INTRODUCTION

Krishi Vigyan Kendra has been sanctioned to Satpuda Education Society, Jalgaon Jamod, Buldana by Indian Council of Agriculture Research, New Delhi vide letter No. 3-4/94-KVK-AEII dated 19.10.1994 for catering need based trainings to Practicing Farmers, Rural Youth and In-service Extension Functionaries, on-farm testing and Front Line Demonstration of different crops, which are grown in Buldana District.

KVK Jalgaon Jamod falls in Central Maharashtra Plateau Zone having annual rainfall 750 to 900 mm. Buldana district is located at the latitude: 19.51^0 to 21.170 North, Longitude 75.57^0 to 76.49^0 and situated 305m above mean sea level.

Most of the area of Buldana district comes under black cotton soils. The major kharif crops of this district are Cotton, Soybean, Pigeon Pea, Greengram, Blackgram and rabi crops are Bengalgram, Wheat, Onion and having soybean and cotton based cropping pattern. In fruit crops Citrus, Banana, Custard Apple, Guava are major in district.

The present Annual Progress Report of KVK is compiled for the period from January 2021 to December 2021. The report includes various activities conducted by KVK under OFT's, FLD's, Training Programmes and Extension Activities under different disciplines and are compiled with success stories herewith to submit to ICAR-ATARI, Pune.

Jalgaon Jamod
Date:- 07.07.2022

(Vikas G. Jadhao)
Sr. Scientist & Head
KVK Buldana-I (M.S.)

ICAR-ATARI, Pune

DETAILS OF ANNUAL PROGRESS REPORT OF KVKs DURING 2021

(January 2021 to December 2021)

1. GENERAL INFORMATION ABOUT THE KVK

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

Address	Telephone		E mail	Website address & No. of visitors (hits)
	Office	FAX		
Krishi Vigyan Kendra, Jalgaon Jamod, Dist: Buldana (M.S.) 443402	07266 - 221620	--	kvkbuldana@ gmail.com	www.kvkbuldana.com

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

Address	Telephone		E mail	Website address
	Office	FAX		
Satpuda Education Society, Jalgaon Jamod, Dist: Buldana (M.S.) 443402	07266 - 221620	--	sesjj2015@ gmail.com kvkbuldana@ gmail.com	--

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

Name	Telephone / Contact		
	Residence	Mobile	Email
Vikas G. Jadhao	--	9423338595	kvkbuldana@gmail.com

1.4. Year of sanction: October 1994

1.5. Staff Position (as on 31 December, 2021)

Sl. No.	Sanctioned post	Name of the incumbent	Mobile No	Discipline	If Permanent, Please indicate		Date of joining	If Temporary, pl. indicate the consolidated amount paid (Rs./month)
					Current Pay Matrix	Current Pay		
1	Sr. Scientist and Head	Vikas G. Jadhao	9423338595	Agril. Engg.	131400-217100	143600	28.11.18	Permanent
2	Subject Matter Specialist	Anil T. Gabhane	9527568788	Plant Protection	56100 – 177500	107500	27.06.95	Permanent
3	Subject Matter Specialist	Shyamsunder A. Borde	9850470123	Extension Education	56100 – 177500	87400	25.02.05	Permanent
4	Subject Matter Specialist	Sanjay M. Umale	9404710228	Agronomy	56100 – 177500	84900	19.06.06	Permanent
5	Subject Matter Specialist	Dr. Vinod S. Janotkar	9822728287	Vet Science	56100 – 177500	80000	18.12.08	Permanent
6	Subject Matter Specialist	Shashank P. Datey	9975019962	Horticulture	56100 – 177500	77700	08.07.09	Permanent
7	Subject Matter Specialist	Nitin P. Talokar	9404424501	Agril. Engg.	56100 – 177500	73200	08.03.11	Permanent
8	Programme Assistant (HS)	Vacant						
9	Computer Programmer	Yogesh R. Wakekar	9604357100	Computer	35400 - 112400	64100	19.02.02	Permanent
10	Farm Manager	Samadhan J. Bagade	9423266281	--	35400 - 112400	74300	17.06.95	Permanent
11	Assistant	Pradip E. Raut	9921860995	--	35400 – 112400	64100	10.07.95	Permanent
12	Stenographer	Vacant						
13	Driver	Mangesh S. Verulkar	9689877007	--	21700-69100	23800	13.11.18	Permanent
14	Driver	Vacant						
15	Supporting staff1	Ramesh T. Wankhade	9503629927	--	1800-56900	32400	01.08.96	Permanent
16	Supporting staff2	Ab. Samir Ab. Sadik Deshmukh	8600591228	--	1800-56900	19700	13.11.18	Permanent

1.6. Land allotted to KVK for use : 20.59 ha

S. No.	Item	Area (ha)
1.	Under Buildings	1.00
2.	Under Demonstration Units	0.40
3.	Under Crops	13.82
4.	Horticulture	4.97
5.	Others	0.40
	Total	**20.59**

1.7 Infrastructural Development:

A) Buildings

S. N.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Date	Plinth area (Sq.m)	Expenditure (Rs.)	Starting Date	Plinth area (Sq.m)	Status of construction
1.	Administrative Building	ICAR	26.05.03	549.90	3407729/-	--	--	--
2.	Farmers Hostel	ICAR	31.03.05	304.77	1739490/-	--	--	--
3.	Staff Quarters (6)	ICAR	31.03.07	377.64	3197870/-	--	--	--
4.	Demonstration Units (2)	ICAR	31.03.06	160.00	421335/-	--	--	--
5	Fencing	ICAR	31.03.06	2018 rmt.	486000/-	--	--	
6	Rain Water harvesting structure	ICAR	31.03.07	--	839665/-	---	--	--
7	Shed net house	NHM	30.06.09	525.00	212435/-	--	--	--
8	Polytunnel	NHM	30.06.09	213.00				
9	Vermicompost Unit	Agril. Dept.	2008	80.00	Completed	--	--	--
10	Threshing floor	ICAR	31.03.11	27.00	100050/-			
11	Farm godown	ICAR	31.03.11	67.66	500000/-			
12	Medicinal Nursery (Shadenet house	NHM	30.03.13	525	400000/-	--	--	--
13	Minor millets processing unit	Agril. Dept.	31.03.13	660	400000/-	--	--	--

