1527	q/ha	No. of harvests-3	381750	176170	1.85
					T.O.2 (HNCO 5+ Co(FC9))	TNAU	1687		4	427250	221670	2.08
					T.O.3 (COGG3 + Co(FC9)))	TNAU	1925		5	481250	255670	2.13
Poultry		Sanitation difficulty in poultry sheds	Assessment of raking machine in poultry sheds	3	T.O.1 (raking with spade)		NA	NA	Time takem=97m Cost effect=2650 Ease of usage=6			
					T.O.2 (raking machine)		NA	NA	Time takem=13m Cost effect=650 Ease of usage=8			

OFT-2020

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Source of technology	Yield	Unit of yield	Observations other than yield	Gross Return Rs. / unit	Net Return Rs. / unit	BC Ratio (Gross income/ Gross Cost)
1	2	3	4	5	6	7	8	9	10	11	12	13
Musk melon	Irrigated		Assessment of high yielding musk melon	5	T.O.1 (Farmers	Ongoing						

			varieties for Malappuram district		practice)							
					T.O.2							
					T.O.3							
Amaranthus	Irrigated		Assessment of high yielding Amaranthus varieties for Malappuram district	5		Ongoing						
Tubers	Irrigated		Assessment of performance of short duration Tapioca varieties under integrated nutrient management practices	5		Ongoing						
Tubers	Rain fed		Evaluation of Amorphophallus under different nutrient management practices in rice based cropping system	5		Ongoing						
Paddy	Rainfed		Assessment of native isolates of *Beauveria bassiana and Lecanicillium saksenae* against rice bug infestation in Malappuram	5		Ongoing						
Livestock	Small scale farms	Poor reproductive performance of dairy cattle due to negative energy balance in transition period	Assessment of varying feeding strategies to counteract negative energy balance	4	TO 1 Feeding Bye pass fat	Kerala Veterinary and Animal Sciences University	2.1 Kg extra daily	Litre per day	BCS + 1, Fat % + 0.75, early post partumoestrus	2.1 L hike / day x 4 cows x 50 d x 40 =Rs20800	16800 – 1575 = 15225	13.20
					TO 2 Feeding 1 Kg	Farmer's practice	1.2 Kg extra daily	Litre per day	BCS + 0.5, Fat % + 0.1,	1.2 L hike / day x 4	9600 – 1481	6.48

					Maize powder				Post partumoestrus – No change	x 50 d x 40 = Rs 9600	= 8119	
					TO 3 Feeding Rice/ Household food waste	Traditional practice	1.9 Kilo extra daily	Litre per day	BCS + 1.0, Fat % + 0.5, Post partumoestrus – early	1.9 L hike / day x 4 x 50 d x 40 = Rs15200	15200 – 500 14700	30.4
Poultry	Household	Low productivity of existing non descript backyard poultry breeds	Assessment of improved Thalassery breed of chicken under backyard rearing	5	Improved Thalassery breed	Kerala Veterinary and Animal Sciences University	15 eggs (larger size)	Eggs per unit per month	Egg size, Disease incidence, adaptability	4 hen x 15 eggs x10 months x 5 Rs = 3000	3000-1000 (Feed cost & Misc.) = 2000	3.0
					Non descriptDesi chicken	Traditional practice	Egg production	Number per month	Egg size, Disease incidence, adaptability	4 hen x 10 eggs x 10 months x 4 Rs = 1600	1600 - 1000 (Feed cost & Misc.) = 600	1.6
Others	Rainfed/Irrigated		Assessment of mechanical methods for repelling wild boar	3	Ongoing							

4. C2. Feedback on technologies assessed

Name of technology assessed	**Useful characters as well as constraints of technology**	**Socio-economic as well as administrative constraints for its adoption**
Assessment of varying feeding strategies to counteract negative energy balance	Improved milk production, fat %, better body condition score and better fertility	Need to procure the ingredients and incorporate in the feed judiciously.
Assessment of improved Thalassery breed of chicken under backyard rearing	Better egg production and larger size eggs and the larger size of the birds	Difficulty to get adequate number of the birds

4.C3. Details of Successfully completed / concluded technology assessment (support with necessary summary of data and photographs)

1. Title of Technology Assessed : Assessment of varying feeding strategies to counteract negative energy balance in dairy cows
2. Performance of the Technology on specific indicators : Increased milk yield, fat percentage, body condition score and fertility
3. Specific Feedback from farmers : Better physical appearance and earlier post partumoestrum.
4. Specific Feedback from Extension personnel and other stakeholders : Higher price for the milk due to more quantity due to higher fat percentage
5. Feedback to Research System based on results and feedback received : More studies on incorporation of house hold wastes in the feed
6. Feedback on usefulness and constraints of technology : Bye pass fat needed to be made available at all places as well as household food incorporation necessitates more studies

4.D1. Results of Technologies Refined

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Refined	Source of technology	Yield	Unit of yield	Observations other than yield	Gross Return Rs. / unit	Net Return Rs. / unit	BC Ratio (Gross income/ Gross Cost)
1	2	3	4	5	6	7	8	9	10	11	12	13
					T.O.1 (Farmers practice)							
					T.O.2							
					T.O.3							

4. D2. Feedback on technologies refined

Name of technology refined	**Useful characters as well as constraints of technology**	**Socio-economic as well as administrative constraints for its adoption**

4.D.2. Details of Technologies refined:

1. Title of Technology Refined
2. Performance of the Technology on specific indicators
3. Specific Feedback from farmers
4. Specific Feedback from Extension personnel and other stakeholders
5. Feedback to Research System based on results/feedback received
6. Feedback on usefulness and constraints of technology

PART V - FRONTLINE DEMONSTRATIONS

5.A. Summary of FLDs implemented (2020)

Sl. No.	Category	Farming Situation	Season	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		Farmers (No.)		Farmers (No.)	
									Proposed	Actual	SC/ST	Others	Small/ Marginal	Others
	Oilseeds													
	Pulses													
	Cereals	Rainfed	Rabi	Paddy	Uma		INM	Enhancing income from paddy	2		4	6	5	5
		Rainfed	Rabi	Paddy	Uma		IPM	Leaf blight managment	4		3	7	6	4
	Millets													
	Vegetables	Irrigated	Summer	Chilli	Edayur		IPM	AESA based IPM	0.2		2	8	8	2
		Irrigated	Kharif & Rabi	Ridge gourd	KRH-1		Varietal evaluation	KRH-1	0.2		4	6	8	2
	Flowers													
	Ornamental													
	Fruit	Irrigated	Rabi	Banana	Nendran		Plant propagation	Demonstration of macro propagation of in banana	0.1		5	5	7	3
	Spices and condiments													
	Commercial													
	Medicinal and aromatic													
	Fodder	Rainfed	Rabi	fodder	Fodder maize		Utilizing summer fallows	Demonstration of fodder maize in	1		5	5	7	3

								summer fallows						
	Plantation	Irrigated	Rabi	Coconut	WCT		Enhancing income	Management protocol for Enhancing income from coconut	1		2	3	3	2
	Plantation	Irrigated	Kharif	Coconut	WCT		IPM	CPS level management of rhinoceros beetle in coconut using *Metarrhizium anisopliae*	50		1	4	2	3
	Plantation	Irrigated	Kharif	coconut	WCT		Resource conservation	In-situ moisture conservation measures in coconut garden	2		2	3	2	3
	Fibre													
	Dairy													
	Poultry													
	Rabbitry													
	Piggery													
	Sheep and goat													
	Duckery													
	Common carps													
	Mussels													
	Ornamental fishes													

	Oyster mushroom													
	Button mushroom													
	Vermicompost													
	Sericulture													
	Apiculture													
	Implements													
	Others (specify)	Irrigated	Rabi	Sweet potato	Bhu sona		INM	Demonstration of high yielding sweet potato variety 'Bhu Sona' with ICM	0.2		4	6	7	3
		Irrigated	Summer	Tapioca	Sree raksha		INM	Demonstration of high yielding CMD resistant Cassava hybrid 'Sree Reksha' with ICM	0.2		4	6	8	2

5.A. 1. Soil fertility status of FLDs plots, if analysed

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Season and year	Status of soil			Previous crop grown
										N	P	K	
	Oilseeds												
	Pulses												
	Cereals												
	Millets												

	Vegetables												
	Flowers												
	Ornamental												
	Fruit												
	Spices and condiments												
	Commercial												
	Medicinal and aromatic												
	Fodder												
	Plantation												
	Fibre												

