ICAR-ATARI, Pune
DETAILS OF ANNUAL PROGRESS REPORT OF KVKs DURING 2019-20
(1st April 2019 to 31st March 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		Email	Website address & No. of visitors (hits)
	Office	Mobile		
Shri Siddhagiri, Krishi Vigyan Kendra, Kaneri, Tal. Karveer, Dist. Kolhapur- 416234	0231-2980001	7906314421	kvkkolhapur2@gmail.com kvk.kolhapur2@icar.gov.in	https://kvkkolhapur2.icar.gov.in (2150)

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

Address	Telephone		E mail	Website address
	Office	Mobile		
Shri Kshetra Siddhagiri Mahasansthan, Kaneri Math At post: Kaneri, Taluka: Karveer Dist: Kolhapur 416234(M.S.)	0231-2671059 0231-2684100	-	siddhagirimath@gmail.com	www.siddhagirimath.org

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

Name	Telephone / Contact		
	Office	Mobile	Email
Dr. Ravindra Singh	0231-2980001	7906314421	ravindrasingh94125@gmail.com

1.4. Year of sanction: 14 March, 2018

1.5. Staff Position (as on 31 December, 2019)

Sl. No.	Sanctioned post	Name of the incumbent	Discipline	If Permanent, Please indicate		Date of joining	If Temporary, pl. indicate the consolidated amount paid (Rs./month)
				Current Pay Band	Current Grade Pay		
1	Senior Scientist and Head	Dr. Ravindra Singh	Agricultural Extension	Rs. 38800-67000	Rs. 9000/-	17-12-2018	--
2	Subject Matter Specialist	Mr. Pandurang A. Kale	Agronomy	Rs. 16230-39100	Rs. 5400/-	26-12-2018	--
3	Subject Matter Specialist	Mr. Rajendra S. Waware	Soil Science	Rs. 16230-39100	Rs. 5400/-	01-01-2019	--
4	Subject Matter Specialist	Ms. Pratibha B. Thombare	Home Science	Rs. 15600-39100	Rs. 5400/-	04-01-2019	--
5	Subject Matter Specialist	Dr. Chandrakant V. Dhandore	Animal Science	Rs. 15600-39100	Rs. 5400/-	10-01-2019	--
6	Subject Matter Specialist	Dr. Parag D. Turkhade	Plant Protection	Rs. 15600-39100	Rs. 5400/-	17-01-2019	--
7	Subject Matter Specialist	Mr. Sunil Kumar	Agril. Extension	Rs. 15600-39100	Rs. 5400/-	21-01-2019	--
8	Programme Assistant	Mr. Vishvambhar H. Jadhav	GPP	Rs. 9300-34800	Rs. 4200/-	01-11-2019	--
9	Computer Programmer	Mr. Vitthal C. Muthal	Computer Science	Rs. 9300-	Rs. 4200/-	02-11-2019	--

				34800			
10	Farm Manager	Mr. Somnath D. Gadade	M. Sc.	Rs. 9300-34800	Rs. 4200/-	25-11-2019	--
11	Accountant/Superintendent	Mr. Janagarajan Illayaraja	M.B.A. (Finance)	Rs. 9300-34800	Rs. 4200/-	15-11-2019	--
12	Stenographer	Mr. Vinayak D. Vanjari	B.A.	Rs. 5200-20200	Rs. 2400/-	01-11-2019	--
13	Driver 1	Mr. Bramhanand J. Khade	H.S.C.	Rs. 5200-20200	Rs. 2000/-	01-11-2019	--
14	Driver 2	Mr. Omkar R. Patil	H.S.C.	Rs. 5200-20200	Rs. 2000/-	01-11-2019	
15	Supporting staff 1	Mr. Rohit N. Naik	H.S.C.	Rs. 5200-20200	Rs. 1800/-	01-11-2019	--
16	Supporting staff 2	Mr. Shubham H. Shinde	H.S.C.	Rs. 5200-20200	Rs. 1800/-	01-11-2019	--

1.6. Total land with KVK (in ha):

S. No.	Item	Area (ha)
1	Under Buildings	855 (Sq/meter)
2.	Under Demonstration Units	00.40
3.	Under Crops	17.31
4.	Horticulture	06.80
5.	Pond	-
6.	Others if any	00.59

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	-	-	-	2019	550	Work In progress
2.	Farmers Hostel	ICAR		-		2018	305	Work In progress
3.	Staff Quarters (6)							
4.	Demonstration Units (2)							
a	Dairy Unit							
b	Office							
c	Vermicompost Unit							
d	Nursery Unit							
e	Adarsh Nursery							
f	Medicinal Nursery							
g	Bio-fertilizer & Bio-pesticide Unit							
h	Soil Testing							
i	Sorghum processing Unit							
j	Goatry Unit							
k	Poultry Unit							
5	Fencing							
6	Rain Water harvesting system							
7	Threshing floor							
8	Farm go-down							
9	ICT lab							
10	Other							

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
L.M.V. (Mahindra Bolero-SLE)	2019	793599	7303	Working
Tractor Kubota MAU 4501 (45 H.P.)	2020	626000		Working

C) Equipments & AV aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
Balram	2020	24000	Working

1.8 Details SAC meeting conducted in the year

Date	Name and Designation of Participants	Salient Recommendations	Action taken
22 January, 2020			

2. DETAILS OF DISTRICT

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

S. No	Farming system/enterprise
1	Sugarcane based farming system
2	Paddy/Sugarcane farming system
3	Paddy based farming system
4	Soybean/Jowar/Gram farming system
5	Buffalo-Cattle dairy enterprise
6	Paddy/Wheat/Vegetable farming system

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 Zone	This zone receives heavy rain fall, is covered with laterite soils. It is mainly found in Karveer, Ajara, Bhudargad, Gaganbawada, Radhanagari, Panhala and Shahuwadi talukas. It has the altitude of 600 to 900 meters above sea level. It is having laterite soil drained and shallow having the phospheric and acidic quality. The crops such as vari, nachani, sava, rala etc. are grown in this zone.
2	Central Zone	This zone with more or less assured rainfall is covered with fertile, well-drained, brownish medium black soils of natural reaction. It is found in Hatkanangale, Karveer, Radhanagari and some part of Bhudargad and Ajara talukas. It has attitude of 500 to 600 meters above sea level. In this zone the crops like paddy, jawar, and groundnut are cultivated during kharif season and sugarcane and vegetables are grown where the irrigation water is available.
3	Eastern Zone	The dry eastern zone with precarious rainfall is covered with medium to deep black fertile soils of varying depths. This zone consists of Gandhinglaj, Kagal, Karveer, Hatkanangale and Shirol talukas. In this zone the crops like jawar, and groundnut are cultivated on a large scale as well as the crops like paddy, sugarcane and vegetables are grown with the help of irrigation water

b)Topography

S. No.	Agro ecological situation	Characteristics
1	Ghat Zone (Tahsils: Chandgad)	Heavy rainfall, Shallow light to medium red, black and laterite hilly soils Crops: Paddy, Finger millet, Sugarcane, Groundnut and Vegetables Rainfall: 5000 mm
2	Sub mountain zone (Tahsils: Karveer, Kagal, Gadhinglaj, Ajara, Bhudargad)	Medium to heavy rainfall, shallow black, red soils Crops: Sugarcane, Groundnut, Sorghum, Cashewnut, Vegetables Rainfall: 750-1500 mm

2.3 Soil Types

S. No	Soil type	Characteristics	Area in ha
1	Laterite soils	Acidic, EC less than 1mmhos/cm, PH less than 7.00 Crops: Paddy, Nagli, Mango, Sapota	96006
2	Light red soils	Neutral, E C less than 1 mmhos/cm, PH = 7.00 Crops: Sugarcane, Paddy, Groundnut, Vegetables,Flowers, Livestock.	215882
3	Black soils	Alkaline, EC-2mmhos/cm, PH more than 7.00 Crops: Sugarcane, Paddy, Groundnut, Vegetables, Flowers, and Livestock.	227232

2.4. Area, Production and Productivity of major crops cultivated in the district (2019-20)

S. No	Crop	Area (ha)	Production (MT)	Productivity (qt/ha)
1	K. Sorghum			
2	Bajara			
3	K. Maize			
4	Other Kharip Cereals			
5	Pigeon pea			
6	Greengram			
7	Blackgram			
8	Other Kharip Pulses			
9	K. Groundnut			
10	K.Sunflower			
11	Seasamum			
12	Soybean			
13	Niger			
14	Other Oilseed			
15	Cotton			
16	Rabi Sorghum			
17	Wheat			
18	Rabi Maize			
19	Other cereals			
20	Chickpea			
21	Other pulses			
22	Safflower			
23	Linseed			
24	Sunflower			

Source: District agriculture department.

Fruit Crops

S. No	Crop	Area (ha)	Production (MT)	Productivity (MT./ha)
1	Mango			
2	Sweet Orange			
3	Pomegranate			
4	Guava			
5	K. lime			
6	Sapota			
7	Banana			
8	Grape			
9	Orange			
10	Fig			
11	Aonla			
12	Muskmelon			
13	Watermelon			
14	Tamarind			
15	Jamun			
16	Coconut			
17	Papaya			
18	C.Apple			
19	Ber			
20	Other			

2.5. Weather data (2019)

Month	Rainfall (mm)	Rainy Days	Temperature 0 C		Relative Humidity (%)	
			Maximum	Minimum	Maximum	Minimum
Jan-2019	00	00	31	20	72.41	36.45
Feb-2019	00	00	34	22	70.85	34.10
March-2019	00	00	38	24	64.38	29.90
April-2019	00	00	40	25	65.00	45.43
May-2019	00	00	39	24	73.32	50.67
June-2019	243.3	243.3	32	24	81.06	58.76
July-2019	644.3	644.3	27	22	88.45	80.25
Aug-2019	833.2	833.2	26	21	86.96	81.09

Sep-2019	322.0	322.0	25	20	88.96	82.63
Oct-2019	240.4	240.4	28	21	88.12	78.80
Nov-2019	00	00	28	20	81.00	65.7
Dec-2019	00	00	28	19	79.06	66.32
Total	**2283.1**	**2283.2**	**376**	**262**	**939.57**	**710.1**

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

Category	Population	Production	Productivity
Cattle			
Crossbred	274080	26432011	5.99 ltr/day
Indigenous	70550	62100001	1.5 ltr/day
Buffalo	601380	340982460	4.07 ltr/day
Sheep			
Indigenous	142896	2657920	20 kg/year
Goats	159655	5295756	33.17 kg/year
Pigs	-	-	-
Crossbred	-	-	-
Indigenous	-	-	-
Rabbits	-	-	-
Poultry			
Hens	-	-	-
Desi	-	-	-
Category		**Production (Q.)**	**Productivity**
Fish *(Reservoir)*	-	-	-

2.7. Details of Operational area / Villages

Taluka	Name of the block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
Bhudargarh	Bhudargarh	Bediv (Savatwadi)	Paddy Ragi Sugarcane Cashew nut Livestock	**1.** Low yield of Sugarcane due to non-adoption of improved agronomic practices. **2.** Low productivity of ragi and paddy **3.** Unaware about use of bio fertilizers **4.** Pests and disease incidence in Paddy. **5.** Scarcity of fodder to livestock. **6.** Enterpreneurship development **7.** Low use of ICT tools	**1.** Improved agronomic practices for Sugarcane, Paddy and Ragi production **2.** Promotion of Integrated Nutrient Management **3.** Promotion of Organic forming **4.** Validation of IPM technologies in Paddy and Sugarcane crops. **5.** Fodder production technology. **6.** Scientific knowledge to establish small scale enterprises. **7.** Training and awareness programme for use of ICT

Karveer	Karveer	Shelkewadi	Sugarcane Paddy Soybean Wheat Vegetables Livestock	**1.** Low productivity of sugarcane **2.** Imbalance fertilizer management **3.** Non availability of high yielding varieties of crops **4.** Unaware about soil health management **5.** Crop losses due to pests and diseases incidence. **6.** Lack on farm advisory in vegetables **7.** Lack of marketing structures for crops **8.** Lack of training for staring new enterprises **9.** Improper cattle management **10.** Heavy drudgery work farm women **11.** Malnutrition found in 3-6 year children	**1** Promotion of INM in sugarcane **2** Varietal evaluation in sugarcane **3** Soil health management **4** Implementation IPM and IDM practices in crops. **5** Varietal demonstrations in field crops **6** Hi-tech vegetable production. **7** Improved practices of cattle management **8** Use of improved tools and implements for farm activity **9** Use of balanced nutritional aspects to 3-6 year children. **10** Formation of Farmer producer company for proper marketing of produce **11** Use of ICT/social media for dissemination of information
Kagal	Kagal	Shendur	Sugarcane Paddy Soybean Groundnut Jowar Gram Vegetables Livestock	**1.** Low productivity in sugarcane due to improper agronomical practices **2.** Imbalanced fertilizer management in major crops **3.** Low yield due to non-adoption of improved varieties of field crops **4.** Low awareness about bio fertilizers **5.** Crop losses due to pests and disease incidence. **6.** Poor production of vegetables and fruit crops. **7.** Low milk yield in cattle **8.** Heavy drudgery work of farm women **9.** Income generation activities for women **10.** Lack of proper marketing structures **11.** lack of knowledge about making organic fertilizers **12.** lack of training for starting nursery **13.** Lack of information about new techniques and timely information about crops and weather	**1.** Promotion of Integrated nutrient management **2.** Demonstration on high yielding varieties of agronomical and vegetable crops. **3.** Promotion of soil test based fertilizer management **4.** Promotion of Organic farming **5.** Validation on IPM and IDM technologies. **6.** Awareness about use of bio-agents and bio-pesticide for pest management. **7.** Improved rust resistant/ tolerant varieties of Soybean **8.** Fodder production and nutrition management in cattle. **9.** Use of improved tools implements for farm activity. **10.** 10.Value addition scientific knowledge and skill about value addition of fruits and vegetables **11.** Training Programme on organic input preparation **12.** Capacity building on Hi-tech farming and Nursery raising **13.** 13. Awareness about ICT and Social media tools

