ICAR-ATARI, Pune

DETAILS OF ANNUAL PROGRESS REPORT OF KVKs DURING 2020

(January 2020 to December 2020)

1. GENERAL INFORMATION ABOUT THE KVK

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

Address with PIN code	Telephone		E mail	Website address & No. of visitors (hits)
	Office	FAX		
Krishi Vigyan Kendra, Satara I, At/Post – Kalwade, Tahsil – Karad, District – Satara, State – Maharashtra, Pin – 415539	02164 – 288070	9423529137	pckvkkarad@gmail.com	www.kvkkarad.co.in Visitors - 5322

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

Address	Telephone		E mail	Website address
	Office	FAX		
Krishi Vigyan Kendra, Satara I, At/Post – Kalwade, Tahsil – Karad, District – Satara, State – Maharashtra, Pin – 415539	02164 – 288070	9423529137	-	-

1.3. Name of the Senior Scientist and Head with phone & mobile no.

Name	Telephone / Contact		
	Office	Mobile	Email
Dr. B.S Khandekar	9423529137	9423529137	bskhandekar4@gmail.com

1.4. Year of sanction: June 2002 (NGO)

1.5. Staff Position (as on 31 December, 2020)

				If Permanent, Please indicate			If Temporary, pl. indicate the consolidated amount paid (Rs./month)
Sl. No.	Sanctioned post	Name of the incumbent	Discipline	Current Pay Band	Current Grade Pay	Date of joining	
1.	Senior Scientist and Head	Vaccant					
2.	Subject Matter Specialist	Dr. Bharat S.Khandekar	Soil Science	19679	5400	03/05/2012	

3.	Subject Matter Specialist	Mr. Nilesh H. Thorat	Agronomy	16879	5400	20/06/2016	
4.	Subject Matter Specialist	Mr. Vishal R. Mahajan	Agricultural Extension	16230	5400	13/02/2017	
5.	Subject Matter Specialist	Mr. Shivam Patil	Horticulture	15600	5400	21/9/2018	
6.	Subject Matter Specialist	Dr. Priyadershani Deshmukh	Home Science	15600	5400	3/10/2018	
7.	Subject Matter Specialist	Vaccant	Plant Protection	Vaccant	Vaccant	Vaccant	
8.	Programme Assistant	Vaccant	Veternary	Vaccant	Vaccant	Vaccant	
9.	Computer Programmer	Mrs. Shubhapradha Mohite	Computer	9300	4200	22/10/2018	
10.	Farm Manager	Mr. Prakash P. Thorat	Farms	12923	4200	28/12/2010	
11.	Accountant/Superintendent	Vaccant	Accountant	Vaccant	Vaccant		
12.	Stenographer	Mr . Pawan L.Joshi	Computer Science	5428	2400	11/05/2017	
13.	Driver 1	Mr Sandeep J. Bhilare	General Admn	9750	2000	01/11/2011	
14.	Driver 2	Mr. Vikas B. Chorge	General Admn	6714	2000	17/11/2016	
15.	Supporting staff 1	Mr. Shankar M. Kumbhar	General Admn	8415	1800	02/12/2002	
16.	Supporting staff 2	Vaccant	General Admn	Vaccant	Vaccant		

1.6. Total land with KVK (in ha) :

S. No.	Item	Area (ha)
1	Under Buildings	0.13
2.	Under Demonstration Units	2.00
3.	Under Crops	10.40
4.	Horticulture	4.00
5.	Pond	0.47
6.	Others if any	3.00
		20

1.7. Infrastructural Development:

A) Buildings

S. No.	Name of building	Source of funding	Stage	
			Complete	Incomplete

			Completion Year	Plinth area (Sq.m)	Expenditure (Rs.)	Starting year	Plinth area (Sq.m)	Status of construction
1.	Administrative Building	ICAR	93 – 94	446.00	970777 898660	-	-	-
2.	Farmers Hostel	ICAR		329.40		-	-	-
3.	Staff Quarters (6)	ICAR	93 – 94	199.12	777693	-	-	-
4.	Demonstration Units (2)	KVK R/F	05 – 06	70.00	280563	-	-	-
5	Fencing							
6	Rain Water harvesting system	RKVY	05 – 06	64.00	529450	-	-	-
7	Threshing floor							
8	Farm godown							
9	ICT lab							
10	Other							

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Tractor	2002	420000	-	Working
Motorcycle	2003	37000	-	Working
Jeep	2020	600000	10500	Working

C) Equipments & AV aids

Name of the equipment / Implements	Year of purchase	Cost (Rs.)	Present status
Computer -2	March 2003	60000	Need to Upgrade
Printer-1	February 2003	11550	Not Working
UMAX Scanner -1	February 2003	5000	Working
UPS	February 2003	13500	Needs to replace
Colour Printer	July 2002	4500	Not working
Audio System- Ahuja	March 2005	8575	Working
Mic – 2	March 2005	1360	Working
Speakers – 2	March 2005	2050	Working
TV Onida 29 ''	March 2005	16690	Working
DVD Onida	March 2005	4785	Working
Laptop	March 2005	60770	Working
Printer Cum Fax	March 2006	7000	Working
Digital Camera	March 2004	20000	Not Working
LCD Projector –Optoma	March 07	59223	Not Working
LCD Projector Screen	March 07	11289	Not Working

Video Camera Digital – Sony	March 07	29432	Not Working
Multi Seed Drill Planter	March 03	27600	Working
Tractor Trolley	March 03	55000	Working
Tractor Side Plough	March 03	8730	Working
Rotavator (130DI)	March 2006	86431	Working
Sugarcane Rotavator ridger	March 2006	21500	Working
Plough Popular	March 2006	36036	Working
Stabilizer for Xerox	March 2008	9175	Not Working
Xerox machine- Canon Make	March 2008	132500	Not Working
Computer (Dell Optiplex 755)-5	March 2009	Funded by ICAR/ERNET	Working
Server (Dell PE 2900) -1	March 2009		Working
Dot matrix printer (TVS MSP-245) – 1	March 2009		Working
Dax 24 port Switch (DX-5024-GSE) – 1	March 2009		Working
650 VA UPS (APC) – 5	March 2009		Working
3 KVA UPS (APC) with 16 batteries – 1	March 2009		Working
HP Laserjet P 1505 Printer – 1	March 2009		Working
HP Scanner G3100 – 1	March 2009		Working
Computer table (Godrej) – 6	April 2009		Working
Printer table (Godrej) – 2	April 2009		Working
4103 I Chair – 10	April 2009		Working
AC (Onida 1.5 Ton) – 1	April 2009		Working
1.8 M Prodelin Antenna – 1	July 2009		Not Working
Viasat Linkstar IDU – 1	October 2009		Not Working
5 Watt C-Band ODU with external PSU – 1	October 2009		Not Working
LNBC – 1	October 2009		Not Working
VOIP & FAX equipment – 1	October 2009		Not Working
Seed cum fertilizer drill	March 2009	30000	Working
Grain & seed cleaner	March 2009	20000	Working
Bullock drawn Sugarcane fertilizer Driller	March 2009	5000	Working
Genset Kirloskar	March 2009	249700	Not Working
Solar battery charging system	March 2009	78000	Not Working
Solar Integrated power system with Battery backup, fitting & other	March 2009	357013.18	Not Working
Solar water heater for guest house	March 2009	85500	Not Working
Water tank 1000 lit	March 2009	2644	Working
Meeting hall with colour, table, chair, carpet, POP, curtains, Aluminum windows & electric fitting etc.	March 2009	96441	Working
Wooden sofa set	March 2009	8437	Working
Microphone Ahuja	March 2009	2715	Working
Office cupboard & rack	March 2009	29700	Working
AC for Meeting hall – 2	March 2009	37000	Working
HP Laser colour printer	April 2016	35300	Working
Laser printer Cannon	August 2016	8000	Working
Brookbond Tea and coffee machine	April 2016	21300	Working
Laptops with inverter and internet system (Two)	March 2017	95000	Working

1.8. Details of SAC meetings conducted in the year 2020

Date	Name and Designation of Participants	Salient Recommendations	Action taken
28/12/2020	Dr. Lakhan Singh, Director, ATARI, Pune and Mr. Avinash Khare, Trustee, Kalyani Gorakshan Trust chaired the meeting. Also Mr. Vijaysingh Kate, Kalyani Gorakshan Trust, from line department Mr. Ashok Desai, Project Director, ATMA, Satara, Mr. U.K. Desai, Dy. Project Director, ATMA, Satara, Dr. Ashok Pisal, Extension Agronomist , Regional extension center, Kolhapur, Mr. Daulatrao Chavan, Sub-divisional agricultural officer, Karad, Dr. Mahesh Babar, SMS-Agricultural Extension, KVK, Borgaon, Dr. Waybase, Veterinary officer, Kale, Mr. R.S. Jagtap, Circle Agricultural officer, Undale	• Need to overall improvement in KVK farm and activities. • Improvement in SAC presentation before meeting. • All SMS maintain dairy for record of FLD's and OFT's observation and extension activities. • In FLD and OFT take village level observations and pest incidence level. • Use professional camera while taking photographs. • Implement all KVK FLD's and OFT's and other extension activities in adopted village of doubling the farmers income. • Generate DFI village. • Proper management in farm. • Convey to farmers for adopting floricultural in rural area against monocroping. • In KVK farm, Use diversification of crop model. • Develop agro tourism unit. • Increasing visibility of KVK. • Filling all KVK vacant post. • Demonstration unit must proper working • Instructional farm should better	

		than other farmers. • In KVK farm demonstrate fruit technology.	

2. DETAILS OF DISTRICT / JURISDICTION AREA OF KVK

Sr. No	Name of Taluka
1	Karad
2	Patan
3	Koregaon
4	Man
5	Khatav

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

S. No	Farming system/enterprise	Names of talukas covered
1	Mahabaleshwar	Agriculture + Horticulture
2	Wai	Sugarcane based (Agriculture) + Vegetable based (Horticulture) + Dairy
3	Khandala	Dry land Farming
4	Phaltan	Agriculture + Dairy + Semi dry land
5	Man	Dry land Farming
6	Khatav	Dry land Farming
7	Koregaon	Agriculture + Horticulture + Dairy
8	Satara	Sugarcane based Agriculture + Horticulture + Dairy
9	Javali	Agriculture + Horticulture + Dairy
10	Patan	Agriculture + Horticulture + Dairy
11	Karad	Sugarcane based (Agriculture) + Dairy + Horticulture

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

a) Soil type

Sl. No.	Agro-climatic Zone	Characteristics
1	WESTERN GHAT ZONE	Mahabaleshwar and western part of Javali, Patan and Wai lies in this zone. The height is near about 1500 – 1900 meter from sea level. Soils are majorly red lateritic with very shallow soil depth.
2	SUB MOUNTAIN ZONE	Western part of Satara, Patan, Javali and Wai Tahsil are forms this zone. This zone receives 1500 to 2500 mm annual rainfall. Soil type in this zone is light, medium type & well drained.
3	WESTERN MAHARASHTRA PLAIN ZONE	Eastern part of Satara & Wai, Western part of Karad & Koregaon lies in this zone. The Krishna and Koyna river flows in this zone. Black fertile soils.
4	WESTERN MAHARASHTRA SCARCITY ZONE	This zone consists of Khatav, Man, Phaltan, and Khandala & Koregaon Tahsil. This zone receives 500 to 600 mm annual rainfall. Soils majorly medium to deep black cotton soils.

b)Topography

S. No.	Agro ecological situation	Characteristics
1	MOUNTAIN ZONE	Mahabaleshwar and western part of Javali, Patan and Wai lies in this zone. The height is near about 1500 – 1900 meter from sea level. Undulating topography with light red soils and annual rainfall ranges from 3000-5000 mm. The Paddy, Nagali & Maize is the major crop of region.
2	SUB MOUNTAIN ZONE	Western part of Satara, Patan, Javali and Wai Tahsil are forms this zone. This zone receives 1500 to 2500 mm annual rainfall. Soil type in this zone is light type & well drained. Paddy, Jowar, groundnut, Sugarcane, and vegetables are the major crops of this zone.
3	PLAIN ZONE	Eastern part of Satara & Wai, Western part of Karad & Koregaon lies in this zone. The Krishna and Koyna river flows in this zone. Black fertile soils and 650 mm to 1000 mm annual rainfall are the characteristics of this zone. The maximum temperature is up to 400c in Apr-May and average minimum temperature is 90c in the month of Dec-Jan. Potential area in Kharif season. Black soils to medium light soils with rainfall 650-1000mm. Sugarcane, groundnut, soybean, sorghum, rajma, turmeric ginger and paddy are major Kharif crop and sorghum, wheat & gram are rabi crops. Vegetable crops are also potential crops of this zone
4	SCARCITY ZONE (DPEP)	This zone consists of Khatav, Man, Phaltan, and Khandala & Koregaon Tahsil. This zone receives 500 to 600 mm annual rainfall. Very low rainfall and hot arid temp is typical characteristic. Rainfall observed in two spell mainly in June –July and Sept. Average Maximum temp up to 410c & min temp 14-150c. Evaporation rate 1800mm per year in this area. Soils of this zone are medium to light. Pearl Millet, sorghum and pulses are major Kharif crop in this region while sorghum, gram &wheat are rabi crops.
5	ANNUAL IRRIGATED	South eastern part of Phaltan, Middle arts of Karad along with Krishna Koyna river, Central part of Satara & Wai. Black fertile soils and 650 mm to 1000 mm annual rainfall are the characteristics of this zone. Sugarcane, groundnut, soybean and turmeric are major Kharif crop and wheat, summer groundnut & gram are rabi crops. Vegetable crops are also potential crops of this zone

2.3 Soil Types

S. No	Soil type	Characteristics	Area in ha
1	Medium black to Deep black	These are found along the belts of the Krishna and Koyna rivers. They are brownish to dark brown in colour. The chemical analysis of the soil shows that the soil is rich in lime. At certain places like Phaltan, a clear band of lime is found at a depth of a few feet in the soil. The nitrogen content of the soil is fairly good and the organic matter content of the soil is high. The soil is rich in clay content and colloidal complex is fully saturated with exchangeable bases. This is due to dry spell of monsoon. Medium black soil is also to be found in Koregaon, western part of Vaduj, Khandala Taluka and in the northern part of the Phaltan Taluka along the Nira River. The soils in the eastern part of the taluka are deep to medium black. Crops like groundnut, wheat, Sorghum (rabi) and, at certain places, where irrigation facilities are available, sugar-cane and turmeric are taken.	42800
2	Lighter soils	Light soil of the district is locally called as malran or murum mal and brown	574000

		in colour. These are hard and rocky and are commonly found in the planes on the eastern side. These are also to be found on the slopes of the hillocks situated in the eastern side. These soils are well-drained, light in nature and sandy loam in texture. They are rich in lime but shallow in depth. The chemical analysis of the soil indicates that they are deficient in fertility constituents like nitrogen, organic carbon and phosphorus. However, the potash contents of the soils are fairly high. The clay complex of the soils is poor in exchangeable bases. Therefore, the soils in this category yield good produce only if bulky manures and heavy fertilizers are applied and proper irrigation is provided. At certain places, where sufficient water is available, paddy crop is also taken. However, the soil is better suited for Pearl Millet.	
3	Lateritic soils	Lateritic soils are red in colour and are mainly found in Mahabaleshwar hills and along the whole mountain range comprising the entire Koyna valley On account of the red colour of the soil, they are locally known as tambad mati at certain places blending of the black soils with laterite or red soils has taken place. On account of heavy rainfall in this region, these soils are subjected to heavy leaching and a high degree of erosion. The reason for the red colour of the soil is the high content of Iron Oxides in the sesqui-oxides of these soils. The depth of the soil varies from 1' to 10'. The chemical analysis of these soils indicates that they are rich in clay and clay-loam in texture. They are rich in nitrogen but poor in organic matter. The main crops taken on them consist of the rice and hill millets like ragi, vari and nachni. At certain places, rice is taken by adopting the kumri cultivation. At places with high altitudes, especially around Mahabaleshwar, fruits like strawberries, goose-berries which require cold climate are also grown.	425400

2.4. Area, Production and Productivity of major crops cultivated in the area of jurisdiction of KVK (2020)

S. No	Crop	Area (ha)	Production (MT)	Productivity (q /ha)
A	Cereals			
	Paddy	45000	74500	16.55
	Wheat	37100	63300	17.07
	Kh. Sorghum	22400	27900	12.47
	Ragi	4400	4400	9.93
	Rabi Sorghum	137000	105200	7.67
	Pearl Millet	67800	58200	8.59
	Maize	18200	53500	29.40
	Other Cereals	2600	3200	19.50
B	Pulses			
9	Green Gram	8000	3600	4.51
10	Black Gram	3800	2000	5.29
11	Red gram	2000	1000	4.75
12	Gram	30000	26400	8.80
13	Other Pulses	36700	14500	5.80
C	Cash crops			

14	Sugarcane	80600	7979400	99 T
15	Turmeric	963	2334	2424
16	Ginger	966	3361	3479
D	Oilseeds			
17	Groundnut	32800	43800	13.35
18	Soybean	73000	142500	19.52
19	Sunflower	100	100	6.00
20	Safflower	700	200	3.00
21	Summer Groundnut	2500	6000	24.00
22	Other Oilseeds	100	00	4.25
E	Vegetables			
23	Potato	4805	7207	1500
24	Onion	6549	60187	9190
25	Tomato	1164	8286	7119
26	Chilli	929	2775	2987
27	Brinjal	753	7294	9687
28	Pea	336	1017	3027
29	French bean	5746	6229	1084
30	Coriander	2834	804	284
F	Fruits			
31	Mango	879	7559	8600
32	Banana	244	2693	11037
33	Guava	319	3782	11856
34	Pomegranate	984	9381	9534
35	Grapes	232	3999	17237
G	Greenhouse	52	---	---

Source: District agriculture department.