5.B. Results of FLDs

5.B.1. Crops

FLDs 2019-20

Crop	Name of the technology demonstrated	Variety	Hybrid	Farming situation	No. of Demo.	Area (ha)	Yield (q/ha)				% Increase	Economics of demonstration (Rs./ha)			Economics of demonstration (Rs./ha) check		
							Demo			Check		Gross Return	Net Return	BCR	Gross Return	Net Return	BCR
							H	L	A								
Oilseeds																	
Pulses																	

Cereals	Demonstration of management protocol for enhancing income from paddy in other than kole lands	Manurathna		Rainfed Low land	5	2	Crop loss due to flood in August 2019										
Millets																	
Vegetables	Wilt resistant tomato variety manuprabha with ICM	Manuprabha		Irrigate	10	0.2			365.67	296.02	23	511938	251614	1.96	414428	154104	1.59
Flowers																	
Ornamental																	
Fruit	Prophylactic Management of rhizome weevil and pseudo stem weevil in Banana	Nendran		Irrigate	10	0.2			325	275	18	812500	375000	1.86	661440	236440	1.56
	Sampoorna- secondary micronutrient mixture for banana	Nendran		Irrigate	5	.0.5	Crop under progress										
	Precision farming technique and bunch covering equipment for high quality bunches in banana	Nendran		Irrigate	3	.0.1			495	337.5	46	1237500	647500	2.10	843750	358750	1.74
Spices and condiments	ICM practices in short duration turmeric variety IISR Pragati	IISR Pragati		Irrigate	5	0.1			225.67	140.22	62	902680	632180	3.33	490770	270270	2.23
	IISR Micronutrient mixture in Black Pepper			Irrigated	5	1.0			16.01	12.54	27.5	293180	155180	2.12	235720	103220	1.77
Commercial																	

Fibre crops like cotton																	
Medicinal and aromatic																	
Fodder	Shade tolerant guinea grass COGG3 in densely planted coconut home steads	COGG3		Irrigated	5	0.4			2560	2216	15.50	640000	373450	2.40	554000	297450	2.16
Plantation	In-situ moisture conservation measures in coconut garden			Irrigated		4.0	Crop under progress										
	CPS level management of rhinoceros beetle in coconut using metarrhiziumanisopliae			Irrigated	5	25	Crop under progress										
	Management protocol for enhancing income from coconut			Rainfed	5	1			10255	10185	1.6	123060	146456	1.37	122220	30361	1.33
Fibre																	

FLD 2020-21

Crop	Name of the technology demonstrated	Variety	Hybrid	Farming situation	No. of Demo.	Area (ha)	Yield (q/ha)				% Increase	Economics of demonstration (Rs./ha)			Economics of demonstration (Rs./ha)		
							Demo			Check		Gross Return	Net Return	BCR	Gross Return	Net Return	BCR
							H	L	A								
Oilseeds																	
Pulses																	

Cereals	Demonstration of management protocol for enhancing income from paddy in other than kole lands			Ongoing	5												
	Management of Bacterial leaf blight in Rice			Ongoing	10												
Millets																	
Vegetables	AESA based IPM in Edayur Chilli			Ongoing	10												
	Demonstration of ridge gourd hybrid 'KRH-1' with ICM			Ongoing	10												
Flowers																	
Ornamental																	
Fruit	Demonstration of macro propagation of in banana			Ongoing	10												
Spices and condiments																	
Commercial																	
Fibre crops like cotton																	
Medicinal and aromatic																	

Fodder	Demonstration of fodder maize in summer fallows			Ongoing	10												
Plantation	Demonstration of management protocol for enhancing income from coconut (2nd year)			Ongoing	5												
	CPS level management of rhinoceros beetle in coconut using *Metarrhizium anisopliae*			Ongoing	5												
	In-situ moisture conservation measures in coconut garden			Ongoing	5												
Fibre																	
Others (Tubers)	Demonstration of high yielding sweet potato variety 'Bhu Sona' with ICM			Ongoing	10												
	Demonstration of high yielding CMD resistant Cassava hybrid 'Sree Reksha' with ICM			Ongoing	10												

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

** BCR= GROSS RETURN/GROSS COST

H – Highest Yield, L – Lowest Yield A – Average Yield

Data on additional parameters other than yield (viz., reduction of percentage in weed/pest/diseases etc.)

Data on other parameters in relation to technology demonstrated		
Parameter with unit	**Demo**	**Check**

5. B2. Feedback on technologies demonstrated

Name of technology demonstrated	Useful characters as well as constraints of technology	Socio-economic as well as administrative constraints for its adoption

5.B.3. Livestock and related enterprises

Type of livestock	Name of the technology demonstrated	Breed	No. of Demo	No. of Units	Name of the parameter with unit	Yield (kg/animal)				% Increase	*Economics of demonstration Rs./unit)			*Economics of check (Rs./unit)		
						Demo			Check if any		Gross Return	Net Return	** BCR	Gross Return	Net Return	** BCR
						H	L	A								
Dairy																
Poultry																
Rabbitry																
Pigerry																
Sheep and goat																
Duckery																
Others (pl.specify)																

* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.
** BCR= GROSS RETURN/GROSS COST

Data on additional parameters other than yield (viz., reduction of percentage diseases, increase in conceiving rate, inter-calving period etc.)

Data on other parameters in relation to technology demonstrated

Parameter with unit	Demo	Check if any

5. B4. Feedback on livestock technologies demonstrated

Name of livestock technology demonstrated	Useful characters as well as constraints of technology	Socio-economic as well as administrative constraints for its adoption

5.B.5. Fisheries

Type of Breed	Name of the technology demonstrated	Breed	No. of Demo	Units/ Area (m^2)	Name of the parameter with unit	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./unit)			*Economics of check (Rs./unit)		
						Demo			Check if any		Gross Return	Net Return	** BCR	Gross Return	Net Return	** BCR
						H	L	A								
Common carps																
Mussels																
Ornamental fishes																
Others (pl.specify)																

* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.
** BCR= GROSS RETURN/GROSS COST
H-High L-Low, A-Average

Data on additional parameters other than yield (viz., reduction of percentage diseases, effective use of land etc.)

Data on other parameters in relation to technology demonstrated		
Parameter with unit	**Demo**	**Check if any**

5. B6. Feedback on fisheries technologies demonstrated

Name of fisheries technology demonstrated	Useful characters as well as constraints of technology	Socio-economic as well as administrative constraints for its adoption

5.B.7. Other enterprises

Enterprise	Name of the technology demonstrated	Variety/ species	No. of Demo	Units/ Area {m^2}	Name of the parameter with unit	Yield				% Increase	*Economics of demonstration (Rs./unit) or (Rs./m2)			*Economics of check (Rs./unit) or (Rs./m2)		
						Demo			Check if any		Gross Return	Net Return	** BCR	Gross Return	Net Return	** BCR
						H	L	A								
Oyster mushroom																
Button mushroom																
Vermicompost																
Sericulture																
Apiculture																
Others (pl.specify)																

* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.
** BCR= GROSS RETURN/GROSS COST
H-High L-Low, A-Average

Data on additional parameters other than yield (viz., additional income realized, employment generation, quantum of farm resources recycled etc.)

Data on other parameters in relation to technology demonstrated		
Parameter with unit	**Demo**	**Local**

5. B8. Feedback on enterprises demonstrated

Name of enterprise demonstrated	Useful characters as well as constraints of technology	Socio-economic as well as administrative constraints for its adoption

5.B.9. Farm implements and machinery

Name of the implement	Cost of the implement in Rs.	Name of the technology demonstrated	No. of Demo	Area covered under demo in ha	Name of the operation with unit	Labour requirement in Mandays		% save	Savings in labour (Rs./ha)	*Economics of demonstration (Rs./ha)			*Economics of check (Rs./ha)		
						Demo	Check			Gross Return	Net Return	** BCR	Gross Return	Net Return	** BCR

* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.
** BCR= GROSS RETURN/GROSS COST

Data on additional parameters other than laboursaved (viz., reduction in drudgery, time etc.)