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Motorcycle	Jan. 1995	40128/-	Closed	Not in working condition
Tractor (Massey Ferguson) procured under RKVY with implements such as BBF planter, Rotavator, Seed Drill,	Feb. 2012	700000/-	4776 hrs.	Working
Tractor (John Deer) procured through ICAR fund	Mar.2012	710000/-	4212 hrs	Working
Mobile Soil Testing Van Under Manav Vikas Programme	Mar. 2012	3500000/-	7715 km	Working
Jeep (Mahindra Bolero)	Nov. 2019	796500/-	29941 km	Working

C) Equipments & AV aids

Name of the equipment	Year of purchase	Quantity	Cost (Rs.)	Present status
Equipments				
Telephone	13.07.1995	01	2000.00	Working condition
Typewriter	19.08.95	01	9740.00	Not in Working condition
OHP with carrying case	30.12.95	01	7119.00	Working condition
Slide Projector with liner tray	30.12.95	01	15302.00	Working condition
Screen	30.12.95	02	2598.00	Not in Working condition
Camera	30.03.96	01	1695.00	Not in Working condition
Home Science utensils	95-96, 96-97	Lumsum	6662.00	Working condition
Refrigerator	28.03.96	01	12900.00	Not in Working condition
Mixure	13.03.95	01	2275.00	Working condition
Oven	13.03.96	01	2175.00	Working condition
Cooker	27.03.96	01	1200.00	Working condition
Sewing machine	30.11.95	01	3093.00	Working condition
Hipro Gin Machine	2006-07	01	59280.00	Working condition
Generator	17.02.05	01	62200.00	Working condition
Inverter set	19.02.05	01	12781.00	Working condition
STL equipment & acc.	24.03.05	Lumsum	820153.00	Working condition
LPG connection (STL)	11.02.05	02	2740.00	Working condition
Refrigerator (STL)	08.02.05	01	15000.00	Working condition
Software (STL)	30.03.05		22040.00	Working condition
Computer with printer	23.03.06	02	99970.00	Working condition
LCD projector	Mar 06	01	77500.00	Working condition
TV	Feb 06	01	22100.00	Working condition
Xerox Machine	Mar 08	01	118800.0	Working condition
Laptop Comp.	Mar 08	01	31200.00	Working condition
Office almirah	28.02.95,11.03 .96,7.03.01,30. 03.02, Mar 06	13	67300.00	Working condition
Office table	28.02.95,11.03 .96, 15.12.96 16.02.05	18	44754.00	5 tables are not in working condition
Stool	19.08.95	06	1350.00	Not in Working condition
Chairs	28.02.95, 11.03.96	73	59870.00	12 Not in Working condition

Water cooler	Mar 06	02	27150.00	Working condition
Crates	28.02.95	06	2244.00	Not in Working condition
Trolley	28.02.95, 29.03.96	02	3200.00	Not in Working condition
Office utensils	05.08.95	Set	1417.00	Not in Working condition
Lock	1995-96,1996-97 1997-98	11	807.00	Not in Working condition
Fan	19.09.95, 28.01.97	07	7275.00	4 Not in Working condition
Brief case	31.12.95	01	679.00	Not in Working condition
Lecture stand	30.03.96	01	2715.00	Working condition
Tube light	12.03.96	03	570.00	Not in Working condition
Library cases	11.03.96, 27.03.01	04	12400.00	Working condition
FH bed, bedding & Utensils 4 rooms	Mar 06	08	35504.00	Working condition
Training cum conference hall furni.	Mar 06		182045.00	Working condition
Iron Rack (sericulture)	28-29.11.95, 19.03.96	04	3556.00	Working condition
Drip irrigation set	29-03-95	1 set	7023.00	Not in Working condition
Wooden hoe	19.10.95	1	150.00	Not in Working condition
Secator	30.11.95	10	1200.00	Not in Working condition
Knife	30.11.95	6	300.00	Not in Working condition
Duster	29.03.97	1	990.00	Not in Working condition
Knapsack sprayer	29.03.97	1	3650.00	Not in Working condition
Knapsack sprayer	29.03.97	3	3479.00	1 not in working condition
Cultivator Blade	20.7.96	3	400.00	Not in Working condition
Rabit cage	05.11.96	1	2107.00	Not in Working condition
Kudali	04.02.97	1	40.00	Not in Working condition
Matok	04.02.97	2	80.00	Not in Working condition
Bucket	05.02.97	1	75.00	Not in Working condition
Sericulture Unit impl.	13-25.11.95		7201.00	Not in Working condition
Jack	30.03.96	1	380.00	Working condition
Disc harrow	2006-07	1	43304.00	Working condition
Seed drill	2006-07	1	29102.00	Not in Working condition
Dibbler	2006-07	2	1500.00	Working condition
Seed treatment drum	2006-07	1	1400.00	Working condition
Harrow	2006-07	1	2500.00	Working condition
Bullock drawn ridger	2007-08	1	3000.00	Working condition
Tractor drawn ridger	2007-08	1	20280.00	Working condition
Rechargeable sprayer	2007-08	1	4400.00	Not in Working condition
Power sprayer	2007-08	1	16500.00	Not in Working condition
Laptop HCL	2007-08	1	31200.00	Working condition
Power tiller	2008-09	1	121000.0	Not in Working condition
Generator	2008-09	1	2610000.00	Working condition
Camera	2008-09	1	22000.00	Not in Working condition
PKV Dal Mill	2009-10	1	45800.00	Working condition
Window AC ONIDA	2009-10	1	13899.00	Provided by ICAR & ERNET India
Godrej table	2009-10	06	45266.00	
Godrej chairs	2009-10	20	34166.00	
Godrej Printer table	2009-10	02	11041.00	