Gadhinglaj	Gadhinglaj	Hanmantwadi	Soybean Groundnut Sorghum Chilli Chick pea Sugarcane Vegetables Livestock	**1.** Low productivity of Major agronomical crop under rainfed condition **2.** Imbalanced fertilizer management **3.** Unaware about use of bio fertilizers. **4.** Yield losses due to regular insect pests and diseases. **5.** Incidence of leaf curl and thrips on chili. **6.** Poor vegetable production **7.** Lack of technical knowledge about improved farming tools **8.** Low quality fodder **9.** Lack of information about new schemes **10.** Lack of proper marketing	**1.** Promotion of improved varieties of agronomical crops **2.** Promotion of Integrated Nutrient Management **3.** Promotion of dry land technologies and in situ soil moisture conservation **4.** Validation of IPM practices. **5.** Intensive vegetable production. **6.** Food crop cultivation for food security **7.** Use of improved farm tools and implements for farming **8.** Use of university recommended fodder varieties **9.** Awareness about new marketing strategies, tools and online platforms **10.** Awareness about ICT tools and forming social media/online information groups
Ajara	Ajara	Bhadvanwadi	Sugarcane Maize Soybean Paddy Ragi Livestock	**1.** More use of local cultivar declines productivity **2.** Higher cost of production in sugarcane **3.** Low awareness about soil health management **4.** Imbalanced use of chemical fertilizers **5.** Cattle management **6.** Poor nutritional status of women **7.** Rural youth migration **8.** Lack of adoption of hi-tech and nursery techniques **9.** Lack of proper market infrastructure **10.** Lack of proper information on agriculture	**1.** Promotion of new cultivars in major agronomical crops **2.** Integrated nutrient management **3.** Promotion of soil test based fertilizers management **4.** Cattle management practices. **5.** To increase the nutritional status of women **6.** Training about hi tech agriculture and nursery management **7.** Training of farmer about use of ICT **8.** Awareness about new marketing structures and online platforms
Chandgad	Chandgad	Turkewadi	Sugarcane Paddy Cashew Potato Ragi Sweet potatoVegetables Livestock	**1.** Low productivity of major agronomical crops due to local cultivars and improper agronomical practices **2.** Low awareness about sugarcane trash management **3.** Imbalanced use of chemical fertilizers **4.** Reduction in yield due to incidence of pests and diseases **5.** Improper health management in cattle **6.** Difficulties in operating agriculture equipments for farm women **7.** Low awareness about government schemes **8.** Low use of ICT tools for agriculture	**1.** Cost effective crop production technology **2.** Promotion of Integrated Nutrient Management **3.** Sugarcane trash management **4.** Promotion of organic farming **5.** Plant protection measures for cereals. **6.** Introduction of newer variety of vegetables **7.** Availability of technical knowledge of crop production **8.** Proper management practices for dairy animals **9.** Use of modified drudgery reducing implements specially designed for farm women

2.8. Discipline-wise priority thrust areas:

Sr. No.	Discipline	Priority thrust areas
1.	Agronomy	• Cultivation of improved varieties of major agronomical crops • Adaption of integrated crop management practices in major agronomical crops. • Use of Integrated farming system. • Promotion of drip Irrigation system in Sugarcane. • Promote the farmer towards organic farming. • Development of entrepreneurs through seed production. • Promotion of farm mechanization by using improved tools and implements. • Weed management
2.	Soil Science	• Promotion of soil test based Fertilizer Management practices • Emphasis on nutrient use efficiency • Adoption of Integrated nutrient management to maintain the fertility status of soil • Introduction and promotion of organic farming • Promotion of green manuring • Introduction of biofertilizers e.g. Rhizobium, Azotobacter, Azospirillum, Blue green algae, Azolla & PSB for nutrient management • Promotion of vermi composting • Creation of awareness about identification & management of nutrient deficiency • Awareness about fertigation & foliar spray of nutrient • Emphasis on Soil sampling, testing, & interpretation of result • Promotion of Soil health management
3.	Plant Protection	• Increase productivity of the crops by using IPM and IDM technology • Building judgment about selection of pesticides and pesticides formulations • To create awareness about importance of bio-agents, bio-pesticides, botanicals and allelochemicals for the pest management. • Implementation of use of bio-pesticides, botanicals, light traps, sticky traps and pheromone traps. • Awareness and entrepreneurship development in Mushroom Cultivation
4.	Animal Science	• Promotion of fodder & seed production • Nutritional management in Cattle and Buffaloes • Promotion of back yard poultry • Management of animals under drought situation • Ecto and Endo parasite control in livestock • Conservation of green fodder and treatment of crop residues • Management of diseases in livestock
5.	Home Science	• Unawareness about processing of fruits and vegetable • Unawareness about Protein Energy Malnutrition, among Pre-school children • Anemia observed in farm women • Loss of food grains due to insects and pest during storage • Lack of awareness about family hygiene & improvement in nutritional health status.
6.	Agricultural Extension	• Promotion of group approach & strengthening of group farming (FPO/FO/FC etc.) • To motivate farmers to use latest technologies as per their capacity • Promote the use of ICT to increase the access to authorized information sources, problem solving • To identify & use the potential crop/commodity leaders for efficient communication & insuring participation of all the CIG members • Entrepreneurship development of rural youth for income centric agriculture • Entrepreneurial motivational training of farmers & youth • Knowledge up gradation about the facilities available at Marketing institutions Viz. APMCs, Maha. Warehouse Corporation & MSAMB, Pune • Awareness creation about Climate Change & its Impact on agriculture

		• To provide information on Polyhouse, Nursery and hi-tech technologies • To provide on spot advocacy to the farmers • To provide personalized mobile agro advisoy

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
09	08	124	114	18	13	254	186

Training				Extension Programs			
3				4			
Number of Courses		Number of Participants		Number of Programs		Number of participants	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
68	79	1589	2971	301	302	2822	35378
Seed Production (qtl.)				Planting materials (Nos.)			
5				6			
Target		Achievement		Target		Achievement	
-		-		-		-	
Livestock, poultry strains and fingerlings (No.)				Bio-products (Kg)			
7				8			
Target		Achievement		Target		Achievement	
-		-		-		-	

3.1. B. Operational areas details during 2019-20

Sr.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	Proposed Intervention (OFT, FLD, Training, extension activity etc.)*
1.	Sugarcane	Less weight and girth of cane resulting in low yield of sugarcane& Loss of organic carbon due to burning of trash	28000 ha area under Sugarcane cultivation	Kogil (B), Shendur, Turkewadi & Bhadwanwadi	• Assessment on use of waste decomposer on trash management in Ratoon Sugarcane. • OFT on Management of white grub in sugarcane • FLD on efficacy of Acetobactor, PSB and multimicronutrient for improvement of fertilizer use efficiency and see the effect on growth and yield of pre-seasonal Sugarcane. • FLD on Integrated Crop Management • FLD on Integrated Nutrient Management with trash management • Training • KisanMela/ Use of ICT/ group approach./ Social Media Use • Technology Mahotasav • Agril. Exhibition. • Group discussion

					• Method Demonstration • Field Day • Radio talk • News coverage
2.	Soybean	Low yields and Imbalanced 10ensitive10 management	35000 ha area under Soybean crop	Shendur, & Hanmantwadi,	• FLD on improved variety Phule Sangam (KDS-726) and INM. • Training • Use of Biofertilizers for seed treatment • FLD on Management of Soybean leaf eating caterpillar • KisanMela/ Use of ICT/ group approach./ Social Media Use • Technology Mahotasav • Agril. Exhibition./CIG • Group discussion • Method Demonstration • Field Day • News coverage.
3.	Finger Millet	Low yield under rain feed condition & Crop logging followed by Imbalanced fertilizer management.	18000 ha area under crop	Bediv & Bhadvanwadi	• Assessment on new variety of Ragi of Phule Nachni/KOPN-942 against local variety • Assessment on Foliar spray of 19:19:19 (2%) and INM • Use of ICT/ group approach./ Social Media Use • Group discussion • Method Demonstration • Field Day
4.	Paddy	Low yield due to improper agronomical practices & incidence of Yellow stem borer, BPH & Blue beetle	38000 ha area under crop	Bhadvanwadi, Sawatwadi Turkewadi	• FLD on Varietal demonstration on Phule Samrudhi and field Day • FLD on management of pests (YSB, BPH) • Training • Use of ICT/ Social Media Use • Group discussion • Method Demonstration • Field Day • Radio talk • News coverage
5.	Sorghum	Low yield under protected irrigation condition	35000 ha area under crop	Hanmatwadi	• Assessment on new improved variety of Phule Revti against to local variety. • Group Discussion • Use of Bioferilisers • Technology Mahotasav • Agril. Exhibition. /Use of ICT/ group approach./ Social Media Use • Field Day • In situ soil moisture conservation
6.	Groundnut	Low productivity of groundnut due to old varieties and improper pod filling	900 ha are under Summer groundnut	Kogil (B), Shendur, Turkewadi & Bhadwanwadi	• KisanMela • Technology Mahotasav • Agril. Exhibition. • Radio talk • News articles.
7.	Gram	Reduced yield due to use of Local old varieties and gram pod borer & wilt	9000 hectare area under gram crop	Kogil (B), Shendur, Turkewadi & Bhadwanwadi	• FLD on Management of Chick Pea Pod Borer, *H armigera* • Training • KisanMela • Technology Mahotasav

					• Agril. Exhibition. • Radio talk • News articles.
8.	Tomato	Incidence of leaf curl virus and early blight on tomato	450 hectare area under Tomato crop	Kogil (B) Turkewadi & Bhadwanwadi	• OFT on Management of tomato leaf curl virus and early blight • Training • Use of ICT/ Social Media Use • Group discussion • Method Demonstration • Field Day • Radio talk • News coverage
9.	Brinjal	Poor nutrient management	525 hectare area under Brinjal crop	Shendur, Kogil (B)	• FLD on Management of Brinjal Shoot & Fruit Borer • Training • Use of ICT/ Social Media Use • Group discussion • Method Demonstration • Field Day • Radio talk • News coverage
10.	Chilli	Severe flower drop	1250 hectare area under Chilli crop	Hanmatwadi Turkewadi	• FLD on management of leaf curl & IPM • Training • Use of ICT/ Social Media Use/ group approach • Group discussion • Method Demonstration • Field Day • News coverage
11.	Other vegetable crops (okra, onion, garlic, coriander, cabbage etc.)		43%	Kogil (B), Shendur, Turkewadi Hanamantwadi &Bhadwanwadi	• Use of ICT/ Social Media Use • Group discussion • Radio talk • News coverage • Field Visit
12.	Fodder crops	Inadequate fodder production throughout the year &Unawareness about improved varieties of fodder crops	80%	Kogil (B), Shendur, Turkewadi Hanamantwadi &Bhadwanwadi	• FLD on Phule Gunwant & Sorghum COFS-29 • Training • KisanMela/ Use of ICT/ group approach./ Social Media Use • Technology Mahotasav • Group discussion • Method Demonstration • Field Day • Radio talk • News coverage
13.	Poultry	low Productivity Unawareness about improved breeds of backyard poultry	80%	Swatwadi, Turkewadi Hanamantwadi &Bhadwanwadi	• Assessment on Black Australorp breed • Training • KisanMela/ Use of ICT/ group approach./ Social Media Use • Technology Mahotasav • Group discussion • Method Demonstration • Field Day • Radio talk • News coverage

14.	Dairy	Low milk yield of dairy animals, Lower Growth rate, &Body weightAffects health of status of animal	70%	Kogil (B), Swatwadi, Shendur, Turkewadi Hanamantwadi &Bhadwanwadi	• Assessment on Use of Area specific mineral mixture • Assessment on Use of Pro-biotic supplement • FLD on Use of Protocols in Mastitis Management • Training • KisanMela/ Use of ICT/ group approach./ Social Media Use • Technology Mahotasav • Group discussion • Method Demonstration • Field Day • Radio talk • News coverage
15.	Drudgery reduction	Traditional method of milking cow heavy drudgery & Awkward posture ,Uneasy sitting position and more time consuming &movement of animal while milking, incidence of storage pests, more time consumption and hardworking process, During picking of soybean hand scratches	68%	Kogil (B), Swatwadi, Shendur, Turkewadi Hanamantwadi &Bhadwanwadi	• To assess the Use of Revolving Stool with Stand for milking activity • To assess the effect of Super Grain Bags to prevent store grain pests during storage • FLD on Spiral Separator for cleaning grains • FLD on Mittens • Training • Use of ICT/ Social Media Use/ group approach • Group discussion • Method Demonstration • Field Day • News coverage
16.	Soybean processing	Unawareness of value addition & Large scale production of soybean	45%	Kogil (B), Hanamantwadi	• Training • Use of ICT/ Social Media Use/ group approach • Group discussion • Method Demonstration • Field Day • News coverage
17.	Establishment of nutrition garden	Less consumption of leafy vegetables, faulty methods of cooking Iron, micronutrients&vitamin deficiency in found in some villages.	35%	Kogil (B), Swatwadi,	• Training • Use of ICT/ Social Media Use • Group discussion • Method Demonstration • Field Day • News coverage
18.	Women and child care	Low nutritional & health status of women and children mostly anemia among women of all age group	51%	Kogil (B), Hanamantwadi Swatwadi,	• FLD on Soyanuts processing • Training • Use of ICT/ Social Media Use • Group discussion • Method Demonstration • Field Day • Radio talk • News coverage
19.	Preservation of fruits and vegetables	Production of vegetables and fruits is good but less number of processing units.	55%	Kogil (B),	• Training • Use of ICT/ Social Media Use • Group discussion • Method Demonstration • Field Day • Radio talk • News coverage