Data on other parameters in relation to technology demonstrated		
Parameter with unit	**Demo**	**Local**

5. B10. Feedback on farm implements demonstrated

Name of farm implement demonstrated	Useful characters as well as constraints of technology	Socio-economic as well as administrative constraints for its adoption

5.B.6.Extension and Training activities under FLD

Sl.No.	Activity	No. of activities organised	Number of participants	Remarks
1	Field days	11	126	
2	Farmers Training	14	108	
3	Media coverage			
4	Training for extension functionaries			
5	Others (Please specify)			

PART VI – DEMONSTRATIONS ON CROP HYBRIDS(2020)

Demonstration details on crop hybrids

Type of Breed	Name of the technology demonstrated	Name of the hybrid	No. of Demo	Area (ha)	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./ha)			*Economics of check (Rs./ha)		
					Demo			Check		Gross Return	Net Return	** BCR	Gross Return	Net Return	** BCR
					H	L	A								
Cereals															
Bajra															
Maize															
Paddy															
Sorghum															
Wheat															
Others (pl.specify)															

Total															
Oilseeds															
Castor															
Mustard															
Safflower															
Sesame															
Sunflower															
Groundnut															
Soybean															
Others (pl.specify)															
Total															
Pulses															
Greengram															
Blackgram															
Bengalgram															
Redgram															
Others (pl.specify)															
Total															
Vegetable crops															
Bottle gourd															
Capsicum															
Others (pl.specify)															
Total															
Cucumber															
Tomato															
Brinjal															
Okra															
Onion															
Potato															
Field bean															
Others (pl.specify)															
Total															
Commercial crops															
Sugarcane															
Coconut															
Others (pl.specify)															
Total															
Fodder crops															
Maize (Fodder)															
Sorghum (Fodder)															
Others (pl.specify)															
Total															

H-High L-Low, A-Average

*Please ensure that the name of the hybrid is correct pertaining to the crop specified

Feedback on crop hybrids demonstrated

Name of crop hybrid demonstrated	Useful characters as well as constraints of technology	Socio-economic as well as administrative constraints for its adoption

PART VII. TRAINING(2020)

7.A..Training of Farmers and Farm Women including sponsored training programmes (On campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop Production										
Weed Management										
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming										
Micro Irrigation/Irrigation										
Seed production										
Nursery management										
Integrated Crop Management										
Soil and Water Conservation										
Integrated Nutrient Management	5	121	78	199	27	18	45	148	96	244
Production of organic inputs										
Others (pl.specify)										
Horticulture										
a) Vegetable Crops										

Production of low value and high volume crop	8	87	37	124	12	19	31	99	56	155
Off-season vegetables										
Nursery raising										
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation										
Others (pl.specify)										
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit										
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques	4	74	47	121	17	11	28	91	58	149
Others (pl.specify)										
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl.specify)										
d) Plantation crops										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
e) Tuber crops										

Production and Management technology										
Processing and value addition										
Others (pl.specify)										
f) Spices										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
Others (pl.specify)										
Soil Health and Fertility Management										
Soil fertility management	3	117	88	205	37	24	61	154	112	266
Integrated water management										
Integrated nutrient management										
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient use efficiency										
Balanced use of fertilizers										
Soil and water testing										
Others (pl.specify)										
Livestock Production and Management										
Dairy Management	2	24	21	45			24	21	45	45
Poultry Management	1	31	18	49	2	4	6	33	22	55
Piggery Management										
Rabbit Management										
Animal Nutrition Management										

Animal Disease Management										
Feed and Fodder technology										
Production of quality animal products										
Others (pl.specify) Goat	2	21	32	53	5	11	16	26	43	69
Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening										
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing										
Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition	3	11	58	69	7	12	19	18	70	88
Women empowerment										
Location specific drudgery production										
Rural Crafts										
Women and child care										
Others (pl.specify) Mushroom cultivation	3	24	66	90	11	18	29	35	84	119
Agril. Engineering										
Farm machinery and its maintenance										
Installation and maintenance of micro irrigation systems	3	78	37	115	24	14	38	102	51	153
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
Others (pl.specify) Precison farming	4	128	34	162	21	20	41	149	54	203
Plant Protection										
Integrated Pest Management	4	67	41	108	21	17	38	88	58	146

Integrated Disease Management	3	55	38	93	14	12	26	69	50	119
Bio-control of pests and diseases										
Production of bio control agents and bio pesticides										
Others (pl.specify)										
Fisheries										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
Others (pl.specify)										
Production of Inputs at site										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										

Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
Mushroom production	**4**	**37**	**38**	**75**	**17**	**21**	**38**	**54**	**59**	**113**
Apiculture										
Others (pl.specify)										
CapacityBuilding and Group Dynamics										
Leadership development	**2**	**42**	**23**	**65**	**12**	**6**	**18**	**48**	**29**	**83**
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths	**2**	**57**	**35**	**92**	**24**	**13**	**37**	**81**	**48**	**129**
Others (pl.specify)										
Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (Pl. specify)										
TOTAL	**53**	**974**	**691**	**1665**	**251**	**220**	**471**	**1225**	**911**	**2136**

7.B Training of Farmers and Farm Women including sponsored training programmes (Off campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop Production										
Weed Management										
Resource Conservation Technologies	1	38	27	65				38	27	65
Cropping Systems										
Crop Diversification										
Integrated Farming										
Micro Irrigation/Irrigation										
Seed production										
Nursery management										
Integrated Crop Management										
Soil and Water Conservation										
Integrated Nutrient Management	4	215	156	371				215	156	371
Production of organic inputs										
Others (pl.specify)										
Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop	5	312	214	526				312	214	526
Off-season vegetables										
Nursery raising										
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation	3	184	94	278				184	94	278
Others (pl.specify)										
b) Fruits										

Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit										
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques	2	65	31	96				65	31	96
Others (pl.specify)										
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl.specify)										
d) Plantation crops										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
e) Tuber crops										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
f) Spices										
Production and Management technology										
Processing and value addition										
Others (pl.specify)										
g) Medicinal and Aromatic Plants										
Nursery management										

Production and management technology										
Post harvest technology and value addition										
Others (pl.specify)										
Soil Health and Fertility Management										
Soil fertility management	1	157	62	219				157	62	219
Integrated water management										
Integrated nutrient management	4	124	81	205				124	81	205
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient use efficiency										
Balanced use of fertilizers										
Soil and water testing										
Others (pl.specify)										
Livestock Production and Management										
Dairy Management	4	156	74	230				156	74	230
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management										
Animal Disease Management										
Feed and Fodder technology										
Production of quality animal products										
Others (pl.specify) Goat farming	2	64	43	107				64	43	107
Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	3	4	47	51	0	18	18	4	65	69
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing										

Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition	5	147	215	362				147	215	362
Women empowerment										
Location specific drudgery production										
Rural Crafts										
Women and child care										
Others (pl.specify)										
Agril. Engineering										
Farm machinery and its maintenance										
Installation and maintenance of micro irrigation systems	4	148	73	221				148	73	221
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
Others (pl.specify) Precision farming	5	172	65	237				172	65	237
Plant Protection										
Integrated Pest Management	10	247	238	485				247	238	485
Integrated Disease Management										
Bio-control of pests and diseases										
Production of bio control agents and bio pesticides										
Others (pl.specify)										
Fisheries										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										

Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
Others (pl.specify)										

Production of Inputs at site										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
Mushroom production										
Apiculture										
Others (pl.specify)										
CapacityBuilding and Group Dynamics										
Leadership development										
Group dynamics	**2**	**47**	**28**	**75**				**47**	**28**	**75**
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths	**6**	**214**	**165**	**379**				**214**	**165**	**379**
Others (pl.specify)										
Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										

Others (Pl. specify)										
TOTAL	**55**	**2294**	**1613**	**3907**	**0**	**18**	**18**	**2294**	**1631**	**3925**

7.C.Training for Rural Youths including sponsored training programmes (on campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops										
Training and pruning of orchards										
Protected cultivation of vegetable crops										
Commercial fruit production										
Integrated farming										
Seed production										
Production of organic inputs										
Planting material production										
Vermi-culture										
Mushroom Production										
Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition	1	7	12	19	4	3	7	11	15	26
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts										
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery										
Rabbit farming										
Poultry production										

Ornamental fisheries										
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Any other (pl.specify)										
TOTAL	1	7	12	19	4	3	7	11	15	26

7.D. Training for Rural Youths including sponsored training programmes (off campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops										
Training and pruning of orchards										
Protected cultivation of vegetable crops										
Commercial fruit production										
Integrated farming										
Seed production										
Production of organic inputs										
Planting material production										
Vermi-culture										
Mushroom Production	2	23	12	35	7	6	13	30	18	48
Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition										
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts										
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery										
Rabbit farming										
Poultry production										

Ornamental fisheries										
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Any other (pl.specify)										
TOTAL	2	23	12	35	7	6	13	30	18	48

7.E.Training programmes for Extension Personnel including sponsored training programmes (on campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops										
Integrated Pest Management										
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care										
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Any other (pl.specify)										
Total										

7.F. Training programmes for Extension Personnel including sponsored training programmes (off campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops										
Integrated Pest Management										
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care										
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Entrepruenesship development	5	0	127	127	0	37	37	0	164	164
Total	5	0	127	127	0	37	37	0	164	164