2.5. Weather data (2020)

Month	Rainfall (mm)	Temperature 0 C		Relative Humidity (%)	
		Maximum	Minimum	Maximum	Minimum
January	0	29.43	15.08	94.21	36.71
February	0	31.40	17.32	96.28	38.12
March	0	33.17	18.32	97.25	37.60
April	0	36.2	20.05	117.1	32.2
May	0	36.70	22.79	89.55	31.92
June	159.4	30.25	22.12	111.49	58.63
July	178.2	28.69	22.01	107.08	64.67
August	156.8	27.41	21.62	101.41	70.21
September	152	29.95	21.04	100.58	61.19
October	310	30.28	20.82	102.72	54.68
November	0	30.06	17.55	87.86	39.42

December	0	29.69	15.55	85.04	34.97
Total	**956.4**	31.10	19.59	99.21	46.69

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

Category	Population	Production	Productivity
Cattle			
Crossbred	88072	273023	3100
Indigenous	24300	21870	900
Buffalo	149000	208600	1400
Sheep	274638	3427	12.5
Goats	88072	273023	3100
Pigs			
Crossbred			
Indigenous			
Rabbits			
Poultry			
Hens	2306514	2491 lakh	108
Desi	607300	3427	1.3
Category		Production (Q.)	Productivity
Fish (Reservoir)			

2.7. Details of Operational area / Villages

Taluka / Block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
Patan	Bhairewadi (17-18)	Paddy, Finger millet, wheat, Mango, Dairy, Poultry	Low productivity of cost and animals Low yields of paddy finger millet due to use of imbalance nutrients lack of knowledge about Plant Protection Very limited irrigation water for rabi only	Integrated nutrient management in paddy and finger millet Integrated pest management Livestock and poultry management empowerment of rural youth and women
Karad	Rethare kh (2016 -17)	Major crops: Groundnut, Paddy, Sorghum, Soybean, Wheat, Gram, Mango Enterprises: Dairy Goatary Poultry	Low productivity of crops & animals Low yield due to imbalance use of nutrients. Low yield in Groundnut due to use of local variety and disease Low quality of local mango Unemployment	Improving the productivity of Paddy, Groundnut, Wheat Jowar and Red gram Integrated Nutrient Management in different crops Integrated Pest Management in Gram and Rice Livestock and Poultry management Empowerment of Rural Women & Youth, Dissemination of new improved Varieties and technologies
Karad	Nigadi (2017 – 18)	Major crops: Soybean, Groundnut, Sorghum, Sugarcane, Wheat, Gram, Ginger, Turmeric Enterprises: Dairy Goatary Poultry	Low productivity of crops & animals Low yield due to imbalance use of nutrients. Low yield in Groundnut & Soybean due to use of local variety and disease Low yield of Rabi sorghum due use of local variety Water scaracity Unemployment	Improving the productivity of Soybean, Groundnut, Wheat Jowar and gram Integrated Nutrient Management in different crops Integrated Pest Management in Gram & Pigeon pea Livestock and Poultry management Soil and water conservation practices Empowerment of Rural Women & Youth, Dissemination of new improved technologies

Khatav	Kumthe Nagache (2017 – 18)	Major crops: Maize, Onion, Sorghum, Wheat, Gram, Pea Enterprises: Dairy Goatary Poultry	Low productivity of crops & animals Low yield due to imbalance use of nutrients in maize. Low yield of Rabi sorghum due use of local variety Water scaracity Unemployment	Improving the productivity of Maize, Wheat Jowar and gram Integrated Nutrient Management in different crops Integrated Pest Management in Gram & Pigeon pea Livestock and Poultry management Soil and water conservation practices Empowerment of Rural Women & Youth, Dissemination of new improved technologies
Karad	Mundhe (2018 – 19)	Major crops: Sugarcane, Soybean, Groundnut, Wheat, Paddy & Gram, Enterprises: Dairy Goatary Poultry	Low productivity of crops, animal, Low yield in soybean & wheat due to Rust and local variety Low yield of sugarcane due to close planting, imbalance fertilizer use & poor drainage. Low yield in Gram due to Pod borer Poor drainage, Unemployment	Improving the productivity of Sugarcane, Soybean, Paddy, Gram, Wheat, Gr. nut Introduce New varieties of Soybean, Wheat and Rabi Jowar. INM in sugarcane Improve soil drainage Livestock and Poultry management Empowerment of Rural Women, Youth, Dissemination of new improved technologies

2.8. Priority thrust areas:

Crop/ Enterprise	Thrust area
SUGARCANE	Use of Integrated Nutrient Management – Trash management in Ratoon, Use of NPK briquette & fertilizers as per STCR
	Use of Biofertilizer & Green Manuring crops (Organic inputs)
	Introduce wide row and single eye bud planting in sugarcane (Nursery management and ICM
	Use of Drip & Long rows method of irrigation (Micro irrigation)
	Create awareness for maintenance of good quality planting material on its own farm and promote low cost sugarcane nursery techniques (Farm mechanization)
	Create awareness about Pest and Disease management especially with IPM technology (IPDM)
SOYBEAN	Introduction of new moderately rust resistant KDS-726 and DS – 228 varieties (Varietal evaluate)
	Create awareness for use of recommended Bio fertilizer for seed treatment, Use of Balance fertilizers & also use of spray grade fertilizer (INM)
	Use of growth retardant like Lihocine in heavy black soils (ICM)
	IPM of Spodoptera leutera and other pests and diseases (IPM)
GROUNDNUT	Introduction of new varieties likeKDG-128, JL – 286, & JL-501 (Varietal evaluate)
	Use of BBF method of planting (ICM)
	Use of Integrated Nutrient Management in Groundnut (INM)
	Control of Tikka, Rust and other diseases in Kharif Groundnut by following IDM technology (IPDM)
RICE	Use of Four Fold Rice planting method (Resource conservation technology)
	Use of Integrated Nutrient Management by promoting use of Urea DAP & NPK Briquette. (IPM)
	Proper management of water & use of IPM technique control of disease pest. (Water management)
WHEAT	Use of correct planting method with recommended seed rate and timely sowing.(ICM)

	Use of Integrated Nutrient Management in Wheat. (INM)
	Introduction of new rust resistant and high yielding varieties like Trimbak, Samadhan, MACS-6222 (Varietal evaluate)
	Biological control Wheat aphids and rust management.(Biological control of pest and disease)
RABI SORGHUM	Introduction of new varieties as per soil type like Phule Vasudha, Phule Anuradha, Phule Revati, Phule Suchitra etc. (Varietal evaluate)
	Create awareness for in situ water conservation & provide two protective irrigations. Zero tillage sowing for water conservation and more yield. (Resource conservation technology)
	Use of Integrated Nutrient Management in Rabi Jowar (INM)
	Management of Shoot fly and smut diseases.(IPM)
GRAM	Use of new varieties like Digvijay & Vijay (Varietal evaluate)
	IPM in Gram for control of pod borer and wilt (IPM)
	Change the existing method of planting with ridges & furrow and BBF sowing, use of Sprinkler irrigation method. Create awareness for proper water management in Gram (ICM)
	Use of Integrated Nutrient Management, use potash with FYM and foliar nutrient application (INM)
Redgram	Introduction of new high yielding improved varieties like Vipula (Varietal evaluate)
	Use of Integrated Pest Management and promote Red gram intercropping in other crops (IPM)
BANANA	INM, Foliar spray with PDH and 00:00:50 and Bunch feeding technique for increase bunch weight, Proper Fertigation technique, Management of pest and diseases, Banana Marketing etc (ICM)
Mango	INM, ICM, IPM (Rejunation of old orchid)
Potato & PEA	Seed treatment, INM (IPDM)
Poultry, Dairy and goatery	Impart the knowledge regarding Dairy & Goatary farming, introduction of Giriraja and vanraja poultry breeds in backyard and supply of day old chicks. (Poultry management, goat and sheet management)
GENERAL	Improve drainage by use of Mole plough (Reclaimaty of problematic solution)
	Reclamation of Problematic soils. Balance use of Fertilizers on the basis of soil test report. Judicial use of water for Irrigation
	Recycling of Organic Farm Waste & Vermicompost production (Vermicompost production)
	Use of different weedicides & cultural practices for weed control and to overcome labour shortage problem (INM)
	Adoption of recommended crop rotation practices (IFS), crops diversification
	Improve quality and quantity production in greenhouse
	Integrated pest management especially Biological control (IPM)
ENTERPRISE	Promote use of Zero tillage and BBF sowing, Groundnut Decorticator, Groundnut stripper, twin wheel hoe, vaibhav sickle, Laxmi sickle, Okra mitten, and maize sheller like Location specific Drudgery Reduction technology.
	Improve the self employment by imparting skills through vocational training.

3. TECHNICAL ACHIEVEMENTS

3.1. A. Details of target and achievements of mandatory activities

OFT				FLD			
1				2			
Number of OFTs		Number of farmers		Number of FLDs		Number of farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
8	5	62	45	16	12	208	156

Training				Extension Programmes			
3				4			
Number of Courses		Number of Participants		Number of Programmes		Number of participants	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
50	48	1000	1123	200	241	4000	4577

Seed Production (Qtl.)		Planting materials (Nos.)	
5		6	
Target	Achievement	Target	Achievement
100	125	500	1000

Livestock, poultry strains and fingerlings (No.)		Bio-products (Kg)	
7		8	
Target	Achievement	Target	Achievement
1200	970		

3.1. B. Operational areas details during the year 2020

S.No.	Major crops & enterprises being practiced in cluster villages	Prioritized problems in these crops/ enterprise	Extent of area (ha/No.) affected by the problem in the district	Names of Cluster Villages identified for intervention	Intervention (OFT, FLD, Training, extension activity etc.)*
1	Sugarcane	Faulty interculturing operations in ratoon sugarcane. No sett treatment. Lack of knowledge of INM, IPM		Nigadi (Karad)	FLD, training on zero tillage ratoon management
		Low yield due to improper nutrient management Loss of organic matter Less nutrient use efficiency Low yield		Mundhe (Karad)	OFT- 16ssessment on sugarcane
2	Gram	lack of awareness about Varieties, INM, IPM, INM and latest technologies		Targaon (Koregaon)	FLD on ICM Package, Training on Improved production in Gram
		1. Heavy attack of pod borer Helicoverpa armigera and Gram wilt caused by Fusarium oxysporum f.sp. ciceri 2.. Unawareness about the IPM practices		Mundhe (Karad)	Training programme on IPM and FLD on Trichoderma seed treatment for wilt management
		Storage losses because of stored grain pests			Training on Stored grain pest management
		1.Imbalance use of fertilizer 2.Less tillering and improper grain filling 3.Low use of fertilizers. 4. Unawareness of irrigation and spraying.		Nigadi (Karad)	FLD on Nutient Mangement in Gram
3	Wheat	Shattering, small grain size and low yield. Problems observes in existing Trimbak variety		Vihe (Nigadi)	OFT Demonstration of P. Samadhan, training on GAP
		Infestation of aphids, jassids and Pink stem borer in early stage of crop growth		Tondoshi (Patan)	FLD and training for effective management of Wheat aphids, jassids and stem borer
		1.Imbalance use of fertilizer 2.Less tillering and improper grain filling 3.Low use of fertilizers.		Nigadi (Karad)	FLD on Nutient Mangement in Wheat
4	Groundnut	Low plant population & poor drainage, aeration and land preparation and use of more N fertilizers		Mundhe (Karad)	FLD and Training on BBF Method of planting and INM

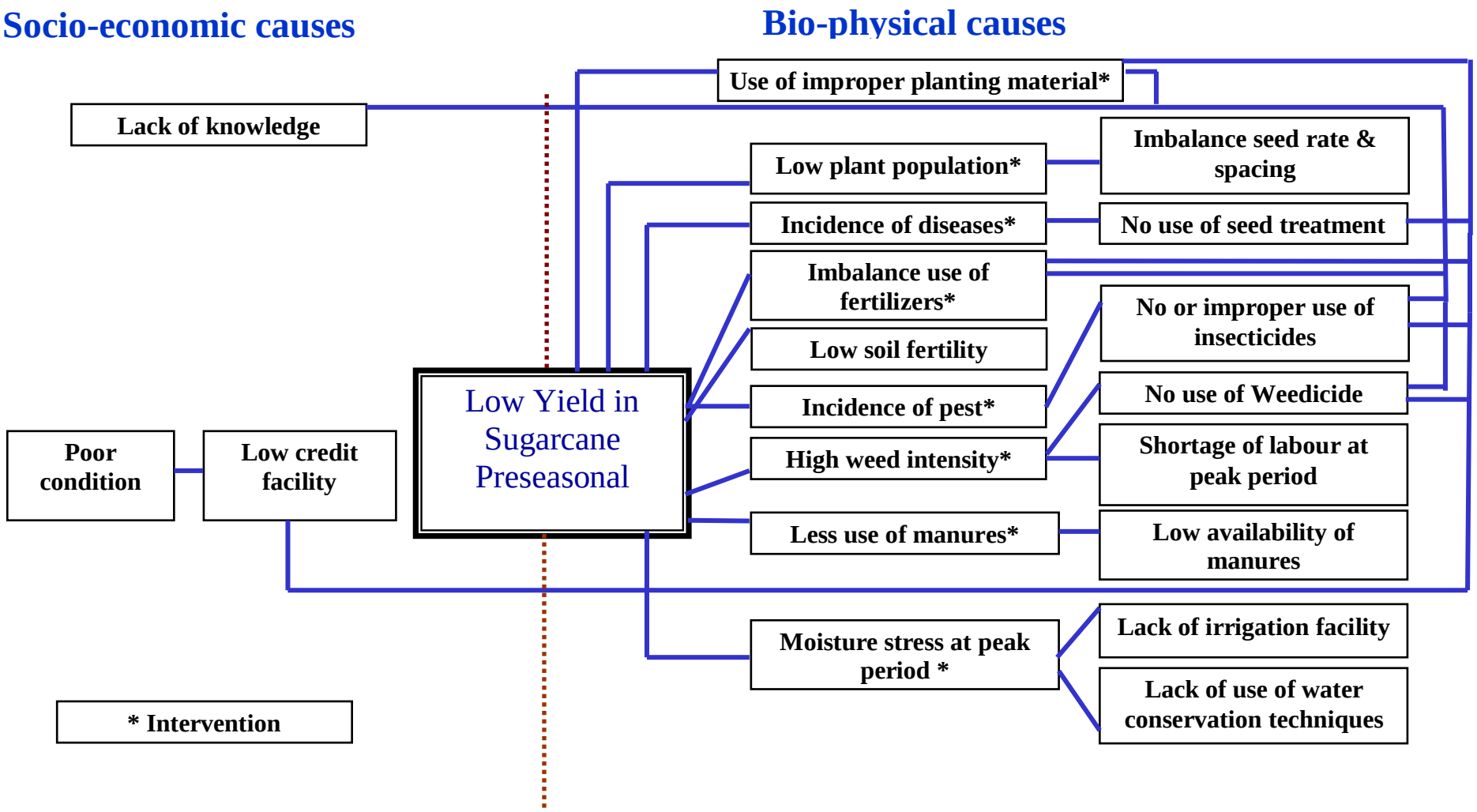
		1. Incidence of Collar rot, stem rot Tikka and Rust diseases in Kharif Groundnut 2. Lack of Knowledge and management practices 3. Lack of seed treatment			OFT Assessment on Seed treatment in groundnut Training on IDM in Kharif Groundnut
5	Soybean	lack of awareness about Varieties, INM, IPM, and latest technologies		Vihe (Patan)	OFT on Phule Sangam, Cluster FLD on ICM Package
6	Nagli (Finger Millet)	1. Incidence of blast. 2. Lack of Knowledge of symptoms and management of the diseases..		Bhairewadi (Patan)	FLD and Training
		Nutrient deficiency and nutrient loss leads to low yield		Bhairewadi (Patan)	OFT Use of NPK Briquettes
7	Onion	Incidence of Thrips and Blotch		Khatav	FLD and Training
		Less use of N fertilizers Low yield due to imbalance nutrient management		Kumthe (khatav)	FLD on Onion STCR
8	Paddy	Use of local variety. Imbalance use of fertilizer		Dhoroshi (Patan)	OFT on improved variety Training and FLD on Four Fold Technology and INM
		Losses in yield due to incidence of caseworm		Bhairewadi (Patan)	OFT assessment and training
		Low yield due to improper method of planting, use of old varieties and improper water management & loss of nutrient by leaching		Bahirewadi (patan)	Training on four fold method of rice planting, & FLDs on INM with Briquette
9	Sorghum	Lack of Knowledge about new varieties, no in-situ moisture conservation, imbalance fertilizer and close spacing		Nigadi (Karad)	OFT on intercropping of Sorghum + Bengal gram (3:3 row) Training on Rabi crop production in Sorghum FLD Demonstration of ICM package, Training on Sorghum production technology
10	Maize	Low yield due to improper nutrient management. Informal and uneven size and shape of cob.		Surupkhanwadi (Man)	OFT- Assesment on Maize and training
11	Ginger	1. Lack of knowledge about IPM		Nigadi (karad0	OFT assessment and Training on IPM of white grub
12	Okra	1. Lack of knowledge of new virus resistant variety		Mhopre (Karad)	OFT assessment and training
13	Tomato	Less use of nitrogenous fertilizers and lack of knowledge of balanced use of fertilizers		Kimthe (khatav)	OFT assessment on STCR

