Annual Progress Report 2021

(FOR THE PERIOD FROM 01 January, 2021 to 31 December, 2021

Submitted to:

Director
Indian Council of Agricultural Research
ICAR-Agricultural Technology Application Research Institute (ATARI)
MRS, HA Farm Post, Hebbal
BANGALURU – 560 024

Submitted by:

ICAR-TaralabaluKrishiVigyan Kendra, Davanagere
Kadalivana, LIC Colony Layout, B.I.E.T. Road
Davanagere - 577 004
Phone: 08192-263462, 297142
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Website: www.taralabalukvk.com

PART I – GENERAL INFORMATION ABOUT THE KVK

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

KVK Address	Telephone		E mail	Web Address
	Office	Fax		
ICAR- Krishi Vigyan Kendra Kadalivana, LIC Colony Layout, B.I.E.T. Road, Davanagere – 577 004 Davanagere-Dist.	08192 – 263462	08192 – 297142	kvk.Davanagere@icar.gov.in dvgtkvk@yahoo.com	www.taralabalukvk.com

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

Address	**Telephone**		**E mail**	**Web Address**
	Office	Fax		
Taralabalu Rural Development Foundation Sirigere – 577541 Chitradurga (Dist.)	08194 – 268829, 268842	08194 - 268847	ao@taralabalu.org (kvk.Davanagere@icar.gov.in)	**http://**www.taralabalu.org

1.3. Name of the Senior Scientist Cum Head with phone & mobile No.

Name	**Telephone / Contact**		
	Residence	Mobile	Email
Dr. Devaraja T.N.	--	94498 – 56876	tngdevaraja@gmail.com

1.4. Year of sanction: 2004

1.5. Staff position as on 31 December 2021

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 Devaraja T N	Senior Scientist-Cum-Head	M	Fisheries	Ph.D. in Fisheries & Aquaculture	37400-67000 (Level-14)	177400	17-05-2005	Permanent	Others
2	Scientist/SMS	Basavanagowda M G	Subject Matter Specialist	M	Horticulture	M.Sc. [Horti.]	15600-39100 (Level-11)	88400	21-11-2006	Permanent	Others
3	Scientist/SMS	Mallikarjuna B O	Subject Matter Specialist	M	Agronomy	M.Sc. [Agri.] - Agronomy	15600-39100 (Level-11)	85800	09-01-2008	Permanent	Others
4	Scientist/SMS	Dr G K Jayadevappa	Subject Matter Specialist	M	Animal Science	M.V.Sc. Animal Nutrition	15600-39100 (Level-11)	85500	29-01-2008	Permanent	Others
5	Scientist/SMS	Raghuraja J	Subject Matter Specialist	M	Agri. Extension	M.Sc. [Agri.] – Agri. Extn.	15600-39100 (Level-11)	83300	23-06-2008	Permanent	Others
6	Scientist/SMS	H.M. Sannagoudra	Subject Matter Specialist	M	Soil Science	M.Sc. [Agri.] – Soil Science & Agri. Chemistry	15600-39100 (Level-10)	69000	01-07-2013	Permanent	Others
7	Scientist/SMS	Dr. Avinash T.G.	Subject Matter Specialist	M	Plant Protection	Ph.D in Agri. Entomology	15600-39100 (Level-10)	56100	01-09-2021	Permanent	Others
8	Programme Assistant (Lab Tech.)	Dr. Supriya P. Patil	Programme Assistant	F	Home Science	Ph.D. in Extension and Communication Management	9300-34800 (Level-6)	35400	01-09-2021	Permanent	Others
9	Programme Assistant (Computer)	Santhosh B	Programme Assistant	M	Computer	B.Sc. (Computer Science)	9300-34800 (Level-7)	53600	05-09-2008	Permanent	Others
10	Programme Assistant/ Farm Manager	Vijayakumar S B	Farm Manager	M	Farm Manager	M.Sc. [Agri] – Plant Breeding & Genetics	9300-34800 (Level-7)	52000	23-06-2008	Permanent	Others
11	Assistant	Prabhuprasad N.K.	Assistant	M	Assistant	Bachelor in Commerce	9300-34800 (Level-6)	35400	01-11-2021	Permanent	OBC
12	Jr. Stenographer	Mamatha H Melmalagi	Stenographer Gr.III	F	Stenographer Gr.III	Bachelor in Commerce	5200-20200 (Level-5)	44100	27-06-2005	Permanent	Others
13	Driver - 1	Karthik M.	Driver (Jeep)	M	Driver (Jeep)	ITI	5200-20200 (Level-3)	21700	01-09-2021	Permanent	Others
14	Driver - 2	S Shivakumar	Driver (Tractor)	M	Driver (Tractor)	S.S.L.C.	5200-20200 (Level-4)	35300	01-06-2005	Permanent	Others
15	SS-1	B Shivakumar	Grade-I	M	Grade-I	S.S.L.C.	5200-20200 (Level-2)	31100	01-06-2005	Permanent	Others
16	SS-2	S E Shivakumar	Grade-I	M	Grade-I	S.S.L.C.	(5200-20200), Level-2	31100	01-06-2005	Permanent	Others

1.6. Total land with KVK (in ha):

S. No.	Item	Area (ha)
1	Under Buildings	1.75
2.	Under Demonstration Units	0.50
3.	Under Crops	7.25
4.	Orchard/Agro-forestry	5.0
5.	Others	0.5

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	04.01.2008	550	29.37			Completed
2.	Farmers Hostel	ICAR	04.01.2008	300	18,82,000.00			Completed
3.	Staff Quarters	ICAR	04.01.2008	400	19,40,000.00			Completed
	1.SMS (Plant Protection)							
	2 . SMS (Agri. Extension)							
	3. SMS (Soil Science)							
	4 Farm Manager							
	5. Office Attendant							
	6. Driver (Jeep)							
4.	Demonstration Units							
	1. Dairy with modern facilities	ICAR	04.01.2008	160	6,41,000.00			Completed
	2. Shade Home	DBT	29.03.2013	1000	2,10,000.00			Completed
	3. Azolla bulk production unit	RF	2010	3	3,000.00			Completed
	4. Azolla production unit	NICRA	28.03.2013	3.53	20,000.00			Completed
	5. Ornamental fish breeding unit	DBT	2010	700	1,49,955.00			Completed
	6. Fish polyculture pond with horti integration	DBT	2010	600				Completed
	7. Guava Scion Block	RF	2018	1,000	1,00,000/-			Completed
	8. Portable Carp hatchery	ICAR	31-03-2011	--	2,25,000-00			Completed
	9..Fodder demo units	RF	2010	4000	41,428.00			Completed
	10. Biogas unit	RF	2011	04	29920.00			Completed

	11. Fish cum paddy cultivation unit	RF	2011	421	13071.00			Completed
	12. Vermicomposting units	RF	2008	121	60000			Completed
	13 .Vermicomposting unit	DBT	2010	60	15000			Completed
5	Fencing	ICAR	31-03-2011	930 feet	11,00,000			Completed
6	Rain Water harvesting system	RF-TKVK	2021	--	1,00,000	-	--	Completed
7	Threshing floor	ICAR	31-03-2011		2,00,000-00			Completed
8	Farm godown	-	--	--	--	To be sanctioned	--	
9	Bore wells (2 No.s)	ICAR	31-03-2011		3,00,000-00			Completed
10	Irrigation system	ICAR	31-03-2011		1,00,000-00			Completed
11	Borewell recharge unit	RF-KVK	01-06-2011		64,585-00			Completed
12	Plant Health Clinic	ICAR	01.04.2012		10,00,000.00			Completed
13	Orchards and agro forestry							Completed
	1. Mango	RF	2005	12000	53215.00			Completed
	2. Sapota orchard	RF	2010	4000	44775.00			Completed
	3. Hexagonal and penta planting of coconut garden, Germ plasm coconut	RF	2009	4000	9035.00			Completed
	4. Arecanut garden	RF	2007	8000	72228.00			Completed
	5.Tarmarind garden, Medicinal plants	RF	2005	2000	--			Completed
	6.Curry leaf garden	RF	2007	500	--			Completed
	7. Agro forestry with biofuel plants	RF	2013	24000	13,166-00			Completed
14	Miyawaki (2 unit)	RF	31-8-2019	1066 sq mts	65333			Completed
15	Truss work and Building above Administration Building	MP and MLA Grants	October 2020	-	15,00,000			Completed
16	Ultra High Density Mango	RF	2018	4000 sq.m	14,920			Completed
17	Jack orchard	RF	2018	1000 sq. m	5511			Completed
18	Lime orchard	RF	2018	1000 sq. m	2147			Completed
19	Mixed Fruit Orchard	RF	2015	4000 sq.m	6811			Completed
20	High Density Mango Orchard	RF	2018	4000 sq. m	14,920			Completed
21	Jamun Orchard	RF	2018	1000 sq. m	8,000			Completed
22	Cashew Orchard	RF	2019	4000 sq. m	12,500			Completed

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Tractor and Trailer	2005	4,99,995-00	4,250.3	Good
Power tiller Funded by FLD cotton	2008	99400-00		Good
Power Tiller	2010	131500-00		Good
Mahindra Bolero	2017	8,00,000-00	86,624	Good
Hero Honda CD Deluxe	2006	39,298-00	81,510	Good
Yamaha Alba	2009	48,309-00	71,300	Good

C) Lab equipment & AV aids

Name of the equipment	Year of purchase	Quantity (No.)	Cost (Rs.)	Present status
AV aids:				
Mixer	2005	1	3,300/-	Good
Xerox Machine	2006	1	73,840/-	Not in working condition
Digital Camera	2006	1	19,900/-	Not in working condition
Over Head Projector	2006	1	19,935/-	Not in working condition
TV with DVD Player (Funded by SHIMUL)	2006	1	11,350/-	Not in working condition
Refrigerator (LG)	2007	1	10,000/-	Good
Deep Freezer + Stabilizer (Funded by ATMA)	2013	1	16,650/-	Good
Computer +LCD	2007	1	1,00,103/-	Good
Fax (4 in one)	2009	1	15,000/-	Not in working condition
Generator	2011	1	100000/-	Good
Sony Digital GPS Camera	2017	1	28,500/-	Good
Computer	2017	1	27,800/-	Good
UPS	2017	1	72,100/-	Good
Xerox Machine	2017	1	65,000/-	Good
LCD Projector	2017	1	32,100/-	Good
RO Water Purifier	2017	1	65,000/-	Good
Hard Disks (2 No.s)	2017	2	9,500/-	Good
LED Projector	2021	1	88,700/-	Good
Dryer	2021	1	30,000/-	Good

Lab equipment:				
Digital conductivity meter	2011-12	1	12,860-00	Good
Digital pH meter	2011-12	1	11,033-00	Good
Flame photometer	2011-12	1	48,375-00	Good
Spectrophotometer	2011-12	1	42,570-00	Good
Macro Block digestion system: KIL 08 L	2011-12	1	96,212-00	Good
Distillation system KJELO DIST EAS VA	2011-12	1	1,77,268-00	Good
Digital Burette Titration system	2011-12	1	53,212-00	Good
Quartz single distillation model with 4 l/h capacity	2011-12	1	31,482-00	Good
Quartz double distillation unit with 1.5 l/h capacity	2011-12	1	64,130-00	Good
Hot air oven	2011-12	1	29,786-00	Good
Hot plate Rectangular	2011-12	1	6,784-00	Good
Water bath	2011-12	1	5,724-00	Good
Digital Analytical balance capacity 210 g	2011-12	1	69,960-00	Good
Table top balance capacity 10 kg	2011-12	1	6,890-00	Good
Heating mantle capacity 250 ml	2011-12	1	1,908-00	Good
Kent water purifier	2011-12	1	16,500-00	Not working
Min Soil Testing Kits	2017-18	2	90,000-00	Good

D) Farm equipment and implements

Name of the equipment/implement	Year of purchase	Quantity (No.)	Cost (Rs.)	Present status
Mahindra Tractor	31-08-2005	1	3,64,595	Good
Tractor Trailer	31-08-2005	1	1,35,400	Good
VST Shakthi Power Tiller with Tiller	10-03-2021	1	1,49,950	Good
Tractor drawn cultivator	30-03-2010	1	19,950	Good
Rotavator	15-03-2011	1	15,000	Good
Seed Driller (Tractor)	15-03-2011	1	25,000	Good
Land Leveler (Tractor)	25-03-2011	1	20,000	Good
Bund Farm (Tractor)	25-03-2011	1	14,990	Good
Portable Crop Hatchery	31-03-2011	1	2,25,000	Good

1.8. Details of SAC meeting organized

Date	Number of Participants	Salient Recommendations	Action taken	Remarks, if any
21-12-2020, Time: 11.00 am	**26** (21 Scientific Advisory Committee members and 5 Special invitees) and 13 TKVK Staff Members	To organize awareness programs on Nutrigardens.	Online training was organized on Nutrition garden on 03-06-2021 (62 farmers). On 17-09-2020, the Nutrition - Garden Campaign was organized in collaboration with the Department of Agriculture and IFFCO limited 234 farmers had participated). Front line demonstration on Nutrigarden was organized in Rameshwara village	
		To encourage participation of farmers from cluster villages in field days	During the reporting period 309 farmers including cluster villages participated in 10 field days and 6 newspaper reports coverage's.	
		To upload all publications/ research articles of the KVK in the website	The publications of KVK have been uploaded to website. News paper: 28, Information manual: 39, Research paper: 1, Success stories: 7, Action plan: 15, Annual report: 15, Scientific Advisory Panel Report: 10, QTR Report: 2, District information: 3, District service centre information: 1, Technical posters: 44.	

		To organize awareness programe on cost reduction in plant protection measures in paddy.	• Awareness programe given in the bi-monthly workshop on 19-06-2021. • Training was conducted on this issue in Kadlebalu and Budayalu village on 6-9-2021 (115 Farmers). • Awareness was created on this topic in 10 DAESI classes. • Provided information on paddy in online training.	
		To collect feedback from FPO's and submit to government.	Status report on 6 FPO's from Davangere district collected and sent to concerned authorities .	
		To organize trainings on mechanization in agriculture.	• Workshop BEE standard pumps in agriculture was organized on 05-12-2021. • Red gram nipping machine (2 no's) developed by innovative farmer sri Sharana Basappa patil from kalalsurgi district was procured and demonstrated in CFLD in Agasananakatte and Rameshwara clusters.	
		To supply quality fodder seed to farmers.	KVK supplied 240 kg CoFS-31 &15 kg Lucern variety seeds to 180 farmers.	
		To give more programmes in AIR.	KVK specialists given 28 programes and encouraged 13 progressive farmer to participate in AIR programmes.	

		To utilize print media to disseminate agricultural technologies.	The important programmes of KVK were published in news papers,(82 no's).	
		To organize trainings on quality of agricultural produce.	Quality aspect in agricultural produce was covered in trainings in the crops like Maize / Banana/Chilli/Tomato and Onion.	
	II. To be addressed through KVK action plan.			
		To visit other KVK's for cross learning.	Visited ICAR-KVK, Belagavi on 13-03-2021 and learnt KVK technologies.	
		To take up seed production on participation on participatory mode.	Seed production in participatory mode is yet to initiate. KVK produced 1420 kg velvet beans and supplied to 125 farmers.	
		To promote cashew in rainfed areas.	• FLD Conducted in Gowdikatte village in Jagalur taluk. • Training on Cashew production organized for 50 farmers. • Field visit to Gowrammanahalli, Jagalur tq on cashew.	

		To conduct demonstration on whitefly in coconut.	• Information broachers on white fly prepared in collaboration with Department of Horticulture. • Whitefly management taken up in KVK using neem oil. • Video on whitefly management published.	
		To promote Maize + Redgram intercropping.	FLD on Maize +Redgram implemented for 50 farmers (20 ha) (TS-3R variety) in Agasanakatte , Siddanuru, Pavadarangavvanahalli cluster, distributed 1476 kg Redgram seeds for 369 farmers under NFSM programme in colaboration with Department of Agriculture in same cluster.	
	III. Action taken in collaboration with Development Departments.			
		To increase the activities under horticulture nursery. To take certification from horticulture department. To submit proposal in this regard.	Submitted Proposal to establish model nursery to Horticulture Dept.	

		To develop V-4 and V-7 variety of cashew in collaboration with Bavikere research station.	• V-4 and V-7 variety of cashew procured from Bavikere Research station and supplied to farmers. • Scion for grafting will be procured for next season.	
		To establish 1 FPO at KVK.	KVK as Resource Institute for 18 FPO's in Davangere, Chitradurga and Haveri districts.	
		Improve KVK website and provide opportunity for feedback.	KVK website updated regularly and feedback option provided.	

Date	Number of Participants	Salient Recommendations	Action taken	Remarks, if any
23-12-2021, Time: 10.00 am	**15** (12 Scientific Advisory Committee members and 3 Special invitees) and 16 TKVK Staff Members	**Group-1: To be addressed through extension activities of KVK:**	On going	
		Marketing issues remained unsolved for farmers, existing marketing situations not convenient to farmers. Marketing facility need to be provided within the vicinity of 5-10 km.		
		Value chain for farmers need to be provided		
		Arecanut crop based farming system need to be managed with suitable intercrops (popularized) in rainfed areas under tank command areas.		
		To organize demonstrations/campaigns/awareness programmes on arecanut based cropping system.		
		Important to understand consumer behavior in market. It is high time that farmers should fix price for their produce.		

		Website: Common guidelines for all KVKs. Update KVK website regularly.		
		Give article for 'Negila Miditha' Magazine		
		To take at least 1 adopted village per KVK		
		To use mass media more effectively by sharing short videos (2-3 minutes)		
		To continue terrace garden activities		
		To give technology on arecanut husk decomposition for larger mass.		
		To do programmes on water management and efficient utilization of water.		
		Suggested to continue programmes on Anabe roga in coconut and arecanut.		
		To promote Natural Farming / organic farming, latest research results can be taken up.		
		To promote brown top millet as cow feed.		
		To do Animal Health Campaigns in collaboration with AH & VS.		
		To promote programmes / trainings on organic farming.		
		SAC report should be same as APR period.		
		ATR should be clearly depicted		
		To conduct 2-3 impact studies on KVK technologies, Also, to consider nature of linkages and their impact.		
		To quantify data like percent disease incidence or percent increase in yield		
		Avoid too many items / matters in single PPT		
		NICRA resilient technologies need to be demonstrated in other areas / adjacent villages.		
		II. To be addressed through action plan of KVK		
		Suggested to promote diversification of crops like Horti-Silviculture, Advanced horticulture (Shade home, Polyhouse)		
		To continue nutri-garden progammes.		
		Nano urea experiments are being conducted in UAHS, once the results are available can be promoted in all the crops		

		To promote arecanut based cropping pattern, model developed by AHRs, Kathalagere can be taken.		
		To promote sheep / goat rearing		
		To promote local poultry birds rearing which is profitable		
		To promote sheep rearing which is best suited enterprise for DFI		
		To promote conventional feed source like areca sheets (after use) for cow feed (Powder or block making)		
		To carry forward findings of NICRA project in KVK activities through action plan.		
		III. To be initiated in collaboration with Departments.		
		Model nursery will be sanctioned to KVK under NHM as Krishi Vigyan Kendra has already submitted the proposal.		
		To initiate fisheries activities in farm ponds constructed under different programmes. 1 FPO will be initiated with KVK		
		To promote bamboo in suitable areas. To promote agro forestry especially in dry lands.		
		To do few programmes under Tribal Development Programmes imitated by NABARD, UAHS will be part of it.		
		Value addition and processing units need to be promoted through FPOs. Promoted in UAS, KVK and Government agencies, at least one crop like tomato in district.		
		To take up skill oriented training through ASCI or KSSDC at least 1 training.		
		To establish mushroom hub in Davanagere city as the consumption is 50-60 kg / day		
		To popularize NABARD programmes for value addition and processing.		
		To promote coconut by-products preparation like cocopeat and virgin coconut oil. To promote bio-control agents.		

Sri Onkarappa S. from S. Mallapura village, Honnali tq., the Krishi Vigyan Kendra promoted Integrated Farming System practicing farmer was felicitated on the occasion of 'National Farmers Day' in SAC meeting.

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	**Rainfed system:** Maize, Maize+Redgram, Ragi, Ragi+Horsegram, Greengram-Ragi, Minor millets, Jowar, Bengalgram , Redgram, Groundnut, Sunflower, Cotton, Mango, Onion-Bengalgram / Jowar.
2	**Irrigation (33%):** Rice- Rice, Sugarcane, Arecanut, Banana, Coconut, Papaya, Vegetable crops, Fodder crops, Pomegranate
3	**Enterprises:** Poultry, Dairy, Sheep/ Goat rearing, Fisheries, Vegetable nursery, Nursery
4	**Cropping intensity**: 122%

Davanagere district is at the centre of the state and lies in between latitude of $75^0.30^{'}$ and $76^0.30^{'}$ and longitude of $13^0.45^{'}$ and $14^0.50^{'}$ with MSL of 602.5 m. The annual average rainfall of the district 678 mm (actual 826 mm in 2020). The variety of soil is medium to deep black and red sandy loam. The district is essentially kharif region and majority rabi crops will be taken up with the help of irrigation from lower Bhadra canal (Irrigation-33%). The district consist of 6 taluks, 810 villages, 418692 holdings with gross cropped area of 460772 ha. Majority of holding are marginal (135246, 47.84 %), followed by small (84521, 29.9%) semi-medium (45905, 16.24%). The total population of the district was 1945497 (According to 2011 censes) with majority 67.66 % lives in rural areas and 32.34 % lives in urban areas.