Rack	2009-10	01	6350.00	
Computer server system	2009-10	01	62400.00	
Desktop computer	2009-10	05	114400.00	
Laser printer	2009-10	01	13000.00	
Dot matrix printer	2009-10	01	17500.00	
Scanner	2009-10	1	5200.00	
Earthing switch	2009-10	1	6500.00	
UPS 650VA	2009-10	1	27040.00	
Online UPS 3 KVA	2009-10	1	95425.00	
VSAT	2009-10	1 set	138000.00	
Multimedia speaker, Headphone, Webcam	2009-10	5 set	--	
Stabilizer with battery	2009-10	1 set	--	
Pulverizer machine	2011-12	1	49028.00	Working condition
Systonic Digital Ph meter	2011-12	1	10940.00	Working condition (RF A/c)
Systonic digital conductivity meter	2011-12	1	12970.00	Working condition (RF A/c)
Systonic colorimeter	2011-12	1	17150.00	Working condition (RF A/c)
Distillation unit	2011-12	1	19260.00	Working condition (RF A/c)
Laptop Acer	2012-13	1	34000.00	Working condition
Mobile Phone with GPS	2012-13	1	20000.00	Working condition
Samsung Mobile Tab	2012-13	1	22500.00	Working condition
Mobile soil testing lab equipments	2012-13	1 set	1431300.00	Under Manav Vikas
Servo Voltage Stabilizer	2012-13	1	22500.00	Working condition
Ahuja Wireless mounting amplifier	2012-13	1	11900.00	Working condition
Foot operated sealing machine	2012-13	1		Provided by Director Agri Processing & Planning Pune
Destoner	2013-14	1		
Dehuler	2013-14	1		
Floor shifter	2013-14	1		
Pulverizer	2013-14	1		
PKV Dal Mill	2013-14	1		Provided by Dr. PDKV Akl
Fruit Grader	2013-14	1		
LCD projector Benq	2014-15	1	23500.00	Working condition
Projector Screen	2014-15	1	3000.00	Working condition
Mike	2014-15	2	5530.00	Working condition
LCD projector BENQ	2016-17	1	27800.00	Working condition
Audio system Ahuja	2016-17	1 set	29520.00	Working condition
Desktop with printer	2016-17	1	39050.00	Working condition (RF a/c)
UPS	2016-17	2	3600.00	Working condition (RF a/c)
GPS meter	2016-17	1	15000.00	Working condition
Lenovo Tab	2016-17	1	9990.00	Working condition
Laptop HP	2016-17	1	37650.00	Working condition
Flame Photometer	2017-18	1	44480.00	Working condition
Spectro Photo Meter	2017-18	1	46600.00	Working condition
Colour Printer	2017-18	1	11000.00	Not in working condition
Mruda Parikshak Kit	2017-18	1	72000.00	Working condition
Distillation Unit	2017-18	1	42871.00	Working condition
Nitrogen Analyser	2017-18	1	193260.00	Working condition
Solar Power Generating system	2017-18	1 set	738359.00	Working condition (RFA/c)

Reversible plough	2019-20	1	63000.00	Working condition
Cotton Slasher	2019-20	1	155000.00	Working condition
Post Hole Digger	2019-20	1	134999.00	Working condition
Desktop Computers	2020-21	2	72600.00	Working condition
Double distilled water unit	2020-21	1	117000.00	Working condition

1.8. Details SAC meeting conducted in the year – 21.05.2021

S. N.	Date	Name & Designation of Participants	Salient Recommendations	Action taken
1	21.05. 2021	1. Mr. K.G Ingle, President SES 2. Dr. Lakhan Singh, Director ATARI, Pune 3. Dr. D. M. Mankar, DEE, Dr. PDKV, Akola, 4. Dr. Narendra Naik, DSAO, Buldana, 5. Ms. Anisa Mahabale, ADO, ZP Buldana 6. Shri. Deepak Patel, SDAO, Khamgaon 7. Dr. C. P. Jaybhaye, Asso. Prof. ARS & Head KVK Buldana-II, 8. Mr. S. P. Phadke, Dist. Sericulture Development Officer, 9. Dr. S. S. Talokar, LDO (Extn) Jalgaon Jamod, 10. Dr. Mangesh Kharate, LDO, TVMP, Jalgaon Jamod, 11. Mrs. Smita Rajhans, RFO (Social Forestry), 12. Shri Amol Bansode, TAO, Sangrampur, 13. Shri. Ravikiran Nawkar, AO, P.S. Jalgaon Jamod, 14. Shri. Bijay Biswakarma, Branch Manager Central Bank of India, Jalgaon Jamod, 15. Shri Vijay Wankhade, Progressive Farmers 16. Shri, Bhanudas	1. In view of lower production of Greengram, Blackgram, Soybean and Cotton in previous year, KVK Scientists must provide their surveillance report regularly to university for further necessary action. (Hon. Chairman of SAC)	Every year KVK provides technology feedbacks to SAU during workshops / meetings arranged by SAU time to time.
			2. In view of pandemic situation & health problems KVK should work on human health related issues. (Hon. Chairman of SAC)	To cope up with pandemic situation, KVK celebrated Poshan Maah (September) and Swachhata Pakhwada (October)
			3. KVK should organize need based offline/online programmes for the farmers. (Hon. Chairman of SAC)	KVK regularly organized offline/online training programmes for farmers.
			4. Doubling Farmers Income (DFI) programme should be carried out by focusing landless, small farmers & marginal farmers etc. (Hon. Director, ATARI, Pune)	Doubling Farmers Income (DFI) programmes were arranged during entire year in DFI village's viz. Charban and Dhanora Jangam.
			5. Crop diversification & entrepreneurship development should be focused by KVK. (Hon. Director, ATARI, Pune)	Under CFLD & FLD programmes KVK successfully implemented crop diversification through sowing Ajwain and Linseed crops in KVK jurisdiction.
			6. CFLD on oilseed & pulses should include new varieties and new technologies. (Hon. Director, ATARI, Pune	Under CFLD programme on oilseed & pulses, KVK introduced new varieties of linseed (PKVNL-260), groundnut (Phule Chaitanya KDG-160) and Chickpea (Phule Vikram)

		Wanare, Progressive Farmers 17. Mrs, Shobha Hiwarkar, Progressive Farmers 18. Mrs. Sangita Datar - Progressive Farmers 19. Mr. Vikas Jadhao, Sr. Scientist & Head 20. KVK staff	7. KVK should regularly update the programmes on KVK Portal and Website. (Hon. Director, ATARI, Pune)	KVK regularly updating the events on KVK portal & website
			8. The infrastructure development/repair & maintenance should be carried out from revolving fund (RF) of KVK. (Hon. Director, ATARI, Pune)	The R&M work of various demonstration units/structures & procurement of implements has been carried out through RF
			9. Demonstrations of new varieties should be conducted on KVK instructional farm. (Hon. Director of Extension Education, Dr. PDKV, Akola)	KVK demonstrated following new varieties in current year on KVK instructional farm. i. **Soybean** – Yellow gold, Phule Sangam, Phule Kimaya, MACS-1188 ii. **Cotton** – ICAR CICR Rajat Bt, ICAR CICR PKV -081 ii. **Chickpea** – RVG-202, Phule Vikram v. **Wheat** – PDKV Sardar
			10. KVK should conduct various programmes in collaboration with line department. (Hon. Director of Extension Education, Dr. PDKV, Akola)	KVK regularly conducting various trainings & extension programmes such as scientific visits, diagnostic visits, FFS trainings, CROPSAP, EF trainings, ED training programmes, Ranbhaji mahotsav, Adivasi Din, World Soil Day etc.
			11. KVK should develop ideal mother orchard and supply genuine saplings to the farmers regularly. (Hon. Director of Extension Education, Dr. PDKV, Akola)	KVK have already developed mother orchard of Mandarin, Custard Apple, Sweet Orange, Guava, Lemon etc. andhaving NHB accrediated nursery. KVK regularly supplying genuine saplings to the farmers.
			12. The information related with the treatments / practices should be explained in detailed in presentation. (Hon. Director of Extension Education, Dr. PDKV, Akola)	KVK provides detailed information related with treatment / practices in presentation.