14	Poultry	Rearing of deshi poultry birds which have low egg production, less weight gain than improved poultry bird		Bhairewadi (Patan)	FLD, training
15	Dairy cows	Use of local and low quality feed and fodder. Poor health and low productivity		Rethare (Karad)	FLD, training, Method Demonstration
16	Goat	Lack of management		Nigadi (Karad)	Training
17	Feed and fodder technology	Unavailability of green fodder all round the year			Training

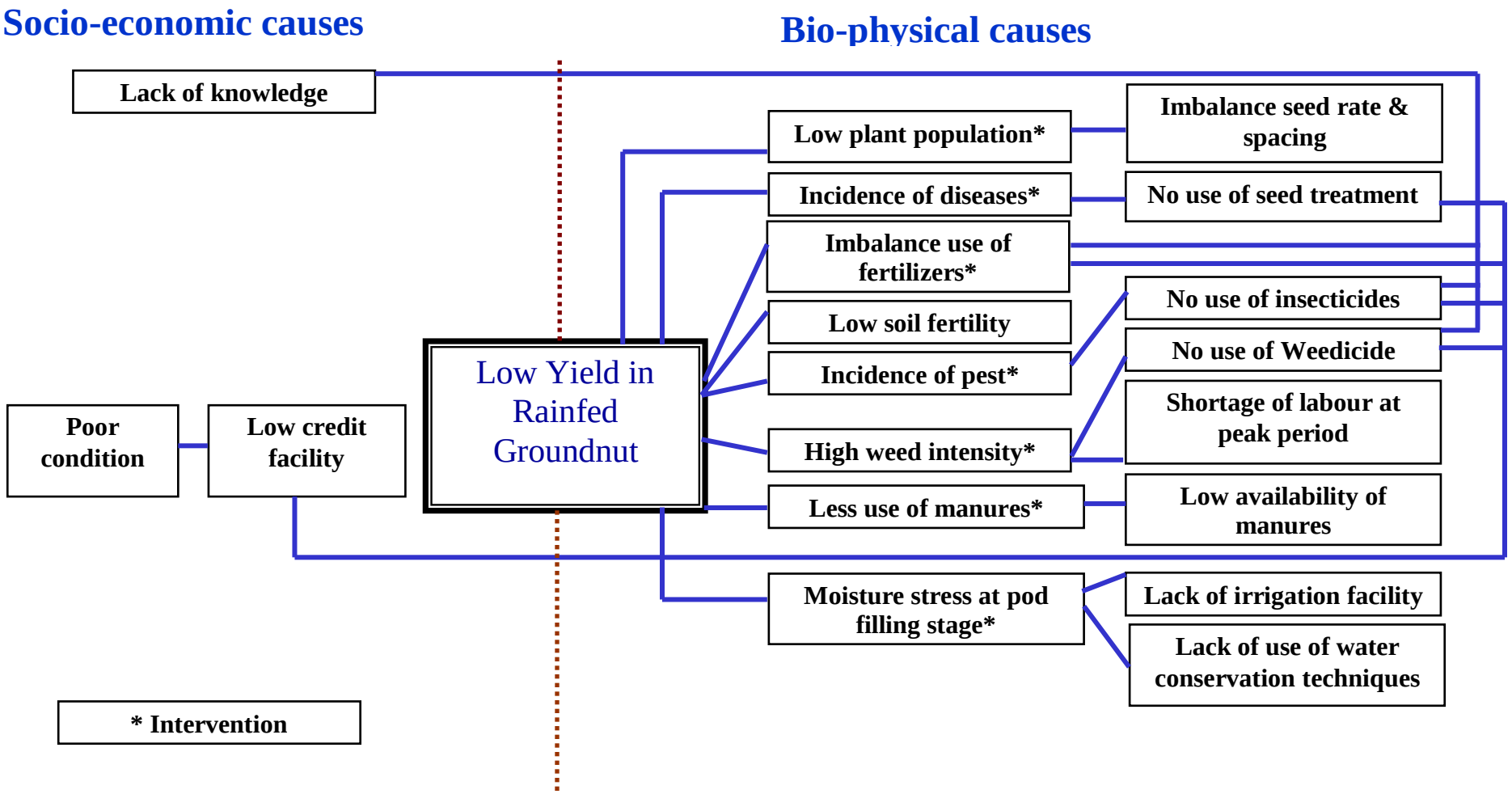
* Support with problem-cause and interventions diagram

3.1. C. Problem cause diagram of major problems.

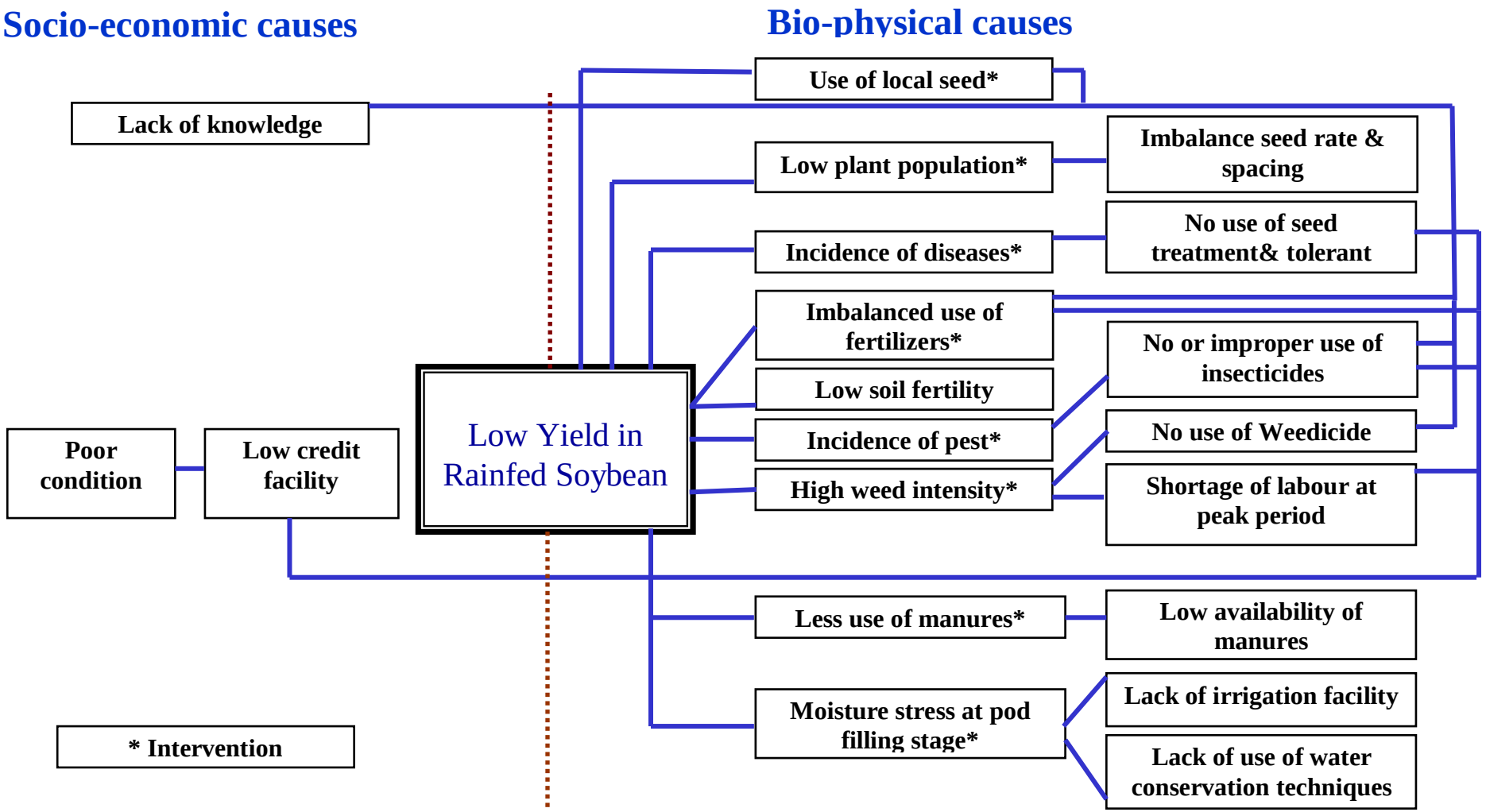
Problem Cause Diagram : Production System *Sugarcane Preseasonal* in Medium Black Clay Soils



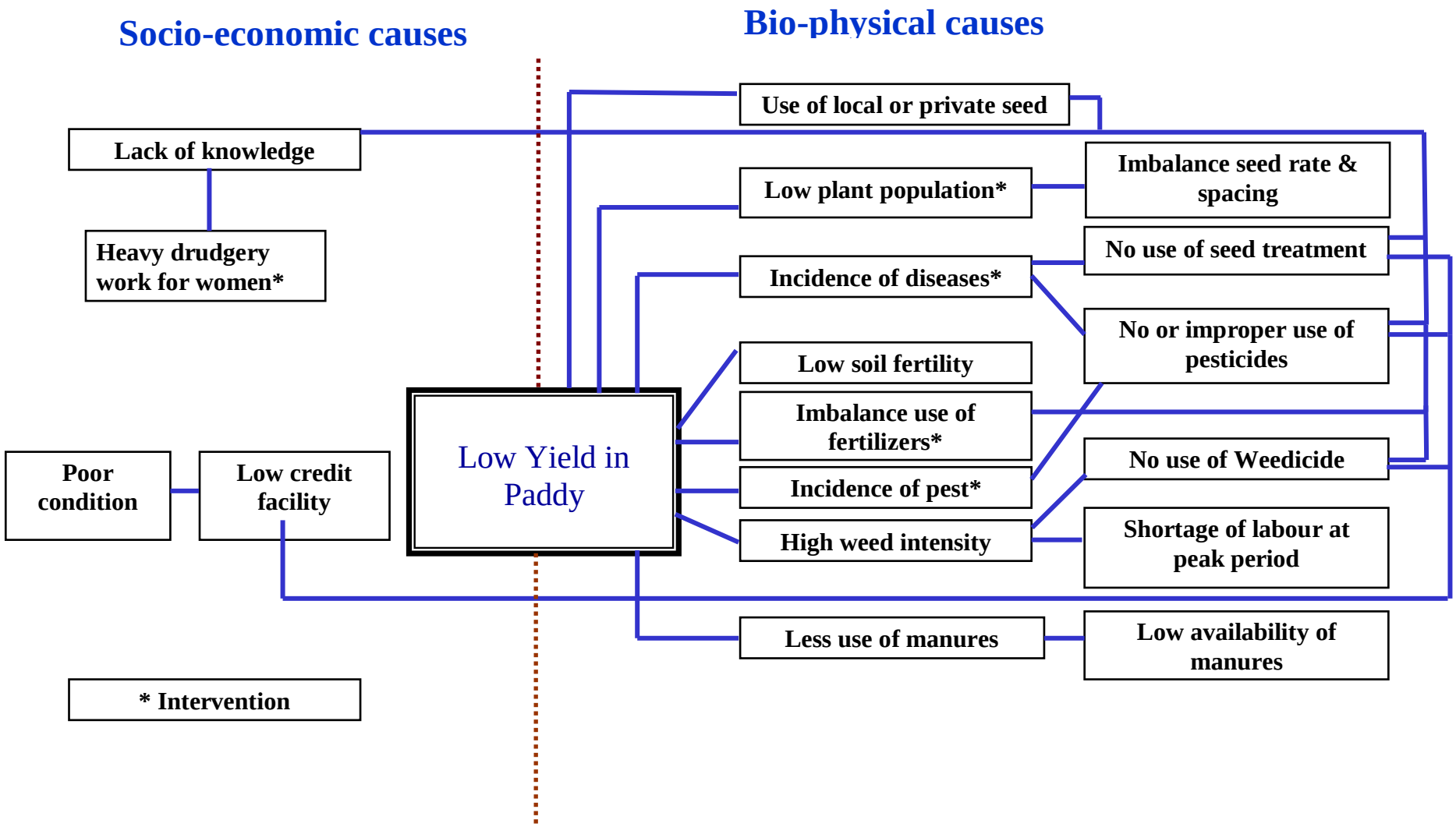
Problem Cause Diagram : Production System *Groundnut* in Medium Black Clay Soils



Problem Cause Diagram : Production System *Soybean* in Medium Black Clay Soils



Problem Cause Diagram : Production System *Paddy* in Medium Black Clay Soils



3.2. Technology Assessment (Kharif 2020, Rabi 2019-20, Summer 2020)

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							1		2
Varietal Evaluation	1	1								2
Integrated Pest Management										
Integrated Crop Management										
Integrated Disease Management										
Small Scale Income Generation Enterprises										
Weed Management										
Resource Conservation Technology										
Farm Machineries					1					1
Integrated Farming System										
Seed / Plant production										
Value addition										
Drudgery Reduction										
Storage Technique										
Mushroom cultivation										
Total	**2**	**1**			**1**			**1**		**5**

A2. Abstract on the number of technologies assessed in respect of livestock enterprises

Thematic areas	**Cattle**	**Poultry**	**Piggery**	**Rabbitry**	**Fisheries**	**TOTAL**
Evaluation of Breeds						
Nutrition Management						
Disease of Management						
Value Addition						
Production and Management						
Feed and Fodder						
Small Scale income generating enterprises						
TOTAL						

B. Achievements on technologies Assessed

B.1. Technologies Assessed under various Crops

Thematic areas	Crop	Name of the technology assessed	No. of trials	Number of farmers	Area in ha (Per trial covering all the Technological Options)
Integrated Nutrient Management	Ginger	Assessment of Fertigation Schedule for Ginger	7	7	2.5
	Wheat	Assessment of STCR Equations for Wheat in heavy blacck soils to achieve 45 qts yield per ha.	7	7	
Varietal Evaluation	Soybean	To Assess the new high yielding variety of Soybean- Phule Sangam (KDS 726	7	7	2.5
	Wheat	New wheat variety Phule Samadhan (NIAW- 1994).	13	15	2.5
Integrated Pest Management					
Integrated Crop Management					
Integrated Disease Management					
Small Scale Income Generation Enterprises					
Weed Management					
Resource Conservation Technology					
Farm Machineries	Vegetables	Assessment of Seedling transplanter for vegetable (seedlings) plantation	7	7	-
Integrated Farming System					
Seed / Plant production					
Value addition					
Drudgery Reduction					
Storage Technique					
Mushroom cultivation					

Total					

B.2. Technologies assessed under Livestock and other enterprises

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

C1.Results of Technologies Assessed

Results of On Farm Trial – 1

Crop/ enterprise	Farming situation	**Problem definition**	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Soybean	Irrigated	Late onset of monsoon, untimely sowing leads to occurrence of rust. Rust susceptible variety JS-335 shows rust incidence in later stage of growth resulting less yield.	To assess the performance of Phule Sangam variety of soybean (KDS-726).	10	T3-Technology assessed-New variety Phule Sangam (KDS-726)	1) Average no. of pods/ plant	156	Phule Sangam variety has recorded 20.73 % more yield over existing variety JS-335 and 16.96 % more yield on JS-9305 Variety	Crop growth of Phule sangam was excellent and produced more yield having bold size grains.	-	-

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice) ; JS-335	JNAU Jabalpur	21.7	q/ha	13018.3	1.21
Technology option 2: JS-9305	JNAU Jabalpur	22.4	q/ha	16418.6	1.26
Technology option 3: KDS- 726	MPKV Rahuri	26.2	q/ha	24313.8	1.37

C2. Details of each On Farm Trial for assessment to be furnished in the following format separately as per the following details

Details of On Farm Trial.