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

S. No	Agro-climatic Zone	Characteristics
1.	Central Dry Zone (Zone I	Jagalur, Harihara and Davanagere Taluks come under Zone IV. We find red sandy soil mixed with clayey soil land patches of black soil in the zone. Major crops include Maize, Rice, Jowar, Sunflower, Sugarcane, Ragi, Minor millets, Vegetables, Coconut, Arecanut, Beetlevine, Groundnut, and Pomegranate.
2.	Southern transitional Zone (Zone VII)	Southern transitional zone includes Channagiri, Nyamathi and Honnali taluks. The dominating soil types found are red sandy soil and black cotton soil. Major crops growing the zone are Maize, Rice, Ragi, Cotton, Chilli, Jowar, Groundnut, Arecanut, Coconut, Mango and other Commercial crops.

S. No	Agro ecological situation	Characteristics
1	Southern Plateau and Hills	Typical semi-arid zone; About 80 % of the area falls under rainfed farming; Cropping intensity is very low. Soils are shallow and medium, loamy red, Major crops are Rice, maize, sugarcane, Arecanut, coconut and millets.

2.3 Soil type/s

S. No	Soil type	Characteristics	Area in ha
1	Red Sandy Soil (Harihara, Channagiri, Jagalur, Davanagere Tq.)	Low water holding capacity Neutral pH Low Nitrogen content Medium in Phosphorus and Potash	1, 26,000
2	Deep to Medium Deep Black Soil (Jagalur, Davanagere, Harapanahalli)	High water holding capacity Neutral to Alkaline pH Medium in Nitrogen and Phosphorus High Potassium	54,000
3	Mixed Red and Black Soil (Honnali, Jagalur, Harapanahalli)	Medium water holding capacity Neutral pH Medium in Nitrogen, Phosphorus and Potassium content	1, 62,000
4	Sandy Loam Soil (Davanagere, Harapanahalli)	Poor water holding capacity Neutral pH Deficient in Nitrogen, Phosphorus and Potassium	18,000
Total			**3, 60,000**

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	Rice	110155	516407	4688
2	Jowar	6215	14294	2300
3	Ragi (Finger Millet)	9015	21929	2433
4	Maize	127540	536022	4203
5	Bajra	600	960	1600
6	Wheat	275	432	1571
7	Minor Millets	455	376	826
I	**Total Cereals:**	**254255**	**1090419**	**42929**
1	Tur (Red gram)	7175	8820	1229
2	Bengal gram	7285	7428	1020
3	Horse gram	1333	695	521
4	Black gram	244	230	941
5	Green gram	440	437	994
6	Cowpea	4145	4243	1024
7	Avare / Field bean	1267	1110	876
8	Mothbean (Madake)	25	13	500
II	**Total Pulses:**	**21914**	**22974**	**14544**
	Total Foodgrains:	**276169**	**1113393**	**57474**
1	Groundnut	17095	24622	1440
2	Sesamum	435	653	1500
3	Sunflower	5576	7019	1259
4	Castor	380	418	1100
5	Niger	325	133	410
6	Mustard	307	130	423
7	Soybean	165	189	1145
8	Safflower	10	0	0
9	Linseed	55	28	500
III	**Total Oilseeds:**	**24348**	**33191**	**14192**

IV	**Commercial Crops:**			
1	Cotton	10327	4140	401
2	Sugarcane Planted	1727	208	120
2a	Sugarcane Ratoon	2764	299	108
	TOTAL	14818	4647	629
	GRAND TOTAL	**315335**	**1151230**	**72295**

* * Source : Department of Agriculture, Davanagere

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

Sl. No	Crop	Area (ha)	Production (Metric tons)	Productivity (t /ha)
1	Arecanut	69710.6	1172.26	1.68
2	Coconut	1111.6	1794.09 lakh nuts	0.16 lakh nuts/ha
3	Banana	2440.72	55373.2	22.69
4	Mango	1786	21997.9	12.31
5	Sapota	168.07	1679.28	9.99
6	Pomegranate	410	5038.06	12.29
7	Tomato	1826.38	57226.6	31.33
8	Onion	7288.74	88349	12.12
9	Green Chilli	487.89	10413	21.34
10	Bêtelvine	833.23	15888.5 lakh leaves	19.07 lakh leaves/ha
11	Marigold	254.5	990.3	3.89
12	Oil palm	81.26	423.39	5.21
13	Cocoa	27.19	14.89	0.55
14	Cashew	49.64	44.84	0.90
15	Black Pepper	454.73	147.17	0.32
16	Papaya	139.66	8271.4	59.22
17	Cabbage	217.82	6015.18	27.62
18	Drumstick	142.11	2681.5	18.87
19	Ridge gourd	70.45	685.68	9.73
20	Cocumber	147.12	2358.40	16.03
21	Brinjal	184.71	5024	27.20
22	Ginger	184.4	2811.95	15.25

Department of Horticulture, Davanagere 2020-21

2.5. Weather data

Source: Department of Agriculture, Davanagere and AHRS, Kathalagere:

Month	Rainfall (mm)	Temperature ^{0} C		Relative Humidity (%)
	Actual	Maximum	Minimum	
January 2021	45.4	30.8	20	99.4
February 2021	11.1	36.1	20	99.1
March 2021	3.5	37	19.8	99.4
April 2021	24.2	33	19	92.0
May 2021	91.8	34	21	99.0
June 2021	82.7	31.2	22.2	92.0
July 2021	211.8	30.8	29.2	99.4
August 2021	100.9	27.4	22.9	99.3
September 2021	40.6	29	22.9	99.1
October 2021	223.0	32	21	98.2
November 2021	129.0	31	19	97.8
December 2021	18.00	29.4	16.8	98.2
Total	**986**			

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

Category	Population	Production	Productivity
Cattle			
Crossbred	124184	238880 t	6 liter/day
Indigenous	207891		
Buffalo	175896		
Sheep			
Crossbred	167	4229.25 t	--
Indigenous	343011		--
Goats	103187		--
Pigs			
Crossbred	144	--	--
Indigenous	3684	--	--
Poultry			
Hens	31,93,472	5168.99 Lakh Eggs	--
Inland fisheries	--	16052.53 t	800
Source: Department of Statistics, Davanagere			

2.7 District profile maintained in the KVK has been Updated for 2021: Yes

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	Nyamathi	Rameshwara	Rameshwara	5	Groundnut	• Low yield • Poor quality fodder	Low yield
2	Davanagere	Angod	Agasankatte	5	Maize	• Improper nutrient management • Low yield	Nutrient Management
3	Davanagere	Angod	Agasankatte	5	Maize	• No intercropping system • No INM and IPM • Army worm incidence and fall army worm (60-100 %).	Low yield and IPM
4	Davanagere	Angod	Agasanakatte	5	Finger millet	• Improper water management • Use of Local varieties • FAW incidence 20 %	Low yield and IWM
5	Nyamathi	Rameshwara	Rameshwara	4	Pulses	Incidence of storage pest	Storage pest management
6	Nyamathi	Rameshwara	Rameshwara	4	Foxtail millet	•Reduction in area under cultivation of minor millets. •Less market price and less demand in the market. •Lack of awareness on consumption of millets. •Lack of knowledge on value addition.	Value addition in minor millet

7	Nyamathi	Rameshwara	Rameshwara	4	Chilli	• Low yield • Incidence of pest and diseases • Low nutrient use efficiency	Integrated Crop Management
8	Davanagere	Davanagere	Huchavvanahalli Gopanal	1 1	Fisheries	• Low yield in village tanks	Polyculture of fishes
9	Davanagere	Davanagere	Huchavvanahalli Gopanal Haluvarthy	1 1 2	Fisheries	• Non availability of high value, fast growing and hardy fish species which can fetch a good local market price.	Fish varietal assessment
10	Jagaluru	Marikunte	Marikunte	5	Onion	• Low yield • Small bulbs	Integrated Nutrient Management
11	Nyamathi	Rameshwara	Rameshwara	5	Ginger	• Zinc and Iron deficiency • Low nutrient use efficiency.	Integrated Nutrient Management
12	Nyamathi	Rameshwara	Rameshwara	5	Banana	• Zinc and Boron deficiency • Low nutrient use efficiency.	Integrated Nutrient Management
13	Nyamathi	Rameshwara	Rameshwara	5	Tomato	• Low yield. • Micronutrient deficiency • Incidence of sucking pest.	Integrated Crop Management
14	Honnali	Dodderahalli	Dodderahalli	1	Brown Top Millet	• No millets in village	Integrated Crop Management
15	Harihara	Belludi	Ramatheerta	3	Betelvine	• Incidence of sucking pests. • Incidence of wilt diseases • Nutrition deficiency	Integrated Crop Management
16	Nyamathi	Rameshwara	Rameshwara	3	Dairy	• Low milk yield and low quality milk • High production cost • Fodder scarcity	Livestock nutrition
17	Jagaluru	Marikunte	Marikunte	5	Sheep and Goat	• Low body weight gain • Worm infestation	Livestock nutrition and Disease management
18	Nyamathi	Rameshwara	Rameshwara	3	Onion	• Lack of suitable varieties.	Varietal Assessment

19	Davanagere	Angod	Agasankatte	5	Tomato	• Low yield • Incidence of pest and diseases. • Imbalanced nutrient management	Integrated Crop Management
20	Davanagere	Angod	Agasankatte	5	Arecanut	• Low yield • Imbalanced nutrient management	Integrated Crop Management
21	Nyamathi	Rameshwara	Rameshwara	3	Nutrigarden	• Non availability of quality and fresh vegetables for house hold consumption	Fresh vegetables
22	Nyamathi	Rameshwara	Rameshwara	3	Bhendi	• Low yield • Lack of suitable variety	Varietal Assessment
21	Davanagere	Angod	Agasankatte	5	Dairy Animals	• Fodder scarcity • Low quality fodders	Livestock Nutrient Management
22	Jagaluru	Marikunte	Marikunte	5	Sheep and Goat	• Low body weight gain • Worm infestation	Livestock nutrition and Disease management
23	Nyamathi	Rameshwara	Rameshwara	3	Dairy	• Low milk yield and low quality milk • High production cost • Fodder scarcity	Livestock nutrition

2.9 Priority thrust areas

S. No	Thrust area
1.	Integrated Crop Management in Maize, Foxtail Millet, Brown top millet, Tomato, Chilli, Redgram, Bengalgram, Arecanut, Onion, Groundnut, Betelvine
2.	Integrated Nutrient Management in Arecanut , Banana, Ginger
3.	Dairy Management
4.	Nutrition Management in Dairy Animals, Sheep and Goat.
5.	Production and Management of Fishes.

PART III - TECHNICAL ACHIEVEMENTS

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
6	6 (2021-22	25	25 (2021-22)	15	15 (2021-22)	251	272 (2021-22)
3	3 (2020-21)	13	13 (2020-21)	8	8 (2020-21)	90	94(2020-21)
				1	1 (2019-20)	5	5 (2019-20)
				NFSM			
				3	62	3	62 (2021-22)

Training (Farmers/farm women)				Training (Rural youth)			
3				4			
Courses (No.)		Participants (No.)		Programmes (No.)		Participants (No.)	
Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
50	**51**	**850**	**1440**	5	5	150	144

Training (Extension personnel)				Training (sponsored)			
5				6			
Courses (No.)		Participants (No.)		Programmes (No.)		Participants (No.)	
Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
6	**6**	**180**	**349**	2	6	50	130

Training (Vocational)				Extension Programmes			
7				8			
Courses (No.)		Participants (No.)		Programmes (No.)		Participants (No.)	
Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
1	**-**	**25**	**-**	2123	1808	18885	39970

Seed Production (Q)		Planting material (Nos.)	
9		10	
Target	Achievement	Target	Achievement
12	18.025	50000	20350

Livestock, poultry strains and fingerlings (No.)		Bio-products (Kg)	
11		12	
Target	Achievement	Target	Achievement
15000	238	250	723

Soil, water, plant and manure analysis (including mobile kits)				Mobile agro advisories provided			
13				14			
Samples (No.)		Farmers (No.)		Messages including text, voice (No.)		Farmers (No.)	
Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
700-Soil	794	700	583	1000	1223	-	-
300- Water	495	300	373				

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	
1	High yield Variety	Groundnut	• Use of local variety TMV-2 • Low yield	Performance assessment of groundnut varieties for better yield.	-	**03**		**02**	Method demonstrations 2 Field visits -08 Field Day -01 **No.-11**	**3.6 q of pods**	-	-	-	**Trichoderma and Rhizobium**
2	Nutrient Management	Maize	• Improper nutrient management	Effect of Nano fertilizer (N and Zn) on Growth and Yield in Hybrid Maize	-	02		02	Method demonstrations 2 Field visits -05 Field Day -01 **No.-08**	--	-	-	-	-
3	Integrated Crop Management	Maize	• Army worm incidence and fall army worm (60-100%) • No inter crops with pulses		Integrated crop Management in Maize+ Redgram (TS-3R)	05		01	Method demonstrations -05 Field visits -06 Field Day -01 **No. -12**	TS-3R-100 kg	-	-	Traps – 4/acre 200 set	*Trichoderma,* Rhizobium, PSB and Azosprillium- 50 kg each
4	Integrated Crop Management	Finger Millet	• FAW, Improper nutrient management • Use of Local varieties		Integrated Crop Management in Finger Millet (ML-365)	01			Method demonstration 01 Field visit - 02	ML-365 250 kg	-	-	-	Azosprillium – and PSB – 30 kg each
5	INM	Onion (2020-21)	• Less pungency • Small bulbs	Role of sulphur in improving the productivity of onion		02	-	-	-	-	-	-	PSB	5kg
6	ICM	Browntop millet	• Improper nutrient management • Stem borer Blast		ICM in browntop millet	**01**	-	-	Method Demonstration: 02	-	Seeds- 50 kg	-	PSB *Azospirillum*	10kg 10kg

7	ICM	Tomato	• Calcium deficiency • Wilt • Sucking pests	-	ICM in Tomato	03	-	-	Method Demonstration: 03 Field visits: 04	-	-	-	Arka Microbial Consortium	40 l
8	INM	Drumstick	• Imbalanced Nutrient management • Flower dropping		ICM in Drumstick	**02**	-	-	Method demonstration: 03 Field visits: 04	-	-	-	-	-
9	INM	Drumstick	• Use of local variety • Imbalanced Nutrient management		Demonstration on drumstick variety KDM-1 (Bhagya)	**02**	-	-	Method demonstration: 02 Field visits: 05	-	Drumstick seedlings - 1500	-	-	-
10	Integrated Crop Management	Chilli	Improper nutrient management (70:100:40 kg N:P2O5:K2/ha); • Boron and Zinc deficiency (20% yield loss); • Incidence of sucking pest (20-60% yield loss)		Integrated Crop Management in Chilli	01			Method Demonstration - 2 Field Day-1 Field Visits-2 No. : 5					Arka Microbial Consortium– 20lit
11	INM	Ginger	• Imbalanced nutrient management • Application of excess P • Deficiency of micronutrient in soil (Zn, B & Fe) • Leaf spot		Demonstration of ginger special	02			Method Demonstration: 02 Field visits: 04				Arka Microbial Consortium	40 l
12	INM	Banana	• Improper nutrient management • Deficiency of micronutrients (Zn, B and Fe)		Micronutrient Management in banana	03			Method Demonstration: 02 Field visits: 04					
13	Integrated crop Management	Arecanut (2020-21)	• Low yield due to improper nutrient management		ICM in Arecanut	04	01	-	05	Mucuna seeds- 100 kg	-	-	*Trichoderma harzianum*	40l
14	Integrated Pest and Disease Management	Betel vine (2020-21)	• Low yield		ICM in Betelvine	03	-	01	05	-	-	-	Arka Microbial Consortium *Verticillium lecanii*	20l 20l

15	Integrated crop Management	Arecanut (2021-22)	• Low yield due to improper nutrient management		ICM in Arecanut	02	-	-	02	Mucuna seeds-100 kg			*Trichoderma harzianum*	40l
16	Integrated crop Management	Onion (2021-22)	• Lack of suitable varieties for Rabi seaseon		Introduction of AFLR variety of onion for Rabi season	02	-	-	05	AFLR seeds-24 kg	-	-	*Trichoderma harzianum* Vegetable special	6 kg 24 kg
17	Crop Diversification	Bhendi (2021-22)	• Lack of suitable hybrids for higher yield	Assessment of Bhendi Hybrids for higher productivity	-	3	-	-	05	COBH-4 seeds-2.5 kg Arka Nikhitha seeds-2.5 kg	-	-	-	-
18	Yield Enhancement	Tomato (2021-22)	• Low yield due to Micro nutrient deficiency	Assessment of Liquid Seaweed Fertilizer on Growth and Yield of Tomato	-	4	1	-	05				Arka Vegetable special Liquid seaweed fertilizer	9 kg 9 l
19	Integrated Crop Management	Betelvine (2021-22)	• Incidence of downey mildew (8%) • Sucking insect damage (15%) • Mealy bug for • standard (32%) • Wilt(23%)		Integrated Crop Management in Betelvine	02			Method Demonstration - 2 Field Visits-2 No. : 4				Arka Microbial Consortium *Verticillium lecanii*	40 *20 lit*
20	Storage pest management	Pulses	Incidence of storage pest		Super grain bags to prevent stored grain pests	**01**	**-**	**-**	**6**	**-**	**-**	**-**	-	-
21	Millet Production	Foxtail millet	• Reduction in area under cultivation of minor millets. • Less market price and less demand in the market. • Lack of awareness on consumption of millets. • Lack of knowledge on value addition.		Demonstration of nutri cereal crop (DHFT-109-03 variety of foxtail millet) and value addition	01	-	-	04	0.75				

22	Integrated crop Management	Black Pepper (2020-21)	• Yellowing • Spike shedding • Wilt • Nematodes		Management of yellowing and spike shedding in Black pepper	05	01	01	05	-	-	-	Balck pepper special Arka Microbial Consortium Pachoniachla mydosporia Potassium Nitrate	25kg 50 kg 50 kg 10 kg
23	Livestock nutrition	Dairy animals	• Low yield • High production cost	-	Integrated management of dairy animals for better performance	2	-	43	1	-	-	-	-	-
24	Livestock nutrition and disease management	Sheep and Goat	• Low meat production • Disease incidence	-	Balanced nutrition and total deforming in small ruminants	1	-	-	1		-	-	-	-
25	Livestock nutrition	Dairy animals	• Low yield • High production cost	Effect of feeding urea treated paddy straw along with grain mixtures in dairy animals	-	2	-	-	1	-	-	-	-	-
26	Fodder scarcity	Fodder	• Low quality fodders for production	-	Establishment of fodder cafeteria	1	-	-	1	-	-	-	-	-
27	Fish ployculutre	Fisheries	• Low yield in village tanks	-	Polyculture of high value fresh water fishes in lined farm ponds/storage tanks	2	-	-	5	-	-	8000	-	-
28	Fish varietal assessment	Fisheries	• Non availability of high value, fast growing and hardy fish species which can fetch a good local market price	Growth performance of high value fishes in lined farm ponds		1	-	-	4			3500		
29	Varietal assessment of fishes	Fisheries	• Low yield	Growth performance of improved carps, *Pangasius* and farmed *tilapia* in farm ponds	-	01	-	-	5			**18,000 Fingerlings**	-	-

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
2	Performance assessment of groundnut varieties for better yield.	UAS, Dharawad	Groundnut	1	1	03	Method demonstrations 2 Field visits -08 Field Day -01
3	Effect of Nano fertilizer (N and Zn) on Growth and Yield in Hybrid Maize	IFFCO NBRC , Gujarath	Hybrid Maize	1	1	02	Method demonstrations 2 Field visits -05 Field Day -01
4	Integrated crop Management in Maize + Redgram	UAHS, Shivamogga	Maize + Redgram	1	1	04	Method demonstrations -05 Field visits -06 Field Day -01
5	Integrated crop Management in Finger Millet	UAHS, Shivamogga	Finger Millet	1	1	01	Method demonstration 01 Field visit - 02

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**
04	01	0	0	0	0	0	0	64	02	-	-	114	09	02	0
10	-	-	-	-	-	-	-	22	0	0	0	84	0	0	0
-	-	-	--	44	-	06	-	129	0	13	-	206	4	30	0
-	-	-	-	25	0	0	0	24	0	01	0	32	0	3	0

S.No	Title of Technology	Source of technology	Crop/enterprise	No. of programmes conducted			
				OFT	FLD	Training	Others (Specify)
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
6	Application of Sulphur	DOGR, Pune	Onion	1		02	Method Demonstrations: 02 Field visits: 04
7	Arka Microbial Consortium	IIHR, Bengaluru	Tomato, Chilli, Ginger		3	3	Method Demonstration: 03 Field visits: 10
8	Ginger Special	IISR, Calicut	Ginger		1	1	Method Demonstration: 01 Field visits: 03
9	Banana Special	IIHR, Bengaluru	Banana		1	2	Method Demonstration: 02 Field visits: 06
10	Integrated Crop Management in Chilli	IIHR, Bengaluru	Chilli	-	1	1	Method Demonstration -2 Field Day – 1 Field visits-2
11	Integrated Crop Management in Betelvine	IIHR, Bengaluru	Betelvine		1	2	Method Demonstration – 2 Field Visits-2 No. : 4
12	Vegetable special	IIHR, Bengaluru	Tomato, Chilli	-	1	01	Method Demonstration -1 Field Day – 4 Field visits-1

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
05	-	-	-	-	-	-	-	12	-	08	-	-	-	-	-
-	-	-	-	23	05	02	-	36	12	13	3	-	-	-	-
-	-	-	-	03	05	-	-	11	02	02	-	-	-	-	-
-	-	-	-	08	01	01	-	31	04	04	-	-	-	-	-
				22	08	2						22	08	2	
				18	00	2									
				09	00	01	-	21	02	08	-	-	-	-	-

S.No	Title of Technology	Source of technology	Crop/enterprise	No.of programmes conducted			
				OFT	FLD	Training	Others (Specify)
1	2	3	4	5	6	7	8
13	Super grain bags to prevent stored grain pests	Pest Control India	Pulses		01	01	Method demonstration-01 Field visits-05
14	Demonstration of nutri cereal crop (DHFT-109-03 variety of foxtail millet) and value addition	University of Agricultural Sciences, Dharwad	Millet		01	01	Method demonstration-01 Field visit-04