20.	Capacity Development	Lack of awareness about mandates and functioning of KVK, Unawareness about facilities available at Maharashtra Warehouse Corporation. & APMC, Lack of awareness about climate change and its impact on Agriculture & Less use of Social media for effective sharing of Agricultural information Knowledge	65%	Kogil (B), Swatwadi, Shendur, Turkewadi Hanamantwadi &Bhadwanwadi	• Training • Use of ICT/ Social Media Use • Group discussion • Radio talk • News coverage • Field Visit
21.	Rural youth	Less awareness for use of available agricultural mobile apps for farming, &Lack of awareness about Organic Farming	70%	Kogil (B), Swatwadi, Shendur, Turkewadi Hanamantwadi &Bhadwanwadi	• Training • Use of ICT/ Social Media Use • Group discussion • Radio talk • News coverage • Field Visit
22.	Agro – processing Entrepreneurship Development	Less awareness about Electronic–National Agricultural Market. (e-NAM), Less motivation for Entrepreneurial development for Agri start up and Technology adoption	55%	Kogil (B), Swatwadi, Shendur, Turkewadi Hanamantwadi &Bhadwanwadi	• Training • Use of ICT/ Social Media Use • Group discussion • Radio talk • News coverage • Field Visit
23.	Vermicompost farming	Soil infertility and high cultivation cost	35%	Kogil (B), Swatwadi, Shendur, Turkewadi Hanamantwadi &Bhadwanwadi	• Training • Use of ICT/ Social Media Use • Group discussion • Radio talk • News coverage • Field Visit
24.	Soil health management	Less awareness about soil and water testing & soil health	60%	Kogil (B), Swatwadi, Shendur, Turkewadi Hanamantwadi &Bhadwanwadi	• Training • Awareness campaign • Group discussion • Method demonstration • Radio talk • News coverage • Field Visit
25.	Animal health management	Unawareness about Vaccination, de worming % infertility	70%	Kogil (B), Swatwadi, Shendur, Turkewadi Hanamantwadi &Bhadwanwadi	• Awareness campaign • Group discussion • Method demonstration • Radio talk • News coverage • Field Visit

** Support with problem-cause and interventions diagram*

3.2. Technology Assessment

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
Varietal Evaluation	01									**01**
Integrated Nutrient Management	01									**01**
Drudgery reduction	01									**01**

Women & Child Care	01									**01**
Integrated Pest Management				01						**01**
Integrated Disease Management					01					**01**
Resource Conservation Technology				01						**01**
Total	**04**			**02**	**01**					**07**

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

Thematic areas	Cattle	Poultry	Piggery	Goatry	Fisheries	TOTAL
Evaluation of Breeds		01				01
Nutrition Management	01					01
Farm Machinery/Implements						
TOTAL	**01**	**01**				**02**

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 trail covering all the Technological Options)
Varietal Evaluation	Finger millet	To assess the new variety of finger millet Phule Nachni/ Dapoli-2 against local variety	01	15	03
Integrated Nutrient Management	Finger Millet	To study the effect of foliar spray 19:19:19 (2%) with INM in 14ensit millet.	15	15	0.20
Resource Conservation Technology	Sugarcane	To see the efficacy of waste decomposer on trash management in Ratoon Sugarcane in Shendur Village of kagal tahsil. **(Ongoing)**	10	10	0.20
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
Total				

[1] Agronomy –Finger Millet

C1.Results of Technologies Assessed

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
Finger Millet	Irrigated	Low yield of finger millet due lodging of plant and old variety.	To assess the new variety of finger millet Phule Nachni & Dapoli-2 against local variety	15	T1: Local Variety	Plant Height (cm)	62	The performance assessment is satisfactory. The improved variety of finger millet Dapoli- 2 found superior over Phule nachni and local variety yielded 22 qt. /ha grain production whereas the average height of plant recorded 74.5 cm as compare to Phule nachni (89 cm) and local variety (62 cm).	1)The performance of assessment is satisfactory 2)The improved variety of finger millet Phule Nachni found superior over Dapoli-2 & local variety, yield increased by 25.0 % over local variety & 2.27 % over dapoli-2	Farmers require short duration, short height and high yielding varieties.	No
						Yield (q/ha.)	18				
					T2: Phule Nachni	Plant Height (cm)	89				
						Yield (q/ha.)	19.2				
					T3: Improved variety- Dapoli- 2	Plant Height (cm)	74.5				
						Yield (q/ha.)	22				

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
T1: Local Variety	MPKV, Rahuri	18	(q/ha.)	26000	2.37
T2: Phule Nachani		22.5	(q/ha.)	37250	2.96
T3: Improved variety- Dapoli- 2		22	(q/ha.)	36000	2.89

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:** To assess the new variety of finger millet Phule Nachni & Dapoli-2 against local variety
2. **Problems definition:** Low yield of finger millet due lodging of plant and old variety.
3. **Detail of technologies selected for assessment:**
   Phule Nachni- Maturity (days)-115-120, Avg. Yield- 20-22 qt./ha.,
   Dapoli-2- Maturity (days)-, 118-120 Avg. Yield- 25-27 qt./ha.,
4. **Source of Technology:** MPKV, Rahuri
5. **Production systems & thematic area:** Protective Irrigated and Varietal Evaluation
6. **Performance of the technology with performance indicators:** The performance assessment is satisfactory. The improved variety of finger millet Dapoli- 2 found superior over Phule nachni and local variety yielded 22 qt. /ha grain production whereas the average height of plant recorded 74.5 cm as compare to Phule nachni (89 cm) and local variety (62 cm).
7. **Feedback, matrix scoring of various technologies parameters done through farmer's participation/other scoring techniques:** Achieved satisfactory yield but due to lodging problems it is difficult to harvest the crop.
8. **Final recommendation for micro level situation**: Due lodging and heavy rainfall this variety is not suitable for this region.
9. **Constraints identified and feed back for research:** Observed lodging problem due to excess height and heavy rainfall.
10. **Process of farmer's participation and their reaction:** Problems identified on the basis of PRA survey of selected village, selected farmers in the presence of member of agriculture committee, conducted training program, method demonstration on seed treatment.

[2] Soil Science: Sugarcane

C1.Results of Technologies Assessed

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
Sugarcane	Irrigated, Medium to deep black soils	Low productivity of Ratoon Sugarcane due to trash burning soil moisture is deficient and soil health is deteriorated.	To see the efficacy of waste decomposer on trash management in Ratoon Sugarcane.	10	T1: Farmers practice (Burning) T2: Technology assessed – Spray of waste Decomposer in 200 liters of water with 2 kg jaggary	**Ongoing**					

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
Ongoing					

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:** To see the efficacy of waste decomposer on trash management in Ratoon Sugarcane
2. **Problems definition:** Low productivity of Ratoon Sugarcane due to trash burning soil moisture is deficient and soil health is deteriorated
3. **Detail of technologies selected for assessment:**

T1: Farmers practice	Burning of sugarcane trash.
T2 : Technology assessed	Spray of waste Decomposer in 200 liters of water with 2 kg Jaggery

4. **Source of Technology:** National Institute of Organic Farming, Ghaziabad
5. **Production systems & thematic area:** Soil fertility Management
6. **Performance of the technology with performance indicators:** Ongoing
7. **Feedback, matrix scoring of various technologies parameters done through farmer's participation/other scoring techniques.**
8. **Final recommendation for micro level situation:**
9. **Constraints identified and feed back for research:**
10. **Process of farmer's participation and their reaction:**

[3] Soil Science – Finger Millet

C1.Results of Technologies Assessed

Crop	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
Finger Millet	Medium soil, Rain feed condition	1) Low yield under rain feed condition. 2) Imbalanced fertilizer management. 3) No use of foliar spray by farmers	To study effect of foliar spray of 19:19:19 (2%) and Integrated Nutrient Management in Finger Millet	15	T1: Farmers practice: No use of Fertilizers	Yield (q/ha.)	17.45	Spraying of 2% 19:19:19 at pre flowering Stage & INM in finger millet gives 31% more yield	Spraying of 2% 19:19:19 at pre flowering Stage & INM in finger millet gives 31% more yield.	Nil	Nil
						No. of fingers (No. of fingers/ ear)	4.33				
					T2: Technology assessed 1.Application of RDF(45: 22.5:00 NPK kg/ha as per soil test value) 2. Spraying of 2 % 19:19:19 at pre flowering Stage.	Yield (q/ha.)	22.99				
						No. of fingers (No. of fingers/ ear)	5.6				

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
T1: Farmers practice: No use of Fertilizers	MPKV, Rahuri	17.45	q/ha.	21135	2.11
T2: Technology assessed 1.Application of RDF(45: 22.5:00 NPK kg/ha as per soil test value) 2. Spraying of 2 % 19:19:19 at pre flowering Stage.		22.99	q/ha.	37500	2.88

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: To study effect of foliar spray of 19:19:19 (2%) and Integrated Nutrient Management in Finger Millet

2 Problem Definition:1) Low yield under rain feed condition.2) Imbalanced fertilizer management 3) No use of foliar spray by farmers

3 Details of technologies selected for assessment:

T1 : Farmers practice : No use of Fertilizers.

T2 : Technology assessed : 1.Application of RDF(45: 22.5:00 NPK kg/ha as per soil test value) 2. Spraying of 2% 19:19:19 at pre flowering Stage

4 Source of technology: MPKV, Rahuri

5 Production system and thematic area: Integrated nutrient Management

6 Performance of the Technology with performance indicators:

Performance indicators	T1	T2
i) No. of fingers/ ear	4.33	5.6
ii) Production (q/ha)	17.45	22.99
iii) B:C ratio	2.11	2.88

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

- Before this OFT programme the farmers were illiterate about balanced use of fertilizers in finger millet.
- They were not doing seed treatment with Azosprillum and PSB @ 25 grams/kg seed.
- Method of application of Azosprillum & PSB is very easy.
- The farmers understood that by INM & spraying of 2 % 19:19:19 in finger millet, there was 31 % yield improvement over control.

8 Final recommendation for micro level situation:

Foliar spray of 19:19:19 (2%) at pre flowering stage with INM in finger millet gave 31 % more yield over control, the technology should be popularized through .state Agril. Department by taking demonstration on large area as low productivity of finger millet has become a major problem

9 Constraints identified and feedback for research:

- Unavailability of biofertilizers of good count.

Feedback : Systematic research should be done to develop drought tolerant varieties of finger millet.

10 Process of farmers' participation and their reaction:

Village Bediv, Tal: Bhudargad was selected by KVK, Kolhapur- II as Focal village especially for conducting various activities of KVK. The bench mark Survey was conducted in the month of March 2019 on the basis of this survey low yield in Finger Millet was identified due to imbalanced fertilizer management. Hence OFT on this crop / topic was undertaken, before implementation of this OFT, farmers were selected by taking Group Discussion they were explained about the technology to be given. The farmers were suggested to use soil test based fertilizer management in finger millet. Only 0.20 ha area was allotted to every farmer. A training programme on Production technology of finger millet with special reference to balanced use of fertilizer was conducted at village Bediv for OFT beneficiaries. They were given method demonstration on seed treatment with bio fertilizers during training programme.. After sowing various observations pertaining to cost of cultivation, No. of fingers per ear, increase in yield per hectare and B:C Ratio were recorded with the help of farmers participation.

[4] Plant Protection: Sugarcane

C1.Results of Technologies Assessed

Crop	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
Sugarcane	Irrigated	Incidence of white grub in sugarcane	Management of white grub in sugarcane	15	T1: Farmers practice	Clump Mortality (%)	9.02	T2 and T3 found at par and found more effective as compared to T1 in response to per cent clump mortality and yield parameter.	Easy method for application and getting satisfactory results against white grub	No	No
					Treatment with application of chemical insecticides like, Phorate 10G, Chlorpyriphos 50 Ec, Fipronil + Imidacloprid, etc.	Yield (q/ha.)	1089.5				
					T2: Technology assessed First application of EPN, *H. indica*@7.5 kg per ha in the month of June	Clump Mortality (%)	7.09				
					Second need based application at 30-45 days after first application.	Yield (q/ha.	1116.8				
					T3: Technology assessed- application of *Metarhizium anisopliae* @ 15 kg/ha.	Clump Mortality (%)	7.95				
						Yield (q/ha.	1100.60				

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit	Net Return (Profit) in Rs.	BC Ratio
13	14	15	16	17	18
T1: Farmers practice Treatment with application of chemical insecticides like, Phorate 10G, Chlorpyriphos 50 Ec, Fipronil + Imidacloprid, etc	MPKV, Rahuri	1089.5	q/ha.	181225	2.60
T2: Technology assessed First application of EPN, *H. indica*@7.5 kg per ha in the month of June Second need based application at 30-45 days after first application.		1116.8	q/ha.	190684	2.72
T2: Technology assessed Soil application of *Metarhizium anisopliae* @ 15 kg/ha.		1100.60	q/ha.	188200	2.71

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:** Application of Entomopathogenic Nematode, Heterorhabditis indica for the management of white grub in sugarcane

2 **Problem Definition:** Incidence of white grub in sugarcane

3 **Details of technologies selected for assessment:** Soil application of EPN, *H. indica*@7.5 kg per ha. First in the month of June and Second need based application at 30-45 days after first application.