1 Title of Technology Assessed :

To assesss the performance of Phule Sangam variety of soybean (KDS-726).

2 Problem Definition

Late onset of monsoon, untimely sowing leads to occurrence of rust. Rust susceptible variety JS-335 shows rust incidence in later stage of growth resulting less yield.

3 Details of technologies selected for assessment :

New Soybean variety Phule Sangam (KDS-726)

4 Source of technology :

MPKV, Rahuri.

5 Production system and thematic area :

Cultivation of soybean under situation on medium to heavy soil with protective irrigation facility. Varietal Evaluation.

6 Performance of the Technology with performance indicators :

Particulars	Unit	T1	T2	T3
1) Average no. of Pods/ plant	Number	97	103	156
2) Average weight of 100 grains	Number	13.34	14.80	17.32
3) Average grain yield qtl/ha	Qtl/ha	21.7	22.4	26.2
4) B:C ratio		1.21	1.26	1.37

Input cost of Farmer (Control) Rs./ha	**Input cost of demonstration Rs./ha**	**Additional cost incurred for new technology Rs./ha**	**Farmers gross income Rs./ha**	**Farmers gross income after use of new technology Rs./ha**	**Farmers net income after use of new technology Rs./ha**

46160	46875	715	65975	77875	11900

7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques :

Farmers were contented after observing yield and yield contributing characters of phule Sangam variety of Soybean. bold grain size, vigorous growth, resistant to rust. As per yield character, farmers gave first ranking to Phule sangam.

8 Final recommendation for micro level situation.

New variety Phule sangam recorded more yield, and yield attributing characters over existing variety JS-335. Need to be demonstrated on large acreage under FLD.

9 Constraints identified and feedback for research

More dark colour of pods and plant observed at the time of harvesting of crop as compare to JS-335 variety, may be due to more rainfall received at the time of maturity and harvesting of crop. But, grain colour remains as it is. Vigorous growth, yield of Phule sangam is better than JS-335.

10 Process of farmers participation and their Reaction :

Farmers actively participated in training, and implementation of assessment trial. Phule sangam gave more grain yield. bold grain size, resistant to rust than existing variety JS-335 and JS-9305

Results of On Farm Trial : 2

Crop/ enterprise	Farming situation	**Problem definition**	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Wheat	Irrigated	Use of old low yielding varieties, drilling of without	To assesss the performance of Phule Samadhan variety of	07	T3-Technology assessed-New variety	1) Average no. of grains/ ear head	86.72	Phule Samadhan variety has recorded 08.68 %	Crop growth of Phule samadhan was excellent	No any refinement needed	-

		proper spacing and nutrient management. No seed shattering while harvesting with machine harvesting.	wheat under irrigated condition. (NIAW-1994)).		Phule Samadhan (NIAW-1994)	2) Average no. of tillers per plant	22.6	more yield over existing variety	uniform crop stand and mature earlier than existing wheat variety		
						3) Average grain yield qtl/ha	47.34				
						4) B:C ratio	1.75				

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / ha	BC Ratio
13	14	15	16	17	18
T1- Farmers existing variety	-	38.80	q/ha	26348	1.53
T2-MACS-6222	Agarkar Institute Pune	43.46	q/ha	34415	1.68
T2- Technology assessed- New variety Phule Samadhan (NIAW-1994)	MPKV Rahuri	47.34	q/ha	39767	1.75

Details of On Farm Trial.

1 Title of Technology Assessed :

To assesss the performance of Phule Samadhan wheat variety under irrigated condition (NIAW-1994).

2 Problem Definition :

Use of old low yielding varieties, drilling of without proper spacing and nutrient management,shattering with machine harvesting.

3 Details of technologies selected for assessment : New variety Phule Samadhan (NIAW-1994)

4 Source of technology : MPKV, Rahuri.

5 Production system and thematic area :

Timely cultivation of wheat in medium to heavy black soil under assured irrigated condition. Majority planning by sowing rarely by dibbling as sole crop or as on intercrop in sugarcane.

6 Performance of the Technology with performance indicators :

Particulars	Unit	T1	T2	T3
1) Average no. of grains/ ear head	Number	57.60	76.40	86.72
2) Average no. of tillers per plant	Number	14.4	18.6	22.2
3) Average grain yield qtl/ha	Qtl/ha	41.90	44.70	47.34
4) B:C ratio		1.53	1.68	1.75

Input cost of Farmer (Control) Rs./ha	**Input cost of demonstration Rs./ha**	**Additional cost incurred for new technology Rs./ha**	**Farmers gross income Rs./ha**	**Farmers gross income after use of new technology Rs./ha**	**Farmers net income after use of new technology Rs./ha**
49312	52546	3234	75660	92313	39767

7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques

Farmers were contented after observing yield and yield attributing characters of phule Samadhan variety of wheat. Vigorous growth, uniform crop stand, As per yield character and table farmers gave first ranking to Phule samadhan.

8 Final recommendation for micro level situation. :

New variety Phule samadhan recorded more yield, and yield attributing characters over existing variety. No shattering at the time of harvesting. Need to be demonstrated on large acreage.

9 Constraints identified and feedback for research :

Variety Phule samadhan is good in terms of growth, uniform crop stand, early maturity and recorded more yield. Less shattering during harvesting. Seed availability in time is major constraints.

10 Process of farmers participation and their Reaction :

Farmers actively participated in group discussion and other activities training, and implementation of assessment trial. Phule samadhan gave more grain yield, less shattering than existing variety.

Results of On Farm Trial 3

Crop/ enterprise	Farming situation	**Problem definition**	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Wheat	Heavy soil	Nutrient deficiency and nutrient loss at the time of grain filling stage.	To assess the effect STCR equations in Wheat for 45 qts/ha and to study the efficiency of nutrient for high yield.	07	T_1 – RDF dose 120:60:40 kg /ha N: P_2O_5 : K_2O T_2 –Use of Fertilizers as per Soil Test Crop Response and as per target of 45 qtls/ha as T3 - RDF with 120 : 60 : 40 NPK kg/ ha with 10 ton of O.M	Average No. of tillers No of grains per plant Average Yield B:C Ratio	21.40 78.46 46.70 1.61	Additional cost Rs. 1208 Additional income Rs. 34545	Farmers enthusiastically participated programme.	---------- ------	------- ------- -----

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
T_1 – RDF dose 120:60:40 kg /ha N: P_2O_5 : K_2O	MPKV Rahuri	41.80	Qt/ha	26198	1.47
T_2 –Use of Fertilizers as per Soil Test Crop Response and as per target of 45 qtls/ha as	MPKV Rahuri	44.23	Qt/ha	31528.5	1.57
T3 - RDF with 120 : 60 : 40 NPK kg/ ha with 10 ton of O.M	MPKV Rahuri	46.70	Qt/ha	34545	1.61

Details of On Farm Trial.

1 Title of Technology Assessed

To assess the effect STCR equations in Wheat for 45 qts/ha and to study the efficiency of nutrient for high yield.

Problem Definition

Nutrient deficiency and nutrient loss at the time of grain filling stage.

2 Details of technologies selected for assessment

SAU for Wheat 120:60:40 kg /ha + 10 ton Organic matter.
Apply Basal dose of 60 :60: 40 kg NPK + 5 kg Ferrous Sulphate + 5 kg Zinc Sulphate + 10 ton organic matter and after one month apply 60 kg N + 5 kg Ferrous Sulphate + 5 kg Zinc Sulphate per ha.

3 Source of technology

MPKV Rahuri

4 Production system and thematic area

Irrigated

Integrated Nutrient Management,

5 Performance of the Technology with performance indicators

Input cost of farmer	Input cost of trial	Additional cost incurred for new technology	Farmers gross income	Farmers gross income after use of new technology	Net income of farmer after use of new technology	Additional cost of new technology	Additional income due to new technology
A	B	B – A = C	D	E	E – D = F	C	F
55312	56520	1208	81510	91065	34545	1208	34545

7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques

Application of SAU RDF for maize 120:60:40 kg /ha + 10 ton Organic matter. Apply Basal dose of 60 :60: 40 kg NPK + 5 kg Ferrous Sulphate + 5 kg Zinc Sulphate + 10 ton organic matter and after one month apply 60 kg N + 5 kg Ferrous Sulphate + 5 kg Zinc Sulphate per ha. the yields were increased and farmers were happy to adopt this trial than their individual cultivation.

8. Final recommendation for micro level situation

In Scarcity zone rainfall is below 750 mm the nutrients must be applied in split dose for more yields.

9 Constraints identified and feedback for research

Mixing of major and micro nutrients together should be applied immediately otherwise clogging may happens as because of hygroscopic in nature.

10 Process of farmers participation and their reaction

Farmers participated in Group discussion, training and method demonstrations on methods of fertilizer application and time of fertilizer application.

Results of On Farm Trial - 4

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement

1	2	3	4	5	6	7	8	9	10	11	12
Chilli		Conventional transplanting is performed by hand in bending posture which causes Back pain and leg pain, repetitive strain, time consuming	Assessment of Seedling transplanter for vegetable (seedlings) plantation	7	Seedling transplanter	1. Area covered by worker (Sq.mt/hr) = 2. Labour Requirement (Women/ha) 3. Percent reduction in cost of cultivation	1. Area covered by worker (Sq.mt/hr) = 607.07 by seedling transplanter & 216.79 without seedling transplanter 2. Labour Requirement (Women/ha) = 5 labours / ha 3. Percent reduction in cost of cultivation = 67.74%	Percent labour and cultivation cost saving of seedling transplanter is 67.74. It requires only 5 labour/ha where as 26 labours/ ha are required for plantation in check plot.	Seedling transplanter is very good as it saves time, labour and reduces drudgery. If possible only height of the transplanter should be adjustible	Height of the seedling transplanter should be increased or it should be adjustible	Because some of them need to bend a little while using transplantrer

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice)		-	Area covered 216.79 sq mt /hr		
Technology option 2	CIAE Bhopal	-	Area covered 607.07 sq mt/hr		
Technology option 3					

C2. Details of each On Farm Trial for assessment to be furnished in the following format separately as per the following details

1	Title of Technology Assessed - Assessment of Seedling transplanter for vegetable (seedlings) plantation
2	Problem Definition - Conventional transplanting is manual seedling transplantation performed by hand in bending posture which causes back pain and leg pain, repetitive strain & is also time & labour consuming
3	Details of technologies selected for assessment - 1) Farmers practice (by hand) 2) Use of Seedling transplanter for seedling plantation
4	Source of technology - VNMKV, Parbhani, 2015
5	Production system and thematic area - Location specific drudgery reduction technologies
6	Performance of the Technology with performance indicators - 1. Area covered by worker (Sq.mt/hr) = 607.07 by seedling transplanter & 216.79 without seedling transplante 2. Labour Requirement (Women/ha) = 5 labours / ha by seedling transplanter and 26 labours are required by farmers practice 3. Percent reduction in cost of cultivation = 67.74%
7.	Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques - Seedling transplanter is very good as it saves time, labour and reduces drudgery. If possible only height of the transplanter should be adjustable.
8	Final recommendation for micro level situation - It is highly recommended with minute refinements (ht)
9	Constraints identified and feedback for research and developmental departments - Height of the seedling transplanter should be increased or it should be adjustable
10	Process of farmers participation and their reaction - Farmers participation was good and they are satisfied with the technology

3.3. FRONTLINE DEMONSTRATION

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

List of technologies demonstrated during previous year and popularized during 2020 and recommended for large scale adoption in the district

S. No	Crop/ Enterprise	Thematic Area*	Technology demonstrated	Details of popularization methods suggested to the Extension system	Horizontal spread of technology		
					No. of villages	No. of farmers	Area in ha
1.	Finger millet	INM	Use of 19:19:19 NPK 2 % at pre flowering stage	FLD, Training, Input supply, Field visits, Field Days	3	41	15
2.	Suru Sugarcane	INM	Use of Acetobacter culture at 60 and 90 DAS in suru sugarcane	FLD, Training, Input supply, Field visits, Field Days	1	13	5
3.	Ratoon sugarcane	RCT	Tash management, INM through crow bar.	FLD, Training, Input supply, Field visits, Field Days	6	32	22
4.	Summer groundnut	ICM	BBF plating, Variety, INM, IPM	FLD, Training, Input supply, Field visits, Field Days	12	180	40
5.	Finger millet	Nutrient use efficiency	Demonstration of Urea DAP Briquetes in Nagali.	FLD, Training, Input supply, Field visits, Field Days	04	52	15
6.	Sugarcane	Nutrient use efficiency	Spraying of Multi macronutrient and Multi micronutrient in Sugarcane at 60 and 90 days.	FLD, Training, Input supply, Field visits, Field Days	08	98	42
7.	Wheat	Nutrient use efficiency	Demonstration of Spraying of 19:19:19 or DAP at 55 and 70 DAS on Wheat for Better yield	FLD, Training, Input supply, Field visits, Field Days	14	280	38
8.	Bengal gram	Nutrient use efficiency	Spraying of Pot. Nitrate 2% at 50% flowering stage and at grain filling stage on Gram for high yield 12u	FLD, Training, Input supply, Field visits, Field Days	08	110	12
9.	Spiral grain separator	Drudgery reduction technology	Drudgery reduction by use of spiral grain separator	FLD, Training, Input supply, Field visits, Field Days	02	32	-
10.	Twin wheel hoe	Drudgery reduction technology	Use of Twin wheel hoe for drudgery reduction while weeding	FLD, Training, Input supply, Field visits, Field Days	06	90	-
11.	Sulabha bag	Drudgery reduction technology	Use of Sulbha (Fertilizer carrying) Bag to reduce health hazards	FLD, Training, Input supply, Field visits, Field Days	04	60	-
12.	Kitchen Garden	Household food security by kitchen gardening & nutrition gardening	Development of Kitchen Garden for Food and Nutritional Security	FLD, Training, Input supply, Field visits, Field Days	06	110	-

B. Details of FLDs implemented during 2020 **(Kharif 2020, Rabi 2019-20, Summer 2020)** (Information is to be furnished in the following **three tables** for **each category** i.e. **cereals, horticultural crops, oilseeds, pulses, cotton and commercial crops**.)