No. of farmers covered															
OFT				FLD				Training				Others (Method demonstration and field visits)			
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
					20			04	28			08	81		
				20				30				42			

S.No	Title of Technology	Source of technology	Crop/enterprise	No.of programmes conducted			
				OFT	FLD	Training	Others (Specify)
1	2	3	4	5	6	7	8
15	Growth performance of improved carps, Pangasius and farmed tilpia in farm ponds (2020-21)	KVAFSU, Bidar	Fisheries	1	-	1	5 visits
16	Polyculture of high value fresh water fishes in lined farm ponds/ storage tanks	CIFA, Bengaluru	Fisheries	-	1	1	6 Method Demonstration and Field visits
17	Growth Performance of high value fishes in lined farm ponds	CIFA, Bhuvaneshwar	Fisheries	1	-	1	5 Method Demonstration and Field visits

No. of farmers covered															
OFT				FLD				Training				Others (Method demonstration and field visits)			
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
3	-	-	-	-	-	--	-	8	-	-	-	15	-	-	-
-	-	-	-	3	-	-	-	9	-	-	-	16	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

PART IV - On Farm Trial

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	1				02					3
Varietal Evaluation		1			01					2
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	**1**	**1**			**3**					**5**

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		01			01	**02**
Nutrition Management						
Disease of Management						
Value Addition						
Production and Management						
Feed and Fodder						
Small Scale income generating enterprises						
Dairy						
Others (Pl. specify)						
TOTAL		**01**			**01**	**02**

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

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	Maize	Effect of Nano fertilizer (N and Zn) on growth and yield of Maize	03	01	1.2
	Tomato	Assessment of Liquid Seaweed Fertilizer on Growth and Yield of Tomato	03	03	0.9
	Onion	Role of sulphur in improving the productivity of onion	05	05	1.5 ha
Varietal Evaluation	Bhendi	Assessment of Bhendi Hybrids for Higher Productivity	05	05	1
	Groundnut	Assessment of groundnut varieties for better yield.	03	05/02	1.2
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.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					
Post Harvest Technology/Value addition					
Drudgery Reduction					

Storage Technique					
Mushroom cultivation					
Cropping Systems					
Farm Mechanization					
Others, Pl specify					
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	Kadaknath Poultry Birds	Adoptability to climatic condition and disease resistance evaluation	04	04
Nutrition management				
Disease management				
Processing and Value addition				
Production and management				
Feed and fodder management				
Small scale income generating enterprises				
Others, pl. specify- Fish varietal assessment	Fish	*GIFT, Pangasius, Jayanthi Rohu*	03	03
Fish varietal assessment	Fish	*Puntius pulchellus* and Pacu	03	03
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				
Processing and Value addition				
Production and management				
Feed and fodder management				
Small scale income generating enterprises				
Others, pl. specify				
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				
3	Health and nutrition	Poultry	Evaluation of Kadakanath Poultry birds for backyard rearing condition	04	02
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, pl. specify				

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, pl. specify				

4.C1.Results of Technologies Assessed:

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. / ha	Net Return Rs. / ha	BC Ratio (Gross income/ Gross Cost)
1	2	3	4	5	6	7	8	9	10	11	12	13
Hybrid Maize	Rainfed	• Low yield .	Effect of Nano fertilizer (N and Zn) on Growth and Yield in Hybrid Maize	03	T_1 Application of NP(100kg) fertilizers as a basal dose and top dressing with Nitrogenous(50 kg urea) and Potash fertilizers (30 kg MOP	Farmers practice	46.36	q/ha	14 No. of rows /Cob	85766	42166	1.97
				03	T_2 .Soil Test Based Fertilizers application Nutrient Management (RDF; 100:50 :25 N , P2O5 and K2O kg/ha. 50 % N . 100 % P2O5 and 50 % K20 as a basal and 25 % N at 30 DAS and 25% N and 50 % K20 at Tasselling stage	UAHS, Shivamoga	49.84	q/ha	14.8 No. of rows /Cob	92204	49004	2.13
				03	T3. Application of 25 % N (N: 25 kg/ha), 50% K20 and 100 % P2O5 as a basal dose . 25 % N at 25 – 30 DAS, 50 % K2O at tassselling stage . N and Zn Nano fertilizer spray at 30 DAS (4 ml/l of water) and second spray 50 DAS	IFFCO NBRC , Gujarath	50.88	q/ha	15.2 No. of rows /Cob	94128	51628	2.21

Groundnut	Rainfed	• Use of local variety TMV-2 • Low yield • Lack of awareness on improved varieties.	Performance assessment of groundnut varieties for better yield.	03	T1 Farmers' Practice (FP) TMV-2	-	22.10	q/ha	75.55 Plant Height in cm	128166.3	72516.25	2.30
					T2 Recommended practice (RP) (GPBD-4	UAS, Dharwad	25.23	q/ha	82.10 Plant Height in cm	151936.3	94636.25	2.65
					T3 Alternative practice (AP1) G-2-52	UAS, Dharwad	25.9	q/ha	82.40 Plant Height in cm	155963.8	98663.75	2.72
Onion	Rainfed	Low yield	Role of sulphur in improving the productivity of onion	05	T1 : (Farmerpractice): 100:75:20 kg $N:P_2O_5:K_2O$/ha along with FYM	Farmer practice	161.60	q/ha	Size of the bulb (cm): 11.2 Weight of the bulb (g): 66.09	210080	85880	1.69
					T2 : RDF (125:50:125 Kg $N:P_2O_5:K_2O$ /ha) along with FYM	UHS (B)	179.50	q/ha	Size of the bulb (cm): 11.3 Weight of the bulb (g): 69.30	233350	107150	1.85
					T3: RDF (125:50:125 Kg $N:P_2O_5:K_2O$ /ha) along with FYM and 45kg sulphur through elemental sulphur	DOGR, Pune	194.70	q/ha	Size of the bulb (cm): 12.2 Weight of the bulb (g): 75.16	253110	125610	1.98
Bhendi	Irrigated	• Low yield of existing varieities • High incidence of YVMV	Assessment of Bhendi Varieties for Higher Yield	05	T.O.1 (Farmers practice): INDAM		148.26	q/ha	**Plant Height(cm)** 119.66 **No.of branches/plant** 2.84 **Fruit weight(g)** 12.84 **Number of fruits/plant** 18.9 **Incidence of YVMV** 11.04	118608-00	69756-00	2.42

					T.O.2 : CCBH -4	TNAU,Coimbatore	206.5	q/ha	**Plant Height(cm)** 124.16 **No.of branches/plant** 3.52 **Fruit weight(g)** 15.46 **Number of fruits/plant** 22.52 **Incidence of YVMV** 3.5	165200-00	121200-00	3.76
					T.O.3: Arka Nikhitha	IIHR, Bengaluru	183.48	q/ha	**Plant Height(cm)** 120.46 **No.of branches/plant** 3.2 **Fruit weight(g)** 11.04 **Number of fruits/plant** 20.22 **Incidence of YVMV** 6.5	146784-00	102149-00	3.29

Tomato	Irrigated	Imbalanced nutrient application Not using micronutrients in foliar spray	Assessment of liquid seaweed fertilizer on growth and yield of Tomato	03	T.O.1: • Imbalanced Nutrient Management (NPK-120:80:50 kg/ac)	Farmers practice	505.06	q/ha	**Plant Height(cm)** 70.54 **No.of fruits/plant** 41.69 **Fruit weight(g)** 35.73	404048-00	260369-00	2.81
					T.O.2: • Soil Test Based Nutrient Management • RDF_ 250:250:250 NPK kg/ha • Vegetable special -5g/l @ 45 DAP+ 2 sprayes at 15 days Interval	UAHS, Shivamogga	538.11	q/ha	**Plant Height(cm)** 75.24 **No.of fruits/plant** 47.75 **Fruit weight(g)** 43.16	430491	284357	2.94
					• T.O.3: Soil test based nutrient Management (RDF) • Liquid seaweed fertilizer 5 % foliar spray at 7 days after flowering	Council of Scientific and Industrial Research, Central Salt and Marine chemical Research institute (CSIR-CSMCRI)	635.70	q/ha	**Plant Height(cm)** 79.25 **No.of fruits/plant** 52.5 **Fruit weight(g)** 47.54	508560	359975	3.42

Dairying	Home Stead	Generally dairy animals are fed with poor quality dry roughages along with a few feed ingredients. These fodders when fed to high yielding dairy animals would not support production and health due to deficiency of Protein, energy & minerals. Poor quality dry roughages when enriched with urea and fed along with Grain mixture (starch) improved the digestibility of dry roughages and supplied the crude protein &Energy (TDN) required by the animal.	Effect of feeding urea-treated paddy straw along with grain mixture in dairy animals.	05	T.O.1: (Farmers practice): Feeding dairy animals with low quality dry roughages and non-leguminous green fodders along with cake & bran items •	Farmers Practice	2520.3	L / lactation	• Milk quality (CLR): 1.025 • Feeding cost (Rs. /lactation / animal): 39345 • Cost of milk production (Rs./L):15.93	63007.5	23662.5	1.64
					T.O. 2 Feeding dairy animals with urea-treated dry roughages, green fodders and compounded animal feeds as per the NRC specifications	KVAFSU, Bidar	2930.4	L / lactation	• Milk quality (CLR): 1.027) • Feeding cost (Rs. /lactation / animal): 42090 Cost of milk production (Rs. /L):14.81	73260	31170	1.74

					T.O. 3 Feeding dairy animals with urea-treated dry roughages, green fodders and compounded animal feeds as per the NRC specifications. PLUS using 1-2 kg grain mixture at the time of feeding urea-treated dry roughages	NDRI Bengaluru	3191.0	L / lactation	• Milk quality (CLR): 1.028 • Feeding cost (Rs. /lactation / animal): 39345 Cost of milk production (Rs./L): 13.27	81387.5	42042.5	2.07

Poultry	Back yard	High yielding Giriraj birds suffer from predator problems	Comparative study on growth performance of Kadaknath with other local breeds of Backyard Poultry.	04	T.O.1 (Farmers practice)	Local bids rearing	Ongoing					
					T.O.2	Giriraja Birds rearing						
					T.O.3	Raering Kadakanath poultry birds						
Fisheries	Irrigated	Low yield	Assessment of growth performance of improved caps, *Pangasius* and farmed *tilapia* in farm ponds	03	T1-Control (Combination of *Catla, Rohu* and *Common carp)*	-	22.25	q/ha	-	369750	123500	1.50
					T2- *Catla*	-	90.00			900000	572500	2.75
					T3- *Pangasius*	KVAFSU, Bidar	192.15			960750	633250	2.93
					T4-GIFT	UAS (B)	105.00			630000	302500	1.92
					T5-*Jayanthi Rohu*	CIFA, Benglauru	59.85			418950	91450	1.28

Fisheries	Irrigated	Low yield	Growth performance of high value fishes in lined farm ponds	03	T1-Farmers Practice: Culture of Carps in farm ponds @ 10000/ha in polyculture sytem.		Ongoing
					T2: Culture of Puntius pulchellus @ 15000/ha in monoculture system .	CIFA, Bhubaneshwar)	
					T3: Farming Pacu (Roopchand): Stocking: 10000 fish seed/ha)	(Progressive farmers)	

4. C2. Feedback on technologies assessed:

Maize

Name of technology assessed	Useful characters as well as constraints of technology	Socio-economic as well as administrative constraints for its adoption
Effect of Nano fertilizer (N and Zn) on Growth and Yield in Hybrid Maize	Useful 1. Urea can be replaced for top dressing by using the NANO nitrogen. 2. Easy to carry, cost effective and well suited spraying Constraints: Dry land water availability for the spray solution preparation is the big challenge	Availability of NANO fertilizer at RSK level

Groundnut:

Name of technology assessed	Useful characters as well as constraints of technology	Socio-economic as well as administrative constraints for its adoption
Different Groundnut Varieties	1. Good fodder Quality 2. Good pod yield and shelling percentage Constraints: Pods /Seeds should be made at RSK, Dept of Agriculture	Seed production should be encouraged and non availability of quality pods

Bhendi:

Assessment of Bhendi Varieties for Higher Yield	**Useful Characters:** • Good fruit weight and fruit length • Yield level is high compare to local • Less incidence of YVMV disease	Availability of seeds in time

Tomato:

Name of technology assessed	Useful characters as well as constraints of technology	Socio-economic as well as administrative constraints for its adoption
Assessment of liquid seaweed fertilizer on growth and yield of Tomato	• Application of sea weed extract helps in maintaining uniform fruit weight • It helps in disease resistance • Flower and fruit setting was good compare to local • Crop is in full greenish color even at the end of the harvest	As yield per unit area is more and also farmer got the best price for the produce it helps in getting better standard of living in the society.

Onion:

Name of technology assessed	Useful characters as well as constraints of technology	Socio-economic as well as administrative constraints for its adoption
Role of sulphur in improving the productivity of onion	Onion production can be increased by applying sulpher during sowing time	Nothing as such

Kadaknath Birds (ON GOING)

Name of technology assessed	Useful characters as well as constraints of technology	Socio-economic as well as administrative constraints for its adoption
Kadaknath Birds	Kadaknath birds thrives well in back yard rearing condition & resistant to diseases	

Fisheries:

Name of technology assessed	**Useful characters as well as constraints of technology**	**Socio-economic as well as administrative constraints for its adoption**
Growth performance of improved *carps, pangasius* and farmed *tilapia* in farm ponds	**Useful Characters:** 1. Farm ponds can be used to generate secondary income through there improved fish species. 2. *Pangasius* performed best followed by improved *catla* and farmed *tilapia.* **Constraints:** 1. GIFT *tilapia* breeds early crating disturbance in stocking density. 2. Tilapia and *pangasius* fetches low price in local market	No constraints

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

1. **Maize**

1. **Title of Technology Assessed :** Effect of Nano fertilizer (N and Zn) on Growth and Yield in Hybrid Maize

2. **Performance of the Technology on specific indicators:** Loss of urea can be reduced by using the NANO nitrogen spray and grain filling and test weight is more.

3.**Specific Feedback from farmers:** Farmers expressed that quality of grains is good and easy to carry and it will be future urea.

4. **Specific Feedback from Extension personnel and other stakeholders:** DDA , Davanagere visited the farmers field and expressed that in future the urea requirement of crop will be met by NANO nitrogen and reduced loss of nitrogen.

5. **Feedback to Research System based on results and feedback received**: Soil fertility will be improved and nutrient loss will be reduced.

6. **Feedback on usefulness and constraints of technology:** Farmers will use this NANO technology in next season as they are convinced that instead of applying urea during the top dressing, it can be replaced.

2. Groundnut

1**. Title of Technology Assessed :** Performance assessment of Groundnut varieties for better yield

2. **Performance of the Technology on specific indicators:** Pod and Fodder yield were good compared to the local varieties.

3.**Specific Feedback from farmers**: Farmers expressed that quality of fodder is superior and G-2 52 reamins green at time of harvest with good yield of 25.9 q/ha

4. **Specific Feedback from Extension personnel and other stakeholders:** Agriculture Officer Expressed that G2 -52 characteristic similar to old variety TMV-2 in taste and oil content. APMC merchant expressed that quality of pods were good.

5. **Feedback to Research System based on results and feedback received:** Tikka disease resistant observed and root rot resistant varieties should be developed

6**. Feedback on usefulness and constraints of technology:** Farmers will grow G 2-52 as its yields more with quality pod and fodder

3. Onion

1. **Title of Technology Assessed :** Role of sulphur in improving the productivity of onion
2. **Performance of the Technology on specific indicators:** Application of sulpher increases the bulb size (10%) and weight (18%)
3. **Specific Feedback from farmers:** Onion production can be increased by applying sulpher during sowing time.
4. **Specific Feedback from Extension personnel and other stakeholders**: Fetches good market price.
5. **Feedback to Research System based on results and feedback received:** Find the role of other nutrients like silicon in onion production

4. Bhendi:

1. **Title of Technology Assessed :** Assessment of Bhendi Varieties for Higher Yield
2. **Performance of the Technology on specific indicators:** Increased yield and disease resistance
3. **Specific Feedback from farmers:** The quality of the fruits is good and yield potential of the variety is better compare to local hybrids, even the hybrid COBH -4 performs better for disease resistance
4. **Specific Feedback from Extension personnel and other stakeholders**: Need to popularize the variety as it is having very good performance in yield and other parameters
5. **Feedback to Research System based on results and feedback received**: Need to ensure the availability of seed materials to the farmers , need to conduct research on the adoptability to different locations of all agro climatic zones
6. **Feedback on usefulness and constraints of technology:** Better price in the market due to its very good quality parameters and constraints is availability of seed in time.

5. Tomato:

1. **Title of Technology Assessed :** Assessment of liquid seaweed fertilizer on growth and yield of Tomato

2. **Performance of the Technology on specific indicators:** weight of the fruits was better compare to check: quality parameters are better compare to the check

3.**Specific Feedback from farmers:** fruit setting percentage is better in sea weed extract sprayed plots compare to other two treatments: uniform quality of fruits compare to other treatments.

4.**Specific Feedback from Extension personnel and other stakeholders:** since the application of sea weed extracts at flowering stage helps in better fruit set and prevents flower drop, it helps to increase the productivity

5. **Feedback to Research System based on results and feedback received:** Need to standardize the protocol for different stages of the growth

6. **Feedback on usefulness and constraints of technology:** crop is at full greenish stage even at the time of harvest, better fruit set and yield.

6. Fisheries:

1. **Title of Technology Assessed :** Growth performance of improved *carps*, *Pangasius* and farmed *Tilapia* in farm ponds.

2. **Performance of the Technology on specific indicators:** Mixed culture in farm ponds does not provide extra advantage as against single species.

3.**Specific Feedback from farmers:** Early breeding by GIFT *Tilapia* is disturbing and fetch low price in local market.

4.**Specific Feedback from Extension personnel and other stakeholders:** Live marketing units for GIFT *Tilapia* and other species would be useful.

5. **Feedback to Research System based on results and feedback received:** 100 % male *Tilapia* seeds can be useful.

6. **Feedback on usefulness and constraints of technology:** Growth performance of improved *carps*, *Pangasius* and farmed *Tilapia* in farm ponds.

4.D1. Results of Technologies Refined : NIL

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

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													
1	Others – Post harvest management	Homestead	Rabi-2020-21	Pulses	-	-	Storage pest management	Super grain bags to prevent stored grain pests	-	-	00	20	20	00
	Cereals													
2	Cereals	Rainfed	Kharif	Maize + Redgram		Hybrid	ICM	Integrated Crop Management in Maize + Redgram (TS-3R)	20	20	06	44	40	04
		Rainfed	Rabi-2021	Foxtail millet	DHFT-109-03		Value addition	• Reduction in area under cultivation of minor millets. • Less market price and less demand in the market. • Lack of awareness on consumption of millets. • Lack of knowledge on value addition.	08	08	0	20	20	
	Millets													
3	Finger millet	Irrigated	Summer	Finger millet	ML-365	-	ICM	Integrated crop Management in Finger millet	20	20	01	0	21	03
4	Browntop millet	Irrigated	Rabi	Browntop millet	Local	-	ICM	Seed treatment with biofertilizers, Spraying of water soluble fertilizers	10	10	-	10	08	02

5	Vegetables	Irrigated	Rabi 2021-22	Onion	Agri Found Light Red	-	ICM	• Use of AFLR variety (10 kg/ha) • Application of gypsum (as source of sulphur) @ 2.5 q/ha • Seed treatment with *Trichoderma harzianum* @ 4 g/kg • Use of post emergent herbicide (Oxyfluorfen 23.5% EC @ 300 g/acre) • Foliar nutrition with Arka Vegetable Special & water soluble fertilizers (30 and 60 DAT) @ 5 g/l • 2 rows of maize as barrier crop to manage adult thrips • Spray with Fipronil @ 1 ml/l to control sucking pest • Spray with Hexaconazole @ 1 ml/lto purple blotch	4.8	4.8	-	12	12	
	Drumstick (2019-20)	Irrigated	Kharif	Drumstick	KDM- 1		ICM	• Demonstration of KDM-1 (Bhagya) variety • Soil test based fertilizer application • Intercropping with pulses/groundnut • Need based plant protection measures • Market intervention	1.2	1.2	0	3	1	2
	Drumstick (2020-21)	Irrigated	Kharif	Drumstick	KDM- 1		ICM	• Integrated Nutrient Management • Intercropping with pulses/groundnut • Need based plant protection measures	2	2	0	5	3	2
6		Irrigated	Kharif	Tomato	-	Shivam	ICM	• Soil test based nutrient application; • Use of Marigold as a trap crop (16:1)	10	10	01	09	06	04

								• Application of Arka Microbial Consortium (20 g for seed treatment, 20g/l – drenching 10 DAT, 5kg-Main field along with vermicompost); • Spray of vegetable special @ 5g/l; • Spray of calcium nitrate @5g/l; • Use of yellow and blue sticky traps @ 25/ha; • Use of pheromone traps @ 10/ha; Need based plant protection measures						

7	Vegetables	Irrigated	Kharif	Chilli		**Sitara**	Integrated Crop Management	• Soil test based nutrient application • Application of Arka Microbial Consortium 10ml/l – drenching 10 DAT, 3 ml- Main field along with vermicompost) • Spray of vegetable special @ 5g/l • Use of yellow and blue sticky traps @ 25/ha • Need based plant protection measures	04	04	01	09	08	02
8	Betelvine (2021-22)	Irrigated	Kharif	Betelvine	Nagaveni		Integrated Crop Management	• Recommended RDF (50:50:50 g NPK/Vine) • Controlled irrigation • Drenching Copper oxy chloride @ 3 g/l @ lowering of vine • Drenching AMC @ 5 ml/l- Thrice • Spraying *Verticillium lecanii* @ 5 ml /	2.4	2.4			16	04
	Flowers													
	Ornamental													
	Fruit													