2. DETAILS OF DISTRICT / JURISDICTION AREA OF KVK

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

S. No	Farming system/enterprise
1	***Sole Crop(s)*** • Kharif Sorghum • Cotton
2	***Inter Cropping (s)*** • Cotton + Green gram 1 : 1 • Cotton + Black gram 1 : 1 • Cotton + Red gram 8 : 2 or 10 : 2 • Sorghum + Red gram 3 : 3 or 6 : 3 • Red gram + Green gram 2 : 4 • Red gram + Black gram 2 : 4 • Red gram + Soybean 2 : 4 • Cotton + Sorghum + Red gram + Sorghum 6 : 1 : 2 : 1 • Soybean + Sorghum + Red gram 9 : 2 : 1
3	***Double Cropping: Rain fed situation (If late rains are received)*** • Green gram - Sunflower / Wheat / Gram / Safflower • Black gram - Safflower / Wheat / Gram / Onion • Soybean - Wheat / Gram / Onion

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

a) Soil type/s

S. No	Agro-climatic Zone	Characteristics
1	Ghat Tract	This sub-zone occupies greater part of Buldana District with 9 tahsils viz. Chikhali, Buldana, Deolgaon Raja, Mehkar, Lonar, Malkapur, Sindhkhed Raja, Motala and Nandura. Elevation varies from 350 to 600 Above Sea Level. Annual rainfall varies from 750 to 850 mm. Soil ranges from very shallow to moderately deep. The topography is rolling and land slopes are around upto 7%. In this ghat tract Sorghum & Cotton are predominant crops.
2	Black Plains	This sub-zone spreads over Khamgaon and Shegaon tahsils of Buldana districts along with 15 tahsils of Akola and Amravati. Annual Precipitation varies from 750 to 900 mm. Soils are moderate to deep and predominantly vertisols with several situations of ill drainage due to that crop suffer more of wet conditions during years of relatively higher rains.
3	Sailent Alkali Tract	This sub-zone includes major parts of 6 tahsils viz. Jalgaon and Sangrampur tahsils of Buldnan District and Akot, Telhara of Akola District and Daryapur and Anjangaon Surji of Amravati District. The soils are vertisols, deep and saline to saline alkali in reaction. Annual precipitation varies between 750 to 850 mm. Open wells in the tract have saline water as a result of which the same cannot be tilized for irrigation purpose. Cotton and Sorghum are the major crops of the tract together with rainfed Wheat during Rabi season. Poor drainage during rainy season is rampant.

b) Topography

S. No	Agro ecological situation	Characteristics
1	AES I	The AES-I lies on the north-east part of the district with main characteristic of black cotton soil, high rainfall and hilly topography in another side. The blocks covered under this AES are Sangrampur (95%) and Jalgaon Jamod (70%). 'Bilala' dominates some part, which are separated from Madhyapradesh. The crops like cotton, wheat and gram grown in the area. The two villages Ekalara (BK) and Sungaon were selected for as representative of AES for data collection.
2	AES II	This AES situated in west north direction of the district. The blocks covered by AES are Malkapur (100%), Nandura (100%), Shegaon (100%), Sangrampur (5%) and Khamgaon (15%). The main feature of AES are plain topography with saline soil called Kharpanpata. The major crops grown in this AES are cotton, gram and sunflower. For the data collection two representative villages are selected namely Nipana and Kalkhed.
3	AES III	This AES situated in western side of the Buldana district. The blocks covered are Motala (100%), Buldana (100%) and Chikhali (30%). The Buldana and Chikhali are situated at high attitude as compared to Motala. The main feature of AES are hilly topography, medium to shallow soil. The major crops grown are cotton, jowar, maize, soyabean, wheat and gram. The horticultural crops custardapple, aonla and vegetable crops like, chilli, brinjal and tomoto are also grown in the AES.
4	AES IV	AES IV comprise Mehkar (100%), Khamgaon (85%) and Chikhali (70%) blocks. This AES is situated in east side of the district. The main feature of AES-IV is assured rainfall, well irrigated, medium to shallow soils. The AES-IV has favourable weather condition for grape production in Chikhali block. The agricultural crops grown in this area and soybean, cotton, jowar maize in kharif and gram and wheat in Rabi season. The horticultural crops grown in this AES are grape, Guava, mango, custard apple and sweet orange. Chilli, onion, tomoto and onion seed production in case of vegetable are grown. For data collection of AES the two representative villages are selected namely, Nagzari and Hiwarkhed.
5	AES V	The AES-V is characterized by hilly and undulating topography, medium to shallow soils and rainfed area covering Deulgaon Raja (100%), Sindkhed Raja (100%) and Lonar (100%) blocks. This AES is situated in south of the district. The major crops grown in Kharif are soyabean, Cotton, Jowar and wheat, gram, safflower in rabi season. The major horticulture crop santra is grown in this AES. The climate is favourable for custard apple and aonla and has wide scope in this AES.