Sl. No.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ Demonstration			Reasons for shortfall in achievement
					Proposed	Actual	SC/ST	Others	Total	
1.	Finger millet	INM	Use of 19:19:19 NPK 2 % at pre flowering stage	Kharif 2020	5.0	5.0		15	15	
2.	Suru Sugarcane	INM	Use of Acetobacter culture at 60 and 90 DAS in suru sugarcane	Rabi 2020	5.0	5.0		13	13	
3.	Ratoon sugarcane	RCT	Tash management, INM through crow bar.	Rabi 2020	5.0	5.0		13	13	
4.	Summer groundnut	ICM	BBF plating, Variety, INM, IPM	Summer 2021	5.0	5.0		13	13	
5.	Finger millet	Nutrient use efficiency	Demonstration of Urea DAP Briquetes in Nagali.	Kharif 2020	5.0	5.0		13	13	
6.	Sugarcane	Nutrient use efficiency	Spraying of Multi macronutrient and Multi micronutrient in Sugarcane at 60 and 90 days.	Rabi 2020	5.0	5.0		13	13	
7.	Wheat	Nutrient use efficiency	Demonstration of Spraying of 19:19:19 or DAP at 55 and 70 DAS on Wheat for Better yield	Rabi 2020	5.0	5.0		13	13	
8.	Bengal gram	Nutrient use efficiency	Spraying of Pot. Nitrate 2% at 50% flowering stage and at grain filling stage on Gram for high yield .	Rabi 2020	5.0	5.0		13	13	
9.	Spiral	Drudge	Drudgery reduction by	Rabi 2020				10	10	

	grain separator	ry reduction technology	use of spiral grain separator							
10.	Twin wheel hoe	Drudgery reduction technology	Use of Twin wheel hoe for drudgery reduction while weeding	Kharif 2020	-	-	-	10	10	
11.	Sulabha bag	Drudgery reduction technology	Use of Sulbha (Fertilizer carrying) Bag to reduce health hazards	Rabi 2020	-	-	-	10	10	
12.	Kitchen Garden	Household food security by kitchen gardening & nutrition gardening	Development of Kitchen Garden for Food and Nutritional Security	Kharif 2020	-	-	-	10	10	

Details of farming situation

Crop	Season	Farming situation (RF/Irrigated)	Soil type	Status of soil			Previous crop	Sowing date	Harvest date	Seasonal rainfall (mm)	No. of rainy days
				N	P	K					
Finger millet	Kharif 2020	Rainfed	Light soil	280.61	5.43	430.19	Bengal gram	10 June 2020	25 Oct 2020	1860	68
Suru Sugarcane	Rabi 2020	Irrigated	Heavy	325.32	6.64	476.27	Soybean	15 Dec 2020	Crop is standing	1140	56
Ratoon	Rabi	Irrigated	Heavy	316	6.8	432.12	Sugarcane	10 Dec	Crop is	1140	56

sugarcane	2020			.40	7			2020	standing		
Summer groundnut	Summer 2021	Irrigated	Heavy	268.67	4.71	428.19	Sugarcane ratoon	25 Jan 2021	Crop is standing	1140	56
Finger millet	Kharif 2020	Rainfed	Light soil	268.87	5.22	482.19	Gram	15 June 2020	1 Nov 2020	1860	68
Sugarcane	Rabi 2020	Irrigated	Heavy	215.88	5.22	350.42	Groundnut	20 Oct 2020	Crop is standing	1140	56
Wheat	Rabi 2020	Irrigated	Heavy	115.0	3.12	35.55	Ratoon Sugarcane	25 Nov 2020	15 March 2021	1140	56
Bengal gram	Rabi 2020	Irrigated	Heavy	268.0	7.14	428.19	Soybean	20 Nov 2020	1 March 2021	1140	56

Technical Feedback on the demonstrated technologies

S. No	Feed Back
1	**Summer Groundnut BBF (Last year)** Demonstration plot shows superior growth over check plot, obtained maximum yield than check plot. BBF for groundnut is most effective method than drilling.
2	**Zero tillage sugarcane ratoon management (Last year)** Demonstration of zero tillage sugarcane ratoon management shows more gross and net income than check plot, Demonstration plot reduces cost of cultivation than check plot. Due to trash mulching, number of irrigation minimized, cost of production reduced because of no intercultivation operations followed, reduced weeding operations.
3	**Use of Liquid Acetobacter in Suru Sugarcane (Last year)** Spraying of liquid Acetobacter in suru sugarcane resulting more tillering, succulent growth, more length of internode, vigorous growth observed than untreated plot. yield of treated sugarcane is more than conventional plot.
4	**Use of 19:19:19 NPK as Foliar fertilizer on Finger millet** Spraying of 19:19:19 NPK foliar grade fertilizer on fingermillet at pre flowering stage resulting more number of tillers, more number of grains per panicle and yield than untreated plot.
5	**Finger millet** As this area is under heavy rainfall and to avoid leaching losses of nutrients the nutrients should be given in form of briquette. Briquettes application to be done at appropriate time and planning.
6	**Wheat**: Spraying of 19:19:19 can be replaced by using DAP and the accurate stage of spraying should be achieved i.e. 55 and 70 DAS. The spray can increase quality, quantity and weight of each grain.
7	**Gram:** Spraying of Potassium Nitrate 2 % at the acute stage of 50% flowering and at grain filling stage should be achieved. This will help in increase in pods and filling of pods.

8	**Spiral grain separator** Use of spiral grain separator for grain cleaning is very effective and beneficial from the point of labour saving, money saving, time saving. Moreover, it is also highly effective in drudgery reduction of farm women while cleaning grains as it needs labour only to put grains in the machine and collect the cleaned grains.
9	**Twin wheel hoe** Weeding operation becomes very easy by use of twin wheel hoe with time, money and labour saving benefits when compared to traditional hoe or weeding by hands without any hoe.
10	**Sulbha bags** Use of Sulbha bags for fertilizer application increases the speed because both hands can be used for fertilizer application and hazards caused due to contact of fertilizers with skin (Specially thighs) are also completely avoided.
11	**Development of kitchen garden** Demonstration of kitchen garden to rural households improves the fruit and vegetable intake of rural families and reduces the cost on vegetables. Along with demonstration of kitchen garden a fix package of three to six months of nutrition education should be compulsorily delivered along with kitchen garden which will have more beneficial effects on nutritional knowledge and there by health of rural women.

Farmers' reactions on specific technologies

S. No	Feed Back
1	**Summer Groundnut BBF (Last year)** After implementation of BBF for summer groundnut, farmers were surprised to see the results on BBF for groundnut, yield of groundnut recorded highest over drilled groundnut.
2	**Zero tillage sugarcane ratoon management (Last year)** After implementation of Zero tillage sugarcane ratoon management, farmers were surprised to see the results on Zero tillage sugarcane ratoon management, yield of Zero tillage sugarcane ratoon management is more conventional ratoon management.
3	**Use of Liquid Acetobacter in Suru Sugarcane (Last year)** Spraying of liquid Acetobacter in suru sugarcane resulting vigorous growth, farmers were surprised to see the results of Acetobacter on sugarcane, yield of treated sugarcane is more than conventional plot.
4.	**Use of 19:19:19 NPK as Foliar fertilizer on Finger millet** Spraying of 19:19:19 NPK foliar grade fertilizer on fingermillet at pre flowering stage resulting more yield than untreated plot.
5.	**Finger millet** Farmers were happy to use of briquettes as they have saved fertilizers, cost on fertilizer and also improves yield.
6.	**Wheat :** Farmers were spray wheat only for pest and disease attack only and they were unknown about nutrient spray. Due to this trial they get maximum yields and with less cost. But the stage of spraying should be acute i.e. 55 and 70 DAS
7.	**Gram:** The size and weight of grains increased due to spraying 2 % Pot. Nitrate at flowering stage and at grain filling stage the yields increased from previous years.

Extension and Training activities under FLD

Sl.No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	04	24/9/2020, 26/9/2020, 6/11/2020,27/10/2020	65	
2	Farmers Training	06	23/1/2020,27/11/2020, 5/12/2020,13/11/2020, 18/12/2020,23/12/2020	113	
3	Media coverage	12	-	-	
4	Training for extension functionaries	-	-	-	-

C. Performance of Frontline demonstrations

Frontline demonstrations on oilseed crops

Crop	Thematic Area	technology demonstrated	Variety	No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
						Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
						High	Low	Average										
Groundnut	Integrated Crop Management	BBF and Variety	JL-286	13	5	Results awaited												
Last year FLD	Integrated Crop Management	BBF and Variety	JL-286	13	5	36.23	30.5	33.36	24.65	35.33	116790	166800	50010	1.42	96872	123250	26378	1.27
Sesamum																		
Mustard																		
Safflower																		

Linseed																		
Sunflower																		
Soybean																		
Castor																		

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

Frontline demonstration on pulse crops

Crop	Thematic Area	technology demonstrated	Variety	No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
						Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
						High	Low	Average										
Pigeonpea																		
Blackgram																		
Greengram																		
Chickpea	Nutrient use efficiency	RDF for Gram along with spraying of Pot. Nitrate 2% at 50% flowering stage and at grain filling stage for better results	Digvijay	13	5.0	27.40	24.32	168	103	18.62	82970	139644	56674	1.68	74345	117720	43375	1.58

Fieldpea																		
Lentil																		
Horsegram																		
Cowpea																		

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

FLD on Other crops

Category & Crop	Thematic Area	Name of the technology	No. of Farmers	Area (ha)	Yield (q/ha)				% Change in Yield	Other Parameters		Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
					Demo			Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
					High	Low	Average												
Cereals																			
Paddy																			
Waterlogged Situation																			
Coarse Rice																			
Scented Rice																			
Wheat	Nutrient use efficiency	RDF for wheat along with	13	5.0	44.72	39.56	42.14	38.44	9.62	77	62	61230	82173	20943	1.34	59852	74958	15106	1.25

		spraying of 19:19:19 at 55 and 70DAS																	
Wheat Timely sown																			
Wheat Late Sown																			
Mandua																			
Barley																			
Maize																			
Amaranth																			
Millets																			
Jowar																			
Bajra																			
Barnyard millet																			
Finger millet	Integrated Nutrient Management	Spray of 19:19:19 NPK at pre flowering stage	15	5	25.48	21.84	23.66	20.38	16.09	26	19	63945	94640	30695	1.48	61293	81520	20227	1.33

	Nutrient Use Efficiency	Use of Urea DAP briquette	13	5	23.32	18.32	20.82	16.68	24.82	24	20	58763	83280	24517	1.41	54890	66720	11830	1.21
Vegetables																			
Bottlegourd																			
Bittergourd																			
Cowpea																			
Spongegourd																			
Petha																			
Tomato																			
Frenchbean																			
Capsicum																			
Chilli																			
Brinjal																			
Vegetable pea																			
Softgourd																			

Okra																			
Colocasia (Arvi)																			
Broccoli																			
Cucumber																			
Onion																			
Coriender																			
Lettuce																			
Cabbage																			
Cauliflower																			
Elephant fruit																			
Any other (Pl specify)																			
Flower crops																			
Marigold																			
Bela																			
Tuberose																			
Gladiolus																			

Any other (Pl. specify)																			
Fruit crops																			
Mango																			
Strawberry																			
Guava																			
Banana																			
Papaya																			
Muskmelon																			
Watermelon																			
Any other (Pl. specify)																			
Spices & condiments																			
Ginger																			
Garlic																			
Turmeric																			
Commercial Crops																			
Sugarcane	Integrated Crop Management	Use of Liquid Acetobacter culture on suru Sugarcane	13	5	Results awaited														
Last year result	Integrated Crop Management	Use of Liquid Acetobacter culture on	13	5	104.8	97.4	101.1	92.2	09.65	16	9	162570	308355	145785	1.89	159690	281210	121520	1.76

		suru Sugarcane																	
Sugarcane	Resource conservation technology	Zero tillage sugarcane ratoon management	13	5	Results awaited														
Last year FLD	Integrated Crop Management	Zero tillage sugarcane ratoon management	13	5	96.6	89.5	93.5	88.7	5.41	13	8	92453	285175	192722	3.08	97432	272975	175543	2.80
Potato																			
Cotton																			
Medicinal & aromatic plants																			
Mentholment																			
Kalmegh																			
Ashwagandha																			
Any other (Pl. specify)																			
Fodder Crops																			
Sorghum (F)																			
Cowpea (F)																			
Maize (F)																			

Lucern																			
Berseem																			
Oat (F)																			
Napier																			
Grasses																			

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

Frontline Demonstration on Nutri cereals

Crop	Thematic Area	Technology demonstrated	Variety	No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
						Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
						High	Low	Average										
Sorghum																		

FLD on Livestock

Category	Thematic area	Name of the technology demonstrated	No. of Farmer	No.of Units (Animal/ Poultry/ Birds, etc)	Major parameters		% change in major parameter	Other parameter		Economics of demonstration (Rs.)				Economics of check (Rs.)			
					Demo	Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Cattle																	
Buffalo																	
Buffalo Calf																	

Dairy																		
Poultry																		
Sheep & Goat																		
Vaccination																		

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

FLD on Fisheries

Category	Thematic area	Name of the technology demonstrated	No. of Farmer	No.of units	Major parameters		% change in major parameter	Other parameter		Economics of demonstration (Rs.)				Economics of check (Rs.)			
					Demonstration	Check		Demonstration	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Common Carps																	
Composite fish culture																	
Feed Management																	

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

FLD on Other enterprises

Category	Name of the technology demonstrated	No. of Farmer	No.of units	Major parameters		% change in major parameter	Other parameter		Economics of demonstration (Rs.) or Rs./unit				Economics of check (Rs.) or Rs./unit			
				Demo	Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Oyster Mushroom																
Button Mushroom																
Apiculture																
Maize Sheller																
Value Addition																
Vermi Compost																
Sericulture																

FLD on Women Empowerment

Category	Name of technology	No. of demonstrations	Name of observations	Demonstration	Check

FLD on Farm Implements and Machinery

Name of the implement	Crop	Technology demonstrated	No. of Farmer	Area (ha)	Major parameters	Filed observation (output/man hour)	% change in major	Labor reduction (man days)	Cost reduction (Rs./ha or Rs./Unit etc.)

						Demo	Check	parameter	Land preparation	Sowing	Weeding	Total	Land preparation	Labour	Irrigation	Total
Spiral grain seperator	soyabean	Drudgery reduction by use of spiral grain seperator	10	1	a) Time required (hrs/100kg) b) Labour Requirement (Women/100kg) c)Operating cost (Rs/100kg)	a) 0.269 b) 0.064 c)12.80 Rs	a) 19.04 b) 2.72 c) 544 Rs	a) 98.58 b) 97.64 c)97.64	-	-	2.66 women/100 kg	2.66 women/ 100 kg	-	531.12 Rs/100 kg	-	531.12 Rs/100 kg
Twin wheel hoe	jowar	Use of Twin wheel hoe for drudgery reduction while weeding	10	1	a) Area covered /d/ women in (ha) b) Labour Requirement (Women/ha) c) Operating cost (Rs/ha)	a)0.14 b)6.44 c)1288 d)45.92hrs	a)0.085 b)13 c)2600 -	a)64.70 b)50.45 c)50.46	-	-	6.56/ha	6.56/ha	-	1312/ha	-	1312/ha
Sulabha bag	wheat	Use of Sulbha (Fertilizer carrying) Bag to reduce health hazards	10	1	a) Area covered (ha)/hr/woman b) Labour requirement women/ha c)Operating cost Rs/ha d)Time (hr)saved /ha	a)0.067 b)2.519 c)503.8 d)23.982hrs	a)0.03 b)5.945 c)1189 -	a)123.33 b)57.62 c)57.62 -	-	-	3.426/ha	3.426/ha	-	685/ha	-	685.2/ha

FLD on Other Enterprise: Kitchen Gardening

Category and Crop	Thematic area	Name of the technology demonstrated	No. of Farmer	No. of Units	Yield (Kg)		% change in yield	Other parameters		Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)				
					Demonstration	Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)	
		Household food security by kitchen gardening & nutrition gardening	Development of Kitchen Garden for Food and Nutritional Security	13	13	72	23	213.04	% frequency of daily GLV consumption 75	% frequency of daily GLV consumption 25	1193.0769	2976.92308	1783.846	2.5273	225	340	150	1.5

FLD on Demonstration details on crop hybrids

Crop	technology demonstrated	Hybrid Variety	No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)			
					Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)
					High	Low	Average						
Oilseed crop													
Pulse crop													
Cereal crop													
Vegetable crop													
Fruit crop													
Other (specify)													

Note : Remove the Enterprises/crops which have not been shown

3.4. Training Programmes(Online programmes if any should be included under On Campus category)

Farmers' Training including sponsored training programmes (on campus)

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
I Crop Production										
Weed Management										
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming										
Micro Irrigation/irrigation										
Seed production										
Nursery management										
Integrated Crop Management	6	100	13	113	0	0	0	100	13	113
Soil & water conservatioin										
Integrated nutrient management										
Production of organic inputs										
Others (pl specify)										
Total	**6**	**100**	**13**	**113**	**0**	**0**	**0**	**100**	**13**	**113**
II Horticulture										
a) Vegetable Crops										
Production of low value and high valume crops										
Off-season vegetables	01	26	1	27	0	0	0	26	1	27
Nursery raising										
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation										
Others (pl specify)										
Total (a)	**01**	**26**	**1**	**27**	**0**	**0**	**0**	**26**	**1**	**27**
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)										
Total (b)										
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl specify)										
Total (c)										
d) Plantation crops										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
Total (d)										
e) Tuber crops										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
Total (e)										
f) Spices										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
Total (f)										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post harvest technology and value addition										

Others (pl specify)										
Total (g)										
GT (a-g)										
III Soil Health and Fertility Management										
Soil fertility management	01	16	4	20	2	0	2	18	4	22
Integrated water management										
Integrated Nutrient Management	02	24	0	24	0	0	0	24	0	24
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient Use Efficiency										
Balance use of fertilizers										
Soil and Water Testing										
Others (pl specify)										
Total	**03**	**40**	**4**	**44**	**2**	**0**	**2**	**42**	**4**	**46**
IV Livestock Production and Management										
Dairy Management										
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management										
Disease Management										
Feed & fodder technology										
Production of quality animal products										
Others (pl specify)										
Total										
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening										
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing										
Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition										
Women empowerment										
Location specific drudgery reduction technologies	01	7	19	26	0	0	0	7	19	26
Rural Crafts	01	0	39	39	0	0	0	0	39	39
Women and child care	02	0	43	43	0	0	0	0	43	43
Others (pl specify)										
Total	**04**	**07**	**101**	**108**	**0**	**0**	**0**	**07**	**101**	**108**
VI Agril. Engineering										
Farm Machinary 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)										
Total										
VII Plant Protection										
Integrated Pest Management										
Integrated Disease Management										
Bio-control of pests and diseases										
Production of bio control agents and bio pesticides										
Others (pl specify)										
Total										
VIII 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)										
Total										
IX 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)										
Total										
X CapacityBuilding and Group Dynamics										
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
WTO and IPR issues										
Others (pl specify)										
Total										
XI Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (pl specify)										
Total										
GRAND TOTAL	**14**	**173**	**119**	**292**	**02**	**00**	**02**	**175**	**119**	**294**