4 **Source of technology:** MPKV, Rahuri

5 **Production system and thematic area:** Protective irrigated and IPM**.**

6 **Performance of the Technology with performance indicators:** Satisfactory, revealed less incidence of white grub as compared to farmers practices when it is applied at proper time by proper method.

7 **Feedback, matrix scoring of various technology parameters done through farmer's participation /other scoring techniques:** EPN has a potential to manage white grub when its applied at right time in the field but this year incidence of white grub was low therefore we are going to use this technology in next year because there no any residue of white grub observed in EPN treated plots.

8 **Final recommendation for micro level situation:** EPN found suitable to manage white grub when it applied timely and scientifically. It is recommended in both Suru and Adsali sugarcane cultivation.

9 **Constraints identified and feedback for research:** The incidence of white grub in the month of July was found but from the month of August to December there was negligible incidence of white grub due to heavy rainfall in Kolhapur district. Therefore, the results found at par with T1. Technology application is laborious in ratton and fallen sugarcane.

10 **Process of farmer's participation and their reaction:** Problems identified during KVK's PRA survey – Prioritized the problems- selection of village-selection of farmers in the presence of members of Agri. Committee of Grampanchayat chaired by Hon'ble Sarpanch-Conducted training programs-Conducted method demonstration on Application of EPN. Farmers Reaction: Unbiased selection of farmers. They assessed trial carefully and scientifically.

[5] Plant Protection: Tomato

C1.Results of Technologies Assessed

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
Tomato	Irrigated	Incidence of leaf curl virus and early blight on tomato	Assessment of Tomato hybrid Arka Rakshak/Arka Samrat for the management of tomato leaf curl virus, early blight and bacterial wilt	13	T1: Farmers practice– Cultivation of local varieties of tomato and indiscriminate use of pesticides	Leaf curl virus (%)	3.20	Assessed technology found superior over farmers practices and observed less disease incidence and higher average yield (20.97 t/ha) as compared to farmers practice (15.02 t/ha)	Hybrids have a potential to achieve good yield and also found resistance to leaf curl virus, early blight and bacterial wilt. Therefore reduced the disease management cost and got expected fruit yield	No	No
						Early blight (%)	2.45				
						Bacterial wilt (%)	0.00				
						White fly (No./leaf)	3.26				
						Yield (ton/ha)	15.20				
					T2: Technology assessed- Cultivation of Arka Rakshak /Arka Samrat hybrids of Tomato	Leaf curl virus (%)	0.15				
						Early blight (%)	0.36				
						Bacterial wilt (%)	0.00				
						White fly (No./leaf)	1.25				
						Yield (qt/ha	20.97				

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
T1: Farmers practice– Cultivation of local varieties of tomato and indiscriminate use of pesticides	IIHR, Bengaluru	15.20	ton	1.52 lakh Rs/ha	3.00
T2: Technology assessed- Cultivation of Arka Rakshak /Arka Samrat hybrids of Tomato		20.97	ton	2.43 lakh Rs./ha	4.40

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 Tomato hybrid Arka Rakshak/Arka Samrat for the management of tomato leaf curl virus, early blight and bacterial wilt.

2 **Problem Definition:** Incidence of leaf curl virus and early blight on tomato

3 **Details of technologies selected for assessment:** Cultivation of Tomato hybrid Arka Rakshak which is resistance to tomato leaf curl virus, early blight and bacterial wilt.

4 **Source of technology:** IIHR, Bengaluru (Karnataka)

5 **Production system and thematic area:** Protective irrigated and IPM/IDM

6 **Performance of the Technology with performance indicators:** Excellent, revealed very less percent disease incidence and achieved higher yield**.** In Assessment, farmers cultivated Tomato Arka Rakshak hybrid which is resistant to ToLCV, early blight and Bacterial wilt where as in farmers practice farmers taken Tomato variety UAS Agri 2638. In farmers practice higher disease intensity was observed as compared to assessed plots. Observation recorded for early blight, Tomato leaf curl virus and Bacterial wilt. It is observed that PDI of early blight was 15.20 in farmers practice where as 3.09 in Assessed practice. Per cent Tomato leaf curl virus was also recorded higher 4.23 in farmers practice where as 1.23 per cent in assessed practice. Similarly, the incidence of Bacterial wilt (1.96) was also observed higher in farmers practices as compared to assessed practice (0.53). The average fresh tomato fruit yield 20.97 ton per ha was recorded in assessed practices which was higher than farmers practice (15.20 ton/ha).

7. **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques:** Hybrids have a potential to achieve good yield and also found resistance to leaf curl virus, early blight and bacterial wilt. Therefore reduced the disease management cost and got expected fruit yield. Also reduce the pest management cost.

8 **Final recommendation for micro level situation:** Arka Rakshak variety of Tomato found suitable in Kolhapur location and recommended for cultivation

9 **Constraints identified and feedback for research:** Availability of seeds of hybrid in local markets and most of the farmers purchased ready seedlings of any variety from nearest nursery.

10 **Process of farmer's participation and their reaction:** Problems identified during KVK's PRA survey- prioritized problems – selection of village-selection of farmers in the presence of members of Agri. Committee of Grampanchayat chaired by Hon'ble Sarpanch-conducted training programs- conducted method demonstration on raising of nursery and planting of seedlings. Farmers Reaction:- Unbiased selection and enthusiastically agreed to conduct trial of this new disease resistant hybrid.

[6] Animal Science: Poultry Management

C1. Results of Technologies Assessed

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
Poultry	Evaluation of Breeds	Low eggs & meat production	To assess the performance of Black Australorp breed of poultry in backyard poultry farming	13	T1: Farmers Practice – Rearing of local poultry breeds	Yield (kg/bird)	0.03	Result showed that performance of black australorp is very sturdy, high disease resistance power and low mortality rate as compared to desi bird	1) Body weight high 2) lower the mortlity rate 3) Easily sold at market.	No	Nil
						Initial body weight (gram)	35				
						Final Body weight (gram)	1100				
						Egg production	85				
					T_2: Technology assessed - Rearing of improved poultry breed Black Australorp	Yield (kg/bird)	0.04				
						Initial body weight (gram)	45				
						Final Body weight (gram)	2700				
						Egg production	180				

Contd..

Technology Assessed	Source of Technology	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16
T1: Farmers Practice – Rearing of local poultry breeds	CPDO	2260	1.35
T_2: Technology assessed - Rearing of improved poultry breed Black Australorp		5800	1.47

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:** To assess the performance of Black Australorp breed of poultry in backyard poultry farming

2 **Problem Definition:** Low eggs & meat production

3 **Details of technologies selected for assessment:** Performance of Black Australorp breed of poultry in backyard poultry farming

4 **Source of technology:** CPDO

5 **Production system and thematic area:** Poultry Management

6 **Performance of the Technology with performance indicators:** Result showed that performance of black australorp is very sturdy, high disease resistance power and low mortality rate as compared to desi bird.

7. **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques:** Very sturdy, high disease resistance power and low mortality rate as compared to desi bird**.**

8 **Final recommendation for micro level situation**: Black australorp breeds found high disease resistance power and lower percent of mortality

9 **Constraints identified and feedback for research:** Brooding is required for day old checks upto 21. Care and brooding management is very necessary.

10 **Process of farmers participation and their reaction:** Problem identification **–** Selection of village – Selection of farmers – Training – Inputs distribution – Diagnostic visit – Observation taken. **Farmers reaction**: Eagerly adopted this technology because of very sturdy, high disease resistance power and low mortality rate of black austrolorp birds as compared to desi.

[7] Animal Science: Pro-biotics

C1. Results of Technologies Assessed

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
Dairy	Semi stall feeding management.	Low milk yield in CB cows	To study the effect of Pro-biotic on milk production in CB cow	13	T1: Farmers practice: No use of Pro-biotic	Milk Yield (ltr/day/cow)	5.6	Milk yield increased and Ruminal digestion improved	Easy handling to farmers, milk 27ensi increase, cost of production is very low,Body coat of animal shiny	No	Nil
						Fat (%)	3.32				
					T2:Improved Technology:-Use of Pro-biotic 50 ml/(diluted M)/cow/day	Milk Yield (ltr/day/cow)	6.14				
						Fat (%)	3.46				

Contd.

Technology Assessed	Source of Technology	Production (milk lit/day)	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
T1: Farmers practice: No use of Pro-biotic	NDRI, Karnal	5.6	(Ltr/day/cow)	43	1.10
T2:Improved Technology:-Use of Pro-biotic 50 ml/(diluted M)/cow/day		6.14	(Ltr/day/cow)	85	1.21

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:** To study the effect of Pro-biotic on milk production in cross breed cow.

2 **Problem Definition:** Low milk yield in cross breed cows

3 **Details of technologies selected for assessment:** Use of Pro-biotic on milk production in cross breed cow.

4 **Source of technology:** NDRI, Karnal

5 **Production system and thematic area:** Animal Nutrition Management

6 **Performance of the Technology with performance indicators:** Milk yield increased and Ruminal digestion improved

7. **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques:** Easy handling to the farmers, milk yield increased, cost of production is very low, Body coat of animal shiny.

8 **Final recommendation for micro level situation:** Milk yield increased due to Ruminal digestion.

9 **Constraints identified and feedback for research:** Care should be taken during fermentation process.

10 **Process of farmers participation and their reaction:** Problem identification **–** Selection of village – Selection of farmers – Training – Inputs distribution – Diagnostic visit – Observation taken **Farmers reaction**: Eagerly adopted, Milk yield increased and Ruminal digestion improved

[8] Home Science: Super Grain Bags

C1. Results of Technologies Assessed

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
Jowar	-	1) Pest infestation damages the quality of grains 2) Fluctuation in moisture content due to change in temperature spoilage grains during storage	To assess the effect of Super Grain Bags to prevent store grain pests during storage	15	T1: Farmers Practice – Use of Gunny bags (Jute bags)	Pest infestation per kg in grains weight	Grain damage 11.13 %	Result shown that 2.55% pest infestation in assessed practice against 11.13% of infestation in traditional practice, also increase shelf life up to one year in assessed practice where 6 month in regular method	Enhance grain life in a much safer and it is pesticide free. Low cost technology, easily available, reusable andcan use for multi grain purpose	No	No
					T2: Technology assess – Use of Super Grain Bag	Pest infestation per kg in grains weight	Grain damage 2.55 %				

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:** To assess the effect of Super Grain Bags to prevent store grain pests during storage

2 **Problem Identification:** Pest infestation damages the quality of grains & Fluctuation in moisture content due to change in temperature spoilage grains during storage

3 **Details of technologies selected for assessment:** Use of super grain bags for grain storage.

4 **Source of technology:** PCI, Ltd, Pune

5 **Production system and thematic area:** Drudgery Reduction

6 **Performance of the Technology with performance indicators:** Result shown that 2.55% pest infestation in assessed practice against 11.13% of infestation in traditional practice, also increase shelf life up to one year in assessed practice where 6 month in regular method.

7. **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques:** Enhance grain life in a much safer and it is pesticide free. Low cost technology, easily available, reusable and can use for multi grain purpose.

8 **Final recommendation for micro level situation:** Use of supergrain bags for grain storage reduced grain losses and pest infestation.

9 **Constraints identified and feedback for research: :** It should be available in the local market and should be available in the different sizes to store grain according to according to grain quantity.

10 **Process of farmers participation and their reaction:** Selection of village – Problem identification –selection of farm women – training – input distribution – demonstration – data collection.

[9] Home Science: Nutrition Security

C1. Results of Technologies Assessed

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	-	Nutritional deficiency & Low body Weight in pre-school children	To study the efficiency of protein energy rich food for Malnutrition pre-school children	15	T1: Farmers practice: Regular diet	Average Weight Gain (kg/Child/90 days)	1.2	Increased weight and Mid Upper Arm Circumference 0.5cm by using improved technology	All the row materials are easily available at local level & Method of preparation of Soya nuts is very easy. Farm woman's was happy for the soya nuts available in their own house and now they realized that Soya nuts are very nutritious, children are like to consume these soya nuts.	No	No
					T2: Improved technology: Soya Nuts 25gm/day(2 Month)	Average Weight Gain (kg/Child/90 days)	2.9				

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:** To study the efficiency of protein energy rich food for Malnutrition pre-school children
2. **Problem Identification:** Nutritional deficiency & Low body Weight in pre-school children
3. **Details of technologies selected for assessment:** Use of soyanuts for weight gain.
4. **Source of technology:** VNMAU, Parbhani
5. **Production system and thematic area:** Women and Child care
6. **Performance of the Technology with performance indicators:** Result shown that within a 90 days 2.92 kg weight increased in improved technology against 0.5 kg weight increased in traditional practiceand also increase the Mid Upper Arm Circumference 0.5cm by using improved technology.
7. **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques:** All the row materials are easily available at local level & Method of preparation of Soya nuts is very easy. Farm woman's was happy for the soya nuts available in their own house and now they realized that Soya nuts are very nutritious, children are like to consume these soya nuts.
8. **Final recommendation for micro level situation:** It is beneficial to preschool children's who has low body weight. It helps to increase the body weight of preschool children's hence it is needed to give more focus on daily use of soya nuts in the rural areas.
9. **Constraints identified and feedback for research:** No
10. **Process of farmers participation and their reaction:** Selection of village – Problem identification – Selection of Anganwadi – selection of preschoolchildren's – training – input distribution – demonstration– data collection.