2.3 Soil type/s

S. No	Soil type	Characteristics	Area in ha
1	Vertisoles	(Heavy black soil)	199318.00
2	Inseptisoles	(Medium black)	265757.00
3	Entsoles	(Light soil)	273139.00

2.4 Area, Production and Productivity of major crops cultivated in the area of jurisdiction of KVK (2021)

S. No	Major Field Crop	Area (ha)	Production (MT)	Productivity (kg/ha)
Kharif Season				
1	Sorghum	6600	6100	925
2	Maize	24700	37100	1500
3	Bajra	900	200	246
4	Pigeonpea	74604	64900	870
5	Green gram	18042	10600	590
6	Black Gram	19148	11700	610
7	Soybean	388300	330100	850
8	Groundnut	400	380	865
9	Sesamum	540	130	243
10	Cotton	194100	353900	310
11	Sugarcane	200	1360000	56000
Rabi Season				
1	Chickpea	197325	253166	1283
2	Wheat	79035	175281	2218
3	maize	11820	15931	1348
4	Sorghum	15100	18406	1222
Summer Season				
1	Maize	104	1401	1351
2	Groundnut	2466	15688	1258
3	Sesamum	470	86	184
4	Safflower	274	271	993

(Source- SAO, Buldana)

Area Production & Productivity of Major fruit crop in Buldana District

Sr. No.	Name of Crop	Area (Ha)	Production (ton)	Productivity (t/ha)
01	Mandarin	1489	10655	7.15
02	Aonla	70	627	8.89
03	Banana	564	16467	29.15
04	Custard-apple	240	3941	16.42
05	Guava	467	3497	09.35
06	Mango	312	1222	03.90
07	Papaya	291	3164	10.84
08	Pomegranate	764	7847	09.29
09	Sapota	72	453	06.28
10	Kagzi-lime	269	2134	07.90
11	Sweet Orange	421	5473	12.99

(Source- SAO, Buldana)

Area Production & Productivity of Major Vegetable crop in Buldana District

Sr.No	Name of Crop	Area (Ha)	Production (ton)	Productivity (ton/ha)
01	Brinjal	464	5988	12.89
02	Cabbage	219	2360	10.76
03	Sweet pepper	27	183	6.79
04	Green Chilli	846	11799	13.93

05	Okra	290	1315	4.53
06	Onion	3877	28656	7.38
07	Tomato	518	6090	11.74
08	Ginger	211	2139	10.11
09	Turmeric	442	47208	106.69
10	Garlic	136	518	3.80
11	Cauliflower	229	2425	10.58

(Source- SAO, Buldana)

2.5. Weather data (2021)

Month	**Rainfall (mm)**	**Temperature 0 C**		**Relative Humidity (%)**	
		Maximum	**Minimum**	**Maximum**	**Minimum**
January	4.0	29.5	16.6	62	46
February	3.5	31.7	16.0	45	30
March	21.7	36.8	21.0	42	26
April	0.0	39.4	24.3	37	21
May	41.6	36.7	24.9	55	36
June	90.8	32.4	23.5	76	61
July	180.4	30.7	23.1	82	68
August	145.3	28.8	22.3	84	73
September	506.8	28.3	22.0	87	80
October	72.3	30.2	19.4	72	58
November	6.0	30.3	18.2	68	53
December	42.0	28.1	15.2	68	53
Total / Average	**1130.4**	**32.0**	**20.5**	**65**	**50**
Source: IMD & Rainfall Recording, Analysis Department, Govt. of Maharashtra					

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

Category	**Population**	**Production**	**Productivity**
Cattle			
Crossbred	10071	105.30	9.98
Indigenous	93344	129.80	1.48
Buffalo	129370	343.23	6.53
Sheep	93388	---	--
Goats	334757	--	--
Pigs	17151	--	--
Poultry	172000	--	--

(Source: http:// ah.adfmaharashtra.in)

2.7 Details of Operational Area / Villages

Name of Taluka	Name of the village	Major crops & enterprise	Major problem identified	Identified Thrust Areas
Nandura Sangrampur	Dhanora Jungam Wadgaon Wan	Cotton	Sowing of Cotton in light soil & rainfed situation. Management practices (wider spacing, No Seed treatment, No proper gap filling, Protective irrigation at critical stages) Imbalance nutrient management (Soil test Based Fertilizer application Inadequate & low-Quality organic matter used) Improper Pest, diseases mgt.	Efficient use of Fertilizers Integrated Nutrient Management Integrated pest & diseases management.
		Soybean	Unawareness about New variety, No use of good quality seed, Imbalance nutrient management, (No use of 2%foliar spray of Urea) Improper Pest, diseases mgt. Moisture stressing during flowering	New Variety, Integrated Nutrient Management, Proper Pest & diseases management In situ moisture conservation.
		Maize	Scarcity of Labour for Weeding, Higher cost for Weeding, Imbalance nutrient management	Weed Management, Integrated Nutrient management
		Red gram / Green-gram/ B.Gram /	Imbalance nutrient management, Excess Urea Application, Improper pest & disease management	Integrated Nutrient management, Foliar Application of 2% Urea, Integrated pest & diseases management
		Wheat	Low yield due to use of traditional crop varieties, Improper Sowing time, Imbalance nutrient management	Importance of New High Yielding Varieties, Nutrient management Weed Management
		Ground Nut	Unawareness about New Technology, Secondary and micronutrient deficiencies	BBF or Ridges and furrow method of sowing Nutrient management, Proper Pest & diseases management

		Horticult-ural crops	Non availability of guanine planting Material, Improper Management Practices, Improper Spacing, Imbalance Nutrient Management, Improper Insect Pest and disease Management, Improper use of irrigation facilities, Flower and fruit drop, Post-harvest losses of fruit Crops, Less returns due to direct selling, Non availability of value added products	Improved Nursery techniques for vegetable seedlings, Application of growth regulator in vegetable and fruit crops, Pre harvest & Post harvest techniques of vegetable, fruits & other Horticultural crops, Micronutrient application in Horticultural crops, Fruit & vegetable preservation, Irrigation management in Horticultural crops, Introduction of new Horticultural crops of low water requirement, Cultivation of tissue culture banana
		Soil & water conservation (Agril. Engg.)	Improper tillage operation & seed bed preparation, Water scarcity, Non adoption of in-situ soil & water conservation techniques	Soil and water conservation, Use of proper implements, Maintenance of tractor & tractor drawn implements, Post-harvest technology, Care and maintenance of Plant Protection equipments
		Irrigation	Improper method of irrigation	
		Post-Harvest Technology	Lack of knowledge of simple techniques of PHT viz. clean Cotton picking, grading, available fruit packaging grading & processing	
		Mechanizatio n	Lack of knowledge about improved Agriculture implements	
		Drudgery in field operation	Drudgery in agricultural operation, Time consuming traditional method of operation	
		Cattle	Management & health, Non adoption of proper housing systems, Manage mental problems like identification, dehorning, castration, Unawareness about Vaccination, Irregular Deworming, Unavailability of timely treatment, Low Milk Yield	Formulation of balance ration for Dairy animals, Scientific feeding of animals, Ecto-parasitic infection in animals, Inbreeding problems in goat & dairy animals, Worms problems in animals, Improving backyard poultry, Proper housing of animals, Vaccination and healthcare in animals, Entrepreneurship development through Dairy, Poultry & Goatry
		Buffalo	High Mortality in Calves, Silent Heat, Highly Worms, Infection in Milch Buffalo	