Farmers' Training including sponsored training programmes (off campus)

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
I Crop Production										
Weed Management										
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming										
Micro Irrigation/irrigation										
Seed production										
Nursery management										
Integrated Crop Management	8	153	6	159	0	0	0	153	6	159
Soil & water conservatioin										
Integrated nutrient management										
Production of organic inputs										
Others (pl specify)										
Total	**8**	**153**	**6**	**159**	**0**	**0**	**0**	**153**	**6**	**159**
II Horticulture										
a) Vegetable Crops										
Production of low value and high valume crops										
Off-season vegetables										
Nursery raising										
Exotic vegetables										
Export potential vegetables										

Grading and standardization										
Protective cultivation										
Others (pl specify)										
Total (a)										
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)										
Total (b)										
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl specify)										
Total (c)										
d) Plantation crops										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
Total (d)										
e) Tuber crops										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
Total (e)										
f) Spices										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
Total (f)										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
Others (pl specify)										
Total (g)										
GT (a-g)										
III Soil Health and Fertility Management										
Soil fertility management										
Integrated water management										
Integrated Nutrient Management	05	74	10	84	0	0	0	74	10	84
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient Use Efficiency										
Balance use of fertilizers										
Soil and Water Testing										
Others (pl specify)										
Total	**05**	**74**	**10**	**84**	**0**	**0**	**0**	**74**	**10**	**84**
IV Livestock Production and Management										
Dairy Management										
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management										
Disease Management										
Feed & fodder technology										
Production of quality animal products										
Others (pl specify)										
Total										
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening										

Design and development of low/minimum cost diet	01	0	53	53	0	0	0	0	53	53
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 reduction technologies										
Rural Crafts										
Women and child care										
Others (pl specify)										
Total	**01**	**0**	**53**	**53**	**0**	**0**	**0**	**0**	**53**	**53**
VI Agril. Engineering										
Farm Machinary 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)										
Total										
VII Plant Protection										
Integrated Pest Management	01	30	2	32	0	0	0	30	2	32
Integrated Disease Management										
Bio-control of pests and diseases										
Production of bio control agents and bio pesticides										
Others (pl specify)										
Total	**01**	**30**	**2**	**32**	**0**	**0**	**0**	**30**	**2**	**32**
VIII 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)										
Total										
IX 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)										
Total										
X Capacity Building and Group Dynamics										
Leadership development										
Group dynamics										

Formation and Management of SHGs	01	40	0	40	0	0	0	40	0	40
Mobilization of social capital	02	52	0	52	0	0	0	52	0	52
Entrepreneurial development of farmers/youths	02	61	0	61	0	0	0	61	0	61
WTO and IPR issues										
Others (pl specify)										
Total	**05**	**153**	**0**	**153**	**0**	**0**	**0**	**153**	**0**	**153**
XI Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (pl specify)										
Total										
GRAND TOTAL	**20**	**410**	**71**	**481**	**0**	**0**	**0**	**410**	**71**	**481**

Farmers' Training including sponsored training programmes – CONSOLIDATED (On + Off campus)

Thematic area	**No. of courses**	**Participants**								
		Others			**SC/ST**			**Grand Total**		
		Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
I Crop Production										
Weed Management										
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming										
Micro Irrigation/irrigation										
Seed production										
Nursery management										
Integrated Crop Management	14	253	19	272	0	0	0	253	19	272
Soil & water conservatioin										
Integrated nutrient management										
Production of organic inputs										
Others (pl specify)										
Total	**14**	**253**	**19**	**272**	**0**	**0**	**0**	**253**	**19**	**272**
II Horticulture										
a) Vegetable Crops										
Production of low value and high valume crops										
Off-season vegetables	01	26	1	27	0	0	0	26	1	27
Nursery raising										
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation										
Others (pl specify)										
Total (a)	**01**	**26**	**1**	**27**	**0**	**0**	**0**	**26**	**1**	**27**
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)										
Total (b)										
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl specify)										
Total (c)										
d) Plantation crops										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
Total (d)										
e) Tuber crops										

Production and Management technology										
Processing and value addition										
Others (pl specify)										
Total (e)										
f) Spices										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
Total (f)										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
Others (pl specify)										
Total (g)										
GT (a-g)										
III Soil Health and Fertility Management										
Soil fertility management	01	16	4	20	2	0	2	18	4	22
Integrated water management										
Integrated Nutrient Management	7	98	10	108	0	0	0	98	10	108
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient Use Efficiency										
Balance use of fertilizers										
Soil and Water Testing										
Others (pl specify)										
Total	**08**	**114**	**14**	**128**	**2**	**0**	**2**	**116**	**14**	**130**
IV Livestock Production and Management										
Dairy Management										
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management										
Disease Management										
Feed & fodder technology										
Production of quality animal products										
Others (pl specify)										
Total										
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening										
Design and development of low/minimum cost diet	01	0	53	53	0	0	0	0	53	53
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 reduction technologies	01	7	19	26	0	0	0	7	19	26
Rural Crafts	01	0	39	39	0	0	0	0	39	39
Women and child care	02	0	43	43	0	0	0	0	43	43
Others (pl specify)										
Total	**05**	**07**	**101**	**108**	**0**	**0**	**0**	**07**	**101**	**108**
VI Agril. Engineering										
Farm Machinary 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)										
Total										
VII Plant Protection										
Integrated Pest Management	01	30	2	32	0	0	0	30	2	32

Integrated Disease Management										
Bio-control of pests and diseases										
Production of bio control agents and bio pesticides										
Others (pl specify)										
Total										
VIII 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)										
Total										
IX 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)										
Total										
X CapacityBuilding and Group Dynamics										
Leadership development										
Group dynamics										
Formation and Management of SHGs	01	40	0	40	0	0	0	40	0	40
Mobilization of social capital	02	52	0	52	0	0	0	52	0	52
Entrepreneurial development of farmers/youths	02	61	0	61	0	0	0	61	0	61
WTO and IPR issues										
Others (pl specify)										
Total	**05**	**153**	**0**	**153**	**0**	**0**	**0**	**153**	**0**	**153**
XI Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (pl specify)										
Total										
GRAND TOTAL	**34**	**583**	**137**	**720**	**0**	**0**	**0**	**585**	**137**	**722**

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	41	0	41	0	0	0	41	0	41
Seed production										
Production of organic inputs										

Planting material production										
Vermi-culture	01	5	6	11	3	1	4	8	7	15
Mushroom Production										
Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition	01	0	21	21	0	0	0	0	21	21
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	**04**	**46**	**27**	**73**	**3**	**1**	**4**	**49**	**28**	**77**

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)	02	68	56	124	0	0	0	68	56	124
TOTAL	**02**	**68**	**56**	**124**	**0**	**0**	**0**	**68**	**56**	**124**

Training for Rural Youths including sponsored training programmes – CONSOLIDATED (On + 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	02	41	0	41	0	0	0	41	0	41
Seed production										
Production of organic inputs										
Planting material production										
Vermi-culture	01	5	6	11	3	1	4	8	7	15
Mushroom Production										
Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition	01	0	21	21	0	0	0	0	21	21
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)	02	68	56	124	0	0	0	68	56	124
TOTAL	**06**	**114**	**83**	**197**	**03**	**01**	**04**	**117**	**84**	**201**

Training programmes for Extension Personnel including sponsored training (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	**02**	**51**	**1**	**52**	**3**	**0**	**3**	**55**	**0**	**55**
Integrated Pest Management										
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs										
Care and maintenance of farm machinery and										

implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs	**01**	**22**	**0**	**22**	**0**	**0**	**0**	**22**	**0**	**22**
Women and Child care										
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Any other (pl.specify)										
TOTAL	**03**	**73**	**01**	**74**	**03**	**0**	**03**	**77**	**0**	**77**

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops										
Integrated Pest Management										
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care	**01**	**0**	**21**	**21**	**0**	**0**	**0**	**0**	**21**	**21**
Low cost and nutrient efficient diet designing	**01**	**6**	**40**	**46**	**0**	**2**	**2**	**6**	**42**	**48**
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Any other (pl.specify)										
TOTAL	**02**	**06**	**61**	**67**	**0**	**2**	**2**	**06**	**63**	**69**

Training programmes for Extension Personnel including sponsored training – CONSOLIDATED (On + 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	**02**	**51**	**1**	**52**	**3**	**0**	**3**	**55**	**0**	**55**
Integrated Pest Management										
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs	**01**	**22**	**0**	**22**	**0**	**0**	**0**	**22**	**0**	**22**
Women and Child care	**01**	**0**	**21**	**21**	**0**	**0**	**0**	**0**	**21**	**21**
Low cost and nutrient efficient diet designing	**01**	**6**	**40**	**46**	**0**	**2**	**2**	**6**	**42**	**48**
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Any other (pl.specify)										
TOTAL	**05**	**79**	**62**	**141**	**3**	**2**	**5**	**83**	**63**	**146**

Sponsored training programmes

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 and management										
Increasing production and productivity of crops										
Commercial production of vegetables										
Production and value addition										
Fruit Plants										
Ornamental plants										
Spices crops										
Soil health and fertility management										
Production of Inputs at site										
Methods of protective cultivation										
Others (pl. specify) Soil and water testing Lab Analysyt	**01**	**16**	**4**	**20**	**0**	**0**	**0**	**16**	**4**	**20**
Total										
Post harvest technology and value addition										
Processing and value addition										
Others (pl. specify)										
Total										
Farm machinery										
Farm machinery, tools and implements										
Others (pl. specify)										
Total										
Livestock and fisheries										
Livestock production and management										
Animal Nutrition Management										
Animal Disease Management										
Fisheries Nutrition										
Fisheries Management										
Others (pl. specify)										
Total										
Home Science										
Household nutritional security										
Economic empowerment of women										
Drudgery reduction of women										
Others (pl. specify)										
Total										
Agricultural Extension										
CapacityBuilding and Group Dynamics										
Others (pl. specify) Agricultural Extension Service Provider	**01**	**16**	**4**	**20**	**0**	**0**	**0**	**16**	**4**	**20**
Total	**02**	**32**	**08**	**40**	**0**	**0**	**0**	**32**	**08**	**40**
GRAND TOTAL										

Details of vocational training programmes carried out by KVKs for rural youth (4 or more days)

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 and management										
Commercial floriculture										
Commercial fruit production										
Commercial vegetable production										
Integrated crop management										
Organic farming										
Others (pl. specify)										
Total										
Post harvest technology and value addition										
Value addition										
Others (pl. specify)										
Total										
Livestock and fisheries										
Dairy farming										
Composite fish culture										
Sheep and goat rearing										
Piggery										
Poultry farming										
Others (pl. specify)										
Total										
Income generation activities										
Vermicomposting	**01**	**5**	**6**	**11**	**3**	**1**	**4**	**8**	**7**	**15**
Production of bio-agents, bio-pesticides,										
bio-fertilizers etc.										
Repair and maintenance of farm machinery										
and implements										
Rural Crafts										
Seed production										
Sericulture										
Mushroom cultivation										
Nursery, grafting etc.										
Tailoring, stitching, embroidery, dying etc.										
Agril. para-workers, para-vet training										
Others (pl. specify)										
Total										
Agricultural Extension										
Capacity building and group dynamics										
Others (pl. specify)										
Total	**01**	**5**	**6**	**11**	**3**	**1**	**4**	**8**	**7**	**15**
Grand Total	**48**	**813**	**296**	**1109**	**09**	**05**	**14**	**822**	**301**	**1123**

3.5. Extension Programmes

Activities	No. of programmes	No. of farmers	No. of Extension Personnel	TOTAL
Advisory Services (Other than KMAS)	13	29698	0	29698
Diagnostic visits	75	399	109	508
Field Day	04	53	12	65
Group discussions	07	108	16	124
Kisan Ghosthi	0	0	0	0
Film Show	0	0	0	0
Self -help groups	0	0	0	0
Kisan Mela	01	23	62	85
Exhibition	01	82	09	91
Scientists' visit to farmers field	0	0	0	0
Plant/animal health camps	0	0	0	0
Farm Science Club	0	0	0	0
Ex-trainees Sammelan	0	0	0	0
Farmers' seminar/workshop	06	29	60	89
Method Demonstrations	05	76	13	89
Celebration of important days	14	340	75	415
Special day celebration	0	0	0	0
Exposure visits	04	109	06	115
Others (pl.specify)	0	0	0	0
Tree Plantation	01	0	14	14
Awareness on COVID -19	02	0	0	0
Conference Participation	04	0	638	638
HRD Training	04	0	422	422
Information corner	01	55	0	55
Lecture Delivered as Resource Person	29	819	87	906
News paper coverage	12	0	0	0
Participation in Krushi Sanjivani Sapthah	01	52	14	66
Participation in meeting	06	32	39	71
Participation in Online Programme	02	0	0	0
PM Live Telecast	02	96	06	102
Popular Article	02	0	0	0
Preparation of video clip	01	0	0	0
Radio Talk	06	0	0	0
Recipes Competition	01	10	0	10
SAC Meeting Attend	01	06	19	25
Soil health Campaign	01	29	05	34
Swachhata Activity	17	226	73	299
Farmers visit to KVK	06	270	0	270
Webinar	14	77	15	92
News letter	12	0	0	0
Total	**244**	**32589**	**1694**	**34283**

Note- Advisory services includes social media, website, telephonic calls etc.

Details of other extension programmes

Particulars	Number
Electronic Media (CD./DVD)	00
Extension Literature	06
Newspaper coverage	12
Popular articles	02
Radio Talks	06
TV Talks	0
Animal health amps (Number of animals treated)	0

Social Media (No. of platforms Used)	06
Others (pl. specify)	0
Total	**32**

3.6 Online activities during year 2020

S. No.	**Activity Type**	**Mode of implementation (Video conferencing / Audio Conferencing / Facebook Live / YouTube Live/ Zoom/ Google meet/ Webexetc)**	**Title of Program**	**No. of Programmes**	**No. of Participants/ Views**
A	Farmers training				
1		Google meet	Online Training on Awareness of KVK Activities	01	79
2		Google meet	Online Training on Soybean Production Technology	01	40
3		Google meet	Online training on Vermicompost production technology	01	22
4		Google meet	Balance diet & health	01	20
5		Google meet	Importance of biofortified verities of crops in diet and health	01	23
6		Google meet	Value addition to Nutri cereals	01	21
	Total			**6**	**205**
B	Farmers scientist's interaction programme				
	Total				
1	Farmers seminars	Zoom	Immund-Nutrition, wellness management and livelihood change	01	0
2		Zoom	Promoting Nutri – Garden for nutrition securiety	01	0

3		Zoom	Fisheries Production Technology	01	00
4		Zoom	Use of farm implements	01	64
5		Zoom	Online webinar on Mahatma gandhiji Jayanti	01	28
6		Zoom	PM Online webinar on Food & Nutrition Security	01	0
7		Zoom	Design e-learning content	01	0
8		Zoom	Webinar on Fisheries	01	0
9		Zoom	Drought resilient technology in kharif crops	01	0
10		Zoom	Organic farming certification method	01	0
11		Zoom	The future of Teaching and Learning	01	0
12		Zoom	Food safety policies & Regulation	01	0
13		Zoom	Capacity development of Anganwadi workers & Farm Women on poshan	01	0
14		Zoom	Medicinal plants potentials Therapeutic source for human disease	01	0
	Total			**14**	**92**
D	Expert lectures				
1		Zoom	International food standards	01	32
2		Zoom	Sensitization in Animal Husbandries	01	20
3		Zoom	Nutrition counseling and guidance	01	29
	Total			**03**	**81**
E	Any other (Pl. specify)				
1		Google Meet	Participation in Meeting	01	0

2		Google Meet	Participation in Online Programme	01	0
3		Google Meet	Participation in Online Programme	01	0
4		Google Meet	PM Kisan live telecast	01	50
5		Google Meet	PM Live Telecast	01	52
	Total			**5**	**102**
	Grand Total (A+B+C+D+E)			**28**	**480**

3.7. PRODUCTION OF SEED/PLANTING MATERIAL AND BIO-PRODUCTS

Production of seeds by the KVKs

Crop	Name of the crop	Name of the variety	Name of the hybrid	Quantity of seed (q)	Value (Rs)	Number of farmers
Cereals	Wheat	MACS-6222		110	275000	280
Oilseeds	Groundnut	JL-286		15	180000	36
Pulses						
Commercial crops						
Vegetables						
Flower crops						
Spices						
Fodder crop seeds						
Fiber crops						
Forest Species						
Others						
Total				**125**	**455000**	**316**