7.G. Sponsored training programmes conducted

S.No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
1	**Crop production and management**										
1.a.	Increasing production and productivity of crops	**2**	**42**	**27**	**69**	**12**	**7**	**19**	**54**	**34**	**88**
1.b.	Commercial production of vegetables										
2	**Production and value addition**										
2.a.	Fruit Plants										
2.b.	Ornamental plants										
2.c.	Spices crops										
3.	**Soil health and fertility management**	**4**	**127**	**71**	**198**	**15**	**7**	**22**	**142**	**78**	**220**
4	**Production of Inputs at site**										
5	**Methods of protective cultivation**	**4**	**141**	**43**	**184**	**21**	**17**	**38**	**162**	**60**	**222**
6	**Others (pl.specify)**										
7	**Post harvest technology and value addition**										
7.a.	Processing and value addition	**3**	**94**	**52**	**146**	**17**	**7**	**24**	**111**	**59**	**170**
7.b.	Others (pl.specify)Mushroom	**1**	**31**	**14**	**45**	**4**	**6**	**10**	**35**	**20**	**55**
8	**Farm machinery**										
8.a.	Farm machinery, tools and implements										
8.b.	Others (pl.specify) precision farming	**4**	**112**	**32**	**144**	**7**	**11**	**18**	**119**	**43**	**162**
9.	**Livestock and fisheries**										
10	**Livestock production and management**										
10.a.	Animal Nutrition Management	**2**	**25**	**18**	**43**	**4**	**7**	**11**	**18**	**32**	**29**
10.b.	Animal Disease Management										
10.c	Fisheries Nutrition										
10.d	Fisheries Management										
10.e.	Others (pl.specify)										
11.	**Home Science**										
11.a.	Household nutritional security										
11.b.	Economic empowerment of women	**2**	**0**	**44**	**44**	**0**	**22**	**22**	**0**	**66**	**66**
11.c.	Drudgery reduction of women										
11.d.	Others (pl.specify)										
12	**Agricultural Extension**										
12.a.	CapacityBuilding and Group Dynamics	**3**	**33**	**27**	**60**	**18**	**12**	**30**	**51**	**39**	**90**
12.b.	Others (pl.specify)										
	Total	**25**	**605**	**328**	**933**	**98**	**96**	**194**	**692**	**431**	**1102**

Details of sponsoring agencies involved

1. ATMA

2. Kudumbasree

3. CTCRI

4. Agricultural Department

7.H. Details of Vocational Training Programmes carried out by KVKs for rural youth : nil

S.No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
1	**Crop production and management**										
1.a.	Commercial floriculture										
1.b.	Commercial fruit production										
1.c.	Commercial vegetable production										
1.d.	Integrated crop management										
1.e.	Organic farming										
1.f.	Others (pl.specify)										
2	**Post harvest technology and value addition**										
2.a.	Value addition										
2.b.	Others (pl.specify)										
3.	**Livestock and fisheries**										
3.a.	Dairy farming										
3.b.	Composite fish culture										
3.c.	Sheep and goat rearing										
3.d.	Piggery										
3.e.	Poultry farming										
3.f.	Others (pl.specify)										
4.	**Income generation activities**										
4.a.	Vermi-composting										
4.b.	Production of bio-agents, bio-pesticides, bio-fertilizers etc.										
4.c.	Repair and maintenance of farm machinery and implements										
4.d.	Rural Crafts										
4.e.	Seed production										
4.f.	Sericulture										
4.g.	Mushroom cultivation										
4.h.	Nursery, grafting etc.										
4.i.	Tailoring, stitching, embroidery, dying etc.										
4.j.	Agril. para-workers, para-vet training										
4.k.	Others (pl.specify)										
5	**Agricultural Extension**										
5.a.	Capacity building and group dynamics										
5.b.	Others (pl.specify)										
	Grand Total										

7.F. Details of Skill Training Programmes carried out by KVKs under ASCI : nil

S. No.	Name of Job Role	Date of Start	Date of Close	Total Participants	No. of Participants									Date of Assessment	No of Participants passed assessment
					General			SC/ST			Grand Total				
					Male	Female	Total	Male	Female	Total	Male	Female	Total		
1															
2.															

PART VIII – EXTENSION ACTIVITIES(2020)

8.1. Extension Programmes (including extension activities undertaken in FLD programmes)

Nature of Extension Programme	No. of Programmes	No. of Participants (General)			No. of Participants SC / ST			No.of extension personnel		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Field Day	3	45	38	73	35	22	57	3	4	7
Kisan Mela	2	155	76	131	47	25	72	5	3	8
KisanGhosthi	0	0	0	0	0	0	0	0	0	0
Exhibition	1	400	350	750	125	85	210	5	5	10
Film Show	0	0	0	0	0	0	0	0	0	0
Method Demonstrations	22	75	45	120	42	18	60	5	2	7
Farmers Seminar	12	840	357	1197	412	236	648	14	8	22
Workshop	0	0	0	0	0	0	0	0	0	0
Group meetings	0	0	0	0	0	0	0	0	0	0
Lectures delivered as resource persons	0	0	0	0	0	0	0	0	0	0
Newspaper coverage	12	0	0	0	0	0	0	0	0	0
Radio talks	4	0	0	0	0	0	0	0	0	0
TV talks	0	0	0	0	0	0	0	0	0	0
Popular articles	10	0	0	0	0	0	0	0	0	0
Extension Literature	4	0	0	0	0	0	0	0	0	0
Advisory Services	427	356	167	523	172	88	260	14	22	36
Scientific visit to farmers field	89	223	112	335	95	30	125	12	9	21
Farmers visit to KVK	132	543	312	855	154	78	232	0	0	0
Diagnostic visits	25	172	105	277	89	31	120	5	5	10
Exposure visits	28	237	187	424	127	83	210	9	7	16
Ex-trainees Sammelan	0	0	0	0	0	0	0	0	0	0
Soil health Camp	1	86	17	103	13	9	24	0	0	0
Animal Health Camp	0	0	0	0	0	0	0	0	0	0
Agri mobile clinic	0	0	0	0	0	0	0	0	0	0
Soil test campaigns	0	0	0	0	0	0	0	0	0	0
Farm Science Club Conveners meet	0	0	0	0	0	0	0	0	0	0
Self Help Group Conveners meetings	5	0	30	30	0	0	0	0	0	0
MahilaMandals Conveners meetings	0	0	0	0	0	0	0	0	0	0
Celebration of important days (specify)	6	326	355	771	0	0	0	0	0	0
Any Other (Specify)	0	0	0	0	0	0	0	0	0	0
Total	783	3458	2151	5589	1311	705	2018	72	65	137

8.2 Special Extension Programmes

Nature of Extension Programme	Date(s) conducted	No. of farmers (General)			No. of farmers SC / ST			No.of extension personnel		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Jal Shakti Abhiyan										
Fertilizer Use Awareness Campaign	**05-12-2020**	**31**	**18**	**49**	**17**	**12**	**29**	**1**	**1**	**2**
National Animal Disease Control Programme										
Tree Plantation Campaign	**17-08-2020**	**21**	**8**	**29**	**4**	**20**	**24**	**2**	**2**	**4**
Any other, Pl.specify										

PART IX – PRODUCTION OF SEED, PLANT AND LIVESTOCK MATERIAL (2020)

9.A. Production of seeds by the KVKs

Crop category	Name of the crop	Name of the Variety	Quantity of seed (q)	Value (Rs)	Number of farmers to whom provided
Cereals (crop wise)					
Oilseeds					
Pulses					
Commercial crops					
Vegetables	Chilli	Ujvala	0.0126	58845	
	Cowpea	Anaswara	0.745	76100	
	Cowpea	Kanakamany	3.67	115565	
	bhindi	Varsha Upahar	1.066	181700	
	Bottle gourd	Arka bahar	0.5168	73895	
	Pumpkin	Ambili	0.406	81290	
	cucumber	Soubhagya	0.395	76390	
	Bitter gourd	Preethi	0.6965	178909	
	Snakegourd	Manusree	0.397	98972	
	Ashgourd	KAU Local	0.135	47024	
	Amaranthus	Co-1	0.7137	121181	
	Amaranthus	Arun	0.4258	88273	
	Cowpea	Jyothika	0.496	99250	
	Brinjal	Haritha	0.2528	63650	
	Tomato	Anagha	0.0045	4565	
	Assorted	Assorted	2.83	566550	

		Total	12.7627	1932159	
Flower crops					
Spices					
Fodder crop seeds					
Fiber crops					
Forest Species					
Others (specify)	Mushroom spawn		8.43	100795	
Total			**21.192**	**20,32,954**	

9.B. Production of hybrid seeds by the KVKs

Crop category	Name of crop	Name of the hybrid	Quantity of seed (q)	Value (Rs)	Number of farmers to whom provided
Total					