		Goat & Sheep	Highly abortion rate, High incidence of FMD, Less Use of Concentrate in Feeding, Mortality in Rainy season	
		Poultry	Rearing of Deshi Breeds, lack of knowledge about proper Poultry management, High Cost of Feed, Higher Mortality, Effect of climate on poultry production	
		Agriculture Technology & Marketing	Lack of upgradation of improved agriculture, Weak extension linkage between extension workers & farmers, Improper adoption of Improved agriculture technologies, Women empowerment Unavailability of current market prices at village level	Taking up suitable measures to impart knowledge about modern agriculture amongst the farmers' community, Creation of awareness amongst the farmers, farmwomen, rural youth regarding improved agricultural technologies
		Rural Women & Child Nutrition, Hygiene & Health	Iron deficiency in women, Underweight & mal nutrition, Balance diet, Hygienic problems	Nutrient deficiency of farm women & child, Heavy physical stress due to tradition methods in agricultural operations, Women empowerment Value addition of agricultural commodities
		Women Drudgery reduction	Lack of awareness about agriculture tools & implements	
		Agro-processing & value addition	Heavy losses in agriculture commodities due to unavailability of agro processing facilities.	

2.8. Priority thrust areas

Discipline	Thrust Area
Agronomy	
Cereals	
Maize	Integrated Nutrient Management, Weed Management, Crop Diversification.
Sorghum	Integrated Nutrient Management
Wheat	Variety, Integrated Nutrient Management, Weed management
Oilseed	
Soybean	Variety, Integrated Nutrient Management
Groundnut	Variety, INM,
Pulses	
Greengram, Blackgram,	Variety, Integrated Nutrient Management

Pigeon pea, Bengal gram	
Fiber crop	
Cotton	Integrated Nutrient Management
Plant Protection	
Maize	Integrated Pest Management, FAW management
Soybean, Sorghum, Ground Nut, Greengram, Blackgram, Pigeon pea, Bengalgram	Integrated Pest & Disease Management
Cotton	Integrated Pest & Disease Management, PBW management
Citrus, Onion	Pest & disease management.
Horticulture	
Fruit crops	
Custard Apple	Improved variety, Integrated crop management, training & pruning method
Banana	Nutrient Management, Water management, Pre/post harvest management
Citrus	Nutrient Management, Water management, Pre/post harvest management, Pest & disease management.
Turmeric	Improved variety, Nutrient Management, Pest & disease management, pre-harvest crop management, storage management
Papaya	Improved Variety, Pest & disease management
Watermelon/Muskmelon	Pest & disease management, Polythene mulch
Onion	Improved variety, weed management, pre-harvest crop management, storage management
Tomato	Improved variety, Pest & disease management
Brinjal	Integrated crop management, Pest management
Chilli	Pest & disease management, Nutrient Management
Medicinal Crops	
Safed Musli	Improved variety, plantation management, post harvest management.
Agricultural Engineering	
Mechanization	Use of Improved implements for mechanization of dryland Agriculture
Soil & Water conservation	In-situ soil moisture conservation
Micro Irrigation system	Use of improved irrigation methods like drip & Sprinkler irrigation system
Small scale processing	PKV Mini Dal Mill for pulses processing, PKV Deseeding machine for custard apple
Veterinary Science	
Dairy	Feed & Fodder production, Animal health, Use of mineral mixture
Goat	Up gradation of local goat, Health
Poultry	Feed & Rearing of birds
Home Science	
Women & Child care	Nutrition status
Drudgery Reduction	Use of drudgery reducing farm implements/equipment's
Capacity Building	Strengthening up of SHG / farmers club

3. TECHNICAL ACHIEVEMENTS

3.1 A. Details of target and achievements of mandatory activities

OFT (Technology assessment and Refinement)				FLD (Oilseed, Pulses, Cotton, Other crop / enterprise)			
1				2			
Number of OFTs		Number of Farmers		Number of FLDs		Number of Farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
10	10	96	96	18	18	409	409

Training				Extension Programmes			
3				4			
Number of Courses		Number of Participants		Number of Programmes		Number of participants	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
110	136	3300	4383	180	264	5400	9662

Seed Production (Qtl.)		Planting material (Nos.)	
5		6	
Target	Achievement	Target	Achievement
Soybean , Bengalgram & Wheat – 25 qt	29 qt	Custard Apple, Lemon, Citrus, Guava - 15000	21231
Fodder sets CO5,CO4 – 4000nos.	4600 nos.		
Azolla Culture 30 kg	35 kg		
Turmeric Seed rizhoms – 10 qt	14 qt		

Livestock, poultry strains and fingerlings (No.)		Bio-Products (kg)	
7		8	
Target	Achievement	Target	Achievement
Giriraja, Kaveri birds – 250 nos	350 nos.	Vermicompost – 25 qt	65 qt
Broiler poultry 1 batch	745 nos		

3.1. B. Operational areas details during the year 2021

S.No.	Major crops & enterprises being practiced in cluster villages	Prioritized problems in these crops/ enterprise	Extent of area (Ha/No.) affected by the problem in the district	Names of Cluster Villages identified for intervention	Intervention (OFT, FLD, Training, extension activity etc.)*
1	**Cereals**				
	Wheat	Heat Stress,Late sowing,Weed Menace	8764	Uti ,Wadshingi, Umapur,	FLD on New Varity PDKV Sardar Suitable for Late Sowing and OFT on Weedicide in Wheat
	Maize	Fall Army Worm	65 % area affected	KhandariBkWadshghi	FLD , Trainings
2	**Fibre crop**				
	Cotton	Heavy Infestation of Pink bollworm, sucking pest infestation	126545 Ha 70 -80 % area affected	Sungaon , Wadsinghi, Jalgaon Jamod	OFT , Trainings, field visit, diagnostic visit
3	**Pulses**				
	Chickpea	Wilt problem	15120	Dhnora,Sagoda,Panchala	CFLD on improved wilt resistant variety RVG202 and Phule Vikramin summer ground nut
	Pigeaon pea	Pod borer complex	70% area affected	SungaonJamod	OFT , Trainings, field visit, diagnostic visit
	Pigeaon pea	Wilt problem	55% area affected	Akola Kh, Wadshingi	FLD , Trainings
4	**Oilseeds**				
	Soybean	Varietal Monoculture of JS335,Low yield,	148540	Manasgaon	FLD of improved Variety MACS1281
	Soybean	Infestation of Stem fly and Girdle Beetle	225000 50.55 % area affected	Akola Kh	FLD , Trainings
	Summer Ground Nut	Low yield due to poor crop management	250	Sagoda	CFLD on ICM in summer ground nut