Production of planting materials by the KVK

Crop	Name of the crop	Name of the variety	Name of the hybrid	Number	Value (Rs.)	Number of farmers
Commercial						
Vegetable seedlings						
Fruits						

Ornamental plants						
Medicinal and Aromatic						
Plantation						
Spices						
Tuber						
Fodder crop saplings	Grass	Phule Gunwant		1000	2000	14
Forest Species						
Others	Azolla	*Azolla pinnata*		210	31500	62
Total						

Production of Bio-Products

Bio Products	**Name of the bio-product**	**Quantity Kg**	**Value (Rs.)**	**No. of Farmers**
Bio Fertilisers				
Bio-pesticide				
Bio-fungicide				
Bio Agents	Waste Decomposer	123 lit	2460	53
Others				
Total				

Production of livestock materials

Particulars of Live stock	**Name of the breed**	**Number**	**Value (Rs.)**	**No. of Farmers**
Dairy animals				
Cows				
Buffaloes				
Calves				

Others (Pl. specify)				
Goat	Osmanabadi	05	24500	05
Poultry	Giriraja	970	32010	06
Broilers				
Layers				
Duals (broiler and layer)				
Japanese Quail				
Turkey				
Emu				
Ducks				
Others (Pl. specify)				
Piggery				
Piglet				
Others (Pl.specify)				
Fisheries				
Indian carp				
Exotic carp				
Others (Pl. specify)				
Total				

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

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

B. Literature developed/published

Item	Title	Authors name	Number
Research papers			
Technical reports			
News letters			
Technical bulletins			
Popular articles			
Extension literature	Folder on Gram production Technology	Mr..N.H Thorat	500
	Folder on IPM and IDM of Gram	Mr.N.H Thorat	500
	Folder on Zero tillage sugarcane ratoon management	Mr.N.H Thorat	500
	Weaning foods for infants	Dr. P.P Deshmukh	500
	Booklet on Nutritious cereals - Finger millet	Dr. P.P Deshmukh	500
Others (Pl. specify)			
TOTAL			

C. Details of Electronic Media Produced

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

D. Details of Social Media Platforms Created / Used

S. No.	Type of social media platform	Title of social media	Number of Followers/ Subscribers
1	YouTube Channel	KVK Kalwade	41
2	Facebook page/ Account	KVK Karad dist Satara	2562
3	Mobile Apps	NIL	NIL
4	WhatsApp groups	28	2644
5	Twitter Account	KVK Karad	-
6	Any other (Pl. Specify)		

7	KVK Website	www.kvkkarad.co.in	5322
8	M- Kisan portal	KVK Kalwade	28350

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

Success Story of Farmers Producer Company (FPO)

Background Information –

Farmers from village Jaigaon Tal – Koregaon Dist – Satara growing traditional farming mostly Sugarcane crop based farming system day by day the production of sugarcane was decreasing and farmers faced lot of problems in soil. In village jaigaon no any formation of farmers group or farmers producer company.

Mr. Shankar Narayan Shine is agriculture input dealer and also progressive farmers, his shop at village jaigaon. As per Maharashtra government norm he took admission in KVK, Kalwade (Satara - I) for the course of Diploma in Agriculture Extension Service Provider for Inputs Dealers (DAESI) during this course programme he learn many things of new technologies in agriculture. He focused and like the idea of Farmers Producers Company he decided that they produce Farmers Producer Company at village Jaigaon. One day farmers from jaigaon gather and Mr. Shankar Shinde gave information to village farmers about new idea of farmers producer Company, farmers think on new idea and gate ready for formation of farmers producer company.

FPO Name - Jaigaon Agro Farmers Producer Company Ltd. Jaigaon Dist - Satara
Profile of Company –
FPO Name - Jaigaon Agro Farmers Producer Company Ltd.
Address - At/ Po- Jaigaon, Tal – Koregaon, Dist – Satara, Pin – 415501
Register Number – U01100PN2020PTC196892
PAN Number – AAFCJ0447C
TAN Number – PNEJ12850F
Registration date – 16 December 2020
Co op – Mr. Shankar Narayan Shinde
Number of Director – 05
Total Number of Director body - 10
Number of Farmers Members – 300

Activity of FPO –

After formation of company the farmers decided they produce seed production of different crops like Soybean, Gram, Groundnut, Wheat etc. Under the guidance of KVK and support of State department of agriculture, 45 farmers involved in Soybean seed production of phule sangam (KDS - 726) variety. Participated farmers dived different groups for effective management of seed production and sale , the group like Purchasing of agriculture inputs, Harvesting, Packing and grading, Marketing and Administration First year farmers produced 270 qtl soybean seeds.

Economies – Income and Expenditure –

Farmers produced total 270 qtls of soybean seed and prepared 545 packed bags of 50 Kg seeds. He gave Rs. 80 per kg, the sale of all seed in Marathwada, Vidherbha and near district region of Maharashtra state. The company has sale total 545 bags and got Rs. 21, 80,000/- in first year.
The production cost of per hector farm of soybean is Rs.50,000, total area of cultivation is 11.50 ha. The production cost is Rs. 5, 75,000
Hence Net profit is Rs. 16, 05,000/- in 6 month

Futures plan of FPO

For developing confidence to farmers and growth of company, farmers member decide following units to be started
Production of Gram seed
Production and Sale of vegetables
Processing of Ginger and sale its product
Processing of Soybean and prepare soya product
Prepare organic sugarcane Jaggery
Processing of dal mill, Packing & Grading
Establishment of Onion storage structure

	
Technical Guidance from KVK Satara – I Scientist	Group Discussion of FPO Members
	
Production of Soybean	Soybean Producer Farmers

Activity and Extension Programme of

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

A. TECHNOLOGY TRANSFER CLUB (TCC):

Krishi Vigyan Kendra established technology transfer club in jurisdiction of operational area of selected village. Through these clubs KVK scientists and officials of club (farmers) identify and find out the problems of villagers related to agriculture, social & economic point of view. After finding out these problems suitable solutions are evolved & implemented to solve these problems through mutual understanding of KVK and Club.

Through these TTC, KVK effectively implemented various KVK programmes like FLD, OFT, Training Programme, Farmers rallies etc.

Created Four Whats App group for Sugarcane, Groundnut, Sheep & Goat, Rural Poultry, Farmers Friends for sharing of experiences of the farmers and effective farmers scientists interaction.

B. MINI-ATIC CENTRE:

KVK has established Mini-ATIC Centre for giving information to farming community as well as visiting dignitaries in which Photographs of Pests, Diseases & Nutrition Deficiencies, IPM Kits and different Specimens & Models are demonstrated. In its publications segment the KVK has published the Rabi crop production Diaries, Vermicompost Diaries, Folders on Vegetable plant protections, Fruit crop growing, Sericulture, Booklet on Banana Production technology, Kharif and Rabi crop production Technique, Goat farming etc., and CD on Vermicompost to enrich the knowledge of farmers who are indulged in respective fields.

C. DEMONSTRATIVE UNITS

Considering "Seeing Is Believing", Krishi Vigyan Kendra has established its own 23 Demonstrative Units on his farm for conducting the various trainings and other activities. The demonstration units are Loose housing cow barn, Crop plots of Groundnut, Jawar, Sugarcane, Soybean etc, Crop museum (Different crop variety), Horticulture crop orchard (Aonla, Pomegranate, Mango, Coconut), High Density mango plantation, Vermicompost & Vermiwash project, Mulberry plantation, Mushroom production unit, Azolla production unit, ICRISAT groundnut production technology, Agriculture based implement exhibition, Zero energy cool chamber unit, Nursery, Briquette production unit, Goat rearing unit, Silage preparation, Honey Bee

Keeping unit, Farm pond, Apiculture unit, Hydroponic Unit, Green House Unit, Old Agricultural implements exhibition and Micro irrigation (Drip & Sprinkler) unit.

D. INFORMATION TECHNOLOGY IN AGRICULTURE

1. WEBSITE OF KVK-

Taking into the consideration the importance of Information & Technology the KVK has developed its own website, www.kvkkarad.co.in to provide the useful information to the farming community. KVK is getting very good response for weather forecasting links for each tahsil of Satara district which includes rainfall, cloud cover, wind velocity and direction, humidity, sunshine etc.

2. KVK Whats app Group

KVK has established 28 Whats app Group which provide information about KVK activities & agriculture on whats app group KVK has made available facility of providing feedback to the participant.

3. Kissan Mobile Advisory

KVK Send the messages to registered farmers on Crop, Marketing, Awareness etc.

4. USE OF AUDIO VISUAL AIDS:

It is well known to all that "A picture worth thousands of word". So KVK also widely used the audio visual aids for conducting different programme and to transfer the technology. KVK has maintained other CDs related to agriculture. Besides this KVK plays important role as a resource person for "ICT in Agriculture" at RAMETI, Kolhapur, State Agril Dept and ZP for extension functionaries.

E. Soil and Water Testing Lab :

KVK has established 'Soil and Water Testing Lab' and started the soil & water testing. KVK also provided soil & water test reports to the farmers. From December 2015 Micronutrient analysis facility has started in KVK. KVK has developed Soil and Water Testing Software namely "BHOOMI". Through which fertilizer recommendation can be given as per SAU Dose or as per six tire System approach or as per Targeted Yield approach to different crops as per farmers demand. Total 434 soil samples and 91 water samples were tested and Soil Health cards were distributed in year Jan 2020 to Dec 2020

F. MOBILE SMS SERVICE:

Taking into the consideration the importance of mobile phone as medium for extension KVK has started service through Kisan Portal of providing free SMS to its contact farmers on their mobile phones about Crop advisory, Disease & pests forecasting & management and local weather forecasting. Total Number of messages 12 and farmers beneficiaries 28305

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

Sl. No.	Crop / enterprise	ITK Practiced	Purpose of ITK
A	Agronomical crops		
1	Paddy	Rope dragging and moving to and fro in standing crop	Control of caterpillar
2	Gram	Mixing Jowar or maize seed with Gram while sowing	Bird perch for Helicoverpa armigera management
3	General crops	Spraying of insecticides at evening 2-3 days after Amawasha	Control of nocturnal caterpillar
4	Cereals	Waste cassette reeling	To minimizes the losses of grain at maturity from birds
B	Horticultural crops		
1	Pea	Criss-cross sowing	To avoid lodging by anchoraging in pea
2	Chilli	Spraying the crop with Raw milk 1 cup + Admire 2 gm + Zinc sulphate 15 gm + Steam rich 15 ml per 15 lit pump	For management of Leaf curl of chilli
3	Ginger	Treat the Ginger seed with dung to improve seed germination and to avoide rhizome rot.	To improve seed germination and to avoide rhizome rot.
C	Pest		
1	Rat	Take 5 lit empty plastic can. Cut it at mouth. Burry it at ground level. Apply groundnut oil and some groundnut pieces inside neck. Pour water half of can.	To catch the rats.
		Use of Glyricidia flowers to keep away the rats	Keep away the rats
2	Stored Grains	Use of Wekhand rhizome powder 2% of grain weight and keeping it in container of stored grains for preventing stored grain pests	Preventing stored grain pests
		Mixing of common salt in grains @ 250 gm for 5 kg grains.	Preventing stored grain pests

Indicate the specific training need analysis tools/methodology followed for

A. Practicing Farmers

PRA Survey

B. Rural Youth

a) Field Survey and Agro – Ecosystem Analysis
b) Observation and group discussion with Rural Youth

C. In-service personnel

a) Meeting with Government Institute
b) Feedback from Agriculture department & Development Organizations

D. Other
a) Feedback from Ex-Trainees
b) Pre and post training evaluation

5.2. Indicate the methodology for identifying OFTs/FLDs

PRA – PRA was conducted in Dhoroshi, Nigadi, Surupkhanwadi and Vihe. In PRA identified thrust area like improving productivity of Sugarcane , Soybean, Potato , Pea, Rabbi jowar,Paddy, Gram, Wheat, Groundnut & livestock & Poultry management, empowerment of youth & women . From PRA yield gap analysis was done & accordingly thrust areas the OFTs are finalized

Field level observations – During transit walkobserved the field condition and accordinglyfinalized OFTs

Farmer group discussions –

During village adoption conducted Group discussion in which yield gaps were found and need based technology interventions were finalized.

For FLD:
New variety/technology - Varitial evaluction of groundnut – TAG 24, JL – 286, JL – 501, KDG – 128 & Phule Bharti in case of soybean DS -228, KDS – 344, KDS – 726, in case of wheat Phule Trimbik & Phule Samadhan were evaluated in gram Vijay & Digvijay in Black Gram AKU – 15& TAU – 1 were demonstration in case of poultry birds Giriraja& Black rock were demonstrated
Poor yield at farmers level – Poor yield due to improper nutrient management , improper crop management, improper pest and disease management due to this reason and poor drainage & poor soil health the yields of farmers were poor.

Existing cropping system - Lack of Broad bed furrow & Broad raised bed and lack of planting distance the yields were low according to survey and discussion with farmers proper FLDs were demonstrated

5.3. Field activities
i. Name of villages identified/adopted with block name-
1 Bhairewadi, Tal – Patan 2017 – 18
2. Nigdai, Tal – Karad, 2017 -18
3. Retahre Kh Tal – Karad 2017 -18
4. Surupkhanwadi , Tal – Man, 2016 -17
5. Kumthe Nagache Tal – Khatav 2017 -18

ii. No. of farm families selected per village : 50

iii. No. of survey/PRA conducted :05
iv. No. of technologies taken to the adopted villages –
Bhariewadii – 4 ,
Nigadi – 07,
Kumathe- 04
Vihe- 12,
Surupkhanwadi – 8
Mundhe - 4
Nalawadewadi – 4 (Not adopted)
Wathar 02 (Not adopted)
Rethre Bk 2 (Not adopted)

Kapil 01 (Not adopted)

v. Name of the technologies found suitable by the farmers of the adopted villages:

Use of briquettes in Paddy, Useof STCR doses in onion, BBF for Groundnut, Zero
tillage for ratoon management, Rearing of Black Rock birds, Gram IPM, White grub management by castor fermenter technique.
Growing of Phule Gunavant grass.
All technologies related to IPDM.
vi. Impact (production, income, employment, area/technological– horizontal/vertical)-

Use of briquettes in Paddy, Use of STCR doses in onion, BBF for Groundnut, Zero tillage for ratoon management, Rearing of Black Rock birds, Growing of Phule Gunavant grassIPM in all crops. These are the trials for horizontal spread.

6. LINKAGES

A. Functional linkage with different organizations

Name of organization	Nature of linkage
M.P.K.V., Rahuri	Participation in ZREAC meetings, Source of technical information & Conducting training programmes, and extension activities
Agriculture Research Centers	Participation in meetings & Source of technical information
State Agricultural Department	Joint implementation of extension activities, Participation in meetings & Conducting training programmes
State Veterinary Department	Joint implementation, Participation in meetings & Conducting training programmes
Regional Agricultural Extension Centre	Participation in meetings, Extension activities
Zillah Parishad, Panchayat Samiti and Gram panchayats	Joint implementation, Participation in meetings, conducting training programmes and other extension activities.
MAHABEEJ	Seed production
Agriculture College, Karad	Conducting Extension activities
Regional Agriculture Management Extension & Training Institute, Kolhapur (RAMETI)	Joint implementation, Participation in meetings, & Conducting training programme
ATMA, Satara	Participation in meetings, conducting training programmes. Planning, Survey etc.
District Rural Development Authority	Conducting training programmes for Rural youths under SGSY schemes.
Satara District Co. op. Bank	Group Discussion & meetings of Farmer's Clubs.
NABARAD	Participation in pre Kharif and pre rabi meetings, Formation of TTC.
Central Poultry Development Organization (WR) Mumbai	Joint implementation, Participation & Conducting training programmes Supply of Giriraja chicks
Akashwani, Satara	Recording & broadcasting of agricultural programmes and farmers success stories
Doordarshan, Pune	Recording & broadcasting of agricultural programmes and farmers success stories
Zuari Agro. Ltd	Farmer's ralley and training programmes
Balasaheb Desai College Patan	Soil health campaigning
Y M Krishna Agriculture Collage Rethare	Organising joint farmers meeting and mela's as a part of RAWE activities of RAWE students
Mokashi Agriculture Collage RajmachiKarad	Organising joint farmers meeting and mela's as a part of RAWE activities of RAWE students

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

B. List 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.)

C. Details of linkage with ATMA

a) Is ATMA implemented in your district Yes

If yes, role of KVK in preparation of SREP of the district?