9.C. Production of planting material by the KVKs

Crop category	Name of the crop	Variety	Number	Value (Rs.)	Number of farmers to whom provided
Commercial					
Vegetable seedlings	Tomato	Anagha	17749	48938	1174
	Brinjal	Haritha	21577	70832	1320
	Chilli	Ujvala	22138	68793	1254
	Cabbage	NS 43	30804	70713	
	Cauliflower		29053	66648	
	Bhindi	Varsha upahar	8000	15900	
	Bottle gourd	Arka bahar	2892	5221	
	Chilli kanthari		28600	100100	5240
Fruits					
Ornamental plants					
Medicinal and Aromatic					
Plantation					
Spices	Curry leaf		4287	85740	1356
Tuber	Sweet potato		1346	13460	245

Fodder crop saplings	Hybrid napier	Co-3	9806	9806	
Forest Species					
Others(specify)					
Total			176252	556151	

9.D. Production of hybrid planting materials by the KVKs

Crop category	Name of crop	Name of the hybrid	Quantity of seed (q)	Value (Rs)	Number of farmers to whom provided
Total					

9.C. Production of Bio-Products

Bio Products	Name of the bio-product	Quantity (q)	Value (Rs.)	Number of farmers to whom provided
Bio Fertilizers	Azolla			
	Enriched Coir pith compost	199.4	361960	
Bio-pesticide	Verticilium	7.29	57875	
	Beuveria	5.13	40834	
Bio-fungicide	Pseudomonas	48.97	373040	
	Trichoderma	36.24	426625	
Bio Agents	Fish amino acid (Ltr)	126.0	50700	
Others (specify)	Neem soap	55.1	239375	
	Sampoorna mix	24.0	668879	
	AYAR mix	493.00	2344134	
	Pheromone traps (Nos)	(1729)	236228	
Total		**869.13**	**4799650**	

9.D. Production of livestock

Particulars of Livestock	Name of the breed	Number	Value (Rs.)	Number of farmers to whom provided
Dairy animals				
Cows				
Buffaloes				
Calves				
Others (Pl. specify)				
Poultry				
Broilers				
Layers				
Duals (broiler and layer)				
Japanese Quail				
Turkey				
Emu				
Ducks				
Others (Pl. specify)				
Piggery				

Piglet				
Others (Pl.specify)				
Fisheries				
Fingerlings				
Others (Pl. specify)				
Total				

PART X – PUBLICATIONS, SUCCESS STORY, INNOVATIVE METHODOLOGY, ITK, TECHNOLOGY WEEK

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

(A) KVK Newsletter:
Date of start: 2006 Periodicity: yearly Copies printed in each issue:___1000

(B) Literature developed/published

Item	Number
Research papers- International	
Research papers- National	5
Technical reports	
Technical bulletins	
Popular articles - English	
Popular articles – Local language	5
Extension literature	5
Others (Pl. specify)	
TOTAL	

10.B. Details of Electronic Media Produced

S. No.	Type of media	Title	Details
	CD / DVD		
	Mobile Apps		
	Social media groups with KVK as Admin	**Whatsapp - Coconut cultivation@malappuram, poshan maah, nutrigarden, passion fruit, INM**	
	Facebook account name	**KVK Malappuram**	
	Instagram account name		

10.C. Success Stories / Case studies, if any (two or three pages write-up on each case with suitable action photographs. The Success Stories / Case Studies need not be restricted to the reporting period).

1. **Name and address:**

Krishi Sahayi: The Women Army for Paddy cultivation, KVK Malappuram
Kerala Agricultural University, Tavanur

2. **Category**: Agriculture/Horticulture/Animal husbandry/ Fisheries/ value addition/marketing/ women empowerment/ social sciences etc :

Women Empowerment through paddy mechanization

3. **Background** information regarding land & other resources owned, new technologies/ innovations/ skills developed, implemented and disseminated among the community with area and extent of outreach. (5-6 lines)

Sharp decline in rice area on account of low profitability due to high labour cost and labour scarcity was one of the vital issues that KVK Malappuram had to tackle. In the year of inception of KVK, mechanization in rice cultivation was confined to the use of tractor and power tillers for land preparation. However other labour intensive operations such as transplanting and harvesting were performed manually. Commercial rice farming machines like mechanical rice transplanter, reaper, thresher and winnower were yet to be adopted widely in the district mainly due to small holding size, high investment cost and need of trained people for operation and maintenance. Large scale adoption of this kind of machines in rice farming is possible only through government support to cooperative groups of farmers to make them economically viable and to enable farmers to meet local requirements.

4. **Training and motivational support** to the farmers/members of the community (4-5 lines)

Four numbers of vocational trainings for the period of 15 days each on working and maintenance of paddy transplanter, reaper, thresher and winnower were conducted in KVK for the succeeding years from 2007 to 2009. The activities of the group trained by KVK were linked with State Planning Board projects, which helped the group to carry out mat nursery preparation, paddy transplanting and reaping, thereby gaining confidence to take up mechanization in any extent of area. Ten trainings and demonstrations of Yanji Sakthi Rice Transplanter and KAMCO Reaper were conducted in different areas of the District.

5. **Impact in the area** in terms of income/employment generation/ women's empowerment/ health & nutritional security/education of women in the community with the support from the woman farmer/entrepreneurs (8-10 lines)

   On gaining experience in the field under the supervision of KVK scientists these women trainees decided to organise into a SHG. Thus with the support and supervision of KVK, 11 women formed the group named **'Krishi Sahayi'.** KVK Malappuram was able to convince the farmers the advantages of the rice mechanisation over conventional methods utilising Krishi Sahayi and as a result many farmers who turned away from paddy cultivation came forward to cultivate paddy in their fallow land. The group got many calls from panchayats, padasekhara samithies and individual farmers to undertake mechanised paddy cultivation.

   Over a period of five years, this krishi sahai group alone has done mechanized transplanting, harvesting and threshing in an area of more than 500 hectares. Further the members of Krishi Sahayi group are getting job for 150 days and each of them is paid with an amount of Rs. 800-1200 per day. Thus, they are earning a minimum of Rs. 12000- 20000/month. Based on the success of this group the KVK formulated a project for the District Panchayath. The project funded by District Panchayath was implemented in 35 panchayaths reviving paddy cultivation in more than 1500 ha. 100 per cent mechanization was achieved in harvesting and around 50 percent in transplanting. Further, mechanisation has resulted in savings in cultivation cost to an extent of Rs 16000/- per ha. In addition there is an increase in productivity to an extent of Rs 1.2 t/ha. Thus a total profit of Rs. 34000/- is recorded.

6. **Awards & recognitions** received (4-6 lines)

   - The impact created in the district by the women empowerment model was presented in the Global Women Conference held at New Delhi in March 2012 and the work received Global recognition by way of Second Best Poster award to Er. Sajeena, SMS Agricultural Engineering of KVK Malappuram and received this award from Honourable President of India Smt. Prathibha Patil.
   - The model was adopted by several KVKs of Kerala and neighbouring states.
   - An Ethiopian delegation was also interested in the functioning of the group
   - The Group received an ATMA District award for group approach in Agriculture sector during 2010-2011
   - The news reporter from 'The Hindu' collected the views of Dr. Ayyappan, Director General, ICAR, New Delhi. According to him "This was made possible through the intervention of Krishi Vigyan Kendra, Malappuram by developing a fully equipped women's group named 'Krishi Sahayi' aimed at helping individual farmers and farmers' groups in undertaking mechanised paddy cultivation in a cost effective way,"
   - Dr S Prabhu Kumar, Zonar Project Director, Indian Council for Agricultural Research, says, "Slowly we are going to implement this approach all over India, where labour is a big problem. It has created a good impact not only in this district but in the state of Kerala."

7. Activities of this group telecasted in National Channel CNN- IBN
8. **Contributing/enabling Factors** including people/ Institutions responsible for the motivation and other similar detail/ underlying message (if any) (6-7 lines)

   The formation of women into groups for various livelihood activities became widespread through the Kudumbasree Mission in Malappuram District. But these groups involved in agricultural activities were lacking in technological know-how to make agriculture profitable and sustainable.

KVK Malappuram addressed this issue and could make some major breakthroughs in agriculture through women empowerment. The women empowerment efforts of KVK Malappuram in moulding women activity groups for undertaking paddy mechanization got international recognition. Till the end of the year KVK master trainer group could train 50 groups and spread the message of mechanization to almost 85 % panchayats of Malappuram District.