9	Fruit	Irrigated	Kharif	Banana	Yalakki/ G Nain	-	INM	• Soil Test Based Fertilizer Application (RDF 175:105:220 g $N:P_2O_5:K_2O$/plant) • Sucker Management • Integrated pest and disease management (pseudostem borer and sigatoka leaf spot) • Providing physical support to plants by using polythene tape • Spraying of banana special @ 5 g/litre of water • Spraying of potassium nitrate @ 5 g/litre of water	10	10	01	09	06	04
	Spices and condiments													
10		Irrigated	Kharif	Ginger	Reo de janeiro	-	INM	• Application of soil test based RDF (100:50:50 ; Kg $N:P_2O_5:K_2O$/ha) along with FYM • Spraying of ginger rich (5 g/l @ 45, 90 and 135 DAS) • Spraying of *Pseudomonas floroscence* @ 5ml/l • Drenching of arka microbial consortium @10ml/l • Need based plant protection measures	05	05	01	04	03	02
		Irrigated	Kharif 2020-21	Black Pepper	Paniyur-1	--	Integrated Crop Management	• Spreying of Balck pepper special @ 5g/l • Drenching of AMC @ 20g/l • Spreying Potassium Phophonate @ 5g/l • Soil application of *Pachoniachlamydosporia*	01	01				
	Commercial													
	Medicinal and aromatic													

11	Fodder	Irrigated	Kharif	Sorghum Lucerne Hedge Lucerne	CoFS-31 T-9 Local	- - -		Fodder Cafeteria	2.0	-	-	10	10	-
	Plantation													
12	Arecanut (2020-21)	Irrigated	Rabi /Summer 2020-21	Arecanut (2020-21)	Channagiri Local	--	ICM	• For every two rows one row of 2.5-3 feet drainage • Loosening of soil around plant • Avoiding flood irrigation • Application of RDF based on soil test • *Trichoderma* enriched organic manure • Intercrop with velvet beans	04	04		20		Irrigated
13	Arecanut (2021-22)	Irrigated	Rabi /Summer (2021-22)	Arecanut	Channagiri Local	--	ICM	• For every two rows one row of 2.5-3 feet drainage • Loosening of soil around plant • Avoiding flood irrigation • Application of RDF based on soil test • *Trichoderma* enriched organic manure • Intercrop with velvet beans	16	16		25		Irrigated

14	Betel vine(2021-22)	Irrigated	Rabi 2019-20	Betel vine(2021-22)	Harihara Local	--	ICM	✓ Recommended RDF (0:50:50 g NPK/Vine) ✓ Controlled irrigation ✓ Drenching Copper oxy chloride @ 3 g/l @ lowering of vine ✓ Drenching AMC @ 5 ml/l- Thrice ✓ Spraying *Verticillium lecanii* @ 5 ml /l	02	02	--	10	10	--
	Fibre													
	Dairy													
	Poultry													
	Rabbitry													
	Piggery													

15	Sheep and goat	Home Stead	Rabi	-	Local	-	Nutrition Management	Balanced Nutrition and Total Deworming in Small Ruminants	10 units (10 sheep per unit)	10 units	-	10	10	-
	Duckery													
	Common carps													
16	Fisheries	Irrigated	Kharif	Fisheries	Amur common carp Jayanthi Rohu Mrigal	-	Fish Poloyculture	Pond preparation and management, seed selection and stocking, feed and feeding management, health and water quality monitoring and harvesting, Aeration for better growth.	1.2 ha	1.2 ha	-	3	3	-
	Mussels													
	Ornamental fishes													
	Oyster mushroom													
	Button mushroom													
	Vermicompost													
	Sericulture													
	Apiculture													
	Implements													

17	Nutri-garden	Irrigated	Kharif 2020-21	Vegetable crops	Local varieties	--	Scientific Nutrition Garden	• Malnutrition due to mono type vegetable consumptions in schools • Non utilization of resources- Water, Space & organic waste • Non Availability of chemical free vegetables	Kharif 2020-21	--	--	25	25	--
	Others (specify)													

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												
1	Cereals	Rainfed	Kharif 2021-22	Maize + Redgram	TS-3R	Private	ICM	➢ Spacing of 60X30 cm for maize ➢ Redgram as a Intercrop (1:6) ➢ Recommended dose of Fertilizers (100 : 50 : 25 NPK kg /ha) ➢ Use of bio fertilizers *Asosprillium*, PSB 1kg each/ha ➢ Bio Fertilizers Rhizobium, PSB 1 kg each and Trichoderma Viridae @ 2g/kg of Seed ➢ Management (Spray with Chloropyripous @ 2ml/l (Stem Borer) and Mancozeb-2.5g/L (Downey mildew) ➢ Installation of pheromone traps @ 12 no/ha (24 lures)- Fall Army worm (*Spodoptera frugiperde)- 8 days after Sowing* ➢ Spray with water soluble fertilizers and Micro nutrient (1l) @5ml/ and Macro nutrient @ 5g/l of water ➢ Use of Pulse Magic 5g/l of water and 0.4 g/l PGR and Nipping ➢ Spraying of Chlorntraniliprole @	Kharif 2021-22	L	M	M	Maize

								150 ml / ha (0.3 ml/l of water)/Emamectin Benzoate 0.3g/l of water					
2	Millets	Rainfed	Rabi-2021	Foxtail millet	DHF T-109-03		Value addition	• Reduction in area under cultivation of minor millets. • Less market price and less demand in the market. • Lack of awareness on consumption of millets. • Lack of knowledge on value addition.	Rabi 2021	M	L	L	Ground nut
3		Rainfed	Summer 2021-22	Finger Millet	ML-365		ICM	✓ Spacing 30cm between rows ✓ Seed rate 12 kg /ha (ML-365) – Medium duration variety (110 days ✓ Seed treatment of Bio (Azosprillium and PSB @ 500g/ha each) ✓ RDF: 100: 50 :50 NPK kg/ha and FYM 10 t/ha ✓ Application of Micronutrient Mixture (10 kg/ha) (Fe and Zn) ✓ Spraying of Macro nutrient 5g/l of water (5kg/ha)- 2 sprays ✓ Mechanical harvesting	Summer	L	M	M	Maize
4		Irrigated	Rabi	Browntop millet	Local	-	ICM	Seed treatment with biofertilizers, Spraying of water soluble fertilizers	Rabi 2022	M	M	H	Groundnut
	Vegetables												
5		Irrigated	Rabi 2021-22	Onion	Agri found Light Red	--	ICM	✓ Use of AFLR (10 kg/ha) ✓ Application of gypsum (as source of sulphur) @ 2.5 q/ha ✓ Seed treatment with *Trichoderma harzianum* @ 4 g/kg ✓ Use of post emergent herbicide (Oxyfluorfen 23.5% EC @ 300 g/acre) ✓ Foliar nutrition with Arka Vegetable Special & water soluble fertilizers (30 and 60 DAT) @ 5 g/l ✓ 2 rows of maize as barrier crop to manage adult thrips ✓ Spray with Fipronil @ 1 ml/l to control sucking pest ✓ Spray with Hexaconazole @ 1 ml/lto purple blotch	Rabi 2020-21	L	M	H	Maize

6	Vegetables	Irrigated	Kharif	Tomato	-	Shivam	ICM	• Soil test based nutrient application; • Use of Marigold as a trap crop (16:1) • Application of Arka Microbial Consortium (20 g for seed treatment, 20g/l – drenching 10 DAT, 5kg- Main field along with vermicompost); • Spray of vegetable special @ 5g/l; • Spray of calcium nitrate @5g/l; • Use of yellow and blue sticky traps @ 25/ha; • Use of pheromone traps @ 10/ha; Need based plant protection measures	Kharif 2021	L	H	L	Onion
	Vegetables	Irrigated	Kharif	Drumstick (2019-20)	KDM -1	-	ICM	• Demonstration of KDM-1 (Bhagya) variety • Soil test based fertilizer application • Intercropping with pulses/groundnut • Need based plant protection measures • Market intervention	Kharif 2019	L	M	L	Maize
	Vegetables	Irrigated	Kharif	Drumstick (2020-21)	KDM -1	-	ICM	• Soil test based fertilizer application • Spraying of 13:0:45 @ 5gram + Micronutrient mixture @5 ml per litre of water	Kharif 2020	L	M	L	Maize
7	Vegetables	Irrigated	Kharif 2021	Chilli		Seminis Sitara	Integrated Crop Management	• Soil test based nutrient application • Application of Arka Microbial Consortium 10ml/l – drenching 10 DAT, 3 ml- Main field along with vermicompost) • Spray of vegetable special @ 5g/l • Use of yellow and blue sticky traps @ 25/ha • Need based plant protection measures	Kharif 2021	M	L	H	Onion
8	Betelvine	Irrigated	Kharif 2021-22	Betelvine		Nagaveni	Integrated Crop Management	• Recommended RDF (50:50:50 g NPK/Vine) • Controlled irrigation • Drenching Copper oxy chloride @ 3 g/l @ lowering of vine • Drenching AMC @ 5 ml/l- Thrice • Spraying Verticilliumlecanae@ 5 ml /	Kharif 2021	M	H	L	Areca
	Flowers												
	Ornamental												
	Fruit												
9	Fruit	Irrigated	Kharif	Banana	Yalakki/ G Nain	-	INM	• Soil Test Based Fertilizer Application (RDF 175:105:220 g $N:P_2O_5:K_2O$/plant)	Kharif 2022	L	M	M	Maize

								• Sucker Management • Integrated pest and disease management (pseudostem borer and sigatoka leaf spot) • Providing physical support to plants by using polythene tape • Spraying of banana special @ 5 g/litre of water • Spraying of potassium nitrate @ 5 g/litre of water					
	Spices and condiments												
10		Irrigated	Kharif	Ginger	Reo de janeiro	-	INM	•Application of soil test based RDF (100:50:50 ; Kg N:P_2O_5:K_2O/ha) along with FYM •Spraying of ginger rich (5 g/l @ 45, 90 and 135 DAS) •Spraying of *Pseudomonas floroscence* @ 5ml/l •Drenching of arka microbial consortium @10ml/l •Need based plant protection measures	Kharif 2022	L	M	H	Tomato
		Irrigated	Kharif 2020-21	Black Pepper	Panniyur 1		Integrated crop Management	• Spreying of Balck pepper special @ 5g/l • Drenching of AMC @ 20g/l • Spreying Potassium Phophonate @ 5g/l • Soil application of *Pachoniachlamydosporia*	Kharif 2020-21	L	M	M	Arecanut
	Commercial												
	Medicinal and aromatic												
	Fodder												
	Plantation												
11	Arecanut	Irrigated	Rabi Summer 2020-21	Arecanut	Channagiri Local	--	ICM	✓ For every two rows one row of 2.5-3 feet drainage ✓ Loosening of soil around plant ✓ Avoiding flood irrigation ✓ Application of RDF based on soil test ✓ *Trichoderma* enriched organic manure ✓ Intercrop with velvet beans	Rabi /Summer 2019-20	L	M	H	Arecanut

12	Arecanut	Irrigated	Rabi Summer 2021-22	Arecanut	Channagiri Local	--	ICM	✓ For every two rows one row of 2.5-3 feet drainage ✓ Loosening of soil around plant ✓ Avoiding flood irrigation ✓ Application of RDF based on soil test ✓ *Trichoderma* enriched organic manure ✓ Intercrop with velvet beans	Rabi /Summer 2020-21	L	H	H	Arecanut
13	Betel vine	Irrigated	Rabi 2020-21	Betelvine	Harihara local	--	ICM	✓ Recommended RDF (0:50:50 g NPK/Vine) ✓ Controlled irrigation ✓ Drenching Copper oxy chloride @ 3 g/l @ lowering of vine ✓ Drenching AMC @ 5 ml/l- Thrice and Spraying *Verticillium lecanaii*@ 5 ml /l	Rabi 2020-21	L	M	H	Betelvine
14	Nutri-garden	Irrigated	Kharif 2020-21	Vegetable crops	Local varieties	--	Scientific Nutrition Garden	• Cultivation of local varities • Use of Botonicals • Use of Trichoderma • Staggered sowing • Use of neem powder	Kharif 2020-21	M	M	L	vegetables

5.B. Results of FLDs

5.B.1. Crops

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																	
Others- Post harvest management 2020-21	Super grain bags to prevent stored grain pests	-	-	Homestead	20	-	-	-	-	-	-	-	-	-	-	-	
Cereals																	
Maize + Redgram	Integrated crop management in Maize + Redgram intercropping system	TS-3R	-	Rainfed	50	20	69.44	55.89	63.75	52.08	22.04	124319	69629	2.27	101560	45846	1.82

Millets																			
Browntop millet	• Seed treatment with biofertilizers, • Spraying of water soluble fertilizers	Local	-	Irrigated	10	4	Demonstration is in progress												
Foxtail millet	• Demonstration of nutri cereal crop (DHFT-109-03 variety of foxtail millet) and value addition	DHFT-109-03	-	Rain fed	20	08	Demonstration is in progress												
Vegetables																			
Tomato	• Soil test based nutrient application; • Use of Marigold as a trap crop (16:1) • Application of Arka Microbial Consortium (20 g for seed treatment, 20g/l – drenching 10 DAT, 5kg- Main field along with vermicompost); • Spray of vegetable special @ 5g/l; • Spray of calcium nitrate @5g/l; • Use of yellow and blue sticky traps @ 25/ha; • Use of pheromone traps @ 10/ha; Need based plant protection measures	-	Shivam (Rasi)	Irrigated	10	10	68.05	50.44	59.57	53.19	12	238288	150505	2.71	212752	124860	2.42		

Drumstick (2019-20)	• Demonstration of KDM-1 (Bhagya) variety • Soil test based fertilizer application • Intercropping with pulses/groundnut • Need based plant protection measures • Mark et intervention	KDM-1	-	Irrigated	03	1.5	266.3	358.5	307.43	262.3	13.07	584123	450087	4.36	498370	351510	3.41
Drumstick (2020-21)	• Soil test based fertilizer application • Spraying of 13:0:45 @ 5gram + Micronutrient mixture @5 ml per litre of water	KDM-1	-	Irrigated	05	02	312.96	247.78	273.59	249.15	10.56	519825	355877	3.20	473381	305465	2.84
Chilli	Soil test based nutrient application Application of Arka Microbial Consortium 10ml/l drenching 10 DAT, 3 ml- Main field along with vermicompost) Spray of vegetable special @ 5g/l Use of yellow and blue sticky traps @ 25/ha Need based plant protection measures		Seminis Sitara	Irrigated	10	4	130.50	107.35	119.77	105.56	13.46	251535	179976	3.51	221679	148881	3.04

Betelvine	• Recommended RDF (50:50:50 g NPK/Vine) • Controlled irrigation • Drenching Copper oxy chloride @ 3 g/l @ lowering of vine • Drenching AMC @ 5 ml/l- Thrice • Spraying *Verticillium lecanii*@ 5 ml /	Nagaveni		Irrigated	20	2.5	In Progress
Onion	Integrated crop Management	Agri found Light Red	-	Irrigated	12	4.8	On Going
Flowers							
Ornamental							

Fruit																		
Banana	• Soil Test Based Fertilizer Application (RDF 175:105:220 g $N:P_2O_5:K_2O$/plant) • Sucker Management • Integrated pest and disease management (pseudostem borer and sigatoka leaf spot) • Providing physical support to plants by using polythene tape • Spraying of banana special @ 5 g/litre of water • Spraying of potassium nitrate @ 5 g/litre of water	Yalakki/ Gnain	-	Irrigated	10	10	Demonstration is in progress										
Spices and condiments																		
Ginger	• Application of soil test based RDF (100:50:50 ; Kg $N:P_2O_5:K_2O$/ha) along with FYM • Spraying of ginger rich (5 g/l @ 45, 90 and 135 DAS) • Spraying of *Pseudomonas floroscence* @ 5ml/l • Drenching of arka microbial consortium @10ml/l • Need based plant protection measures	Reo de Janeiro		Irrigaetd	05	05	Demonstration is in progress										

	Management of yellowing and spike shedding in Balck pepper	Paniyur-1		Irrigated	5	01	33.00	23.37	28.05	15.12	85.51	841500.00	700659.00	5.97	453750.00	321477.00	3.47
Commercia																	
Fibre crops like cotton																	
Medicinal and aromatic																	
Fodder (2020-21)	Fodder Cafeteria (Sorghum + Lucerne_ + Hedge Lucerne)	CoFS-31, T-9 & Local	_-	Rainfed condition with protective Irrigation.	10	2.0	5178	2387.8	3309.2	2808		82730	73995	2.13	70200	30855	1.78
Fodder (2021-22)	Fodder Cafeteria (Sorghum + Lucerne_ + Hedge Lucerne)	CoFS-31, T-9 & Local	_-	Rainfed condition with protective Irrigation.	10	2.0	185.0	151.5	166.10	181.25	-	166100	141100	6.64	90625	65625	1.78
Plantation																	
Arecanut (2020-21)	Integrated crop Management	Channagiri Local	--	Irrigated	20	08	26.66	21.26	24.43	14.61	67.21	1050576.00	901518.00	7.05	628402.00	508068.00	5.22
Arecanut (2021-22)	Integrated crop Management	Channagiri Local	--	Irrigated	25	16	On Going										
Betel vine (2020-21) (Numbers)	Integrated crop Management	Harihara Local	--	irrigated	10	02	998423	911452	961809	731787	31.43	336633.00	192811.00	2.34	256125.00	120950.00	1.90
Nutri-garden	Nutritious vegetable cultivation	Local varieities	--	Irrigated	25	--	3.52	2.2	3.14	2.18	44	64370	47476	1.35	44690	34992	1.27
Fisheries	Pond preparation and management, seed selection and stocking, feed and feeding management, health and water quality monitoring and harvesting, Aeration for better growth.	*Amur Common carp* *Jayanthi Rohu* *Mrigal*	-	Irrigated	03	1.2	Ongoing										
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 – Highest Yield, L – Lowest Yield A – Average Yield

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

1. Maize + Redgram

Data on other parameters in relation to technology demonstrated		
Parameter with unit	**Demo**	**Check**
Plant Height cm (Maize)	**217.9**	**213.7**
No. of Pods per plant	**278.52**	**249.8**

2. Arecanut(2020-21)

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**
% Incidence of Inflorescence die back	**6.4**	**14.2**
% incidence of Spindle bug	**4.2**	**12.4**
% incidence of mites	**2.9**	**21.4**
% incidence of Hidimundige	**7.6**	**19.7**
% incidence of Nut dropping	**5.1**	**18.3**
Number of inflorescence /plant	**5.1**	**3.6**

3. Betelvine(2020-21)

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**
Wilt (%)	**6.68**	**12.93**
Sucking Insect (%)	**5.33**	**14.48**

4. Nutrigarden:

Data on other parameters in relation to technology demonstrated (Nutri-garden)		
Parameter with unit	**Demo**	**Check**
Production of vegetables (kg/ 8 months)	7850	5450
Amt spent on Vegetable (Rs/ 8 Month)	33585	45540
Vegetable availability (g/person/day)	355	195
Compost yield (kg)/batch	175.5	Nil

5. Tomato

Data on other parameters in relation to technology demonstrated		
Parameter with unit	**Demo**	**Check**
No. of fruits /plant	**46.1**	**42.1**
Weight of fruit (g)	**115.02**	**110.2**
Incidence of american leaf minor (%)	**9.21**	**21.21**

6. Chilli:

Data on other parameters in relation to technology demonstrated		
Parameter with unit	**Demo**	**Check**
Plant height (cm)	**80.84**	**76.70**
No. of fruits/plant (#)	**79.30**	**73.00**
Incidence of leaf curl	**9.38**	**19.78**
Fruit rot	**20.45**	**28.74**

7. Storage Pests:

Data on other parameters in relation to technology demonstrated		
Parameter with unit	**Demo**	**Check**
No. of pests/kg of grains	**00**	**11**
Loss/kg of grains	**00**	**72**

8. Fodder.

Data on other parameters in relation to technology demonstrated		
Parameter with unit	**Demo**	**Check**
Milk yield l/lactation	3241.5	2630.0
Milk Quality (CLR)	1.028	1.026
Cost of milk production (Rs. / l)	11.29	16.28

Drumstick (2019-20)

Data on other parameters in relation to technology demonstrated		
Parameter with unit	**Demo**	**Check**
No. of pods /plant	**175**	**148**

Drumstick (2020-21)

Data on other parameters in relation to technology demonstrated		
Parameter with unit	**Demo**	**Check**
No. of pods /plant	**168.2**	**156.6**

Black pepper (2020-21)

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**
Yellowing %	**7.16**	**20.82**
Spike shedding %	**5.52**	**15.2**
Dry yield (kg/plant)	**2.04**	**1.1**

5. B2. Feedback on technologies demonstrated

Redgram

Name of technology demonstrated	Useful characters as well as constraints of technology	Socio-economic as well as administrative constraints for its adoption
Integrated Crop Management of Maize + Redgram (TS-3R) **Use of Pulse magic and Pheromone traps against Pod borer**	Medium duration variety Redgram TS-3R , red kernel seeds and tolerant to wilt. Seed treatment with Bio fertislers to Maize and Redgram Spraying of Pulse magic at time of 50 % flowering had improved the pod size and complete filling of seeds. Installation of Pheromone traps for pod **borer** management is useful technology in monitoring the pests. **Constraints:** Critical inputs like Pulse magic and Pheromones traps should be made available at RSK level.	Cost of Production will be reduced and inturn Net returns will be improved

Arecanut(2020-21)

Name of technology demonstrated	Useful characters as well as constraints of technology	Socio-economic as well as administrative constraints for its adoption
Use of Micro nutrients	**Useful Character** • Increases the percent fruit set • Reduces the nut drop • Increases the number of inflorescence **Constraints of Technology** • Availability of commercial grades	• Poor interest on adoption • Variety of brands available in market

Betelvine (2020-21)

Name of technology demonstrated	Useful characters as well as constraints of technology	Socio-economic as well as administrative constraints for its adoption
Arka Microbial Consortium	**Useful Character** • Increases the uptake of nutrients • Increases the resistance • Mobility of nutrients **Constraints of Technology** • Availability of AMC	• Using along with chemicals • Variety of brands available in market

Name of technology demonstrated	Useful characters as well as constraints of technology	Socio-economic as well as administrative constraints for its adoption
Arka Microbial Consortium	**Useful Characteristics:** Effective at field level Increases nutrient availability. Improve soil fertility.	Not Available in regular market.