Action photographs of OFT

On Farm Testings (OFTs)	
Improved crop management technologies in finger millet	**Integrated Nutrient Management in Finger Millet**
	
Management of White grub in Sugarcane	**Black Australorp breed of backyard poultry**
	
Super Grain Bags to prevent store grain pests during storage	
	

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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 2019-20 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	Soybean	Variety Introduction	To improve productivity of Soybean by using improved variety Phule Sangam (KDS- 726)	Training and demonstration	4	43	21
2	Paddy	IPM	Management of Yellow Stem Bore and Brown Plant Hopper in Paddy	Training & Demonstration	3	47	29
3	Brinjal	IPM	Management of Brinjal Shoot and Fruit Borer	Training & Demonstration	2	38	21
4	Chili	IPM	Management of Chili leaf curl	Training & Demonstration	3	57	34
5							
6							
7							
8							

B. Details of FLDs implemented during 2019-20 (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	Soybean	Variety Introduction	To improve productivity of Soybean by using improved variety Phule Sangam (KDS-726)	Kharif 2020	4.8	4.65	0	14	14	Due to less land holding capacity of farmer in our district.

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	
2	Paddy	Variety Introduction	To improve productivity of Rice by using improved variety Phule Samrudhi	Kharif 2020	2.60	3.35	0	13	13	Nil
3	Sorghum	Variety Introduction	Use of improved variety of Rabi sorghum phule Revti against local variety	Rabi 2020	5.2	6	0	15	15	Nil
4	Sugarcane	Integrated Nutrient Mangement	To improve productivity of Sugarcane by adaption suitable plant spacing and INM on the basis on soil testing	Rabi 2020	5.2	3.8	0	13	13	Due to less land holding capacity of farmer in our district.
5	Paddy	IPM	Management of Yellow Stem Borer and BPH in Paddy	Kharif	3.00	3.00	03	12	15	Nil
6	Brinjal	IPM	Management of Brinjal Shoot and Fruit Borer, *Luesinodes orbonalis*	Rabi	1.50	1.50	00	15	15	Nil
7	Chili	IPM	Management of leaf curl, thrips and whitefly in chili	Rabi	1.50	1.50	00	15	15	Nil

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**					
Soybean	Kharif 2020	Irrigated	Medium black				Gram	15 June	Sep. end		
Paddy	Kharif 2020	Irrigated	Medium black				Sugarcane	20 May	Mid. Oct		
Sorghum	Rabi 2020	Irrigated	Medium black				Soybean	Sep. end	Jan. end		
Sugarcane	Rabi 2020	Irrigated	Medium black				Soybean	Nov – Dec.			
Paddy	Kharif	RF	Red laterite	L	M	H	Paddy	(Date of seedling Transplanting)20-30. June 2019	15-30 Oct. 2019		
Brinjal	Rabi	Irrigated	Light soil	L	M	H	Soybean	(Date of seedling	05-15 March,		

								Transplanting)10-20, Dec. 19	2020		
Chili	Rabi	Irrigated	Light soil	L	M	H	Soybean	(Date of seedling Transplanting)15-30, Jan. 2020	20-30 March, 2020		

Technical Feedback on the demonstrated technologies

S. No	Feed Back
Soybean	Due to use of improved variety Phule Sangam (KDS-726) increase the yield 28.86 % was observed as compared to local variety. Average number of pods 95 per plant & number of branches more than other variety. This variety is bold seeded, high yielding and resistance to rust disease.
Paddy	Due to use of improved variety Phule Samrudhi increase the yield 25.00 % was observed as compared to local variety. This improved variety moderately resistant for bacterial leaf blight, blast & stem borer. Its scented rice & having more number of tillers.
Sorghum	Due to use of improved variety Phule Revti increase the yield 34.19 % was observed as compared to local variety. This variety is good responsible to protective irrigation & fertilizer. This variety is resistance to stem borer & leaf spot disease. This variety is bold seeded, high yielding and used for fodder purpose.
Sugarcane	This demonstration is on going
1 (Paddy)	Clipping of tips of seedlings at the time of transplanting found very useful to check the population of stem borer as well as the per cent dead heart.
	Farmers who follow the spray of NSE on the basis of moth catches in pheromone traps, they got low incidence of dead heart and white ears.
	Alternate wet and dry condition also checked BPH populations.
2 (Brinjal)	Periodical release of Trichocards having a potential to reduce population of Brinjal Shoot and Fruit Borers and also observed the less per cent shoot damage and fruit damage.
	Farmers who follow the spray of NSE on the basis of moth catches in pheromone traps also contributed to check the BSFB damage.
	Field sanitation and destroying of BSFB damage plant parts is very important to prevent carrying over population of BSFB.
3 (Chili)	Barrier crops like maize, bajra or sorghum found the great role to prevent the entry and migration of sucking pests like thrips, whiteflies and mites.
	Sticky traps (Yellow and Blue) also contributed to check the thrips and whitefly population and also useful to monitor pest and to make decision on use of control measure i.e. spray of insecticides.
	If atmospheric humidity is high i.e. above 60% , the efficacy of Verticillium lecanii is found promising.

Farmers' reactions on specific technologies

S. No	Feed Back
Soybean	Average number of pods 95 per plant & number of branches more than other variety. This variety is bold seeded, high yielding and resistance to rust disease.
Paddy	This improved variety moderately resistant for bacterial leaf blight, blast & stem borer. Its scented rice & having more number of tillers.
Sorghum	This variety is good responsible to protective irrigation & fertilizer. This variety is resistance to stem borer & leaf spot disease. This variety is bold seeded, high yielding and used for fodder purpose.
1 (Paddy)	Pheromone trap is a good tool to monitor pest and on that basis the spray of NSE gave good results.
	Alternate wet and dry condition is little laborious but BPH populations found less as compared to other
2 (Brinjal)	Periodical release of Trichocards is easy and effective technology to reduce the per cent shoot damage and fruit damage.
	Use of pheromone traps also effective tool for insecticide spray management against

	BSFB
3 (Chili)	IPM is a best method for pest management in chili and reduced management cost.

Extension and Training activities under FLD

Sl. No.	Activity	No. of activities organized	Date	Number of participants	Remarks
1	**Field days**				
1					
2					
3	1	1	11.10.2019	20	
4					
5					
6					
7					
8					
9					
10					
11					
2	**Farmers Training**				
	Integrated crop management in Paddy	01	30/05/2019	13	
	Improved crop management technologies in finger millet	01	03/06/2019	27	
	Integrated crop management in Soybean	01	06/11/2019	14	
	Integrated weed management in sugarcane	01	23/7/2019	28	
	Integrated crop management in Sugarcane	01		88	
	Integrated Farming System	01	12/09/2019	47	
	Improved crop management technologies in Rabi Sorghum	01	9/10/219	15	
	Organic farming	01	18/11/2019	68	
	Integrated crop management in Sugarcane	01	31/12/2019	13	
	Integrated Management of Pests of Soybean	01	30.07.2019	11	
	Integrated Management of White grub inn Sugarcane	01	30.07.2019	16	
	Integrated Pest Management in Paddy	01	26.08.2019	76	
	Integrated Pest Management in Brinjal	01	13.11.2019	12	

Sl. No.	Activity	No. of activities organized	Date	Number of participants	Remarks
	Integrated Management of Pests of Chili	01	20.11.2019	19	
	Awareness about Safely handling of pesticides	01	08.01.2020	32	
3	**Media coverage**				
4	**Training for extension functionaries**				
		01	15.05.2019	50	Training on Management of White grub in Sugarcane and FAW in Maize.

C. Performance of Frontline demonstrations

Frontline demonstration on Cereals crops

Crop	Thematic Area	technology demonstrated	Variety	No. of Farmers	Area (ha)	Parameter	Data on parameter		Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
									Demo												
							Demon	LC	High	Low	Average	Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Rice	Varietal evaluation	To improve productivity of Rice by using improved variety Phule Samrudhi	Phule Samruddhi	13	3.35	No. of Tillers/Plant	16-17	12-13	75	55	60	48	25	50000	132000	82000	2.64	50000	96000	46000	1.92
Sorghum	Variety Introduction	Use of improved variety of Rabi sorghum Phule Revti against local variety	Phule Revti	15	6	Plant Height (cm)	210-215	195-200	30	20	26.1	19.45	34.19	31200	91350	60150	2.92	31200	68075	36875	2.18
Rice	Integrated Pest Management	Management of Yellow Stem Borer and BPH in Paddy	Indrayani	15	3.00	% Dead Heart	3.38	5.69	42.84	56.83	50.11	48.53	3.25	38500/-	95209/-	56709/-	2.47	39050/-	92207/-	53157/-	2.36
						% white ears	4.98	6.95													
						BPH (No. / hill)	0.29	0.51													

Frontline demonstration on Oil Seed crops

Crop	Thematic Area	technology demonstrated	Variety	No. of Farmers	Area (ha)	Parameter	Data on parameter		Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
									Demo												
							Demon	LC	High	Low	Average	Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Soybean	Varietal evaluation	To improve productivity of Soybean by using improved variety Phule Sangam (KDS-726)	Phule Sangam (KDS-726)	14	4.65	No. of pods/plant	110-115	80-85	35	20	26.3	21.41	28.86	30000	65750	35750	2.19	30000	51025	21025	1.70
						No. of branches /plant	6-7	4-5													
						Plant height (cm)	78.9	59.6													
Soybean	Integrated Nutrient Management	To improve productivity of Soybean by using liquid bio-fertilizers formulation as a seed treatment and STBF management	MAUS 158	15	6.00	No. of pods/ plant	81.4	59.06			23.92	18.98	26.02	30000	71760	41760	2.39	25000	45960	20960	1.84

FLD on Other crops

Category & Crop	Thematic Area	Name of the technology	No. of Farmers	Area (ha)	Yield (q/ha)				% Change in Yield	Parameter	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													
Sugarcane	Integrated Crop Management	To improve productivity of sugarcane by adaption suitable plant spacing and INM on the basis on soil testing	13	3.8	**Ongoing (Started in the month of December 2019)**															
Sugarcane	Integrated Nutrient Management	Use of Acetobactor , PSB and multi-micro and macro nutrient for improvement of fertilizer use efficiency on growth and yield of Suru Sugarcane	14	5.6	**Ongoing (Started in the month of November 2019)**															
Sugarcane		Sugarcane	13	5.2	**Ongoing (Started in the month of December 2019)**															

		crop residues management for improvement of soil health																	
Vegetables																			
Chilli Green	Integrated Pest and Disease Management	Management of Leaf curl and thrips in chili	15	1.5	124.32	197.36	153.25	136.26	12.47	Thrips (no/leaf)	0.48	1.05	75630	306500	230870	4.05	83260	272520	189260	3.27
										Per cent leaf curl plant	7.25	9.26								
Brinjal	Integrated Pest Management	Management of Brinjal Shoot and Fruit Borer, L. Orbonalis	15	1.5	210.19	307.23	270.52	240.67	9.27	% Shoot Damage	5.62	10.26	55,400/-	3,25,920/-	2,70,520/-	5.88	57,500/-	2,98,260/-	2,40,760/-	5.18
										% Fruit Damage	9.16	19.26								
Fodder Crops																			
Naiper	Fodder Crops	Demonstration of hybrid nepier variety Phule Gunwant	13	2	1347	1159	1253	1115	12.38	No. Of Cuttings	5	3	67394	112743	45349	1.67	61000	97400	36400	1.59
Fodder Sorghum	Fodder Crops	Introduction of Multi cut Sorghum COFS -29 in irrigated area in Kharif Season	13	2	**Ongoing**														

FLD on Livestock

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.)			
					Demo	Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Animal				**Cows**	**Milk Yield** (Ltr/Animal/Day)			**Fat** (%)									
Pandharpuri Buffalo	Animal Nutrition Management	Use of area specific mineral mixture	13	13	8.4	7.5	12.00	6.5	6.0	930	1275	345	1.37	820	1060	240	1.29
HF cross breed cow	Disease Management	Use of protocol in mastitis management	13	13	8.9	7.9	12.66	4.7	4.3	730	1020	290	1.39	720	870	150	1.20
Sheep & Goat																	

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																	

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			
				Parameters	Demo	Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)