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**	General Body Meeting	04	-	
02	**Research projects**				
03	**Training programmes**		02	02	
04	**Demonstrations**				
05	**Extension Programmes**				
	Kisan Mela	Mahila Kisan Diwas	01	01	
	Technology Week				
	Exposure visit				
	Exhibition				
	Soil health camps				
	Animal Health Campaigns				
	Others (Pl. specify) DAESI Diploma Course	DAESI Diploma Course	01	01	
06	**Publications**				
	Video Films				
	Books				
	Extension Literature		02		
	Pamphlets				
	Others (Pl. specify)				
07	**Other Activities** (Pl.specify)				
	Watershed approach				
	Integrated Farm Development				

	Agri-preneurs development				

D. Give details of programmes implemented under National Horticultural Mission

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

E. Nature of linkage with National Fisheries Development Board

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

F. Details of linkage with RKVY

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

G. Details of linkage with PKVY (Paramparagat Krishi VikasYojana)

S. No.	Programme	Nature of linkage	Funds received if any Rs.	Expenditure during the reporting period in Rs.	Remarks
1	Skill training on soil and water testing Lab Analyst	ASCI			
2	Skill training on Extension Service Provider	ASCI			

H. Details of linkage with NFSM

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

I. Details of linkage with SMAF (Sub-mission on Agroforestry)

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

7. Convergence with other agencies and departments:

8. Innovator Farmer's Meet

Sl.No.	Particulars	Details
	Have you conducted Farm Innovators meet in your district?	No
	Brief report in this regard	

9. Farmers Field School (FFS)

S. No	Thematic area	Title of the FFS	Budget proposed in Rs.	Brief report

10.1. Technical Feedback of the farmers about the technologies demonstrated and assessed:

- After implementation of BBF for summer groundnut, farmers were surprised to see the results on BBF for groundnut, yield of groundnut recorded highest over drilled groundnut.
- After implementation of Zero tillage sugarcane ratoon management, farmers were surprised to see the results on Zero tillage sugarcane ratoon management, yield of Zero tillage sugarcane ratoon management is more conventional ratoon management.
- Technology demonstrated shown superior results over Farmers practice. Method need to be followed very correctly as demonstrated, There was increase in yield due to management of the wilt disease with minimum cost. Farmers also get aware of low cost technology for diseases management. Availability of quality biological control agent in time need to be planned well in advance.
- Management of thrips in onion was achieved by spraying single insecticide 3 – 4 times. To break the resistance in the pest for same insecticide (Neonicotinide) 10000 ppm Neem extract was used @ 1 ml per liter in the recommended spray (recommendation by AAU Anand)
- The method was very easy mean of sucking pest and borer control by only seed treatment of Thimethoxom 30 % FS. As formulation is semiliquid it is to be properly diluted and used as demonstrated.
- Decomposition time of trash has reduced significantly. Faremrs were hesitating to keep trash because of the same problem.
- As this area is under heavy rainfall and to avoid leaching losses of nutrients the nutrients should be given in form of briquette. Briquettes application to be done at appropriate time and planning.
- Farmers apply fertilizers injudiciously to achieve more yields and at any stage. But after receiving STCR doses they got actual dose of fertilizer and time of fertilizer application. STCR dose of fertilizer should be calculated by using recommended equations and if the quantity of potash is higher, conside as medium.
- Spraying of 19:19:19 can be replaced by using DAP and the accurate stage of spraying should be achieved i.e. 55 and 70 DAS. The spray can increase quality, quantity and weight of each grain.
- Spraying of Potassium Nitrate 2 % at the acute stage of 50% flowering and at grain filling stage should be achieved. This will help in increase in pods and filling of pods.
- Phule gunwant has potential to produce higher quality of green fodder from less cost of cultivation. This reduces cost of cultivation as compare to seasonal fodder crops so the farmers increase their area under this variety. The horizontal spread of this grass were happened due to massive extension activities and input service.
- Black australops are duel purpose chicks, they are good layers and also suitable for meat production as compare to local chicks.

10.2. Technical Feedback from the KVK Scientists (Subject wise) to the research institutions/universities:

11. Technology Week celebration during2020:Yes/No, If Yes

Period of observing Technology Week: From to
Online / Offline:
Total number of farmers visited :
Total number of agencies involved :
Number of demonstrations visited by the farmers within KVK campus:

Other Details

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

12. IMPACT

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

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

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

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

- **Rural Poultry Birds:** For popularizing Giriraja, Kadknath, black rock and RIR birds in backyard poultry, KVK has arranged to supply birds of Giriraja, Kadknath, black rock and RIR to needy farmers and arranged several long duration training programmes. During the last Ten year period KVK has supplied 216326 chicks to 2762 farmers.
- **JL 286 Groundnut Variety:** For popularizing JL-286 (Phule Unnap) Variety of groundnut KVK has undertaken trainings and varietal demonstrations & supplied seed of JL-286 (Phule Unnap) Variety for the farmers from whole district. So far KVK has supplied **149.03 Quintals** of seed of JL-286 Variety to **523 farmers** from **119 villages** and covered **8 tahsil** of Satara district.
- **Phule Samadhan Wheat Variety:** For popularizing **Phule Samadhan** variety of Wheat KVK has undertaken trainings and varietal demonstrations and arranged seed production programme along with MAHABEEJ on farmers field and host organizations farm & also supplied seed directly to the farmers of Satara & adjoining districts. Through participatory seed production on farmer's field in collaboration with state seed corporation kvk has producing more than six hundred quintals of seed of Phule Samadhan variety per year.
- **Use of U- DAP and NPK Briquettes:** KVK has undertaking demonstration on Use of U- DAP briquettes in rice from last 6 years and On farm testing trial on Use of NPK briquettes for sugarcane from last two years.

Also through trainings and extension activities KVK has popularized use of U-DAP and NPK briquettes. KVK producing U-DAP and NPK briquettes from last five years and supplying it to farmers from Satara, Sangli and Kolhapur districts. Up to March 2018 KVK has supplied **24998 Kg U-DAP briquettes to 1329 number of farmers and 79675 Kg NPK briquettes to 466 numbers of farmers.**

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

13. Kisan Mobile Advisory Services

Month	No. of SMS sent	No. of farmers to which SMS was sent	No. of feedback / query on SMS sent
Jan 2020	01	23190	
Feb 2020	03	5970	
March 2020	00	00	
April 2020	01	20207	
May 2020	02	41554	
Jun 2020	01	20850	
Jul 2020	00	00	
Aug 2020	00	00	
Sept 2020	02	20855	
Oct 2020	01	20805	
Nov. 2020	01	23112	
Dec. 2020	01	20805	
Total	**13**	**197348**	

Name of KVK	Message Type	Type of Messages						
		Crop	Livestock	Weather	Marke-ting	Aware-ness	Other enterprise	Total
	Text only	09				04		13
	Voice only							
	Voice & Text both							
	Total Messages	**09**				**04**		**13**
	Total farmers Benefitted	**109391**				**87957**		**197348**

14. PERFORMANCE OF INFRASTRUCTURE IN KVK

A. 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	Vermicompost	2016	0.05	Udrilis Ujini	Vermicompost	1500 Kg	1800	27500	
2	Azolla Unit	2016	0.01	Azolla Pinata	Azolla	210 Kg	10000	31500	
3									

B. 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									
Wheat	18/1/2020	23/3/2020	7.5	MACS 6222	Seed	98	110000	248000	
Pulses									
Oilseeds									
Groundnut	15/7/2020	20/11/2020	1	JL 286	Seed	10 Q	76000	120000	
Fibers									
Spices & Plantation crops									
Floriculture									
Fruits									
Vegetables									
Others (specify)									

C. Performance of production Units (bio-agents / bio pesticides/ bio fertilizers etc.)

Sl. No.	Bio Products	Name of the Product	Qty (kg)	Amount (Rs.)		Remarks
				Cost of inputs	Gross income	
	Bio-Fertilizers					
	Bio-					

	Fungicides					
	Bio-pesticides					
	Bio-Agents					

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

Sl. No	Name of the animal / bird / aquatics	Details of production			Amount (Rs.)		Remarks
		Breed	Type of Produce	Qty.	Cost of inputs	Gross income	
1	Poultry Bird	Geriraj	Bird	970	21300	32000	

E. 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 2020			
February 2020	12	20	
March 2020			
April 2020			
May 2020			
June 2020			
July 2020			
August 2020			
September 2020			
October 2020			
November 2020			
December 2020			

F. Database management

S. No	Database target	Database created

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

Amount sanction (Rs.)	Expenditure (Rs.)	Details of infrastructure created / micro irrigation system etc.	Activities conducted					Quantity of water harvested in '000 litres	Area irrigated / utilization pattern
			No. of Training programmes	No. of Demonstration s	No. of plant materials produced	Visit by farmers (No.)	Visit by officials (No.)		

H. Performance of Nutritional Garden at KVK farm

If Nutritional Garden developed at KVK farm/Village Level? Yes/No

If yes,

Nutritional Garden developed at KVK farm

Area under nutritional garden (ha)	Component of Nutritional Garden	No. of species / plants in nutritional garden	No. of farmers visited
1.15 R	Vegetable crops	16	154
	Fruit crops	7	
	Others if any		

Nutritional Garden developed at Village Level

No. of Villages covered	Component of Nutritional Garden	No. of species / plants in nutritional garden	No. of farmers covered
	Vegetable crops		
	Fruit crops		
	Others if any		

H. Details of Skill Development Trainings organized

S.No.	Name of KVKs/SAUs/ICAR Institutes	Name of QP/Job role	Duration (hrs)	No. of participants					
				SCs/STs		Others		Total	
				Male	Female	Male	Female	Male	Female
1	KVK Satara – I	Soil and Water Testing Lab Analyst	200	02	0	14	04	16	04
2	KVK Satara – I	Agriculture Extension Service Provider	200	01	0	15	04	16	04

15.FINANCIAL PERFORMANCE

A. 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	IDBI Bank	Karad	470	Kalyani Gorakshan Trust Account KVK Revolving Fund	47010010004999		IBKL0000470
With KVK	IDBI Bank	Karad	470	Kalyani Gorakshan Trust Account KVK Revolving Fund	47010010005000		IBKL0000470

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

S. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	**Pay & Allowances**	6300000.00	5280000.00	4288278.00
2	**Traveling allowances**	60000.00	20000.00	10000.00
3	**Contingencies**			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	50000.00	30000.00	29190.00
B	POL, repair of vehicles, tractor and equipments	50000.00	50000.00	29190.00
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)	100000.00	100000.00	19228.00
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	100000.00	100000.00	29190.00
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	200000.00	58600.00	39910.00
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	200000.00	100000.00	32740.00
G	Training of extension functionaries	0	0	0
H	Maintenance of buildings	0	0	0
I	Establishment of Soil, Plant & Water Testing Laboratory	0	0	0
J	Library	0	0	0
TOTAL (A)		**7060000.00**	**5738600.00**	**4477726.00**
B. Non-Recurring Contingencies				
1	**Works**			
2	**Equipments including SWTL & Furniture**			
3	**Vehicle** (Four wheeler/Two wheeler, please specify)			
4	**Library** (Purchase of assets like books & journals)			
TOTAL (B)				
C. REVOLVING FUND		0	0	288969.00
GRAND TOTAL (A+B+C)		**7060000.00**	**5738600.00**	**4766695.00**

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

Year	Opening balance as on 1st April	Income during the year	Expenditure during the year	Net balance in hand as on 1st April of each year
April 2018 to March 2019	2327193.47	3734488	1262684	4798997.47
April 2019 to March 2020	4798997.47	5148520.37	5021675.74	4925842.10
April 2020 to December, 2020	4925842.10	491810	288969	5128683.10

16. Details of HRD activities attended by KVK staff during year

Name of the staff	Designation	Title of the training programme	Institute where attended	Mode (Online/Offline)	Dates
Dr. Priyadershani Deshmukh	SMS, Home Science	Women Empowerment	VNM, Parbhani	Online	28/10/2020
Mr. V.R Mahajan	SMS, Agricultural Extension	Use of Social Media in Agriculture	MPKV Rahuri	Online	24/5/2020 to 28/5/2020
Dr. Priyadershani Deshmukh	SMS, Home Science	Importance and value addition to soybean	VNMKV, KVK Solapur	Online	23/6/2020
Mr. V.R Mahajan	SMS, Agricultural Extension	Training on Farmer bill	MANAGE, Hyderabad & VANAMATI, Nagpur	Online	24/10/2020

17. Details of progress in Doubling Farmers Income (DFI) villages adopted by KVKs

Name of the village	Total No. of families surveyed	Key interventions implemented	No. of farmers covered in each intervention	Change in income (Rs/unit)	
				Before	After
Rethare Kh	864	Demonstration of Seed treatment, JL -286, KDS- 726 Off campus training programme Soil and water testing Establishment of IFS Model	200	150000	250000
Kumthe Nagache	474	Off Campus training programme Establishment of IFS Model Demonstration of Seed treatment, JL -286, KDS- 726 Establishment of Agro subsidiary enterprise	200	200000	325000

18. Details of activities planned under NARI /PKVY / TSP / KKA, etc.

S. No.	Name of the programme	No. of villages adopted	Key activities performed	No. of activities carried out	No. of families covered

19. Details of Progress of ARYA Project

Name of Enterprise	No of Training Conducted	No of Beneficiaries	No of Extension Activities	No of Beneficiaries	No of Unit established	Change in income		No. Of Groups Formed
						Before	After	

20. Details of SAP

S. No.	Types of major Activity conducted- SwachhtaPakhwada, Cleaning, Awareness Workshop, Miccobial based Agricultural Waste Management by Vermicomposting etc.	No. of Programmes conducted	No. of Participants
1	Swachhata Pledge & Banner Display	01	18
2	Weeding out of old record and furniture	01	14
3	Cleanliness drive at adopted village	01	15
4	Cleanliness and sanitation drive at KVK Campus	01	13
5	Stock taking of waste compost kitchen management	01	12
6	Awareness on Recycling of waste water	01	13
7	Technology Demonstration on Waste to wealth	01	17
8	Swachhata Awareness at local level	01	20
9	Cleaning at public places	01	25
10	Cleanliness and sanitation drive at KVK Campus	01	20
11	Awareness on Recycling of waste water	01	21
12	Awareness on state disposal of bio degradable,& undegradable waste	01	19
13	Involvement of VIP in Swachhata Activity	01	14
14	Press conference for highlighting of Swachhata Activity	01	8

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

APR SUMMARY

(Note: While preparing summary, please don't add or delete any row or columns)

1. Training Programmes

Clientele	No. of Courses	Male	Female	Total participants
Farmers & farm women	34	585	137	722
Rural youths	06	117	84	201
Extension functionaries	05	83	63	146
Sponsored Training	02	32	08	40
Vocational Training	01	8	7	14
Total	48	825	299	1123

2. Frontline demonstrations

Enterprise	No. of Farmers	Area(ha)	Units/Animals
Oilseeds	13	05	13
Pulses	13	05	13
Cereals	41	15	41
Vegetables	0	0	0
Other crops	39	15	39
Hybrid crops	0	0	0
Total	**106**	**40**	**106**
Livestock & Fisheries	0	0	0
Other enterprises	40	0	40
Total	**40**	**0**	**40**
Grand Total	**146**	**40**	**146**

3. Technology Assessment & Refinement

Category	No. of Technology Assessed & Refined	No. of Trials	No. of Farmers
Technology Assessed			
Crops	04	34	34
Livestock	0	0	0
Various enterprises	01	07	07
Total	**5**	**41**	**41**
Technology Refined			
Crops	0	0	0
Livestock	0	0	0
Various enterprises	0	0	0
Total	0	0	0
Grand Total	**5**	**41**	**41**

4. Extension Programmes

Category	No. of Programmes	Total Participants
Extension activities	243	34283
Other extension activities		
Total	**243**	**34283**

5. Mobile Advisory Services

		Type of Messages

Name of KVK	Message Type	Crop	Livestock	Weather	Marke-ting	Aware-ness	Other enterprise	Total
	Text only	09				04		13
	Voice only							
	Voice & Text both							
	Total Messages	**09**				**04**		**13**
	Total farmers Benefitted	**109391**				**87957**		**197348**

6. Seed & Planting Material Production

	Quintal/Number	Value Rs.
Seed (q)	125	455000
Planting material (No.)	1000	2000
Bio-Products (kg)	210	31500
Livestock Production (No.)	970	32010
Fishery production (No.)	0	0

7. Soil, water & plant Analysis

Samples	No. of Beneficiaries	Value Rs.
Soil	434	97650
Water	91	13650
Plant	0	0
Total	**525**	**111300**

8. HRD and Publications

Sr. No.	Category	Number
1	Workshops	06
2	Conferences	04
3	Meetings	06
4	Trainings for KVK officials	04
5	Visits of KVK officials	75
6	Book published	02
7	Training Manual	02
8	Book chapters	06
9	Research papers	00
10	Lead papers	00
11	Seminar papers	00
12	Extension folder	07
13	Proceedings	02
14	Award & recognition	01
15	On going research projects	02