Black pepper (2020-21)

Name of technology demonstrated	Useful characters as well as constraints of technology	Socio-economic as well as administrative constraints for its adoption
Use of Micro nutrients and AMC	**Useful Character** • Increases the percent fruit set • Reduces the nut drop • Reduces wilt incidence • Reduce nematode incidence **Constraints of Technology** • Availability of bio products	• Poor interest on adoption • Variety of brands not available in market

Name of technology demonstrated	Useful characters as well as constraints of technology	Socio-economic as well as administrative constraints for its adoption
Fodder Cafeteria	Cultivation of Leguminous and non-leguminous fodder crops provide nutritional security to dairy animals, helps in better health, reduces the feeding cost there by brings down the production cost.	Farmers should learn the improved practices in cultivating fodder crops. Use of leguminous fodders helps in reducing the compounded feeds requirement thereby reduces feeding cost & improves animal health

Name of technology demonstrated	Useful characters as well as constraints of technology	Socio-economic as well as administrative constraints for its adoption
• Soil test based nutrient application • Application of ArkaMicrobial Consortium (10 ml for seed treatment, 10ml/l – drenching 10 DAT, 3 ml- Main field along with vermicompost) • Spray of vegetable special @ 5g/l • Use of yellow and blue sticky traps @ 25/ha • Need based plant protection measures	Useful characters: Enhances the yield by increased supply of nutrients and reduction in the incidence of pests and diseases	• Compatibility with other agro chemicals

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 (2020-21)	Integrated Management of Dairy Animals for Better performance	HFx	14	14	Milk yield l/lactation	4938.5	2091	3246.2	1821.5	12.8	81155	38455	1. 9	45538	6193	1.15
Poultry																
Rabbitry																
Pigerry																
Sheep and goat (2020-21)	Balanced Feeding & Total Deworming in Small Ruminants for better performance.	Bellary X	10 (10 sheep unit)	10	Body weight gain (kg)	102	92	97	72	34.72	38800	28500	3.77	28800	19800	3.2
Sheep and goat (2021-22)	Balanced Feeding & Total Deworming in Small Ruminants for better performance.	Bellary X	10 (10 sheep unit)	10	Body weight gain (kg)	88.0	74.0	81.8	56.5	44.78	36810	26510	3.57	25425	16425	2.83
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**
Cost of Meat Production (Rs./ kg)	161.43	126.7
Disease Incidence	Two animals out of 10 suffered from Lameness	NIL

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
Total Deworming	Complete eradication of internal parasites helps in better body weight gain and health	Availability of cost-effective deworming agent at reasonable price at village level is difficult.
Balanced Nutrition	Balanced nutrition helps in meeting the nutritional requirement of the animal at lesser cost and helps in better body weight gain.	Farmers are facing difficulty in cultivating leguminous fodders and they are not feeding minerals &Vitamins supplements regularly.

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 labour saved (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.11 . Extension and Training activities under FLD

1. Maize + Redgram:

Sl.No.	Activity	No. of activities organized	Number of participants	Remarks
1	Field days	01	30	7.12.2021 : Celebration of the field day and farmers expressed that use of the medium duration variety will be beneficial
2	Farmers Training	04	142	
3	Media coverage	02	-	22.6.2021 : Janathavani
	Television	03	-	11.6.2021: Production technology of Redgram 24.6.2021 : Fall army worm Management in Maize 29.7.2021: Management of Leaf webber in redgram 13.8.2021: Nipping in redgram
4	Training for extension functionaries			
5	Method demonstration	05	174	10.6.2021 :Seed treatment with bio fertilizers and bio pesticides 9.8.2021: Preparation of the Profenopous (2ml/l), Nipping through machine 16.9.2021:Nipping through Machine 5.10.2021: Installation of Pheromone traps and Spraying of Pulse magic 07.12.2021 :Pod borer - Preapration of Emamectin Benzoate 0.4g/l
6.	Field visit		43	7.7.2021: Follow up field visit for inter cultivation 12.7.2021: Field visit for FAW infestation in Maize 19.8.2021: Leaf webber in Redgram 30.10.2021: Pod borer infestation in redgram

2. Arecanut(2020-21)

Sl.No.	Activity	No. of activities organised	Number of participants	Remarks
1	Field days	01	29	
2	Farmers Training	04	134	
3	Media coverage	04	-	
4	Training for extension functionaries	01	26	
5	Others (Please specify)			

3. Betelvine (2020-21)

Sl.No.	Activity	No. of activities organised	Number of participants	Remarks
1	Field days	01	16	
2	Farmers Training	04	89	
3	Media coverage	05	--	
4	Training for extension functionaries	01	18	
5	Others (Please specify)			

4. Chilli:

Sl.No.	Activity	No. of activities organised	Number of participants	Remarks
1	Field days	01	27	Recorded yield in the Demo and check plots
2	Farmers Training	01	32	Integrated Crop management of Chilli
3	Media coverage			
4	Training for extension functionaries			
5	Others (Please specify): Method Demonstration, Field Visits	04	35	Drenching of AMC, and Foliar application Vegetable special Installation of Yellow sticky traps and Blue sticky traps

5. Tomato

Sl.No.	Activity	No. of activities organised	Number of participants	Remarks
1	Field days	01	28	
2	Farmers Training	03	34	
3	Media coverage	01		
4	Training for extension functionaries	-	-	
5	Others (Please specify)	Method demonstration: 04	34	

6. Drumstick (2019-20)

Sl.No.	Activity	No. of activities organised	Number of participants	Remarks
1	Field days	-	-	
2	Farmers Training	03	18	
3	Media coverage	-		
4	Training for extension functionaries	-	-	
5	Others (Please specify)	Method demonstration: 03 Field visits: 05	21 37	

7. Drumstick (2020-21)

Sl.No.	Activity	No. of activities organised	Number of participants	Remarks
1	Field days	-	-	
2	Farmers Training	02	14	
3	Media coverage	-	-	
4	Training for extension functionaries	-	-	
5	Others (Please specify)	Method demonstration: 03 Field visits: 05	28 31	

8. Storage Pest:

Sl.No.	Activity	No. of activities organized	Number of participants	Remarks
1	Farmers Training	01	32	
2	Method demonstration	01	28	
3	Field visits	06	81	

9. Black Pepper(2020-21)

Sl.No.	Activity	No. of activities organised	Number of participants	Remarks
1	Field days	01	19	
2	Farmers Training	04	115	
3	Media coverage	04	-	
4	Training for extension functionaries	01	18	
5	Others (Please specify)			

10. Fodder Cafeteria: (2020-21)

Sl.No.	Activity	No. of activities organised	Number of participants	Remarks
1	Field days	0	0	
2	Farmers Training	02	26	
3	Media coverage	01	30	Through WhatsApp
4	Training for extension functionaries	01	43	Conducted for Livestock Inspectors and Livestock Assistants
5	Field visits	02	17	Inspection of fodder crops for growth and taking observations.

11. Fodder Cafeteria (2021-22)

Sl.No.	Activity	No. of activities organised	Number of participants	Remarks
1	Field days	0	0	
2	Farmers Training	01	12	
3	Media coverage	01	26	Through WhatsApp
4	Training for extension functionaries	0	0	-
5	Field visits	02	17	Inspection of fodder cropsfor growth and taking observations.

12. Integrated Management of Dairy Animals (2020-21)

Sl.No.	Activity	No. of activities organised	Number of participants	Remarks
1	Field days	0	0	0
2	Farmers Training	2	30	Provide information on fodder-based production
3	Media coverage	01	40	Through Whatsapp
4	Training for extension functionaries	01	43	For livestock inspectors
5	Mass Campaign	0	0	0

13. Total Deworming and Balanced Nutrition in Small Ruminants (2020-21)

Sl.No.	Activity	No. of activities organised	Number of participants	Remarks
1	Field days	0	0	0
2	Farmers Training	2	26	Provide information on fodder-based production
3	Media coverage	01		
4	Training for extension functionaries	0	0	0
5	Mass Campaign	0	0	0

14. Total Deworming and Balanced Nutrition in Small Ruminants

Sl.No.	Activity	No. of activities organised	Number of participants	Remarks
1	Field days	0	0	0
2	Farmers Training	01	11	Provide information on fodder-based production
3	Media coverage	01		
4	Training for extension functionaries	0	0	0
5	Mass Campaign	01	75	Conducted on benefits of mass deworming in collaboration with Virbac Co, Bangalore.

PART VI – DEMONSTRATIONS ON CROP HYBRIDS

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	Integrated Crop Management in Maize +Redgram	Private	50	20	69.44	55.89	63.75	52.08	22.04	124319	69629	2.27	101560	45846	1.82
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	Integrated Crop Management in Tomato	Shivam	10	10	68.05	50.44	59.57	53.19	12	238288	150505	2.71	212752	124860	2.42
Brinjal															
Okra															
Onion															

Potato																
Field bean																
Others (pl.specify)																
Total																
Commercial crops																
Sugarcane																
Coconut																
Others - Chilli	Integrated Crop Management in Chilli	Seminis Sitara	10	4	130.50	107.35	119.77	105.56	13.46	251535	179976	3.51	221679	148881	3.04
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

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	01	58	18	76	2	4	6	60	22	82
Cropping Systems										
Crop Diversification										
Integrated Farming										
Micro Irrigation/Irrigation										
Seed production										
Nursery management										
Integrated Crop Management	04	133	0	133	0	0	0	133	0	133
Soil and Water Conservation										
Integrated Nutrient Management	01	30	0	30	0	0	0	30	0	30
Production of organic inputs										
Others (pl.specify)										
Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop										
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	02	60	0	60	0	0	0	60	0	60
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
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	02	167	0	167	0	0	0	167	0	167
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	01	12	0	12	0	0	0	12	0	12
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										
Integrated water management										
Integrated nutrient management										
Production and use of organic inputs	03	62	17	79	5	9	14	67	26	93
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										
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management	01	15	01	16	03	03	06	18	4	22
Animal Disease Management	01	10	0	10	0	0	0	10	0	10
Feed and Fodder technology	01	18	0	18	0	0	0	18	0	18
Production of quality animal products										
Others (pl.specify)										
Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	02	64	10	74	0	0	0	64	10	74
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	01	04	28	32	0	0	0	04	28	32
Value addition										
Women empowerment	01	48	53	101	0	0	0	48	53	101
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										
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)										
Plant Protection										
Integrated Pest Management										
Integrated Disease Management										
Bio-control of pests and diseases	01	17	3	20	10	0	10	27	03	30
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	01	08	0	08	2	0	2	10	0	10
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										

Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
Others (pl.specify)										
Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (Pl. specify)										
TOTAL	**23**	**706**	**130**	**836**	**22**	**16**	**38**	**728**	**146**	**874**

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										
Cropping Systems										
Crop Diversification										
Integrated Farming										
Micro Irrigation/Irrigation										
Seed production										
Nursery management										
Integrated Crop Management	04	75	1	76	9	0	9	84	1	85
Soil and Water Conservation										
Integrated Nutrient Management	03	57	3	60	8	2	10	65	5	70
Production of organic inputs										
Others (pl.specify)										
Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop										
Off-season vegetables										
Nursery raising										
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation										
Production and Manahement technology	01	13	1	14	0	0	0	13	1	14
Increasing production on productivity of crops	01	05	02	07	0	0	0	05	02	07

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										
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	03	39	0	39	8	0	8	47	0	47
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	01	8	0	8	0	0	0	8	0	8
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										
Integrated water management										
Integrated nutrient management	01	19	0	19	0	0	0	19	0	19
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										
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management										
Animal Disease Management										
Feed and Fodder technology	01	9	2	11	0	0	0	9	2	11
Production of quality animal products										
Others (pl.specify)										
Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	01	0	30	30	0	0	0	0	30	30
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										
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										
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)										
Plant Protection										
Integrated Pest Management	11	156	14	170	46	8	54	170	54	224
Integrated Disease Management										
Bio-control of pests and diseases	02	18	0	18	16	9	25	34	9	43
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										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
Others (pl.specify)										
Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (Pl. specify)										
TOTAL	**29**	**429**	**23**	**452**	**87**	**27**	**114**	**516**	**50**	**566**

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	02	26	25	51	6	0	6	32	25	57
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										
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	01	16	5	21	0	0	0	16	5	21
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Any other (pl.specify)										
Natural Resource Management	01	21	20	32	2	3	5	14	23	37
Capacity building and Group Dynamics	01	04	02	06	14	09	23	23	18	11
TOTAL	05	58	52	110	22	12	34	80	64	144

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										
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										

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	01	12	3	15	0	0	0	12	3	15
Production and use of organic inputs	01	41	24	65	2	3	5	43	27	70
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	01	07	31	38	6	5	11	13	36	49
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals	01	48	3	51	9	0	9	57	3	60
Livestock feed and fodder production	01	35	5	40	0	0	0	35	5	40
Household food security										
Any other (pl.specify)										
Seed Production	01	26	2	28	5	0	5	31	2	33
Total	06	169	68	237	22	8	30	191	76	267

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	02	42	6	48	11	2	13	53	8	61
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)										
Integrated Crop Management	01	9	3	12	7	2	9	16	5	21
Total	03	51	9	60	18	4	22	69	13	82

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										
1.b.	Commercial production of vegetables										
2	**Production and value addition**										
2.a.	Fruit Plants	**03**	**60**	**01**	**61**	**01**	**0**	**01**	**61**	**01**	**62**
2.b.	Ornamental plants										
2.c.	Spices crops										
3.	**Soil health and fertility management**	**03**	**64**	**0**	**64**	**04**	**0**	**04**	**68**	**0**	**68**
4	**Production of Inputs at site**										
5	**Methods of protective cultivation**										
6	**Others (pl.specify)**										
7	**Post harvest technology and value addition**										
7.a.	Processing and value addition										
7.b.	Others (pl.specify)										
8	**Farm machinery**										
8.a.	Farm machinery, tools and implements										
8.b.	Others (pl.specify)										
9.	**Livestock and fisheries**										
10	**Livestock production and management**										
10.a.	Animal Nutrition Management										
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										
11.c.	Drudgery reduction of women										
11.d.	Others (pl.specify)										
12	**Agricultural Extension**										
12.a.	CapacityBuilding and Group Dynamics										
12.b.	Others (pl.specify)										
	Total	**6**	**124**	**01**	**125**	**05**	**0**	**05**	**129**	**1**	**134**

Details of sponsoring agencies involved

1. Department of Horticulture, Davanagere

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

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	Dairy Farmer/ Entrepreneur	05-04-2021	14-08-2021 (Training was stopped due to Corona lockdown)	25	16	05	21	03	01	04	19	06	25	16-10-2021	19

PART VIII – EXTENSION ACTIVITIES

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

Extension Activity	Programme	Farmer Male	Farmer Female	Farmer Total	SC/ST Farmer Male	SC/ST Farmer Female	SC/ST Total	Extension Male	Extension Female	Extension Total
Advisory Over Phone	32	500	0	500	9	0	9	0	0	0
Animal Health Campaign	1	75	0	75	0	0	0	3	0	3
Bimonthly Meeting	4	0	0	0	0	0	0	141	60	201
Celebration of Important Days	16	2034	560	2594	273	227	500	790	48	838
Diagnostic Visit	40	129	3	132	0	0	0	26	0	26
Exposure Visit	3	37	3	40	11	0	11	10	1	11
Ex-Trainees Samelan	1	31	2	33	11	0	11	0	0	0
Farmer/Extn. Pernl. visit to KVK	62	1085	0	1085	27	0	27	0	0	0
Farmers Seminar/Workshop	2	158	10	168	0	0	0	15	0	15
Field Day	4	132	18	150	7	2	9	1	0	1
Group Meeting	4	74	0	74	20	0	20	19	1	20
KisanMela	5	7224	2578	9802	3849	750	4599	358	194	552
Lect. Delivered as Resource Person	140	6704	1739	8443	2941	471	3412	2829	511	3340
Method Demonstration	47	744	81	825	151	16	167	209	23	232
Scientist visit to farmers field	278	1552	51	1603	139	19	158	257	27	284

8.2 Other extension activities like print and electronic media etc.

Sl. No.	**Type of media/activity**	**Number of activities/Number**
1	Popular articles	**8/8**
2	Newspaper coverage	**57/74**
3	Extension Literature	**8**
4	Radio Talks	**19/485**
5	TV Talks	**35/525**
6	CD/DVD/Video clips	**79**
7	Animal health camps (no. of animal dewormed)	**1940**
8	Others, please specify	
	Total	

PART IX – PRODUCTION OF SEED, PLANT AND LIVESTOCK MATERIAL

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	Chickpea	Jaki-9218	0.50	40000	1
Commercial crops					
Vegetables	Drumstick	PKM-1	0.11	37000	1
Flower crops					
Spices					
Fodder crop seeds	Fodder Bajra	Nutrifeed	0.19	13300	17
	Fodder Sorghum	COFS-31	2.49	174600	184
		Jumbogold	0.14	2520	9
		Sugargraze	0.11	5500	7
	Leguminous	Sesbenia	0.01	1400	1
	Lucerne	Hedge Lucerne	0.175	12375	26
	Styloxanthus	*Styloxanthus Hemata*	0.10	5000	7
Fiber crops					
Forest Species					
Plantation crops	Coconut	Arsikere Tall	2900 No	92800	1
Green Manure Crops	Velvet beans	Mucuna Spp.	14.20	213000	125
Total			**18.025** **2900 No.**	**504695** **92800**	**378** **1**

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	Drumtick	PKM-1	11170	111700	84
Fruits	Custard apple	Grafted	30	2920	11
	Guava	Grafted	40	2100	21
	Jackfruit	Grafted	37	9250	14
	Jamun	Grafted	20	3000	8
	Lime	Balaji	14	840	4
	Mango	Alphanso	106	13275	23
	Orange	Grafted	24	3600	14
	Sapota	Grafted	40	3000	20
	Ramphala	Grafted	3	370	2
	Lakshmanphal	Grafted	15	1800	7
Ornamental plants	Hibiscus	Local	124	2495	48
	Palm	Local	29	1300	12
Medicinal and Aromatic	Neem	Local	37	2220	1
	Tulasi	Krishna	11	220	5
	Lemongrass	Local	6	130	6
Plantation	Arecanut	Channagiri local	3480	121800	58
	Coconut	Arsikere tall	5005	382525	205
Spices	Cinnamon	Ceylon	2	50	2
	Curry leaf	Suhasini	62	1595	24
Tuber					
Fodder crop saplings					
Forest Species					
Others(specify)					
Total			**20255**	**664190**	**569**

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

Crop category	Name of crop	Name of the hybrid	Quantity (No.)	Value (Rs)	Number of farmers to whom provided
Plantation crop	Coconut	D x T	95	23750	12
		Total	**95**	**23750**	**12**

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	0.36	720	12
	Honge Cake	0.20	800	1
	Nano Urea	0.58 No.	13320	22
	Sagarika	13.5 l	7020	3
	AMC	568 l	147680	53
Bio-pesticide	Neem Oil	30 l	17700	1
	Neem pesticide	50 l	15950	1
	Pheromone traps + Lures	400 No.	38000	1
	Verticillium	19 l	8550	1
	Yellow sticky traps	200 No.	8000	1
Bio-fungicide	*Pseudomonas* Liquid	35 l	12250	5
	Pseudomonas Solid	0.12	3000	1
	Trichoderma harzianum Liquid	72.5 l	21750	5
Bio Agents	Earthworms	0.1815	5553	4
	Compost Prachodak	116 No.	11520	2
Micronutrient Mixtures	Banana Special	22.02	440400	443
	Mango Special	0.14	2520	5
	Pulse wonder	132 No.	45240	7
	Vegetable special	1.44	25920	9
	Cal-K-Plus (5 L)	87 No.	34870	68
	Kelvimingold (5 kg)	66 No.	33150	50
	Kelvimingold (1 kg)	250 No.	32500	50
Organic manure	Vermicompost	11.321	169823	595
Total				

9.D. Production of livestock

Particulars of Livestock	Name of the breed	Number	Value (Rs.)	Number of farmers to whom provided
Dairy animals				
Cows	HF-X	1	8000	1
	Milk	2825 l	96050	110
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	Ornamental	237	324	10
Others (Pl. specify)				
Total				

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

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

(i) KVK Newsletter:

Date of start: September 2007 Periodicity: Half Yearly Copies printed in each issue: 2

(ii) Summary of Literature developed/published

Item	Number
Research papers- International	-
Research papers- National	-
Technical reports	
Technical bulletins	
Popular articles - English	
Popular articles – Local language	7
Extension literature	8
Others if any - Abstract	3

(iii) Details of Literature developed/published

Please provide the details of above publication in the following format:

1. Research articles in journals: Complete citation indicating authors, year of publication, title of publication, journal name, volume and page number in sequence.: Nil

2. Technical Reports/ bulletins: Authors name, Title of the technical report, name of publishing KVK, number of pages: Nil

3. Popular articles: Authors name, Title of the article, date of publication, Name of the newspaper/magazine, page no.

1. Mr Basavanagowda M.G., Status and mainainance of arecanut in summer, 23-3-2021, Janathavani.
2. Mr. Basavanagowda M.G., Lack of awareness on COVID-19 during 2nd wave also, 16-5-2021, Janathavani.
3. Mr. Basavanagowda M.G., Selection and opportunities farm university – 11-7-21, Janathavani.
4. Mr. Basavanagowda M.G., Reality and effects of raise in price of arecanut, 15-9-2021, Vigyan loka.
5. Dr. Devaraja T.N., Mr. Mallikarjuna, Dr. Jayadevappa G.K, Attempted works in rural areas for climate resilience, October-November 2021, Vigyan loka.
6. Mr. Sannagoudra H.M., Soil Health our Helath, 5-12-2021, Janathavani.
7. Mr. Sannagoudra H.M., Soil Health Day 7-12-2021, Vijayakarnataka

4. Extension literature; Authors name, month and year of publication, Title of extension literature like folders, pamphlets etc., name of publishing KVK, number of pages.