FLD on Women Empowerment

Category	Name of technology	No. of demonstrations	Technology Demonstrated	Name of observations	Data on Parameter
Drudgery Reduction	Soybean Mitten	15	T1: Farmers Practices	Work output	46.66
				Time Saving	26.66
				Physical injury	13.33
			T2: Technology assess – Use of soybean mittens	Work output	53.33
				Time Saving	73.33
				Physical injury	86.66
Drudgery Reduction	Spiral Separator	15	T1: Farmers Practice	Output (hr/person)	35
				Cleaning (%)	80
				Splits (%)	5
			T2: Technology assess – Use of Spiral Separator	Output (hr/person)	200
				Cleaning (%)	94
				Splits (%)	0.5
Drudgery Reduction	Milking Stool & Stand	15	T1: Farmers Practice	Time required for Milking (rating)	Moderate: 100%
				Discomfort during milking (rating)	Severe : 93.33
				Pain frequency (rating)	Always : 80 %
			T2: Technology assess – Use of milking stool and stand	Time required for milking	Less duration:80%
				Discomfort during milking (rating)	Very mild:86.66 %
				Pain frequency (rating)	Never: 93.33
Value Addition	Solar Dryer	15	T1: Farmers practice: No value addition in Vegetables	Capacity (kg/ Batch)	**Ongoing**
				Moisture content	
				Temperature	
				Drying Time (per Batch)	
			T2: Improved technology Solar Dehydration of vegetables	Capacity (kg/ Batch)	
				Moisture content	
				Temperature	
				Drying Time (per Batch)	

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 parameter	Labor reduction (man days)				Cost reduction (Rs./ha or Rs./Unit etc.)			
						Demo	Check		Land preparation	Sowing	Weeding	Total	Land preparation	Labour	Irrigation	Total

FLD on Other Enterprise: Kitchen Gardening

Category and Crop	Thematic area	Name of the technology demonstrated	No. of Farmer	No. of Units	Yield (Kg/month)		% change in yield	HB level increase after 3 month (mg/dl)		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)

FLD on Demonstration details on crop hybrids
D. Performance of Cluster Frontline Demonstrations (C0-FLD)
CFLD on Oilseed crops (2019)

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										

CFLD on Pulse crops (2019)

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										

Action photographs of FLD

<table>
<tr><th colspan="2">Frontline Demonstrations (FLDs)</th></tr>
<tr><th>Improved Soybean variety of Phule Sangam (KDS-726)</th><th>Improved rice variety of Phule Samrudhi</th></tr>
<tr><td>  </td><td>  </td></tr>
<tr><th>Management of yellow Stem Borer and Brown plant Hoppers in Paddy</th><th>Demonstration of hybrid Napier variety Phule Gunwant</th></tr>
<tr><td>  </td><td>  </td></tr>
<tr><th>Yield improvement in Soybean by using biofertilizers as a Seed treatment & INM.</th><th>Drudgery reduction through soybean mittens</th></tr>
<tr><td>  </td><td>  </td></tr>
</table>

3.4. Training Programs

Farmers' Training including sponsored training programs (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	01	47	00	47	00	00	00	47	00	47
Micro Irrigation/irrigation										
Seed production										
Nursery management										
Integrated Crop Management	03	40	2	42	00	00	00	40	02	42
Soil & water conservation										
Integrated nutrient management										
Production of organic inputs										
Others (pl specify)										
Total	**4**	**87**	**2**	**89**	**0**	**0**	**0**	**87**	**2**	**89**
II Horticulture										
a) Vegetable Crops										
Production of low value and high volume 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	04	110	0	110	4	0	4	114	0	114
Integrated water management										

Integrated Nutrient Management	02	48	0	48	03	0	03	51	0	51
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) Resource Conservation Technologies	01	19	0	19	0	0	0	19	0	19
Total	**7**	**177**	**0**	**177**	**7**	**0**	**7**	**184**	**0**	**184**
IV Livestock Production and Management										
Dairy Management	1	19	0	19	3	0	3	22	0	22
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management	1	21	2	23	2	1	3	23	3	26
Disease Management	1	81	0	81	5	0	5	86	0	86
Feed & fodder technology										
Production of quality animal products										
Others (Goat management)										
Total	**3**	**121**	**2**	**123**	**10**	**1**	**11**	**131**	**3**	**134**
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	1	8	19	27	0	0	0	8	19	27
Women empowerment										
Location specific drudgery reduction technologies										
Rural Crafts										
Women and child care										
Others (pl specify)										
Total	**1**	**8**	**19**	**27**	**0**	**0**	**0**	**8**	**19**	**27**
VI Agril. Engineering										
Farm Machinery and its maintenance										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
Others (pl specify)										
Total										
VII Plant Protection										
Integrated Pest Management										
Integrated Disease Management										
Bio-control of pests and diseases	1	18	4	22	8	0	8	26	4	30
Production of bio control agents and bio pesticides										
Others (Safe handling and use of agro chemicals)										
Others (Seed treatment)										
Total	**1**	**18**	**4**	**22**	**8**	**0**	**8**	**26**	**4**	**30**
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	1	16	0	16	2	0	2	18	0	18
Group dynamics										
Formation and Management of SHGs										

Mobilization of social capital										
Entrepreneurial development of farmers/youths										
WTO and IPR issues										
Others (Community service provider)										
Total	**1**	**16**	**0**	**16**	**2**	**0**	**2**	**18**	**0**	**18**
XI Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (pl specify)										
Total										
GRAND TOTAL	**17**	**427**	**27**	**454**	**27**	**1**	**28**	**454**	**28**	**482**

Farmers' Training including sponsored training programs (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	01	09	19	28	00	00	00	09	19	28
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming										
Micro Irrigation/irrigation										
Seed production										
Nursery management										
Integrated Crop Management	03	95	33	128	00	00	00	95	33	128
Soil & water conservation										
Integrated nutrient management										
Production of organic inputs	01	24	44	68	00	00	00	24	64	68
Others (Soil sampling techniques and use of soil health card)										
Total	**5**	**128**	**96**	**224**	**0**	**0**	**0**	**128**	**96**	**224**
II Horticulture										
a) Vegetable Crops										
Production of low value and high volume 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	01	48	0	48	4	0	4	52	0	52
Integrated water management										
Integrated Nutrient Management	03	63	14	77	0	0	0	63	14	77
Production and use of organic inputs	01	18	0	18	0	0	0	18	0	18
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient Use Efficiency										
Balance use of fertilizers										
Soil and Water Testing										
Others (pl specify)										
Total	**5**	**129**	**14**	**143**	**4**	**0**	**4**	**133**	**14**	**147**
IV Livestock Production and Management										
Dairy Management	2	34	6	40	5	2	7	39	8	47
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management										
Disease Management	1	16	0	16	3	0	3	19	0	19
Feed & fodder technology	2	40	3	43	5	0	5	45	3	48
Production of quality animal products										
Others (Goat management)										
Total	**5**	**90**	**9**	**99**	**13**	**2**	**15**	**103**	**11**	**114**
V Home Science/Women empowerment										
Household food	1	72	14	86	1	1	2	73	15	88

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	1	19	57	76	0	0	0	19	57	76
Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition	1	0	13	13	0	0	0	0	13	13
Women empowerment										
Location specific drudgery reduction technologies	1	0	20	20	0	0	0	0	20	20
Rural Crafts										
Women and child care	2	6	30	36	4	19	23	10	49	59
Others (pl specify)										
Total	**6**	**97**	**134**	**231**	**5**	**20**	**25**	**102**	**154**	**256**
VI Agril. Engineering										
Farm Machinery and its maintenance										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
Others (pl specify) Use of small agriculture tools & implements										
Total										
VII Plant Protection										

Integrated Pest Management	7	108	57	165	15	0	15	123	57	180
Integrated Disease Management	1	12	7	19	0	0	0	12	7	19
Bio-control of pests and diseases										
Production of bio control agents and bio pesticides										
(Safe handling and use of agro chemicals)										
Others (Seed treatment)										
Total	**8**	**120**	**64**	**184**	**15**	**0**	**15**	**135**	**64**	**199**
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	1	17	7	24	4	0	4	21	7	28
Formation and Management of SHGs	1	28	0	28	6	0	6	34	0	34
Mobilization of social capital										
Entrepreneurial development of farmers/youths	1	27	0	27	0	0	0	27	0	27
WTO and IPR issues										
Others (pl specify) contract farming	4	79	38	117	8	6	14	87	44	131
Total	**07**	**148**	**45**	**196**	**18**	**06**	**24**	**169**	**51**	**220**
XI Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (pl specify)										
Total										
GRAND TOTAL	**36**	**715**	**362**	**1077**	**55**	**28**	**83**	**770**	**390**	**1160**

Farmers' Training including sponsored training programs – 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	01	09	19	28	00	00	00	09	19	28
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming	01	47	00	47	00	00	00	47	00	47
Micro Irrigation/irrigation										

Seed production										
Nursery management										
Integrated Crop Management	06	135	35	170	00	00	00	135	35	170
Soil & water conservation										
Integrated nutrient management										
Production of organic inputs	01	24	44	68	00	00	00	24	44	68
Others (pl specify)										
Total	**9**	**215**	**98**	**313**	**0**	**0**	**0**	**215**	**98**	**313**
II Horticulture										
a) Vegetable Crops										
Production of low value and high volume crops										
Off-season vegetables										
Nursery raising										
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation										
Others (Soil sampling techniques and use of soil health card)										
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	5	158	0	158	8	0	8	166	0	166
Integrated water management										
Integrated Nutrient Management	05	111	14	125	03	0	03	114	14	128
Production and use of organic inputs	01	18	0	18	0	0	0	18	0	18
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient Use Efficiency										
Balance use of fertilizers										

Soil and Water Testing	1	27	0	27	0	0	0	27	0	27
Others (pl specify) Resource Conservation Technologies	01	19	0	19	0	0	0	19	0	19
Total	**13**	**333**	**14**	**347**	**11**	**0**	**11**	**344**	**14**	**358**
IV Livestock Production and Management										
Dairy Management	3	53	6	59	8	2	10	61	8	69
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management	1	21	2	23	2	1	3	23	3	26
Disease Management	2	97	0	97	8	0	8	105	0	105
Feed & fodder technology	2	40	3	43	5	0	5	45	3	48
Production of quality animal products										
Others (Goat management)										
Total	**8**	**211**	**11**	**222**	**23**	**3**	**26**	**234**	**14**	**248**
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	1	72	14	86	1	1	2	73	15	88
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing	1	19	57	76	0	0	0	19	57	76
Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition	2	8	32	40	0	0	0	8	32	40
Women empowerment										
Location specific drudgery reduction technologies	1	0	20	20	0	0	0	0	20	20
Rural Crafts										
Women and child	2	6	30	36	4	19	23	10	49	59

care										
Others (pl specify)										
Total	**7**	**105**	**153**	**258**	**5**	**20**	**25**	**110**	**173**	**283**
VI Agril. Engineering										
Farm Machinery and its maintenance										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
Others (pl specify)Energy & water conservation in agriculture pumping										
Total										
VII Plant Protection										
Integrated Pest Management	7	108	57	165	15	0	15	123	57	180
Integrated Disease Management	1	12	7	19	0	0	0	12	7	19
Bio-control of pests and diseases	1	18	4	22	8	0	8	26	4	30
Production of bio control agents and bio pesticides										
(Safe handling and use of agro chemicals)										
Others (Seed treatment)										
Total	**9**	**138**	**68**	**206**	**23**	**0**	**23**	**161**	**68**	**229**
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	1	16	0	16	2	0	2	18	0	18
Group dynamics	1	17	7	24	4	0	4	21	7	28
Formation and Management of SHGs	1	28	0	28	6	0	6	34	0	34
Mobilization of social capital										
Entrepreneurial development of farmers/youths	1	27	0	27	0	0	0	27	0	27

WTO and IPR issues	1	27	0	27	0	0	0	27	0	27
Others (Community Service Provider)	4	79	38	117	8	6	14	87	44	131
Total	**08**	**167**	**45**	**212**	**20**	**06**	**26**	**187**	**51**	**238**
XI Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (pl specify)										
Total										
GRAND TOTAL	**54**	**1169**	**389**	**1558**	**82**	**29**	**111**	**1251**	**418**	**1669**

Training for Rural Youths including sponsored training programs (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
Sugarcane Nursery Management	01	23	0	23	0	0	0	23	0	23
Training and pruning of orchards										
Protected cultivation of vegetable crops										
Commercial fruit production										
Integrated farming										
Seed production	1	19	0	19	0	0	0	19	0	19
Production of organic inputs										
Planting material production										
Vermi-culture	1	18	0	18	0	0	0	18	0	18
Mushroom Production	1	11	0	11	5	2	7	16	2	18
Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition	4	0	79	79	0	1	1	0	80	80
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts										
Production of quality animal products										
Dairying	1	36	2	38	2	0	2	38	2	40
Sheep and goat rearing	1	32	3	35	7	1	8	39	4	43
Quail farming										
Piggery										
Rabbit farming										
Poultry production	1	39	2	41	6	2	8	45	4	49
Ornamental fisheries										
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										

Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Soil testing through STFR										
Community service provider										
Entrepreneurship development	02	55	0	55	14	0	14	69	0	69
TOTAL	**13**	**233**	**86**	**319**	**34**	**6**	**40**	**267**	**92**	**359**

Training for Rural Youths including sponsored training programs (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 (please specify) Entrepreneurship development	1	23	0	23	0	0	0	23	0	23
TOTAL	**1**	**23**	**0**	**23**	**0**	**0**	**0**	**23**	**0**	**23**