5	**Fruit Crop & vegetables**				
	Cusatard Apple	Quality fruit, Insect/pest infestation	1550 ha	Sungaon, Jamod, Sangrampur	FLD on Training & Pruning management, Training & extension activity
	Turmeric	Nutrient management, Improved variety	1150 ha	Usra, Asalgaon, sangrampur	OFT on Nutrient management, FLD on improved variety and Training & extension activity
	Onion	Weed management, nutrient management & water management	1500 ha	Jalgaon, Sangrampur,	FLD, Training & extension activity
	Chilli	Nutrient management, Pest & Disease mgt	800 ha	Jalgaon, Palashi Z, Jamod, Waghud	FLD on fruit drop management, Training & extension activity
	Banana	Nutrient management	750 ha	Wadgson waan, katol, Warvat, Jalgaon	Training & extension activity
	Citrus	Nutrient management	1400ha	Sagoda, Sonala, Hiwarkhed	Training & extension activity
6	**Livestock**				
	poultry	1.Low eggs production 2.Lack of nutritious diet 3.Low weight gain	8100 nos	Charban, Garpeth ,bhingara	FLD Training, Group discussion,
	Goat	Ir- regular deworming Parasitic infestation Low body weight gain	2080 nos	Charban, Garpeth, umapur	OFT Training ,Group discussion
	Dairy animals	Loss of milk yield Repeat breeding Low conception rate Reduce breeding efficiency	1550 nos	Dhanora Jangam, Wadgaon , Charban, Garpeth	FLD,Training ,Group discussion
	Feed and fodder	Low production in cattle due to non cultivation of fodder crop	270 ha	Dhanora Jangam, Wadgaon	OFT Training, Group discussion
	Dairy cattle	Incidence of mastitis. High cost of treatment. Low milk yield. Economic loss	1420 nos	Dhanora Jangam, Wadgaon	FLD Training ,Group discussion

7	**Farm Implement**				
	Animal drafted implements	Difficulties in tillage in tribal area	6000ha	Charban	Distribution of implemnts under AICRP in UAE Project
	PDKV BBF Planter	Low productivity in Maize, Labour intensive planting work.	12600ha	Charban Nimbhora	OFT - Use of Tractor drawn BBF Planter
		Low productivity in Jawar	11230 ha	Charban Nimbhora, changeful	OFT - Use of Tractor drawn BBF Planter
		Low productivity and high seed cost in groundnut	1101ha	Sungaon	FLD on use of BBF Planter
		Low productivity and absence of soil and water conservation measure in rainfed soybean	36000ha	Warwat, Sonala Sangrampur	Training cum Demo
		Difficulties in setting and adjustment of BBF Planter		Walti wasadi, Khatkhed	Diagnostic visit for stting and adjustment of Planter
	PDKV Garlic planter	High cost of planting, labour and time-consuming practice	78 ha	Wadgaon Patan, Ambhoda	OFT on use of PDKV Garlic Planter
	Cotton Slasher	Improper use of biomass in cotton crop, drudgery and time-consuming cotton uprooting traditional practice	48000ha	Borala Kajegaon	FLD on use of cotton slasher
	Deseeding machine (Custard apple)	Fruit waste in low demand /unfavorable weather conditions	26 ha	Kherda Asalgaon	FLD
	PDKV mini dal mill	Absence of small-scale processing in pulses and value addition		Kajegaon, Sungaon, Borala, Nimgaon, Asalgaon	FLD, Training
	Subsoiler	Poor drained, hard &	2400 ha	Bhastan, Borala	FLD, training

		compacted soil			
8	**Water Conservation**	Low water table and decreasing area under irrigation	125000 ha	Warwat bakal, Charban, Sonala, Kajegaon, Chalthana, Chalis Tapari, Sungaon, Kherda, Wadgaon wan, Dhanora Jangam	Trainings
9	**Processing and value addition**	Low milling quality of cv PKV Tara in processing	25 No of dal mill units	Jalgaon Jamod, Nimgaon, Wadgaon Patan, Ghatpuri Nipana	Training on Improving milling quality of pigeon pea grain (Variety- PKV Tara.)
10	**Micro Irrigation**	High cost of micro irrigation unit	48000 ha	Wadgaon Patan	Training on Care and maintenance of Micro Irrigation unit

3.2. Technology Assessment (Kharif 2021, Rabi 2020-21, Summer 2021)

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 Crop	Human Health	TOTAL
Integrated Nutrient Management	0	0	0	0	0	01	0	0	01	0	**02**
Varietal Evaluation	0	01	0	0	0	0	0	0	0	0	**01**
Integrated Pest Management	0	0	01	01	0	0	0	0	0	0	**02**
Integrated Crop Management	0	0	0	0	0	0	0	0	0	0	0
Integrated Disease Management	0	0	0	0	0	0	0	0	0	0	0
Weed Management	01	0	0	0	0	0	0	0	0	0	**01**
Resource Conservation Techn.	0	0	0	0	0	0	0	0	0	0	0
Farm Machineries	02	0	0	0	0	0	0	0	0	0	**02**
Integrated Farming System	0	0	0	0	0	0	0	0	0	0	0
Seed / Plant production	0	0	0	0	0	0	0	0	0	0	0
Value addition	0	0	0	0	0	0	0	0	0	0	0
Drudgery Reduction	0	0	0	0	0	0	0	0	0	0	0
Storage Technique	0	0	0	0	0	0	0	0	0	0	0
Mushroom cultivation	0	0	0	0	0	0	0	0	0	0	0
Human Nutrtion	0	0	0	0	0	0	0	0	0	0	0
Total	**03**	**01**	**01**	**01**	**0**	**01**	**0**	**0**	**01**	**0**	**08**