1. Mr. Mallikarjuna B.O., Dr. Devaraja T.N., Dr. Jayadevappa G.K. (2021) performance and impact of NICRA interventions (2011-20), ICAR-Taralabalu Krishi Vigyan Kendra, Davanagere, 70 P.
2. Mr. Mallikarjuna B.O., Dr. Devaraja T.N.and Dr. Supriya P. Patil (2021) Minor Millets: Production and value addition, ICAR-Taralabalu KVK, Davanagere, 35 P.
3. Mr. Mallikarjuna B.O., Dr. Devaraja T.N. 2021, Mechanized farming in rice, ICARr-Taralabalu Krishi Vigyan Kendra. 6P
4. Mr Basavanagowda M.G., Dr. Devaraja T.N. 2021 organic terrace garden, ICAR-Taralabalu KVK, Davanagere, 18 P
5. Mr Basavanagowda M.G., Dr. Devaraja T.N. 2021, Mr. Sannagoudra H.M. 2021 compost preparation method in Horticulture crops, ICAR-Taralabalu KVK, Davanagere. 2 P.
6. Mr Basavanagowda M.G., Dr. Devaraja T.N. 2021, Mr. Sannagoudra H.M. 2021, Biological control of pests in horticulture crops, ICAR-Taralabalu KVK, 4P
7. Mr Basavanagowda M.G., Dr. Devaraja T.N. 2021, Mr. Sannagoudra H.M. 2021, Bio – fertilizers and bio-Pesticides in horticulture crops, ICAR-Taralabalu KVK, Davanagere 4 P.
8. Mr. Raghurja J.Dr. Devaraja T.N., Mr. Basavanagowda M.G., Dr. Jayadevappa G.K., Mr. H.M. Sannagoudra, Dr. Avinash T.G., Dr. Supriya P. Patil 2021 Energy conservation and water conservation practices, ICAR-Taralabalu KVK, Davanagere

10.B. Details of Electronic Media Produced

S. No.	**Type of media**	**Title**	**Details**
1	CD / DVD	-	-
2	Mobile Apps	-	-
3	Social media groups with KVK as Admin	WhatsApp group – 4	ICAR-Taralabalu KVK ICAR-Taralabalu KVK-1 Hort DVG Forum Davanagere FPO group
4	Facebook account name	Taralabalukvk@gmail.com	--
5	Instagram account name	-	-
6	Others if any	-	-

10.C. Success Stories / Case studies, if any (two/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. Case Studies:

Profitable Intercropping System of Maize + Redgram forRainfed Farming

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Intercropping of legumes with cereals is a recognized practice for economizing the use of nitrogenous fertilizers and increasing the productivity and profitability per unit area and time. Maize is the important crop for billions of people as food, feed and industrial raw material. Nearly 1147.7 million MT of maize is being produced together by over 170 countries from an area of 193.7 million ha with an average productivity of 5.75 t/ha. In 2020, maize production for India was 30,200 thousand tons. The production and productivity of maize mainly depends on the rainfall pattern and in dry lands the yield are low. The rainfed farming continues to be challenging, in view of increasing climatic aberrations viz., occurrence of dry spells, unseasonal rains. So to overcome the loss in rainfed farming there is need to choose the resilient technologies which will enhance the production and productivity. The Red gram a being deep rooted and slow growing in its early growth stage, during which the more rapidly growing crop like maize can be conveniently intercropped to utilize the natural resources more efficiently [1]. The intercropping of maize with redgram (6:1) will be profitable in rainfed farming. The redgram (BRG-5) variety is medium duration, resistant to wilt and red seeded suited for rainfed farming. Redgram Variety BRG-2 is white seeded and suited for table and dhal purposes.

METHODLOGY

The ICAR- Taralabalu KrishiVigyan Kendra has implementedthe National Innovative Climate Resilient Agriculture (NICRA) project inSiddanuru and Agasanakatteof Davanageretaluk. The annual rainfall of the district is 620 mm. The Davanageretaluk belongs to Central Dry Zone-4 and climatic variability is drought. The distribution pattern of the rainfall is uneven and erratic. The Davanagere district the maize area of about 80,000 ha and 80 percent of the maize is grown under rainfed and many times the sole maize is not profitable for the farmers. Under Technology demonstration component of NICRA project during the year 2017and 2018.ICAR-Taralabalukvkconducted the intercropping system of Maize+ Redgram(6:1)in the NICRA village with integrated crop management practices (Fig. 1).The integrated crop management practices include seed treatment with bio-fertilizers(Rhizobium and PSB @ 500g/ha), nipping at knee high stage (45 days after sowing) and spraying of pulse magic a nutrient spray @ 5kg/ha(first spray at 50% flowering and second spray 15 days after first spray).BRG-2/5,a medium duration variety of Redgram was demonstrated along with Maize crop. The intercropping system was demonstrated in an area of 45ha with 120 farmers (BRG-2) and 14 ha with 30 farmers (BRG-5). During the demonstration period from June to November rainfall recorded along with rainy days and dry spells. The details of theRainfall data are presented in Table 1. Maize equivalent yield (MEY) was calculated by considering the prices of both the crops using following formula.

$$\text{MEY (kg/ha)} = \text{Maize yield (kg/ha)} + \frac{\text{Redgram Yield (kg/ha) x price (Rs/kg)}}{\text{Maize Price (Rs./kg)}}$$

RESULTS

The demonstration was conducted during the year 2017 with the Redgram (BRG-2) as intercrop in the Hybrid Maize in Siddanuru. The average results were as follow:In demonstration plot the cost of production was Rs.39000/ha and yield was 4748 kg/ha. In check plot, the average cost of production was Rs.34,500/ha and yield was 3540 kg/ha. In demonstration plot recorded the average net profit of Rs.13228/ha with benefit cost ratio of 1.33 against the check plot with the average net profit of Rs.4440/ha with benefit cost ratio of 1.10 (Table 2). The present findings are in accordance with those of [2] and [3].

Another demonstration was conducted during the year 2018 with the Redgram (BRG-5) as intercrop in the Hybrid Maize in Agasanakatte. The average results were as follow:In demonstration plot the cost of production was Rs.46199/ha and yield was 4870 kg/ha. In check plot, the average cost of production was Rs.44970/ha and yield was 3910 kg/ha. In demonstration plot recorded the average net profit of Rs.41619 /ha with benefit cost ratio of 1.90 against the check plot with the average net profit of Rs.25442/ha with benefit cost ratio of 1.56 (Table 3). The results are in conformity with the findings of [4].Nipping at knee high stage (Fig.2) and use of pulse magic a nutrient spray (Fig.3)certainly helped the improving the yield of red gram in demonstration plot.

CONCLUSION

The intercropping system will be profitable when compared to sole crops under rainfed farming. Even though there were dry spells during the cropping period the check plot (sole maize) crop affected and the inter cropping with redgram in demonstration plots had shown higher net returns with higher benefit cost ratio. The dry spells during the cropping period (vegetative stage and Tasseling stage) i.e. 23-6-17 to 16-7-17, 23 days followed with 10 days and 16 days in August and October respectively. Similarly, in 2018, dry spells of 10 days, 20 days and 24 days during the June, July and August respectively occurred. The climate resilient varieties in red gram (BRG-2 and BRG-5) found to be suitable for intercropping in drought prone areas to avoid economic losses. Pulse crop like redgram issureto support as insurance cropin case of prolonged dry spells, besides additional benefits like nitrogen fixing and adding nutrients to the soil through the biomass. Adequate supply of pulses for nutritional security of people is a great concern and sustained efforts like this present work would become significant in achieving it.

REFERENCES

[1] Willey,R.W.,1979, Intercropping - Its importance and research needs. Part I competition and yield advantages. Field Crop Abst. 32: 1-10.
[2] Madar, K. S., 2001, Studies on maize based intercropping as influenced by maize and pigeonpea row proportions and population levels of cowpea. M. Sc. (Agri.) Thesis, Uni. Agric.Sci.Dharwad
[3] Rathod, P.S., Halikatti, S.I., Hiremath, S.M. and Kajjidoni, S.T., 2004, Influence of different intercrops and row proportions on yield and yield parameters of pigeonpea in vertisols of Dharwad. Kar. J. Agric. Sci. 17: 652-657
[4] Crasta, O. R. and Dixit, L. A., 1990, Economics of cropping systems in different row orientations. J. Far. Syst. 4: 42-44.

Table -1. Rainfall Characteristics during the cropping season

Months	Rainfall (mm)	Actual Rainfall (mm)		No. of rainy days		% deviation of Rainfall		Dry Spells during the cropping period	
	Normal	**2017**	**2018**	**2017**	**2018**	**2017**	**2018**	**2017**	**2018**
June	**75.00**	22.0	57.2	4	5	-70.6	-23.73	23-6-17 to 16-7-17	26-06-18 to 05-07-18
July	**88.2**	28.9	76.4	5	11	- 67.23	-13.37	23 days	10 days
August	**74.2**	84.7	125.5	6	13	14.15	70.20	24-7-17 to 3-8-17 10 days	23-07-18 to 12-08-18 20 days
September	**112.1**	159.1	7.0	11	1	41.92	-93.7	-	2-09-18 to 23-09-18 24 days
October	**117.3**	316.7	27.7	6	3	169.99	-76.38	15-10-17 to31-10-17- 16 days	-
November	**38.3**	00	09.1	0	1	0	-76.24	-	-
	505.1	611.4	302.9	32	34	-	-	-	-

Table 2: Average of Economics of intercropping system of Maize + Red gram (BRG-2) (2017)

Technology	Yield kg/ha	% increase in yield	Gross Cost (Rs./ha)	Gross return (Rs./ha)	Net return (Rs./ha)	B: C
Check -Maize (sole)	3540	34.12	34500	38940	4440	1.10
Demo - Maize + Redgram (BRG-2)	4748 (MEY)		39000	52228	13228	1.33

Table 3: Average of Economics of intercropping system of Maize + Red gram (BRG-5) (2018)

Technology	Yield kg/ha	% increase in yield	Gross Cost (Rs./ha)	Gross return (Rs./ha)	Net return (Rs./ha)	B: C
Maize (Sole)	3910	24.55	44970	70412	25442	1.56
Demo -Maize + Redgram (BRG-5)	4870 (MEY)		46199	87818	41619	1.90

Fig. 1: Inter cropping of Maize + Redgram (6:1)
Fig. 2: Mechanised Nipping in Red gram after 45 days after sowing
Fig. 3: Use of Pulse Magic a nutrient mixture at time of 50% flowering

Inter cropping of Maize + Redgram (6:1)

Mechanized Nipping in Red gram

Use of Pulse Magic a nutrient mixture at time of 50% flowering

2. Case Studies:

Performance of Drought Tolerant Finger Millet Variety ML-365 in rainfed farming for Higher yield

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Finger millet (*Eleusine coracana)* (L.) is important small millet grown in India. It is a staple food in many regions of the country. It is grown both for grain and forage purpose.Ragi is rich in carbohydrates, calcium, fibre, proteins and vitamins, contains slow releasing carbohydrates and provides continuous energy.In India It occupies an area of 6.93 million ha with an average production of 8.61 million tones and productivity of 1243 kg/ha during 2018-19 (Directorate of Millets Development, 2020; Project Coordinator Review, 2020). The nutraceutical importance of finger millet lies in its high content of calcium (0.38%), protein (6%–13%), dietary fiber (18%), carbohydrates (65%–75%), and minerals (2.5%–3.5%) shown in Table 1[1] and [2].The rainfed farming continues to be challenging, in view of increasing climatic aberrations viz., occurrence of dry spells, unseasonal rains. So to overcome the loss in rainfed farming there is need to choose the resilient technologies which will enhance the production and productivity of finger millet. When the delay in monsoon is about 4 weeks, medium duration varieties like GPU-28 (110 days duration) performed better while in case of further delay, short duration varieties like ML-365 (105 days) and GPU-48 (100 days) performed better.

METHODLOGY

The ICAR- TaralabaluKrishiVigyan Kendra has implemented the National Innovative Climate Resilient Agriculture (NICRA) project in Siddanuru of Davanagere taluk.The annual rainfall of the district is 620 mm. The Davanagere taluk belongs to Central Dry Zone-4 and climatic variability is drought. The distribution pattern of the rainfall is uneven and erratic. The Davanagere district the Finger millet area of 25350 ha with productivity of 1750 kg/ha. Under Technology demonstration component of NICRA project during the year 2015 and 2016.ICAR-Taralabalukvkconducted the Demonstration of drought tolerant finger millet Variety ML-365 with integrated crop management practices (Fig.1)with 60 farmers in an area of 33 ha. The integrated crop management practices include seed treatment with bio-fertilizers(*Asosprilium* and PSB @ 500g/ha) and spraying of macro nutrient (13:00:45) @ 5g/l of water at time of active tillering [3]. There were dry spells during the cropping period at vegetative stage (2016) and flowering stage (2015) during the both the years (Table 2). The sowing of the crop taken during the first week of September during 2015and second week of August during 2016 (Fig.2). The variety ML-365 is suited for delayed sowing as it is short duration variety [2].The critical irrigation were given from the farm pond where the rain water harvested during the month of October. NICRA village received the rainfall of 211 mm in the month of October (Table 1).

RESULTS

The demonstration was conducted during the year 2015 and 2016 with the Finger millet (ML-365) as a drought tolerant and medium duration variety in Siddanuru NICRA village. The average results for the two years were recorded and in demonstration plot the cost of production are Rs.26300/ha and yield was 2405 kg/ha. In check plot, the average cost of production are Rs.25250 /ha and yield was 1940 kg/ha (Fig.3). In

demonstration plot recorded the average net profit of Rs.32145/ha with benefit cost ratio of 2.24 against the check plot with the average net profit of Rs.22850/ha with benefit cost ratio of 1.91 (Table 3). The present findings are in accordance with those of [3].

CONCLUSION

The drought tolerant and medium duration varietyperformed well even under erratic rainfall. The Finger Millet variety ML-365 recorded higher net returns and with higher benefit cost ratio. The dry spells during the cropping period of vegetative stage and flowering,during 2015 early season drought in the June end and July beginning for 17 days (26-6-15 to 12-7-15) followed in the month of September for 15 days (11-09-15 to 25-09-15) had little effect on the early growth of the crop. The critical irrigation provided from the farm pond had saved the crop when compared to farmer do not have the farm pond [4].Similarly in 2016, dry spells of 14 days and 25 days in the month of July and August respectively occurred. The climate resilient varietyin finger millet (ML-365) found to be suitable in drought prone areas to avoid economic losses. If there is delayed on set of monsoon and even in the month of August the finger millet, ML-365 variety can be sown and can get the good yield provided with critical irrigation from the farm pond. The line department officers along with farmers from neighbouring village attended the field day organised to popularise the variety among the farming community (Fig.4).The finger millet which is having higher nutritive value and gaining importance among the people which is the need of the hour for millet production.

REFERENCES

[1] Singh P, Srivastava S (2006). Nutritional composition of sixteen new varieties of finger millet. J. Community Mobilization Sustainable Dev., 1(2): 81-84.

[2] Sarita ES. Potential of Millets: Nutrients Composition and Health Benefits. J Sci Innov Res. 2016; 5(2):46-50.

[3] Raghunatha Reddy RL, Krishna Reddy GS, Nagaraja KS and Narayana Reddy R (2020). Influence of front line demonstration of new ragi variety ML-365 IJCS 2020; 8(2): 2544-2548.

[4] Ramanjaneyulu, A.V. and Venkata Ramana, M. 2017. Farm ponds - life saving ponds. ln: National Conference on Technological Challenges in Social, Environmental and Agricultural Reforms (TECHSEAR 20L7),9th and L0th September, 2017, Auditorium, llRR, Hyderabad-500 030, lndia, pp.4-9.

Table 1. Nutrient composition of finger millet with other minor millets

		Protein (%)	Fat (%)	Starch (%)	Ash (%)	Crude fiber (%)	Total dietary fiber/100 g	Total phenol (mg/100 g)	Carbohydrates (g)
	Finger millet	7.3	1.3	59.0	3	3.6	19.1	102	72.6
Minor millets	Pearl millet	14.5	5.1	60.5	2	2	7	51.4	67.5
	Foxtail millet	11.7	3.9	59.1	3	7	19.11	106	60.9

Table 2. Rainfall Characteristics during the cropping season during the 2015 and 2016

Months	Rainfall (mm)	Actual Rainfall (mm)		No. of rainy days		% deviation of Rainfall		Dry Spells during the cropping period	
	Normal	**2015**	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**	**2016**
June	75.00	42.5	91.0	07	08	-43.33	21.00	26-6-15 to 12-7-15 17 days	06-7-16 to 19-7-16 14 days
July	88.2	74.0	107.0	04	13	-16.09	21.31		
August	74.20	82.5	21.0	05	03	11.18	-71.69	-	5-08-2016 to 30- 08-16 25 days
September	112.10	211	89.0	05	06	88.22	-20.60	11-09-15 to 25-09-15 15 days	-

October	117.30	67	00.0	05	00	-48.22	-100	-	-

Table 3: Average of Economics of Finger millet during the year 2015 and 2016

Technology	Yield kg/ha	% increase in yield	Gross Cost (Rs./ha)	Gross return (Rs./ha)	Net return (Rs./ha)	B: C
Check (GPU-28)	1940	23.96	25250	48100	22850	1.91
Demo (ML-365)	2405		26300	58445	32145	2.24

Finger millet at active tillering stage in NICRA Village.

Seed maturing stage in ML-365.

Fully matured finger millet observing by Joint Director of Agriculture and farmers.

Farmers and Line department officers attended the Field day of Finger millet ML-365 at Siddanuru NICRA village.

3. Case Study:

Cultivation of drought tolerant multi-cut fodder Sorghum (CoFS-29/31) in low rain fall areas to alleviate the fodder scarcity for Livestock.

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Siddanuru, Agasanakatte and Pawadarangavvanahalli are the NICRA Cluster villages in Davanagere district in Karnataka state with vulnerability to drought condition suffering from severe losses in the production, productivity and poor quality produces from animal husbandry practices especially dairy animals. The lossesare observed in milk, meat, egg production and poor draft power by the cattle due to poor health condition which in turn due to malnutrition or under nutrition. At present the NICRA Cluster villages comprise of 121 Bullocks, 146 Buffalos, 847 Cattle both local and crossbred, 139 Sheep and 58 Goats with low production potentiality. These livestock are mainly dependent on poor quality dry roughages obtained after the harvesting and threshing of agricultural crops especially maize, finger millet, pigeon pea, horse gram, jowar etc. for their maintenance and production. These feeding stuffs are very low in protein, minerals& vitamins content and are less digestible when fed to animals. Also, they are not available in sufficient quantities to meet the annual dry matter requirements of Livestock.The Livestock owners were meeting their fodder requirements through a combination of dry fodders obtained after harvesting and threshing of agricultural crops and cultivation of one or two forage crops to a limited extent.

After assessing the ground reality in the Cluster villages, we have made an effort through NICRA Project under Technology Demonstration Component (TDC) the production of good quality,high yielding &drought tolerant multi-cut fodder sorghum (CoFs-29 /31)under limited irrigation conditions to meet the fodder scarcity as well as nutrients requirements of livestock.

Multi-cut Fodder Sorghum (CoFS-29/31) variety is from Tamilnadu Agricultural University (TNAU),Coimbatore grows quickly and give better yield (160-170 t /ha/annum) under favorable conditions [1]Though this fodder requires fortnightly irrigation, withstand drought conditions and gives better yield, both in terms of quantity and quality in low rainfall areas with supplemental irrigation from farm ponds. When this fodder was utilized for feeding milch animals,it supported the milk production by reducing the feeding cost. The fodder was highly palatable, easily digestible and helped in meeting the dry matter requirement of the animals [3].

METHODOLOGY

The CAR-Taralabalu Krishi Vigyan Kendra under the Technology Demonstration Component (TDC)of NICRA Project after discussing with Village Level Climate Risk Management Committee (VCRMC) membershad taken up the cultivation of drought tolerant multi-cut Fodder Sorghum (CoFS-29/31) in the 3Cluster villages with 120 farmers to ensure year-round fodder availability to their livestock especially for dairy animals.Observations on fodder yield and economics of cultivation of the fodder were recorded and given in Table-1. The cultivated fodder (CoFS-29/31) was utilized to meet the dry matter (DM) as well as the Energy (TDN) and Protein (DCP) requirements of their dairy animals. Each milch animal was given CoFS-31 green fodder @ 20-22 kgalong with 4-5 kg of available dry fodders and 2-3 kgof compounded feeds per day to meet the Total Digestible Nutrients (TDN) and Digestible Crude Protein (DCP) requirement as per the National Research Council (NRC) Standards.

Out of 120 livestock farmers, observations were collected from 15 dairy farmers,5 from each villageon effect of feedingmulti-cut fodder sorghum on the performance of crossbred milch animals weighing around 380-400 kgand yielding 9-10 litres of milk a day.