Training for Rural Youths including sponsored training programs – 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
Sugarcane Nursery Management	01	23	0	23	0	0	0	23	0	23
Training and pruning of orchards										
Protected cultivation of vegetable crops										
Commercial fruit production										
Integrated farming										
Seed production	1	19	0	19	0	0	0	19	0	19
Production of organic inputs										
Planting material production										
Vermiculture	1	18	0	18	0	0	0	18	0	18
Mushroom Production	1	11	0	11	5	2	7	16	2	18
Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition	4	0	79	79	0	1	1	0	80	80
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts										
Production of quality animal products										
Dairying	1	36	2	38	2	0	2	38	2	40
Sheep and goat rearing	1	32	3	35	7	1	8	39	4	43
Quail farming										
Piggery										
Rabbit farming										
Poultry production	1	39	2	41	6	2	8	45	4	49
Ornamental fisheries										
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Soil testing through STFR										
Community service provider										
Entrepreneurship development	03	78	0	78	14	0	14	92	0	92
TOTAL	**14**	**279**	**86**	**365**	**34**	**6**	**40**	**313**	**92**	**382**

Training programs 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										
Integrated Pest Management	1	43	7	50	0	0	0	43	7	50
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs	1	31	2	33	0	0	0	31	2	33
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care										
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization	02	68	02	70	0	0	0	68	02	70
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Any other contingency planning, PRA techniques										
Seed production technology	1	33	2	35	0	0	0	33	2	35
Climate change and its effect on agriculture										
Micro irrigation system										
Agriculture para vet womens & para vet training	1	17	3	20	2	1	3	19	4	23
Post harvest technology and value addition	2	75	1	76	3	0	3	78	1	79
Soil Health Management	1	35	2	37	0	0	0	35	2	37
TOTAL	**9**	**302**	**19**	**321**	**5**	**1**	**6**	**307**	**20**	**327**

Training programs 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										
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										

Training programs 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										
Integrated Pest Management	1	43	7	50	0	0	0	43	7	50
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs	1	31	2	33	0	0	0	31	2	33
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care										
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization	02	68	02	70	0	0	0	68	02	70
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Any other contingency planning, PRA techniques										
Seed production technology	1	33	2	35	0	0	0	33	2	35
Climate change and its effect on agriculture										
Micro irrigation system										
Agriculture para vet womens & para vet	1	17	3	20	2	1	3	19	4	23

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
training										
Post harvest technology and value addition	2	75	1	76	3	0	3	78	1	79
Soil Health Management	1	35	2	37	0	0	0	35	2	37
TOTAL	**9**	**302**	**19**	**321**	**5**	**1**	**6**	**307**	**20**	**327**

Sponsored training programs

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	1	24	3	27	6	2	8	30	5	35
Production and value addition										
Fruit Plants										
Ornamental plants										
Spices crops										
Soil health and fertility management										
Production of Inputs at site										
Methods of protective cultivation										
Quality seed grower										
Sericulturist										
Total	**1**	**24**	**3**	**27**	**6**	**2**	**8**	**30**	**5**	**35**
Post harvest technology and value addition										
Processing and value addition										
Others (pl. specify)										
Total										
Farm machinery										
Farm machinery, tools and implements										
Others (pl. specify) Energy conservation										
Total										
Livestock and fisheries										
Livestock production and management										
Animal Nutrition Management										
Animal Disease Management										
Fisheries Nutrition										
Fisheries Management										
Others (pl. specify)										
Total										

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Home Science										
Household nutritional security										
Economic empowerment of women										
Drudgery reduction of women										
Others (pl. specify)										
Total										
Agricultural Extension										
Capacity Building and Group Dynamics										
Community service provider										
Total										
GRAND TOTAL	**1**	**24**	**3**	**27**	**6**	**2**	**8**	**30**	**5**	**35**

Details of vocational training programs carried out by KVKs for rural youth

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 (Animal feed)										
Total										
Income generation activities										
Vermicomposting										
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										
Grand Total										

Details of trainings organized under ASCI

Area of training	No. Of courses	General			SC/ST			Grand total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Quality seed grower										
Sericulturist										
Community service provider										

Action photographs of Trainings

Training for practicing farmers/Rural Youth/Extension Functionaries	
Integrated Farming System	**Integrated Weed Management**
	
Management of Yellow Stem Borer and Brown plant Hoppers in Paddy	**Farmers Training on Awareness on Safely Handling of Pesticides**
	
Care & management of animal during rainy season	**Nutritional management in cow, buffalo Sheep & Goat**
	

<table>
<tr><th colspan="2">Training for practicing farmers/Rural Youth/Extension Functionaries</th></tr>
<tr><td>Training programme on minimization of nutrient loss during cooking</td><td>Training programme on Nutrition Garden</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>Integrated Nutrient Management in major Rabi crops</td><td>Farmers Training on Soil health management in organic farming</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>Awareness training on Mandate and functioning of KVK</td><td>Farmer Producer Company: Need of the hour</td></tr>
<tr><td>  </td><td>  </td></tr>
</table>

3.5. Extension Programs

Activities	No. of programs	No. of farmers	No. of Extension Personnel	TOTAL
Advisory Services	99	31019	32	31051
Diagnostic visits	12	46	12	58
Field Day	11	195	08	203
Group discussions	12	168	20	188
Kisan Ghosthi	29	564	23	587
Mahila Goshthi	00	00	00	00
Film Show	00	00	00	00
Self –help groups	00	00	00	00
Kisan Mela	00	00	00	00
Exhibition	00	00	00	00
Scientists' visit to farmers field	105	343	17	360
Soil testing & soil health camp	01	39	01	40
Plant/animal health camps	03	188	02	190
Farm Science Club	00	00	00	0
Ex-trainees Sammelan	00	00	00	0
Farmers' seminar/workshop	04	281	00	281
Method Demonstrations	10	201	10	211
Celebration of important days	05	255	02	257
Special day celebration	01	24	00	24
Exposure visits	00	00	00	00
Others (Educational tour)	00	00	00	00
Lecture delivered	07	218	09	227
Video Show	00	00	00	00
Agro Tourism	00	00	00	00
Swachha Bharat Mission Activity	02	679	00	679
Gram Swaraj Abhiyan	00	00	00	00
Kisan Kalyan Karaykram	00	00	00	00
Mahashramdan (Water Cup competition)	00	00	00	00
Other (Innovative farmers meet)	01	1158	35	1193
Total	**302**	**35378**	**171**	**35549**

Details of other extension programs

Particulars	Number
Electronic Media (CD./DVD)	00
Extension Literature (Article-1, HandBook-1/Poster-1/Folder-2, Newsletter-01, Book Chapter-01)	06
Newspaper coverage	21
Popular articles	14
Radio Talks	01
TV Talks	00
Animal Health Camps (Number of animals treated)	830
Others (pl. specify) Live telecast of Pradhan Mantri Kisan Samman Nidhi Yojana Launching and live telecast of National Animal Disease Control Programme	 102 85
Total	**1059**

Extension Activities	
Field Days	
Production of New variety of Soybean: Phule Sangam	**Production of New variety of Rice: Phule Samrudhi**
	
Soybean Mittens	**Management of Yellow Stem Borer and BPH in Paddy**
	

Extension Activities

Organic Farming Workshop

Campaigns

White grub campaign

Soil health campaign

Human health check up camp

White Grub campaign

METHOD DEMONSTRATION	
Soil sampling	**Seed treatments**
	
Use of light traps for pest management	**Preparation of spray solution for pest management**
	

Group Discussion	
Use of Bio Fertilizers, Integrated farming system SHG formation, Goat farming, Integrated pest management	**Value Addition, Integrated Weed system, Disease management in animal & Mobile apps for information**
	
Important Days Celebrations	
World Soil Day, 25 December, 2019	**National Farmers Day 23 December, 2019**
	
National Milk Day 26 November, 2019	**National Constitution Day 26th November,19**
	

Live Telecast

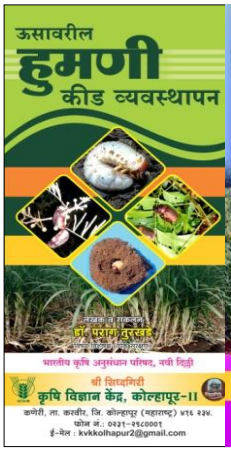
PRADHAN MANTRI KISAN SAMMAN NIDHI YOJANA

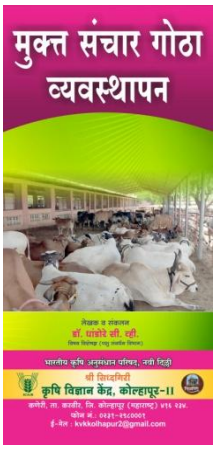
Fertilizer awareness program

National Animal Disease Control Programme

Swacchata Hi Seva

Publications





3.6. 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						
Oilseeds						
Pulses						
Commercial crops						
Vegetables						
Flower crops						
Spices						
Fodder crop seeds						
Fiber crops						
Forest Species						
Others						
Total						

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						
Forest Species						
Others						
Total						

Production of Bio-Products

Bio Products	Name of the bio-product	Quantity (Kg)	Value (Rs.)	No. of Farmers
Bio Fertilizers	PSB			
	Rhizobium			
	Azatobacter			
Bio-pesticide	Paceilomyces			
Bio-fungicide	Trichoderma			
	Pseudomonas			
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 (Goat)				
Poultry				
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				

Production of small agril. Tools & Tractor services

Particulars	Production (No.)	Sold (No.)	Services (No.)	Value (Rs.)	No. of Farmers
Luxmi sickle					
Vaibhav sickle					
Khurpi					
Maize sheller					
Spiral separator					
Tractor					
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			
Others (Posters)			
TOTAL			

C. Details of Electronic Media Produced – NIL

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

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: VERMICOMPOST TO EARNING

Name: Mrs. Rupali Mali
Place: Kasba sangaw, Tal. Kagal, District: Kolhapur,
Age: 34
Education: M.A. (Sociology)
Landholding: 2.5 Acres
Contact number: 8888255221

11. Situation analysis/Problem statement: In the early years, there were problems related to dung in the preparation of 80ensit compost. We had to bring dung from the outside and make fertilizer. Due to lack of technical information, the unprotected dung was hit. The number of earthworms was not the same. But when she realized the partially roasted dung was useful, he started using it. She also reduced the height of the beds. Prioritized the net woven beds. Each year new problems arise. Learning from it has stabilized this business.

2. Plan, Implement and Support: She initially started 80ensit compost for supplying into her farm. She used it for own cultivation. Initially had a few sales for remaining 80ensit compost, but the number of customers continued to grow, and thenshe began to produce large quantities of Vermi compost fertilizer. At present, 80ensit compost is produced through eight beds. Initially, the business was started by bringing in earthworm cultureprovided by the ZillaParishad funded by the Khadi Village Industries Corporation. About Rs 09 lakhs were provided for this business. In the meanwhile, they came in contact with the Shri Siddhagiri, Krishi Vigyan Kendra, Kaneri in Kolhapur district and its way of practicing organic farming and got different information on 80ensit-compost making and use of proper cattle breeds especially indigenous breeds in organic fertilizers preparation. She is the one of the representative of female farmer in the Advisory Committee of the Shri Siddhagiri, Krishi Vigyan Kendra, Kaneri-Kolhapur. Apart from this, she provides guidance on organic farming, earthworm production through training in various places. Today, she is preparing 80ensit compost from the mixture of lemonade, karanjpand,organic fertilizers and bacterial fertilizer etc. Are also made.They have also beensuccessful in increasing the number of customers for their fertilizers today. The business, which was started with eight animal dung, has now expanded. In the coming years,the emphasis is on the consumption of dungs of indigenous cows. Sales and planning are done through telephone and physical contact. She is supplying to both domestic and nursery customers.

3. Output: Mrs. Rupali mali is earning more than rupees 50000/year from vermicompost. She is doing drumstick cultivation too for getting extra income. In addition to 81ensit compost preparation, she also prepares 500-600 litres of vermiwash. Vermi culture is selling at 400 rupees per kilo. The quality of each product is taken into consideration. This has created a consumer class of these products. These products are demanded by the nursery operators, orchards, vegetable growers, grape growers.

4. Outcome: Convincing about your products how they are useful to farmers is main challenge. This led to demonstrations in his field. This helped to gain the trust of the consumer including farmers. Apart from this, business growth is also done through contact with the farmers through mobile, exhibitions and stalls. From time to time, the quality of fertilizers and their constituents is monitored and tested by the laboratory. Thereby, consumers can be assurance of quality products is been given.

5. Impact: she is giving jobs to 06 rural women. She has got various awards for her practices. She is member of SHG and training to other women farmers.

Costs and returns from production and sale of vermicompost

(Rs/ton)

Particulars	**Rs.**
Production Cost (A)	5500
Marketing Cost (B)	
1. Standardization	250
2. Packing	50
3. Loading andUnloading	42
4. Transport	102
5. Storage	20
6. Labour	50
7. Miscellaneous	10
Price realized per ton I	12000
Net returns per ton (C-B-A)	5976
Additionally	
Vermiwash (Rs/lit) for 600 litre	24000
Vermi culture (in 2.5 months) for 8 vermi beds produced 12-15 kg	4800
Total Net income	42776

Photographs




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

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)

S. No.	Crop / Enterprise	ITK Practiced	Purpose of ITK
1			

5.1. INDICATE THE SPECIFIC TRAINING NEED ANALYSIS TOOLS/METHODOLOGY FOLLOWED FOR

A. Practicing Farmers

a) Problem identified/ Job description
b) Questionnaire
c) Observations

B. Rural Youth

a) Questionnaire
b) Observations

C. In-service personnel

a) Job description
b) Observations
c) Present need/requirements

5.2 Indicate the methodology for identifying OFTs/FLDs

For OFT:

i) PRA
ii) Problem identified from Matrix
iii) Field level observations
iv) Farmer group discussions
v) Other if any

For FLD:

i) New variety/technology
ii) Poor yield at farmers level
iii) Existing cropping system
iv) Other if any

5.3 Field activities

(i) Name of villages adopted/identified with block

Sr. No.	Name of village	Block	Year
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			

(ii) No. of farm families selected per villages

Sr. No.	Name of village	Block	Farm families selected
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			

(iii) No. of survey/PRA conducted:

(iv) No. of technologies taken to the adopted villages

Sr. No.	Name of village	Technology taken to Village
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		

(v) Name of technologies found suitable by the farmers of the adopted villages

Technology taken to Village

(vi) Impact (production, income, employment, area/technological-horizontal/vertical)

Name of technology	Productivity qt/ha		Net Income Rs./ha		Impact of technology
	T_1	T_2	T_1	T_2	

*- Kg cocoon/100 DFL
**- Milk Lit/Day
#- time in min./ 300 lit water from 1 km distance

Sr. No	Crop/ Enterprise	Technology demonstrated	Horizontal spread of technology		
			No. Of villages	No. Of farmers	Area in ha

(vii) Constraints if any in the continued application of these improved technologies.