Name and address:

Yasmeen, Arimbra house, Thennala , Malappuram (Dt.)
Phone: 9544283084

9. **Category**: Agriculture/Horticulture/Animal husbandry/ Fisheries/ value addition/marketing/ women empowerment/ social sciences etc

Women empowerment – Livelihood and social farming through women agricultural produce company

10. **Background** information regarding land & other resources owned, new technologies/ innovations/ skills developed, implemented and disseminated among the community with area and extent of outreach. (5-6 lines)

From an ordinary member of a self-help group in 2006, Ms. Yasmeen became the Managing Director of a women agricultural producer company in 2015 comprising of 374 women farmers cultivating rice in an area of 236 acres of leased land. From the lessons she learnt from the bitter experiences of women entrepreneurs, she organised women cultivating rice in leased lands in to 126 groups and formed the Thennala Agro Producers company.

11. **Training and motivational support** to the farmers/members of the community (4-5 lines)

While the men in the locality discouraged, the Kudumbasree poverty eradication mission, KVK and NABARD motivated them to withstand and handholded them with effective group management skills. In 2011 she was elected as the Chairperson of the Community Development Society CDS of ThennalaGramaPanchayath.

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12. **Impact in the area** in terms of income/employment generation/ women's empowerment/ health & nutritional security/education of women in the community with the support from the woman farmer/entrepreneurs (8-10 lines)

She manages The *Thennala Agricultural Producer Company* as its Managing Director, with 374 women farmers as the shareholders. The rice was marketed under the brand "*Thennala* Rice". She runs a special school for the differently abled children and is perusing a graduate degree. Yasmeen has inspired poor women to engage in agro based micro enterprises changing their lives. Her commitment to support differently abled children has lessened the hardships of those mothers confined to their home. It helped them to go out for livelihood earning avenues. Though she remains single, she considers the mother of these 36 differently abled children of the Blooms special school.

13. **Awards & recognitions** received (4-6 lines)

2017- Kudumbasree(Govt of Kerala) award for the best CDS chairperson
2017- Kairali TV *Jwala*award for the best women entrepreneur of Kerala
2018- Recognition from His Excellency Governer of Kerala
2020- Asianet News award *Sthreesakthi*

14. **Contributing/enabling Factors** including people/ Institutions responsible for the motivation and other similar detail/ underlying message (if any) (6-7 lines)

The producer company and the leased in land cultivation by farm women is a result of focused efforts of the Kudumbasree, NABARD , Department of Agriculture and the KVK .The producer company is in the process of initiating their own milling facility with the help of KVK and NABARD, since external dependence on milling limits their collective performance heavily .Yasmeen ,

who has become the member of the District Panchahaythrecently by the support of other women has won the support of the District Panchahayath and has been in search of land for the mill. The KVK has promised introducing cage fish culture in their paddy field where rice is grown only during the third crop season. Since majority of women lack irrigation facilities for rice, KVK has collaborated in popularising human powered treadle pumps as their irrigation system wherever possible as requested by them. Also they are provided with PPFM as drought mitigation strategies in rice fields.

Receiving the recognition from the Governor

Receiving the Kairali TV award

SIDELIGHT

The men in Thennala weren't too happy with Yasmeen's work. They scorned her and christened her a publicity-hungry Mother Teresa of Thennala. But the women in the village stood by her side, encouraging her to do more

HUSK OF HAPPINESS

YASMEEN AREEMBRA 35,
MD, THENNALA AGRO-PRODUCERS COMPANY, KERALA

"Yasmeen has inspired poor women to engage in agro-based micro enterprises, changing their lives. Her commitment to support differently-abled children has lessened the hardships of mothers confined to their homes. She is a role model for our society"

Hemalatha, District Mission Coordinator, Kudumbashree, Malappuram

A.REJIKUMAR

RICE GODDESS
Yasmeen at a paddy field in Thennala

She had joined the neighbourhood society of Kudumbashree, a women's empowerment and poverty eradication programme in Kerala, in 2006 for a soft loan. Little did Yasmeen Areembra know it would change her life forever. Initially, all she did was listen to other people speak and attend training programmes run by the Kudumbashree Mission. In 2011, she was elected chairperson of the Community Development Society in Thennala. The Muslim-dominated Kerala village was considered the worst performing in Malappuram district among Kudumbashree constituents. When Yasmeen heard about the experiences of women micro-entrepreneurs, she decided to get the women of her village to give it a try.

Most people in Thennala grew paddy. In step with the larger Indian reality, the poor worked on the farms while the rich owned the land. Over the years, labour-intensive paddy became loss-making, leading most to abandon cultivation.

Yasmeen decided to organise the women in her village and get them to cultivate paddy on leased and fallow land.

"Most of these women had worked in paddy plantations earlier," says Yasmeen. "We formed 126 groups, pooled small amounts and took loans."

The women cultivated vegetables and paddy on 1,300 acres of land. But the party ended soon because of poor marketing facilities. Yasmeen then set up the Thennala Agro Producers Company in 2015, which has 374 shareholders and her as its managing director. "I was forced to float the company when we could not sell paddy at a remunerative price. Now, we get a good price as we convert paddy into rice and brand it as Thennala organic rice," she says. The rice is sold in packets of 3, 5, 10 and 20 kilograms.

But Yasmeen wasn't done yet. A Kudumbashree survey showed that some 236 children in the village were differently abled. Yasmeen wanted to open a special school for them for which she floated a charitable trust, YAS. Today, 36 children from poor families study in the Blooms Special School she runs in Kodakallu. Yasmeen's taken a personal loan to run the school. She remains single, but considers herself the mother of these 36 children. She herself has enrolled for a BA in sociology to better serve people.

—*Jeemon Jacob*

नया भारतः खुशियों की फसल

जीमोन जैकब
नई दिल्ली, 24 December, 2018

थेत्रला गांव के पुरुष यास्मीन के काम से कोई बहुत खुश नहीं थे. उन्होंने तो मजाक उड़ाते हुए उनका नाम बिगाड़कर थेत्रला की मदर टेरेसा रख दिया, जो प्रचार के लिए यह सब कर रही हैं. मगर गांव की औरतें उनकी तरफ थीं और उन्हें और ज्यादा काम करने को प्रोत्साहित कर रही थीं.

अन्नपूर्णा यास्मीन ने 126 समूह बनाकर धान की खेती को सहकारी रूप दिया

35 वर्ष की यास्मीन अरीम्ब्रा केरल की तेत्रला एग्रो-प्रोड्यूसर्स कंपनी में एमडी हैं.

The Indian EXPRESS

Home / India

Kerala: How one woman reached out to 500, raised an agro company

Yasmin is now the managing director of Thennala Agro Producing Company, which has 374 women farmers as shareholders who are engaged in paddy cultivation as well as marketing the 'Thennala' brand of rice.

Written by **Shaju Philip** | Malappuram |
Updated: December 10, 2018 7:04:01 am

Yasmin (right) with farmers in Thennala, Malappuram. (Express photo)

बातचीत

सैकड़ों महिलाओं को पढ़ा रही उद्यमिता का पाठ

Field visit of KVK

Yasmeen in brain storming held at KVK

Photos

Photo	**Photo**
Title	**Title**
Photo	**Photo**
Title	**Title**

10.D. Give details of Innovative Methodology or Innovative Approach of Transfer of Technology developed and used during the year

10.E. Give details of Indigenous Technical Knowledge 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	Scientific Rationale

10 F. Technology Week celebration during 2020:

Period of observing Technology Week: From to
Total number of farmers visited :
Total number of agencies involved :

Number of demonstrations visited by the farmers within KVK campus :

Other Details

Types of Activities	No. of Activities	Number of Farmers	Related crop/livestock technology
Gosthies			
Lectures organized			
Exhibition			
Film show			
Fair			
Farm Visit			
Diagnostic Practicals			
Supply of Literature (No.)			
Supply of Seed (q)			
Supply of Planting materials (No.)			
Bio Product supply (Kg)			
Bio Fertilizers (q)			
Supply of fingerlings			
Supply of Livestock specimen (No.)			
Total number of farmers visited the technology week			

10 E. Recognition and Awards: Please give details about National and State level recognition and awards

PART XI – SOIL AND WATER TEST

11.1 Soil and Water Testing Laboratory

A.Status of establishment of Lab :

1. Year of establishment : 2011
2. List of equipments purchased with amount :

Sl. No	Name of the Equipment	Qty.	Cost	Status
1	Spectrophotometer	1	333000	Good
2	Microprocessor based Distillation system – Classic DX	1	198349	Good
3	Flame photometer	1	41184	Good
4	Water quality analyser	1	40267	Good
5	Electrical conductivity analyser	1	16840	Good
6	Digital pH meter	1	5104	Good
7	Rotary shaker	1	12797	Good
8	Double distillation unit	1	54841	Good
9	Electronic balance	1	49181	Good
10	Plant sample grinder	1	20900	Good
11	Microprocessor based macro block digestion system – KES 081	1	84578	Good
12	Pusa STFR kit	1	72000	Good
Total				

B. Details of samples analyzed since establishment of SWTL:

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages	Amount realized (Rs.)
Soil Samples	**720**	**428**	**122**	
Water Samples				
Plant samples				
Manure samples				
Others (specify)				
Total				

C. Details of samples analyzed during the 2020:

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages
Soil Samples	**44**	**39**	**15**
Water Samples			

Plant samples			
Manure samples			
Others (specify)			
Total			

11.2 Mobile Soil Testing Kit

A. Date of purchase and current status

Mobile Kits	Date of purchase	Current status
1.		
2.		