RESULTS

The fodder yield obtained was higher (165.2 t /ha) than the existed variety (Napier x) and the quality was good in terms of its nutrients (TDN & DCP) content [2] as well as it's physical characteristics (no serrations on leaves& soft at maturity stage)

Observations on milk yield & its quality and economics of milk production have been tabulated vide. Table-2& 3. Farmers were of the opinion that the voluntary intake (VI) of green fodder was increased as it was succulent and there was no wastage of fodder. The milk yield was increased by 16.74 per cent by reducing the feeding cost in milch animals by 3.5 per cent. The milk fat & Solids-not-fat (SNF) contents along with the overall animal health condition of the animals were improved during the feeding trial.

CONCLUSION:

Multi-cut Fodder Sorghum (CoFS-31) withstand drought situations for a longer period when it is established and can grow quickly when conditions (moisture,manures, fertilizers&etc.) are favourable. Since this fodder can be cultivated throughout the year efforts were made to cultivate these fodders in the village when little moistures are available during the kharif season. This fodder is very promising in alleviating fodder scarcity in the NICRA Cluster villages as it gives 7 to 8 cuttings with a yield potential of 160-170 tons per hectare per annum. Livestock owners can maintain 5 to 6 milch animals economically with 0.2 hectares of this fodder for 2-3 years depending upon the cultivation practice.The farmers ofNICRA Cluster villages and other adjoining villages in Davangere district are convinced about the performance of this multi-cut fodder sorghum (CoFS-29/31) would like to continue the feeding practices to improve the milk production & its quality,reduce the feeding cost thereby bringing down the cost of milk production and improve the overall health condition of the animals. These varieties hold a huge potential in dry land areas as perennial fodder for livestock.

REFERENCES

[1] Iynar,K.andBabu,CandKumaravadivel,N and et al,.(2015) A high yielding multicut fodder Sorghum CO31.Electronic Journal of Plat Breeding, 6(1).pp.54-57.

[2 Manjunath Patil, Ramesh BK, Pralhad, Mahesh C, Mahantesh MT and Sreedhara JN, International Journal of Chemical Studies 2020;8 (4); 3778-3781

[3]] Rudragouda F, Channagouda, Onkarappa,S Prakash Kerure, Jyothi and Rudramuni (2020), Int.J.Curr.Microbiol.App.Sci; 9(11);342-348

Table-1: Average of Economics of Technology Demonstration

No of Farmers in the village	Technology demonstrated		Area under practice in the villages (ha)	Fodder yield (q/ha/annum)		Economics of demonstration (Rs. /ha)			Economics of local practice (Rs. /ha)		
	Crop Name	Name of variety		Demo	Local (Napier X	Gross Cost	Gross Return	BCR	Gross Cost	Gross Return	BCR
120	Fodder Sorghum multi-cut	CoFS-31	21.4	165.2	148.7	65000	247813	3.85	60000	148700	2.48

Table-2: Average of Economics of 15 Crossbred cows selected from 3 NICRA Villages for feeding trial

Sl No	NICRA Village	Animal Breed under feeding Trial	No of Cows under Trial	Lactation Yield (l)		Preliminary Period (Check)			Technology Demonstration Period		
				Demo	Check	Gross cost (Rs)	Gross Return (Rs)	BCR	Gross cost (Rs)	Gross Return (Rs)	BCR
1	**Siddanur**	**HF x Cows**	5	3309.2	2808.0	42090.0	70200.0	1.66	40809.0	82730.0	2.02
2	**Agasanakate**	**HF x Cows**	5	3112,8	2647,2		66180.0	1.57		77820.0	1.91
3	**PR Halli**	**HF x Cows**	5	2967.0	2541,3		63532.5	1.51		78240.0	1.91
	Average			**3129.6**	**2665.5**	**42090.0**	**66637.5**	**1.58**	**40809.0**	**79596.6**	**1.95**

Table-3: Additional parameters other than milk yield

	Parameters in relation to technology demonstrated	
Parameter with unit	**Demo**	**Check**
Milk Fat (%)	**3.8**	**3.2**
Specific Gravity of Milk (CLR)	**1.028**	**1.026**
Cost of Feeding Per day (Rs)	**133.8**	**138.0**
Cost of Milk Production per litre (Rs)	**13.03**	**15.79**

Fig-1: Multi-cut Fodder Sorghum at harvesting stage in NICRA Village
Fig-2: Field Day conducted on Multi-cut Fodder Sorghum at NICRA Village in collaboration with Department of Agriculture

Multi-cut Fodder Sorghum at harvesting stage in NICRA Village

Field Day conducted on Multi-cut Fodder Sorghum at NICRA Village in collaboration with Department of Agriculture

4. Direct Dry seeded Rice in Rainfed farming of Central dry Zone of Karnataka

Title : Direct Dry seeded Rice in Rainfed farming of Central dry Zone of Karnataka

Background: Maize is the main crop of the district and village, due to incidence of fall army worm and reduced the price of maize during the year 2019-20, the farmers face huge loss and reduced the net income. Halvarthy the village located in the davangere taluk and district faced the same problem. The annual rainfall of Angod hobli is 600 mm.

Interventions: Mr. Dyamanna, Farmer, from Halavarty visited the kvk and interacted for the different crops can he grow under rainfed situation with protective irrigation from bore well..

Technology: Suggested the farmer to go for the new technology for your area which is already popular in paddy growing area. The direct dry Seeded Rice technology which is best suited for the rainfed farming, dairy farmers who donot have paddy straw as a fodder.

Introduced the following technologies like Variety RNR-15048 and seed treatment with bio fertilizers, Sowing with seed cum fertilizer drill and weed management both pre and post emergent weedicide application, installation of the pheromone traps for the Stem borer management.

Crop	Technology	Yield (q/ha)	Cost of Production (Rs./ha)	Gross returns (Rs./ha)	Net returns (Rs./ha)	B:C
Rice	Direct Dry Seeded Rice	53.57 Straw yield : 4.5 tons/ha	46000	99,104.5 10,000.0 1,09,104	63104	2.37
Maize	ICM practices	40.8	45200	71400.0	26200	1.57

Selling Produce : Paddy – Rs.1850
: Maize- Rs 1750

Impact : Farmer is now growing the DSR in an area of 3 acres and other faremrs in the village are planning to grow paddy in rainfed farming.

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

a) **WhatsApp group:** Started whatsApp group by name 'ICAR-Taralabalu Krishi Vigyan Kendra' which included Krishi Vigyan Kendra and AHRS scientists, Development Department personnel, farmers, NGO activities, company manufacturers among others. Innovative technologies are discussed and farmers problems are addressed immediately.

b) **Saturday Organic Bazaar:** Weekly Sandy held at Krishi Vigyan Kendra premises every Saturday helped organic farmers and consumers of organic produce as it is made available next door.

c) **Kasa Rasa Abhiyana:** Campaign and Demonstration started for urban bio-waste degradation using microbial culture and use of compost in kitchen garden.

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:

Period of observing Technology Week: From: 4-12-2021 to 5-12-2021
Total number of farmers visited : 2200
Total number of agencies involved : 6
Number of demonstrations visited by the farmers within KVK campus : 15

Other Details

Types of Activities	No. of Activities	Number of Farmers	Related crop/livestock technology
Gosthies	-	2200	
Lectures organized	6		Minor millet value additions and water conservation
Exhibition	1		
Film show	2		Renewable energy
Fair	-		
Farm Visit	2		KVK instructional farm
Diagnostic Practicals	-		
Supply of Literature (No.)	2		
Supply of Seed (q)	-		
Supply of Planting materials (No.)	-		
Bio Product supply (Kg)	-		

Types of Activities	No. of Activities	Number of Farmers	Related crop/livestock technology
Bio Fertilizers (q)	-		
Supply of fingerlings	-		
Supply of Livestock specimen (No.)	-		
Total number of farmers visited the technology week	2200		

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

Name of Scientist	Name of the Award
Mr Raghuraja J Subject Matter Specialist (Agri. Extension)	'Best KVK Scientist Award' by Indian Society of Extension Education, New Delhi
Mr. Basavnagowda M.G. Subject Matter Specialist (Horticulture)	H. Narasimmaiah State Award for the Social Service by Karnataka State Scientific Research Council, Bengaluru
Mr. Basavnagowda M.G. Subject Matter Specialist (Horticulture)	Karnataka Rajyotsava Award from Davanagere city corporation.

PART XI – SOIL AND WATER TEST

11.1 Soil and Water Testing Laboratory

A. Status of establishment of Lab **:** Established

1. Year of establishment : 2011 (April)

2. List of equipments purchased with amount :

Sl. No	Name of the Equipment	Qty.	Cost	Status
1	Digital conductivity meter	01	12,860-00	Good
2	Digital pH meter	01	11,033-00	**Good**
3	Flame photometer	01	48,375-00	**Good**
4.	Spectrophotometer	01	42,570-00	**Good**
5.	Macro Block digestion system: KIL 08 L	01	96,212-00	**Good**
6.	Distillation system KJELO DIST EAS VA	01	1,77,268-00	**Good**
7.	Digital Burette Titration system	01	53,212-00	**Good**
8.	Quartz single distillation model with 4 l/h capacity	01	31,482-00	**Good**
9.	Quartz double distillation unit with 1.5 l/h capacity	01	64,130-00	**Good**
10.	Hot air oven	01	29,786-00	**Good**
11.	Hot plate Rectangular	01	6,784-00	**Good**
12.	Water bath	01	5,724-00	**Good**
13.	Digital Analytical balance capacity 210 g	01	69,960-00	**Good**
14.	Table top balance capacity 10 kg	01	6,890-00	**Good**
15.	Heating mantle capacity 250 ml	01	1,908-00	**Good**
16.	Kent water purifier	01	16,500-00	**Not working**
	Total	**15**	**6,74,694-00**	

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	11,177	8876	6282	1214100
Water Samples	8619	6688	5712	460300
Plant samples				
Manure samples				
Others (specify)				
Total	**19796**	**15564**	**11994**	**1674400**

C. Details of samples analyzed during 2021:

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages	Amount realized (Rs.)
Soil Samples	794	585	433	145300
Water Samples	495	373	316	49500
Plant samples				
Manure samples				
Others (specify)				
Total	**1289**	**958**	**749**	**194800**

11.2 Mobile Soil Testing Kit: Nil

A. Date of purchase and current status

Mobile Kits	Date of purchase	Current status
1.		
2.		

B. Details of soil samples analyzed during 2021 and since establishment with Mobile Soil Testing Kit: Nil

	During 2020	During 2021	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:

Particulars	Date (s)	Villages (No.)	Farmers (No.)	Samples analyzed (No.)	Soil health cards issued (No.)
SWTL					
Mobile Soil Testin 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	1200	120	-	-	15	6

PART XII. IMPACT

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

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): Nil

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

A) **Saturday Organic Bazaar**

Promotion of organic farming by both State and Central Governments in the last 2 decades encouraged many farmers to take up organic farming in Davanagere district. This has promoted the production of organic inputs including pest and disease management, nutrient management, green manuring, farm yard manure, use of bio-digesters. The agricultural output produced through this organic farming is need to be marketed through separate channels without mixing with regular markets because the yield levels especially in the initial years are low when compared to normal practice. The farmers are finding it difficulty in market these produce. ICAR-Taralabalu Krishi Vigyan Kendra, Davanagere initiated Saturday Organic Bazaar during 2013. This marketing facility in the KVK premises facilitated organic farmers to sell their produce directly to the consumers without the involvement of middlemen. The organically produced rice, millets, jaggary, originally extracted groundnut oil, sunflower oil, safflower oil, coconut oil, fruits, vegetables, dry fruits value added products from rice and millets among other products are sold. From consumers point of view, they were getting healthy and good quality produce directly from farmers.

A perusal of Table 1 indicates that average transaction per week in Saturday Organic Bazaar from 8 participant is Rs. 65.865 and average profit to farmers is Rs. 26,675 which accounts for 40.5 %. Since the organic farmers are selling their produce directly to consumers without involvement of middlemen resulting in enhanced income to the farmers, This model is continued since 2013 indicates the acceptance from consumers who are getting daily needs at their doorstep. The organically produced fruits, vegetables, rice and other produce definitely have better quality for which consumers are

ready to pay extra price. One of the participantfarmer in the organic bazaar Mr, Anjaneya A. N., from Kumbaluru village of Harihartaluk, Davanagere district grows organic paddy since 20 years and also conserves and preserves more than 150 traditional rice varieties. The farmer distributes seeds of these traditional rice varieties to other interested farmers and take up primary and secondary value addition in rice. He prepares rice, puffed rice, idli mix, dosa mix, par boiled rice and sell in the organic bazaar. The economic analysis of his paddy production (Table 2) reveals that the cost of production is Rs.52,450/ha, gross income of Rs. 1,96,000/ha and net income of Rs. 1,45,550/ha. The average gross income through Saturday Organic Bazaar is Rs. 3,769/week whereas, average net income is Rs. 2,799/week. The higher net income per hector is attributed to value addition in rice and selling directly to consumers in the organic bazaar at higher price.

Table 1. Details of Saturday Organic Bazaar

Particulars	**Values**
No. of Participant farmers	08 Nos
Average turnover/week	Rs. 65,865.00
Average profit to participant farmers	Rs. 26,675.00 (40.5%)

Table 2. Economics of paddy production and marketing of Mr.Anjaneya A. N

Particulars	**Values**
Cost of production /ha,	Rs. 52,450.00
Gross income/ha,	Rs. 1,96,000.00
Net income/ha,	Rs. 1,45,550.00
Average gross income/week	Rs. 3,769.00
Average net income/week	Rs. 2,799.00

B) Vegetable Marketing through Farmer Producer Organizations during Lockdown period

Lockdown period impacted all walks of life including agricultural sector. In the agricultural sector perishable products like fruits and vegetables suffered seviour set back. The harvesting, packing, transporting, market access, distribution etc. effected. In other words, whole marketing channel comes to standstill. ICAR-Taralabalu Krishi Vigyan Kendra, Davanagere initiated marketing of vegetables through 3 Farmers Producer Organizations (FPO's). The ordinary farmers are facing problems in transportation and marketing of vegetables. The FPO's were guided to procure vegetables directly from farmers and KVK scientists were went around Davanagere city and convinced urban community to purchase vegetables which came directly from farmers. In all 25.23 t of vegetables procured and sold directly to consumers. The total procurement cost was Rs. 5,04,600 gross income earned wasRs. 6,30,750 with netincome of Rs. 1,26,150. Although the quantity of vegetables procured and net incomes earned was less through FPOs. The model inspired the local traders and they started to purchase vegetables, fruits, tender coconut directly from farmers instead of APMC at higher cost than FPOs. This helped the farming community to earn enhanced profit even in distress situation for their perishable produce.

Table 3. Details of marketing through FPO's

Particulars	**Values**
No. of FPO's involved	3 Nos
Total vegetables procured and sold	25.23 t
Total procurement cost	Rs. 5,04,600.00
Gross income	Rs. 6,30,750.00
Net Income	Rs. 1,26,150.00

C) Direct Marketing of Mango

The normal procedure followed in Mango marketing is leasing out whole plantation for 2 to 3 years to local traders. The average earning to farmers through this marketing channel is ranges from 20 to 25 percent of consumer price. ICAR-Taralabalu Krishi Vigyan Kendra, Davanagere organized several frontline demonstrations on integrated crop management in mango and given technologies like integrated nutrient management, integrated pest and disease management, pruning and also introduced 'Mango special' technology released by ICAR-Indian Institute Horticultural Research, Bengaluru. The frontline demonstrations resulted in increase in yield of Mango upto 15 percent. This increase in yield of mango has not

helped farmers in getting higher income due to poor marketing channels. Along with these technologies KVK also established community mango ripening chamber for safe ripening of mangos using ethrel and castic soda. KVK convinced 5 farmers to not the lease out mango plantations and instead harvest themselvesand ripen them using safer chemicals and provided opportunity in KVK Premises to sell mangos directly to consumers. The analysis of direct marketing mango by the producer farmers reveals (Table 4) that during 2018-19 1.1t mango sold and earned gross income of Rs. 66,000 followed by 2.5t with gross income of Rs. 2,00,000 during 2019-20 and 8.5t and earned gross income of Rs. 8,50,000 during 2021-21. All the 5 farmers could have leased out their mango plot and earned gross income of Rs. 2,50,000 only, instead the farmers earned Rs. 8,50,000 (more than three times profit) with little additional effort and cost of harvesting, ripening and transportation which accounts to approximately Rs. 50,000.

Table 4: details of direct marketing of Mango by the farmers.

Year	Quantity Sold (t)	Gross Income (Rs.)
2018-19	1.1	66,000
2019-20	2.5	2,00,000
2020-21	8.5	8,50,000

PART XIII - LINKAGES

13A. Functional linkage with different organizations

Name of organization	Nature of linkage
UAHS, Shivamogga	Technologies, Trainings, Farm trials
IIHR, Bengaluru	Technologies
UAS (Bengaluru), UAS-(Dharwad), UAS (Raichur), KUAFSU (Bengaluru), UHS (Bagalkot)	Technologies
Department of Agriculture, Horticulture, AH & VS	Trainings, Field visits
Dept. of Animal Husbandry and Veterinary Science, Davanagere	Conducting Animal Health Camps and Extension Functionaries Training Programme.
Techno Serve, Davanagere	Conducting animal health Camps, Training programmes and Method Demonstration.
KWDP-II Sujala III, Department of Horticulture	Diagnostic field visits, Trainings.
Farmers Producer Company Ltd	Interactive meetings, Trainings.
RCF Ltd	Collaborative Programmes like trainings/ seminars.
MANAGE, Hyderabad	Trainings, DAESI
IAT and Krishika Samaja	Collaborative Programmes like trainings, Workshops
Tota Uthpanna Marata Co-Operative Society, Channagiri	Training related to horticultural technologies
ATMA	Field visits, Trainings, Krishi Abiyana
Karnataka State Biofuel Development Board	Sponsored project in ongoing since 2011
CRIDA, Hyderabad	Climate resilient technologies for NICRA project.
ASCI, New Delhi	Skill development training
PKVY	Project on organic farming
IFFCO Ltd.	Extension Activities
Karnataka Renewable energy Development Ltd., Bengaluru	Workshop on Renewable energy

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.)
Taralabalu District Bio-energy Research Information & Demonstration Centre	23-03-2011	Taralabalu District Bio-energy Research Information & Demonstration Centre	95,000-00

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**	ATMA Awards	12		
02	**Research projects**	-	-	-	
03	**Training programmes**	-			
04	**Demonstrations**	-			
05	**Extension Programmes**				
	Kisan Mela	Kissan Mela	1		
	Technology Week		1		
	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: Nil

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 : NIl

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 : Nil

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

13G. Kisan Mobile Advisory Services: Nil

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	
1	Coconut plot	2021	0.5						Vegetable Growth
2	Mixed Fruits orchard, Apple and Dragan fruits	2022	0.5						Planting
3	Jack fruits plot	2018	0.25						Planting
4	Jamun fruits	2018	0.25						Planting
5	Lime fruit	2018	0.25						Vegetable Growth
6	Guava Plot	2017	0.50						Vegetable Growth
7	Arecanut plots	2021	0.30						Vegetable Growth
8	Multi Arecanut plot	2018	0.5						Vegetable Growth
9	Mixed fruit orchard	2016	0.5						Vegetable Growth
10	Mango variety plot	2018	0.5						Vegetable Growth
11	Mango Ultra High Density plot	2018	0.50						Vegetable Growth
12	Agro forestry	2019	0.25						Vegetable Growth
13	Green manure (Velvet Beans)	2021	0.50	25-05-2021	25-01-2022				Crop failure due to heavy rain.

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									
Pulses									
Oilseeds									
Fibers									
Spices & Plantation crops									
Floriculture									
Arecanut	2008	2022	0.5	Local	Nuts	12.86Kg	198848	598848	
Fruits									
Banana Fruits	2021	2022	0.1	Local	Fruit	72.75Kg	850	2850	
Guava	2010	2022	0.3	Alahabad safed	Fruit	295.6Kg	4825	10825	
Jack Fruit	2009	2022	0.1	Local	Fruit	6 No	200	600	
Jamun	2008	2022	0.1	Local	Fruit	270 Kg	7.500	19500	
Mango	2008	2022	1.0	Alphonso	Fruit	241.5 Kg	6000	12000	
Ramphala	2014	2022	0.1	Local	Fruit	1	10	20	
Sapota	2008	2022	0.2	Cricket Ball	Fruit	613.5 Kg	10945	20945	
Water apple	2014	2022	0.1	Local	Fruit	30 Kg	200	600	
Vegetables									
Curry Leaf	2008	2022	0.1	Local	Leaves	55Kg	567	1267	
Tomato	2021	2022		Commercial		17 Kg	100	170	
Radish	2021	2022		Commercial		75 Kg	500	830	
Drumstick Pod	2018	2022	On Bunds	PKM-1		174 Kg	1570	3570	
Drumstick Leaves	2018	2022	On Bunds	PKM-1		11 Kg	70	170	

Others (specify)									
Coconut	2009	2022	0.2		Fruit	247 Kg	1963	3963	
Lemon grass	2008	2022	0.1	Local	Leaves	2 Kg	10	40	
Tamarind	2005	2022	0.1	Local	Fruit	62.5 Kg	1000	5000	
Tends Coconut	2016	2022	0.5	Malayan Choughat	Nuts	2212 Nos	15185	30185	
Velvet beans Green manure	2021	2022	1Ha	Local	Seed	150 Kg	18,000	22,500	
FYM	-	2022	-	-	-	3 Tractor	17,525	27,525	
Sheep manure	2021	2022	-	-	-	25 Kg	150	250	

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	

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	729	28	
February	162	6	
March	35	5	
April	25	1	
May	-	-	
June	-	-	
July	-	-	
August	75	3	
September	50	2	
October	150	5	
November	97	5	
December	55	10	

14F. Database management

S.No	Database target	Database created
1	Data base on soil test, water test, raido talk, guest lecture and other extension activities including FLD and OFTs.	Updating has continued with this data base

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

(a) Rain Water Harvesting Structure

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.)		