Sr. No.	Crop technology/Enterprise	Constraints
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		

ii. No. of farm families selected per village :
iii. No. of survey/PRA conducted :
iv. No. of technologies taken to the adopted villages:
v. Name of the technologies found suitable by the farmers of the adopted villages:

vi. Impact (production, income, employment, area/technological–Horizontal/vertical)

vii. Constraints if any in the continued application of these improved technologies

Sr. No.	Name of village	Block Name	Families Selected	Suitable technology
1				
2				
3				
4				
5				
6				
7				
8				
9				

5.4. No. and name and villages adopted for doubling farmer's income indicate whether benchmark survey of the village are done or not.

S. No.	No. Of villages	Name of villages	Bench mark survey done or not
1			
2			
3			
4			
5			
6			

6. LINKAGES

A. Functional linkage with different organizations

Sr.	Name of organization	Nature of linkage
1	ATMA	Training Programme Skill Oriented Training Programme for Rural Youth (STRY)
2	AGRI DEPARTMENT	Resource person in programme arranged under unnatshetisamruddhshetkari scheme
3	SAU	Collaborative programme with scientists of medicinal and aromatic plant unit, MPKV Rahuri.
4	Mahatma Phule Krishi Vidyapeeth, Rahuri (MPKV)	Review and planning of KVK activities including action plan, policies and implementation for agricultural field problems, ZREAC meeting, collaborative programmes at district and university level.
5	National Agricultural Research Project (NARP)	Conduct of SAC meeting, field diagnostic visits and publicity of front line demonstrations and on farm advice, conduct of Krishi mela, field days and other extension activities.
6	State Department of Animal Husbandry	Jointly implementation of various programs of Livestock
7	Doordarshan	Broadcasting of technical information regarding agriculture and KVK activities.
8	Indian Council of Agricultural Research (ICAR)	Procuring scientific and technical information, strengthening of KVK activities, to keep liaison between ICAR authorities and host institute
9	All India Radio – Kolhapur	Broadcasting of radio talks for farmers of Kolhapur district on technical issues and Information.
10	Local village panchyat and Zilla Parishad	Involvement for the conduct of front line demonstrations, on farm testings, training programmes, rallies and other related programmes.
11	MAVIM (Mahila Arthik Vikas Mahamandal) – Kolhapur	Jointly implementation of programs related to women
12	AGROWON& Local News papers	Publicity of KVK programmes, Popular articles and Organizing joint training programmes
13	Co-operative sugar factory	Transfer of technology for sugarcane production, supply of planting materials
14	Co-operative dairy	Jointly organizing training programmes and animal health camps
15	Private agriculture college	Jointly implementation of RAWE activities in KVK adopted villages

B. List special programs 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

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

Coordination activities between KVK and ATMA

S. No.	Program	Particulars	No. of programs attended by KVK staff	No. of programs Organized by KVK	Other remarks (if any)
1	Meetings				
2	Research projects				
3	Training programs				
4	Demonstrations				
5	Extension Programs				
6	Kisan Mela				
7	Technology Week				
8	Exposure visit				
9	Exhibition				
10	Soil health camps				
11	Animal Health Campaigns				
12	Others (Pl. specify)				
13	Publications				
14	Video Films				
15	Books				
16	Extension Literature				
17	Pamphlets				
18	Others (Pl. specify)				
19	Other Activities (Kisan Gosthi)				
20	Farmer Scientist interaction				
21	Integrated Farm Development				
22	Agri-preneurs development				

D. Give details of programs implemented under National Horticultural Mission

S. No.	Program	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 –NIL

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

F. Details of linkage with RKVY

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

7. Convergence with other agencies and departments activities may be specified under DAESI, YCMOU, study centers and other

8. Innovator farmer's meet

Sl. No.	Particulars	Details
1	Have you conducted Farm Innovators meet in your district?	
2	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:

Technology	Feedback

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

Technology	Feedback

11. Technology Week celebration during 2019-20:

12. Interventions on drought mitigation (if the KVK included in this special program)

KVK is not included in the special program on drought mitigation

A. Introduction of alternate crops/varieties

State	Crops/cultivars	Area (ha)	Number of beneficiaries
--	--	--	--

B. Major area coverage under alternate crops/varieties

Crops	Area (ha)	Number of beneficiaries
Oilseeds	--	--
Pulses	--	--
Cereals	--	--
Vegetable crops	--	--
Tuber crops	--	--
Total	--	--

C. Farmers-scientists interaction on livestock management

State	Livestock components	Number of interactions	No.of participants
Maharashtra	--	--	--
Total	--	--	--

D. Animal health camps organized

State	Number of camps	No.of animals	No.of farmers
	--	--	--
Total		--	--

E. Seed distribution in drought hit states

State	Crops	Quantity (qtl)	Coverage of area (ha)	Number of farmers
Maharashtra				
Total				

F. Large scale adoption of resource conservation technologies

State	Crops/cultivars and gist of resource conservation technologies introduced	Area (ha)	Number of farmers
Maharashtra	1.		
Total			

G. Awareness campaign

State	Meetings		Gosthies		Field days		Farmers fair		Exhibition		Film show	
	No.	No. of farmers	No.	No. of farmers	No.	No. of farmers	No.	No. of farmers	No.	No. of farmers	No.	No. of farmers
Maharashtra												
Total												

13. IMPACT

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

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

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

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

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

Year	Production per unit (q/ha)		% increase in yield	Trial given to the farmers	Horizontal spread of area (Ha)	Seed requirement (Kg/ha)		Seed Saving		Fertilizer Required (Kg/ha)		Fertilizer saving	
	T_1	T2				T_1	T2	(Kg/ha)	(Rs/ha)	T_1	T2	(Kg/ha)	(Rs/ha)

Time require (Mah hr/ha)		Labour cost (Rs)		Labour saving (Rs/ha)		Total (Saving		Gross Income		Additional Income (T2-T1)	Net Profit =(12+13)	Village income (Rs.)	
T_1	T2	T_1	T2	T_1	T2			T_1	T2			**T1**	**T2**

Farmer's Feed back:

Socio-economic advantages:

14. Kisan Mobile Advisory Services

Month	No. of SMS sent	No. of farmers to which SMS was sent	No. of feedback / query on SMS sent
Total			

Name of KVK	Message Type	Type of Messages						
		Crop	**Livestock**	**Weather**	**Marketing**	**Awareness**	**Other enterprise**	**Total**
KVK, Kolhapur-II	Text only							
	Voice only							
	Voice & Text both							
	Total Messages							
Total farmers Benefitted								

15. 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	Bio fertilizer unit								
2	Soil Testing								
3	Nursery Unit								
4	Dairy Unit								
5	Vermicompost Unit								
6	Goarty Unit								
7	Poultry Unit								
8	Azolla								
9	Custom hiring center								

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	

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

Sl. No.	Name of the Product	Qty (lit.)	Amount (Rs.)		Remarks
			Cost of inputs	Gross income	
1	PSB				
2	Rhizobium				
3	Azatobacter				
4	Trichoderma				
5	Pseudomonas				
6	Paceilomyces				

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	Dairy						
2	Buffaloes						
3	Goat						
4	Poultry						

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)

F. Database management

S. No	Database target	Database created
	NIL	

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 programs	No. of Demonstration s	No. of plant materials produced	Visit by farmers (No.)	Visit by officials (No.)		
		NIL							

16. 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
Current Account	State Bank of India	MIDC, Gokul Shirgaon	07958	Shri Siddhagiri Math KVK	37762625343	416002006	SBIN0007958

B. Utilization of KVK funds during the year 2018-19 (Rs. In lakh)

S. No.	Particulars	Sanctioned	Released	Expenditure
13.1	**Recurring Contingencies**			
13.1.1	**Pay & Allowances**	88	88	69.26
13.1.2	**Traveling allowances**	4.7	4.7	0.89
13.1.3	**Contingencies**	8.2	8.2	1.95
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance			0.32
B	POL, repair of vehicles, tractor and equipments			0.34
C	Meals for trainees			
D	Teaching material for Training & Demonstrations.			0.27
E	Training of extension functionaries			0.57
F	Publication of Extension Lit. for Farmers and extension functionary			
G	Honorarium for Trainers			0.26
H	On-farm testing (problem oriented)			0.19
I	Demonstration on major crops other than Oilseed & Pulses, animal husbandry, fisheries etc.			
J	Kisan Melas (at KVK farm)			
K	Library (purchase of Newspaper, journals etc)			
L	Maintenance of Farm			
M	Enterprenureship development program(EDP) Integrated farming System (IFS)			
N	Soil test 94ensitive and Printing of soil health cards			
13.1	**Total Recurring**	**100.90**	**100.90**	**72.10**
13.2	**Non-Recurring Contingencies**			
13.2.1	**Works**	93	93	75.91
13.2.2	**Equipments including SWTL & Furniture**			
13.2.3	**Vehicle** (Four wheeler/Two wheeler, please specify)	8	8	7.93
24.2.4	**Library**			
13.2	**Total Non Recurring**	**101**	**101**	**83.84**
13.3	**REVOLVING FUND**			
13.4	**GRAND TOTAL (A+B+C)**	**201.9**	**201.9**	**155.94**

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

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

Name of the staff	Designation	Title of the training program	Institute where attended	Dates

18. List of the collaborative research/extension projects and also write brief key achievements of the projects.

- Pro. SOIL
- NARI (please indicate the name of one adopted village and give the activities carried over on nutri-96ensitive agriculture.)
- VATICA
- Seed Hub
- Others (if any)

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

- **Farmers' group meeting:**

Women Empowerment :

i. **Mahila Kisan Diwas:**

ii. **World Women day :**

Telecasting of Government schemes

- **Webcasting of Pradhan Mantri Kisan Samman Nidhi program: Swaccha Bharat Abhiyan**
- **Swacchta Pakhwada:**

Natural Resource management

- **World Soil day:**
- **Jal Sanskriti Workshop:**
- **Jai kisan Jai Vigyan Week:**

Extension activities

- **Exposure Visit:**
- **International Yoga Day:**
- **ICAR Day – Farmers scientist interaction:**
-

APR SUMMARY

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

1. Training Programs

Clientele	No. Of Courses	Male	Female	Total participants
Farmers & farm women	54	1251	418	1669
Rural youths	15	313	92	405
Extension functionaries	09	307	20	327
Sponsored Training	01	30	05	35
Vocational Training	00	00	00	00
Total	**79**	**1901**	**535**	**2436**

2. Frontline demonstrations

Enterprise	No. of Farmers	Area(ha)	Units/Animals
Oilseeds	29	10.65	-
Pulses	-	-	-
Cereals	43	12.35	-
Vegetables	30	3	-
Fodder Crops	26	4	-
Other crops	40	14.6	-
Hybrid crops	-	-	-
Total	**168**	**44.6**	-
Livestock & Fisheries	26	-	26
Drugery Reduction	45	-	45
Other enterprises	15	-	15
Implements and Machinery	-	-	-
Total	**86**	-	**86**
Grand Total	**254**	**44.6**	**86**

3. Technology Assessment

Category	No. Of Technology Assessed & Refined	No. Of Trials	No. Of Farmers
Technology Assessed			
Crops	5	68	68
Livestock	2	26	26
Various enterprises	1	15	15
Nutrition Security	1	15	15
Total	**9**	**124**	**124**

4. Extension Programs

Category	No. of Programmes	Total Participants
Extension activities	302	35378
Other extension activities	244	-
Total	**546**	**35378**

5. Mobile Advisory Services

Name of KVK	Message Type	Type of Messages						
		Crop	Livestock	Weather	Marketing	Awareness	Other enterprise	Total
KVK, Kolhapur-II	Text only	-	-	-	-	-	-	-
	Voice only	-	-	-	-	-	-	-
	Voice & Text both							
	Total Messages	-	-	-	-	-	-	-
	Total farmers Benefitted	-						

6. Seed & Planting Material Production

	Quintal/Number	Value Rs.
Seed (q)	-	-
Planting material (No.)	-	-
Bio-Products (kg)	-	-
Livestock Production (No.)	-	-
Fishery production (No.)	-	-

7. Soil, water & plant Analysis

Particular	No. of Samples	No. of Beneficiaries	Value Rs.
Soil	-	-	-
Water	-	-	-
Plant	-	-	-
Total	-	-	-

Block- Villages– covered.

8. HRD and Publications

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