B. Details of soil samples analyzed during 2019 and since establishment with Mobile Soil Testing Kit:

	During 2019	During 2020	Cumulative progress (Total)
Samples analyzed (No.)			
Farmers benefited (No.)			
Villages covered (No.)			

11.3 Details of soil health cards issued based on SWTL &Mobile Soil Testing Kit during 2019:

Particulars	Date (s)	Villages (No.)	Farmers (No.)	Samples analyzed (No.)	Soil health cards issued (No.)
SWTL					
Mobile Soil Testing Kit					

11.4 World Soil Health Day celebration

Sl. No.	Farmers participated (No.)	Soil health cards issued (No.)	VIPs (MP/ Minister/MLA attended (No.)	Other Public Representatives participated	Officials participated (No.)	Media coverage (No.)
1	**47**	**40**			**4**	**yes**

PART XII. IMPACT

12.A. Impact of KVK activities (Not restricted for reporting period).

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.)	
			Before (Rs./Unit)	After (Rs./Unit)

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

12.B. Cases of large scale adoption (Please furnish detailed information for each case with suitable photographs)

12.C. Details of impact analysis of KVK activities carried out during the reporting period

PART XIII - LINKAGES

13A. Functional linkage with different organizations

Name of organization	Nature of linkage
ATMA	Managing committee, Governing Board Conducting farm schools, demonstrations, trainings, exposure visits Preparation of MTA Conducting OFT, FLD, farmer scientist interaction, kisan goshti, Identification of awardees Workshop on cafeteria of technologies, Technology week, SAC etc.
Dept. of Agriculture	MDDT, Trainings, Seminars, Workshops, Soil health camps, Technology week, SAC, Support to Agro service centres and Eco shops
State Planning Board	EAP on Enhancing production of vegetable seedlings
Dept. of Rural development	Back stopping MGNREGA and IWMP initiatives
Kudumbashree	Women empowerment efforts in mechanization, fruit and vegetable processing , trainings, MKSP
KCAET	SAC, Trainings, Demonstrations, Exhibitions, Technology week
Panchayats	Project preparation and monitoring, mobilizing farmers for trainings, Technology week, etc

Vocational Higher Secondary Schools	On job trainings
PFDC	Trainings, Demonstrations
NABARD	Strengthening farmers' clubs, patenting and support to farmer innovations, SAC
Dept. of Animal Husbandry	SAC, Trainings, Animal health camps,
VFPCK	Trainings, Diagnosis of pests and diseases, Awareness programmes
CDB	Trainings, Technological backstopping coconut federations and coconut technicians
Dairy development	SAC, Trainings, Promotion of fodder crops, Seminars
CTCRI	Trainings, IPDM technologies
CIFT	Project, trainings

NB The nature of linkage should be indicated in terms of joint diagnostic survey, joint implementation, participation in meeting, contribution received for infrastructural development, conducting training programmes and demonstration or any other

13B. List of special programmes undertaken by the KVK and operational now, which have been financed by State Govt./Other Agencies

Name of the scheme	Date/ Month of initiation	Funding agency	Amount (Rs.)
Project on development of Floriculture	12-2019	Govt. of Kerala	10.00
Promotion of farmer innovation and establishment of a farmer innovation museum at KVK	06-2019	State Planning Board, Kerala	4.00
Promotion of small scale mechanization of horticultural crops through empowerment of rural women	06-2019	State Planning Board, Kerala	2.00
IVLP (Institute village linkage programme)	12-2019	State Planning Board, Kerala	0.50
Training cum demonstration on fish processing under scsp programme.	12-2019	ICAR-CIFT	1.00
Commercial Mediculture	12-2019	State Medicinal plants board Kerala	0.35

13C. Details of linkage with ATMA

Coordination activities between KVK and ATMA

S. No.	Programme	Particulars	No. of programmes attended by KVK staff	No. of programmes Organized by KVK	Other remarks (if any)
01	Meetings	Meetings	Governing Board, Managing Committee, MTA	8	
02	Research projects	Research projects			

			Training to farmer groups mobilized using the provision of within the district trainings and outside the district trainings	**3**	
03	**Training programmes**	**Training programmes**	**ATMA demonstration plots, FLDs of KVK**	**14**	
04	**Demonstrations**	**Demonstrations**			
			Organised at KVK collaborating with ATMA	**12**	
05	**Extension Programmes**	**Extension Programmes**		**10**	
	Kisan Mela	KisanMela			
	Technology Week				
	Exposure visit				
	Exhibition				
	Soil health camps				
	Animal Health Campaigns				
	Others (Pl. specify)				
06	**Publications**				
	Video Films				
	Books				
	Extension Literature				
	Pamphlets				
	Others (Pl. specify)				
07	**Other Activities** (Pl.specify)				
	Watershed approach				
	Integrated Farm Development				
	Agri-preneurs development				

13D. Give details of programmes implemented under National Horticultural Mission

S. No.	**Programme**	**Nature of linkage**	**Funds received if any Rs.**	**Expenditure during the reporting period in Rs.**	**Constraints if any**

13E. Nature of linkage with National Fisheries Development Board

S. No.	Programme	Nature of linkage	Funds received if any Rs.	Expenditure during the reporting period in Rs.	Remarks

13F. Details of linkage with RKVY

S. No.	Programme	Nature of linkage	Funds received if any Rs.	Expenditure during the reporting period in Rs.	Remarks

13G. Kisan Mobile Advisory Services

Month	No of Advisories	Message type (Text/Voice)	SMS/voice calls sent (No.)						Total SMS/Voice calls sent (No.)	Farmers benefitted (No.)
			Crop	Livestock	Weather	Marketing	Awareness	Other enterprises		
January										
February										
March										
April										
May										
June										
July										
August										
September										
October										
November										
December										
Total										

PART XIV- PERFORMANCE OF INFRASTRUCTURE IN KVK

14A. Performance of demonstration units (other than instructional farm)

Sl. No.	Demo Unit	Year of establishment	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Produce	Qty.	Cost of inputs	Gross income	

14B. Performance of instructional farm (Crops) including seed production

Name of the crop	Date of sowing	Date of harvest	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Type of Produce	Qty.	Cost of inputs	Gross income	
Cereals									
Paddy	July 2020	October 2020	3.0 ha	Uma Jyothi	Seed	5250	185000	270000	Managed with the technical support of KVK by KCAET using KAU funds
Pulses									
Oilseeds									
Fibers									
Spices & Plantation crops									
Coconut			5.0 ha	WCT,CDO CDG	Nuts	52,000	286500	665500	
Floriculture									
Fruits									
Vegetables	3 seasons		7.0 ha	22 varieties	seed	150			
Others (specify)									

14C. 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	
	Verticillium	7.29	22000	35875	
	Beuveria	5.13	15000	25034	
	Pseudomonas	48.97	115000	258000	

	Trichoderma	36.24	150000	272625	

14D. Performance of instructional farm (livestock and fisheries production)

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

14E. Utilization of hostel facilities

Accommodation available (No. of beds)

Months	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
January	8	14	
February	14	14	
March	10	10	
April			
May			
June			
July			
August	12	12	
September	8	12	
October	10	10	
November	11	22	
December	18	36	

14F. Database management

S.No	Database target	Database created
1	DFI farmers	Allipparambu, Pulamanthol, Edayur

14G. Details on Rain Water Harvesting Structure and micro-irrigation system

Amount sanction (Rs.)	Expenditure (Rs.)	Details of infrastructure created / micro irrigation system etc.	Activities conducted					Quantity of water harvested in '000 litres	Area irrigated / utilization pattern
			No. of Training programmes	No. of Demonstration s	No. of plant materials produced	Visit by farmers (No.)	Visit by officials (No.)		
10,00,000	9,92,493	A lined rainwater harvesting pond		5	Vegetable seeds- 200 kg	45		3200	0.8 ha

		(1600 sq. m at top and 625 sq.m at bottom) and Micro Irrigation systems (3 ha)							

PART XV –SPECIAL PROGRAMMES

15.1 Paramparagath Krishi Vikas Yojana (PKVY)

Sl No.	Name of cluster village	Initial soil fertility status (Average of cluster village)				Facilities created for organic source of manure	Name of Crops cultivated	Variety	Organic inputs applied including bio-agents and botanicals treatment	Yield (q/ha)	Economics	
		Aval. N	Aval. P	Aval. K	OC %						Cost of cultivation (Rs/ha)	Net returns (Rs/ha)
1	1.											
	2.											
2	1.											
	2.											