(b) Micro-irrigation systems

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.)		

PART XV – SPECIAL PROGRAMMES

15.1 Paramparagath Krishi Vikas Yojana (PKVY): Nil

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): Nil

	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					
2					

15.3 Fertilizer awareness programmeorganised: Nil

State	Name of KVK	Details of Activities/programmeOrganised	Number of Chief Guests	No. of Farmers attended program	Total participants

15.4 Seed Hub: Nil

Crops	*Variety*	*Year of release*	*Production*				*No of farmers benefited/Sold to no. of farmers*	*Quantity seed sold (q)*
			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.)
	Ground nut (Summer)	Demo: G-2-52 Check: TMV-2	05	12	5	12
	Total		05	12	5	12

15.6 CFLDs on Pulses:

Sl.No.	Crop	Varieties demonstrated and check	Allocated		Implemented	
			Area (ha)	Demos (No.)	Area (ha)	Demos (No.)
1	Redgram	Demo: TS-3R Check: Local Seeds(Kempu Kalu)	10	25	10	25
2	Bengal Gram	Demo : JAKI-9218 Check: JG-14	10	25	10	25
	Total		20	50	20	50

15.7 Krishi Kalyan Abhiyan (Aspirational districts): Nil

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: Nil

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): Nil

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: Nil

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						

15.11 NARI: Nil

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)		
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
1505	22	4	-	-	2	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

15.13 KSHAMTA: Nil

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)
1	Davanagere	Davanagere	Agsanakatte	50	1,51,848.20	Maize Redgram Arecanut Banana Dairy	**A. OFTs:** 1. Effect of Nano fertilizers (N &Zn) on growth and yield of maize (2020-21). 2. Assessment of performance of improved carps, *pangassius* and farmed tilapia in farm ponds (2020-21). 3. Assessment of urea treated paddy straw along with grain mixture (starch source) in dairy animals (2020-21). 4. Feeding Urea-treated Paddy straw along with grain mixture (starch source) for better performance in dairy animals (2018-19). 5. Effect of Nano fertilizer (N and Zn) on growth and yield in hybrid maize (2021-22) **B. FLDs: 1** Integrated crop management in maize (2020-21). 2. Integratedcrop management in rice (2020-21). 3. Micronutrient management in tomato (2020-21). 4. Integrated pest and disease management in arecanut (2020-21). 5. Integratedcrop management in finger millet (NFSM-CFLD-Nutri cereals 2018-19). 6. Integrated Crop Management in Arecanut (2018-19). 7. Integrated Crop Management in Maize and redgram (2021-22) 8. Integrated Crop Management of Arecanut (2021-22) **C.** NICRA project activities (Additional village). **D.** Trainings and Extension activities	127734	279582

2	Davanagere	Nyamathi	Rameshwara	50	2,56,560.00	Maize Redgram Bengalgram Sorghum Onion Chilli Beans Tomato Arecanut Dairy	**A. OFTs:** 1. Assessment of groundnut varieties (2020-21). 2. Assessment of onion varieties for rabi season (2020-21). 3. Performance assessment of groundnut varieties for better yield (2021-22). 4. Assessemnt of Bhendi varities for higher yield (2021-22). 5. Assessment of liquid seeweed fertilizer on growth and yield of tomato (2021-22). **B. FLDs:** 1. Integratedcrop management in onion (2020-21). 2. Integratedcrop management in redgram (NFSM-CFLD-2020-21). 3. Integrated management of crossbred dairy animals (2020-21). 4. Fodder cafeteria (2020-21). 5. Integratedcrop management in bengalgram (NFSM-CFLD-2020-21). 6. Integrated crop management in Sorghum (2018-19). 7. Integrated Crop Management in Onion (2018-19). 8. Feeding dairy animals based on Indian standards for better performance (2018-19). 9. Demonstration of nutrition garden (2018-19). 10. Integrated Crop Management in Redgram (NFSM-CFLD 2018-19). 11. Integrated Crop Management in Bengal Gram (NFSM-CFLD 2018-19). 12. Integrated Crop Management in brown top millet (NFSM –CFLD- Nutri cereals, 2018-19). 13. Super grain bags to prevent stored grain pest (2020-21). 14. Demonstration of nutria cereals crop (DHFT-109-03 variety foxtail millet) and value addition. 15. Integrated Crop Management of Tomato (2021-22). Integrated Crop Management of Chilli (2021-22) **C.** PKVY project activities. **D.** Trainings and Extension activities. **Others:** Nutrigarden (2021-22)	216715	473275

PART XVI - FARMERS FEEDBACK ON ASSESSED/DEMONSTRATED TECHNOLOGIES OF CROPS / LIVESTOCK

16.1 Farmers feedback on performance of crop varieties/hybrids

Sl. No.	Crop varieties/hybrids assessed/ demonstrated	Farmer's feedback
1	Groundnut –G2-52	Best Varieity suited for both seeds and fodder
2	Redgram –TS-3R	Medium duration variety and red kernel seeds, resistant wilt

16.2 Farmers feedback on performance of agronomic practices

Sl. No.	Agronomic practices	Farmer's feedback
1.	Land preparation /Fall ploughing	helps in conservation of Moisture during the early showers, and helps in pest management
2	Sowing Across the slope	Best suited technology in rainfed farming and this helps in water and soil conservation in Maize
3.	Seed rate and Spacing	Plant population is necessary to get good yields and sowing with seed cum fertilizer drill helped in maintaining the population
3.	Intercropping of Pulses in Cereals 1:6(Redgram + Maize)	Intercropping technology suited in rainfed farming where there will long dry spells and failure of hybrid crop like maize.
4	Weed Management	Application of Pre and post emergent at right time had helped in increasing the yield of Maize and inter cultivation at right time in groundnut had improved the peg initiation
5.	Spraying of water soluble fertilizers like Pulse Magic	Spraying of Pulse magic at time of 50 % flowering had improved the flowering seeting and second spray after 15 days improved then pod size and redgram yield .

16.3 Farmers feedback onperformance of pest and disease management in crops

Sl. No.	Pest and disease management in crops	Farmer's feedback
1.	FAW in Maize	Timely suggestion of the spraying of emmactin benzoate @ 0.4 g/litre has reduced the incidence and increased yield of maize compared to other farmers
2.	Pod Borer in Redgram a. Installation of pheromone traps @ 4 number per acre	First time we are using the traps for the monitoring of the Pod borer at the early stages and we had reduced the 2 sprays
3.	Leaf webber in redgram	Spraying of the ovivicide for the management of pod borer at early instar had increased the pod yield of redgram

16.4 Farmers feedback onperformance of farm machinery technologies

Sl. No.	Farm machinerytechnologies	Farmer's feedback
1.	Mechanized Transplanting	It has reduced the depended on farmers and cost of transplanting had reduced and inturn reduced the production cost
2.	Seed Cum fertilizer drill	Sowing of the field crops specially maize and Groundnut, seed rate had reduced
3	Power sprayers	Using of power sprayers and correct dosage had reduced the risk of yield loss.

16.5 Farmers feedback onperformance of livestock and fisheries technologies

Sl. No.	Livestock/fisheries technologies	Farmer's feedback
1	**Growth performance of improved *carps, pangasius* and farmed *tilapia* in farm ponds**	1. Farm ponds can be used to generate secondary income through there improved fish species. 2. *Pangasius* performed best followed by improved *catla* and farmed *tilapia.*

PART XVII - FINANCIAL PERFORMANCE

17A. 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							
With KVK	State Bank of India	Davanagere	05624	ICAR-TaralabaluKrishiVigyan Kendra	30166599498	577002902	SBIN0005624

17B. Utilization of KVK funds during the year 2020-21(Rs. in lakh)

S. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	**Pay & Allowances**	157.70	153.42	157.59
2	**Traveling allowances**	0.50	0.25	0.26
3	**Contingencies**			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	2.91	2.41	2.90
B	POL, repair of vehicles, tractor and equipments	2.50	2.23	2.50
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)	1.00	0.93	1.00
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	1.25	1.25	1.25
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	3.32	3.32	3.31
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	0.97	0.97	0.97
G	Training of extension functionaries	0.50	0.50	0.50
H	Maintenance of buildings	1.00	1.00	1.00
I	Establishment of Soil, Plant & Water Testing Laboratory	0.25	0.25	0.25
J	Library	0.05	0.05	0.05
K	Extension Activities	0.50	0.50	0.50
L	Nutrigardens	0.25	0.25	0.25
TOTAL (A)		**172.70**	**167.33**	**172.33**

B. Non-Recurring Contingencies				
1	**Works**			
2	**Equipment including SWTL & Furniture**	2.43	2.43	2.43
3	**Vehicle** (Four wheeler/Two wheeler, please specify)	0.00	0.00	0.00
4	**Library** (Purchase of assets like books & journals)	0.00	0.00	0.00
TOTAL (B)		**2.43**	**2.43**	**2.43**
C. REVOLVING FUND		0.00	0.00	0.00
GRAND TOTAL (A+B+C)		**175.13**	**169.76**	**174.76**

17B-1. Utilization of KVK funds during the year 2021-22(Up to December 2021) (Rs. in lakh)

S. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	**Pay & Allowances**	183.50	146.47	133.98
2	**Traveling allowances**	1.00	0.68	0.67
3	**Contingencies**			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	2.00	1.82	1.81
B	POL, repair of vehicles, tractor and equipment	2.00	2.00	1.99
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)	1.00	0.78	0.78
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	0.50	0.40	0.40
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	5.98	3.95	3.92
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	1.00	0.56	0.56
G	Training of extension functionaries	0.50	0.19	0.19
H	Maintenance of buildings	0.00	0.00	0.00
I	Establishment of Soil, Plant & Water Testing Laboratory	0.30	0.02	0.02
J	Library	0.10	0.04	0.04
K	Extension Activities	0.50	0.26	0.26
L	Farmers Field School(FFS)	0.30	0.00	0.00
M	EDP	0.30	0.00	0.00
TOTAL (A)		**198.98**	**157.17**	**144.62**

B. Non-Recurring Contingencies				
1	**Works**	0.00	0.00	0.00
2	**Equipment including SWTL & Furniture**	0.00	0.00	0.00
3	**Vehicle** (Four wheeler/Two wheeler, please specify)	0.00	0.00	0.00
4	**Library** (Purchase of assets like books & journals)	0.00	0.00	0.00
TOTAL (B)		**0.00**	**0.00**	**0.00**
C. REVOLVING FUND		0.00	0.00	0.00
GRAND TOTAL (A+B+C)		**198.98**	**157.17**	**144.62**

17C. 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 2019	00.064	55.617	50.915	04.766
January to December 2020	04.766	45.022	49.767	00.021
January to December 2021	00.021	48.817	46.873	01.960

18. Details of HRD activities attended by KVK staff

Name of the staff	Designation	Title of the training programme	Institute where attended	Dates
Mr. Basavanagowda M.G.	Subject Matter Specialist (Horticulture)	Recent trends in Banana Production	NRCB, Trichi-Online	8-7-2021
Dr. Avinash T.G.	Subject Matter Specialist (Plant Protection)	Advances in integrated pest management	NCIPM & ICAR-ATRAI, Bengalur-Online	21-10-2021 to 23-10-2021
Dr. Avinash T.G.	Subject Matter Specialist (Plant Protection)	Role of Biological control in integrated pest management	ICAR-IIHR, Bengaluru-Online	9-11-2021
Mr. Basavanagowda M.G. Mr. Mallikarjuna B.O. Dr. Jayadevappa G.K Mr. Raghuraja J. Mr. Sannagoudra H.M. Dr. Avinash T.G.	Subject Matter Specialist (Horticulture) Subject Matter Specialist (Agronomy) Subject Matter Specialist (Animal Science) Subject Matter Specialist (Agri. Extension) Subject Matter Specialist (Soil Science) Subject Matter Specialist (Plant Protecion)	Training for personnel from Resource Institutes on implementation of FPOs	Center of Excellence, Bengaluru	23-11-2021 to 24-11-2021
Dr. Supriya P. Patil	Programme Assistant (Home Science)	Hands on training on Fruits and Vegetables Powder	ICAR-IIHR, Bengaluru-	29-12-2021 to 31-12-2021
Dr. Avinash T.G.	Subject Matter Specialist (Plant Protection)	Apprenticeship training on shaping rural youth	ASCI, New Delhi-Online	17-11-2021
Mr. Basavanagowda M.G. Dr. Avinash T.G.	Subject Matter Specialist (Horticulture) Subject Matter Specialist (Plant Protection)	Horticulture technologies for DFI	ICAR-IIHR, Bengaluru-Online	17-12-2021 to 18-12-2021
Dr. Jayadevapaa G.K	Subject Matter Specialist (Animal Science)	New startup in agri business	ICAR-Nivedi, Bengaluru-Online	8-10-2021
Dr. Jayadevapaa G.K	Subject Matter Specialist (Animal Science)	New startup in agri business	ICAR-NIVEDI, Bengaluru-Online	18-10-2021
Dr. Jayadevapaa G.K	Subject Matter Specialist (Animal Science)	Advances in animal health	ICAR-IVRI Izathanagar, UP-Online	18-10-2021

19. **Please include any other important and relevant information which has not been reflected above (write in detail).**

Other special activities

- Issued certificate for 3rd Batch students of Diploma in Agricultural Extension Services for Input Dealers (DAESI) & started the 4th batch of DAESI course
- On 23.12.2021 conducted 19th Scientific Advisory Committee Meeting in ICAR-Taralabalu Krishi Vigyan Kendra & presented the previous year Action Taken Report & collected suggestions for next years action plan. KVK IFS farmer Sri Onmkarappa S. was felicitated on the occasion of farmers day.
- Participated in the exhibition organized on behalf of "one day with farmer" by Agriculture Minister at Kenchikoppa in Naymathi taluk on 12.01.2021.
- RAWE programme was organized for 30 final year students of Dharwad Agricultural University from 04.01.2021 to 16.01.2021 & for 27 students from College of Horticulture, Hiriyur from 29.03.2021 to 10.04.2021.
- A one day Exposure visit to ICAR-KLE KVK, Balagavi was undertaken by Dr. T.N. Devaraja, Sr. Scientist & Head,ICAR- Taralabalu Krishi Vigyan Kendra & his SMS team on 15.03.2021 & studied the Agricultural technologies of that KVK.
- On 09.02.2021 Dr. T.N. Devaraja, Sr. Scientist & Head and Sri. Basavanagowda, SMS (Horticulture) ICAR- Taralabalu Krishi Vigyan Kendra visited National Horticultural Mela-2021 organized by Indian Institute of Horticultural Research, Bengaluru along with farmers and studied the latest technologies in horticulture.
- On 11.02.2021, 32 farmers from Rameshwara village in Nyamathi taluk were taken to Bio-centre, Department of Horticulture, Shimoga and Mango orchad at Doranal, Tarikere taluk for an exposure visit under PKVY.
- On 02.12.2021 Mr. B.O. Mallikarjuna had given information to farmers on the benefits of Direct Seeded Paddy in the "Chintana-Mantana" programme organized by District Administration for judicial water use.
- On 15.08.2021, 75th Independence day was celebrated at ICAR- Taralabalu Krishi Vigyan Kendra, Davanagere
- Parthenium Awareness Week was observed between 16.08.2021 to 22.08.2021 in ICAR- Taralabalu Krishi Vigyan Kendra.
- On 31.08.2021 "World Coconut Day" was celebrated at ICAR- Taralabalu Krishi Vigyan Kendra.
- Celebrated "Poshan Day" on 17.09.2021 in collaboration with IFFCO Ltd., Davanagere. During the celebration information on Nutri-garden, Tree planting awareness programme, BaKaHu technology for banana growers were provided to the farmers . One hundred banana plants were planted in the KVK instructional farm with the help of participant farmers.
- Recruitment of Dr. T.G. Avinash, SMS (Plant Protection), Dr. Supriya P. Patil, Programme Assistant (Home Science) & Mr. Karthik M. (Driver cum Mechanic) and Sri. Prabhu Prasad N.K., Assistant was completed in 2021.
- On 15.10.2021 celebrated "Mahila Kisan Diwas " in collaboration with Sri. Raghavendra Hi-tech PU college, Davanagere. During the celebration essay competition was organized & distributed prizes for rural girl students.

- On 16-10-2021 World Food Day was celebrated at Rameshwara Village, Nyamathi Taluk. During the period special lecture was given on importance of Nutrients & Value addition.
- On 27-09-2021 "Mass Deworming Campaign" was conducted in collaboration with Virbac Animal Pvt. Ltd., Bangalore at Marikunte, Jagaluru Taluk (1920 Small Ruminants Dewormed).
- "Swachha Bharath Abhiyan" was conducted by cleaning the KVK premises and creating awareness program on cleanliness. On the occasion of "Gandhi Jayanthi and Lal Bahadur Shastriji Jayanthi" cleanliness campaign was conducted on 02- 10-2021.
- Swacchata Campaign was organised from 16-12-2021 to 31-12-2021.
- Conducted Ex-Trainees Sammelana on 30.10.2021 and distributed training certificates of ASCI – Dairy Farmer/Entrepreneur (40) and ASCI-Friends of Coconut Trees (40) training programmes.
- RAWE programme for final year B.Sc Agri students from UAS, Raichur was organized in collaboration with IAT, Davanagere from 15-11-2021 to 1-12-2021.
- Vigilance Awareness week was celebrated from 26-10-2021 to 2-11-2021 by organizing vigilance awareness programmes, students, farmers and extension personnel.
- World Yog Day was celebrated by staff members of KVK on 21-6-2021.
- Kissan Samman Diwas was celebrated on 23-12-2021 and felicitated Sri. Omkarappa S. IFS farmer guided by KVK from S. Mallapura village, Nayamthi tq. on the occasion.

- **Agriculture Technology week.**

Agriculture Technology Week celebrated on 4th and 5th of December 2021 in collaboration with Department of Agriculture, IAT, Krishik Samaja, Davanagere University, IFFCO Ltd., Davanagere on 4-12-2021, the programme was inaugurated by Sri Mahantesh Belagi, Deputy Commissioner, Davanagere and special lectures on minor millets were organized on the occasion of 'Women in Agriculture Day' on 5-12-2021, on the occasion of 'World Soil Day', the progrmmes was inaugurated by Dr. Gayathri Devaraja, Registrar, Davanagere University and Dr. Vijaya Mahanthesh Danammanavar participated as Chief Guest. Special lectures on Soil Health Management and Water Conservation were organized. Millet mela was organized on the occasion and millet Dosa prepared by farmer was supplied.

Special Activities

Sl. No.	Subject	Activities
1.	**BaKaHu (Raw Banana Flour)**	**Among all Krishi Vigyan Kendras in the country our KVK is the first one to organize Online workshop on Preparation of BaKaHu on 27.07.2021**. After the workshop, farmer entrepreneurs were encouraged to takeup this enterprise. Our KVK has purchased one drier for the purpose of giving training on BaKaHu preparation. Now, the sale of BaKaHu has started in Saturday Bazar of ICAR-Taralabalu KVK, DVG. We have the confidence that BaKaHu will get good marketing price in future.
2.	Use of Gou-krupamrutha jala	Krishi Vigyan Kendra has started preparation and use of Gou-krupambrutha (Consortia of microorganisms in liquid form) for all its crops in the instructional farm & got encouraging results. This Micro-organism solution was given to more than 100 farmers as culture free of cost.
3.	Doubling the Farmer's Income (Documentation of Success stories of 110 farmers)	We have documented the success stories of 110 farmers (Big, Marginal & Small) on Doubling the Farmers Income in the proforma provided by the Central Govt. The technologies provided by KVK on cultivation of Agricultural & Horticultural crops, Animal Husbandry, Fisheries, Apiculture and etc. for doubling the farmers income is documented and submitted.
4.	Establishment of Urban Mini-forest	ICAR-Taralabalu KVK has established 2 mini-forests(Miyawaki) in the instructional farms. Inspired by this activity, Davanagere Maha Nagara Palike, Davanagere University, District Agriculture Training Centre (DATC) have taken up the establishment of mini forests in their operational areas
5.	State level Nutri-Cereals Mela	A 2-day state level Nutri-Cerelas Mela was organized in ICAR-Taralabalu KVK premises in collaboration with Department of Agriculture, Davanagere During the mela sales cum exhibition of Nutri-cereals & its value added products was organized for the benefit of citizens of Davanagere city and farmers. During the mela Krishi Ghosti was also organized for the benefit of farmers. More than 2000 people participated & got the benefit.
6.	Solid Waste Management training programme for Self Help Groups	Five days training programme for 4 Non-Government Organization through Zilla Panchayat was organized in our KVK campus. More than 200 farm women were participated in the training programme.
7.	RAWE-IAT training programme for Agriculture and Horticulture students	More than 200 students from 3 Farm universities participated in the event

8.	New recruitment for KVK	Persons for SMS (Plant Protection), Programme Assistant (Home Science), Assistant and Driver posts were recruited & made full strength of KVK.
9	Patent Published (No. 202141053272A)	"Enhanced degradation 2-Chloro-bipheyl (CB) by Stenotrophomonas maltophila GS-108 BPHB Gene". Dr Gayathri Devaraja Dr. Somaraja P.K. Dr. T.N. Deavaraja

Ongoing Projects

1. **Taralabalu Dist. Bio-fuel research and Demonstration centre**

   Taralabalu Dist. Bio-fuel research and Demonstration centre established under Karnataka State Bio-fuel Development Board provided information on Biofuel production information conducted 9 trainings, 11 awareness programmes, 6 Exhibitions and celebrated Bio Fuel day.

2. **Farmer Producers Organizations**

   ICAR-Taralabalu Krishi Vigyan Kendra as Resource Institute initiated 18 farmer producers organizations in Davanagere, Haveri and Chitradurga Districts.