15.2 District Agriculture Meteorological Unit (DAMU)

	Agro advisories			Farmers awareness programmes	
Sl No.	No of Agro advisories generated	No of farmers registered for agro advisories	No of farmers benefitted	No of programmes	No of farmers benefitted
1	104	1200	1200	3	1500
2					

15.3 Fertilizer awareness programme 2020

State	Name of KVK	Details of Activities/programmeOrganised	Number of Chief Guests	No. of Farmers attended program	Total participants
Kerala	**Malappuram**	**Training on soil health management in vegetables**		**51**	**51**

15.4Seed Hub

Crops	***Variety***	***Year of release***	***Production***				***Remarks***
			Target (q)	***Area (ha.)***	***Actual Production (q)***	***Category (FS/CS)***	

15.5 CFLD on Oilseeds:

Sl.No.	Crop	Varieties demonstrated and check	Allocated		Implemented	
			Area (ha)	Demos (No.)	Area (ha)	Demos (No.)
	Total					

15.6 CFLDs on Pulses:

Sl.No.	Crop	Varieties demonstrated and check	Allocated		Implemented	
			Area (ha)	Demos (No.)	Area (ha)	Demos (No.)
	Total					

15.7 Krishi Kalyan Abhiyan

Type of Activity	**Date(s) conducted**	**No. of farmers (General)**			**No. of farmers SC / ST**			**No.of extension personnel**		
		Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**

15.8 Micro-Irrigation

Type of Activity	Date(s) conducted	No. of farmers (General)			No. of farmers SC / ST			No.of extension personnel		
		Male	Female	Total	Male	Female	Total	Male	Female	Total

15.9 Tribal Sub-Plan (TSP)

Farmer Training		Women Farmer Training		Rural Youths		Extension Personnel		OFT (No of Technologiess)	Number of farmers involved			Participants in extension activities (No.)	Production of seed (q)	Production of Planting material (Number in lakh)	Production of Livestock strains (Number in lakh)	Production of fingerlings (Number in lakh)	Testing of Soil, water, plant, manures samples (Number)
No. of Trainings/ Demos	No. of Farmers	No. of Trainings/ Demos	No. of Women Farmers	No. of Trainings/ Demos	No. of Youths	No. of Trainings/ Demos	No. of Ext. Person		On-farm trials	Front line demos	Mobile agro-advisory to farmers						

15.10 SCSP

Farmer Training		Women Farmer Training		Rural Youths		Extension Personnel		OFT (No of Technologiess)	Number of farmers involved			Participants in extension activities (No.)	Production of seed (q)	Production of Planting material (Num	Production of Livestock strains (Number in	Production of fingerlings (Number in lakh)	Testing of Soil, water, plant, manures
No. of Trainings/ Demos	No. of Farmers	No. of Trainings/ Demos	No. of Women Farmers	No. of Trainings/ Demos	No. of Youths	No. of Trainings/ Demos	No. of Ext. Person		On-farm trials	Front line demos	Mobile agro-advisory to						

											farmers			ber in lakh)	lakh)		samples (Number)

15.11 NARI

Activity	Achievement	
	Number of activity	**No. of farmers/ beneficiaries**
OFTs – Nutritional Garden (activity in no. of Unit)		
OFTs – Bio-fortified Crops (activity in no. of Unit)		
OFTs – Value addition(activity in no. of Unit/Enterprise)		
OFTs - Other Enterprises (activity in no. of Unit/Enterprise) (activity in no. of Unit/Enterprise)		
FLDs – Nutritional Garden (activity in no. of Unit)	**5**	**25**
FLDs – Bio-fortified Crops (activity in no. of Unit)		
FLDs – Value addition(activity in no. of Unit/Enterprise)		
FLD- Other Enterprises (activity in no. of Unit/Enterprise) (activity in no. of Unit/Enterprise)		
Trainings		
Extension Activities		

15.12 KVK Portal

No. of Events added by KVKs	No. of Facilities added by KVKs	Filled Report on Package of Practices (Y/N)				Filled Profile Report (Y/N)							
		Crop	Livestock	Fisheries	Horticulture	Employees	Posts	Finance	Soil Health Cards	Appliances	Crops	Resources	Fish
158	7	y			y	y	y	y	y	y	y		

15.13 KSHAMTA

Number of Adopted Villages	No. of Activities		No. of farmers benefited	
	Demo	Training	Demo	Training

15.14 DFI

Sl	District	Taluks	Villages	Farmers (No.)	Average Benchmark Income (Rs/year)	Crops/ enterprises	KVK Interventions	Additional Net Income generated due to KVK interventions (Rs/year)	Total income of farmer (Rs/year)

PART XVI - FINANCIAL PERFORMANCE

16A. Details of KVK Bank accounts

Bank account	Name of the bank	Location	Branch code	Account Name	Account Number	MICR Number	IFSC Number
With Host Institute	State bank of india	Kuttippuram	70195	SB	67201968181		SBTR0000195
With KVK	Federal bank	Tavanur	1171	SB	11710100084319		FDRL0001171

16B. Utilization of KVK funds during the year 2019-20 (Rs. in lakh)

S. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	**Pay & Allowances**	1,30,00,000		1,29,00,000
2	**Traveling allowances**	1,60,000		1,60,000
3	**Contingencies**			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	200000		199999
B	POL, repair of vehicles, tractor and equipments	225000		198511
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)	90000		42423
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	60000		60000
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	252000		176475
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	52000		47132
G	Training of extension functionaries	25000		14420
H	Maintenance of buildings	10000		10000
I	Establishment of Soil, Plant & Water Testing Laboratory	25000		24935
J	Extension activities	100000		100000
K	Nutrigarden	25000		25000
L	Library	15000		15000
TOTAL (A)				
B. Non-Recurring Contingencies				

1	**Works**			
2	**Equipment including SWTL & Furniture**			
3	**Vehicle** (Four wheeler/Two wheeler, please specify)			
4	**Library** (Purchase of assets like books & journals)			
TOTAL (B)				
C. REVOLVING FUND				
GRAND TOTAL (A+B+C)		1,42,39,000	1,38,42,570	1,39,73,895

16C. Status of revolving fund (Rs. in lakh) for the last three years

Year	Opening balance as on 1st January	Income during the year	Expenditure during the year	Net balance in hand as on 31st December of each year
January to December 2018	8926889	13496753	9501478	11377971
January to December 2019	11377971	8372916	7827938	12385746
January to December 2020	12385746	8143805	7990373	12572896

17. Details of HRD activities attended by KVK staff

Name of the staff	Designation	Title of the training programme	Institute where attended	Dates
Dr. Sajeena S	**Asst. Professor (Agri. Engg.)**	**National Ground Water conferrence**	**CWRDM Kozhikode**	**18 to 20 Feb 2020**
Dr. Prasanth K	**Asst. Professor (Hort)**	**UGC – HRDC faculty Induction programme**	**Kannur University - Online**	**11-11-20 to 10-12-20**
Dr. Najitha Ummer	**Asst. Professor (Ento)**	**UGC – HRDC faculty Induction programme**	**Kannur University - Online**	**11-11-20 to 10-12-20**

18. **Please include any other important and relevant information which has not been reflected above (write in detail). Like details regarding FPO formation, Achievements during COVID-19 lockdown period.**

- KVK launched a Special extension programme on social farming initaiative to promote family farming through various take holders
- Social farming initiative through janamaithri police malappuram – 100 families
- Ponani Municipality – initiated actions for distribution of 1000 seed kits
- Preparation of plans for Edapaland Thavanur gramapamnchayaths
- Initiated meetings with the district panchayath , Malappuram for campaign through all district Panchayath members
- NRI farm plans initiative with Perinthalmanna block
- Social farming intiative with Lions club ,Edapal
- No of online trainings for farmers : 6 (Through whats app)

- Handholding for Pravasi returnees – Agricultural helpdesk for farm planning and advisory at KVK planned , since most of the NRI returnees are from Malappuram dist .
- Supporting of existing precision farmers with advisory and essential machinery for drip and mulch layouts -(Linkedwith Thavanurgramapanchayath in an area of 6 acres model open precision farming)

- Community befriending service for stressed farmers through award/progressive farmer network supported by KVK- Social media platform by KVK- outreach through KVK- Chief farmers network

- Linkage with Kottappuram Padasekharam of Irumbiliyam , for increasing productivity of rice based farming system though KVK back stopping