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

Thematic areas	Cattle	Poultry	Piggery	Goatry	Fisheries	TOTAL
Evaluation of Breeds	0	01	0	0	0	01
Nutrition Management	0	0	0	0	0	0
Disease of Management	0	0	0	0	0	0
Value Addition	0	0	0	0	0	0
Production and Management	0	0	0	0	0	0
Feed and Fodder	01	0	0	0	0	01
Small Scale income generating enterprises	0	0	0	0	0	0
TOTAL	**01**	**01**	**0**	**0**	**0**	**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)
Integrated Nutrient Management	Turmeric	Assesment of Turmeric special micronutrient over soil application of micronutrient	14	14	0.40
	Mandarin	Assesment of microbial consortium for nutrient use efficiency in Mandarin crop	07	07	0.2
Varietal Evaluation	Cotton	Assesment of Bt cotton varieties ICAR-CICR PKV 081 Bt and ICAR-CICR Rajat Bt	03	03	1.20
Integrated Pest Management	Cotton	Management of Pink bollworm (*Pectinophoragossypiella*)on Bt cotton	07	07	1.20
	Pigeao pea	Management of pigeonpea pod borer complex	07	07	1.20
Farm Machineries	Maize	Use of PDKV BBF Planter in Maize crop	15	15	0.8
	Jawar	Use of PDKV BBF Planter in Jawar crop	15	15	0.8
Weed Management	Wheat	Assess the performance of Post emergence weedicide application (Clodinafop Propargyl + Metasulfuran Methyal @ 0.06+ 0.004 kg ai /ha) at 35DAS for controlling weed	10	10	1.20
Total			**78**	**78**	**7.00**

B.2. Technologies assessed under Livestock and other enterprises

Thematic areas	Name of the livestock enterprise	Name of the technology assessed	No. of trials	No. of farmers
Evaluation of breeds	Poultry	Assess the performance of new variety Kaveri breed under back yard Poultry	10	10
Feed and fodder	Dairy Cattle	Evaluation of Hybrid napier variety of fodder CO5	08	08
Total			**18**	**18**

C1. Results of Technologies Assessed

Results of On Farm Trial

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
Cotton	Rainfed, Medium black soil	High Seed Cost ,High incidence of Pink boll worm and sucking pest	Assesment of Bt cotton varieties ICAR-CICR PKV- 081 Bt and ICAR-CICR Rajat Bt	3	ICAR-CICR PKV 081 Bt and ICAR-CICR Rajat Bt	Plant Height (cm) Bolls (nos/Plant) Boll weight(gram	T1 - 148 T2 - 87 T3- 74 T1 - 32.2 T2 - 18.8 T3- 17.6 T1 - 5.2 T2 - 2.8 T3- 2.1	ICAR CICRRajat Bt and ICAR CICR PKV 081 gives 46.78% and 52.56 % Less yield than farmer practice (cv.Supperco	Both the Varieties (PKV-081& Rajat) gives less yileld than other varieties.Boll size is very small and boll weight is very low and picking required more labour	No	--
Wheat	Irrigated, Medium Black soil		Assess the performance of Post emergence weedicide application (Clodinafop Propargyl + Metasulfuran Methyal @ 0.06+ 0.004 kg ai /ha) at 35DAS for controlling weed flora in wheat	10	Metsulfuran Methyl@ 20gram a.i./ha at 35 DAS Clodinafop Propargyl + Metasulfuran Methyal @ 0.06+ 0.004 kg ai /ha	Weed Count t) (nos/sqm) Weed Dry Matter (grams/sqm)) WCE (%)	T1 - 24.1 T2 - 6.4 T3- 4.5 T1 - 21.4 T2 - 4.8 T3- 3.3 T1 - - T2 - 73.44 T3- 81.33	For effective control of grassy and broad leaves weeds in wheat post emergence weedicide (clodinafop 15% + metsulfuron methyl 1% WP @ 0.06+0.004 Kg ai/ha) alternative herbicide molecules	Post emergence weedicide application (Clodinafop Propargyl + Metasulfuran Methyal @ 0.06+ 0.004 kg ai /ha) at 35DAS controls both type of weed narrow and broad leaves weed	No	--

								with broad spectrum activity for sustainable weed management in wheat.			
Turmeric	Irrigated situation	Long duration, curcumin %	Assessment of Turmeric special micronutrient as foliar spray in turmeric crop	14	Turmeric special micronutrient	Yield/ha, Aveg duration of crop, Aveg wt of fresh rhizomes	Aveg yield/ha, No of days to mature,	Yield (T1- 193.0qt, T2- 207.5 qt, T3- 206.3 qt) Harvest day- (T1- 210 T2 – 223 T3- 218) Wt of fresh rhizome – T1- 879 gm T2- 930gm T3- 919gm	Easy & quick method to reclaim deficiency	--	--
Citrus	Irrigated situation	Unavailability of nutrient due to less organic carbon %	Assessment of microbial consortium for nutrient use efficiency in Citrus crop	07	Integrated Nutrient management	T1 :Change in N availability of soil Yield : q/ha T2 :Change in N availability of soil Yield : q/ha T3 :Change in N availability of soil Yield : q/ha	191.2 142.01 305.4 143.89 289.32 146.0	Nitrogen availability in T2 treatment is more as compared to T3	Crop growth is excellent.	NIL	NIL
Cotton	Irrigated	Reduction in yield & quality of cotton due to *Pink bollworm & having*	Management of Pink bollworm (*Pectinophoragossypiella*)on Bt cotton	07	T1 (Farmers Practice) – 4 or 5 chemical pesticide sprays comprising of Chlorpyriphos 20 EC@ 30ml,/ Triazophos 40 EC@	1 Green boll damage % 2 Cost of pp / ha 3 Yield q/ha	27.45 7500/- 17.32	T2 treatment is effective over T1 (farmers practice)	Farmers appreciate T2 and T3 treatment	No	No

		intensity 65-75 % in 2020			30 ml / Ampligo @ 10 ml / /Emamectin benzoate 5 SG @ 10 gram per 10 lit water T2- 1st Spray profenophos 50 EC @ 20 ml per 10 lit water at 60 DAS 2nd Spray Emamectin benzoate 5 SG @ 4.4 g per 10 lit water at 80 DAS and 3rd spray Lambda cyhalothrin 5 EC @ 10 ml per 10 lit water at 100 DAS T3- Installation of Pheromone Traps @2/acre for monitoring at square formation, Spray Azadirachtin 300 ppm @ 50ml/10 lit at flower initiation, Plucking of rosette flowers, ETL based application of Thiodicarb 75 WP 20 g per 10 lit water at boll formation followed by Deltamethrin 2.8 EC 10 ml per 10 lit water	1 Green boll damage % 2 Cost of pp/ha 3 yield q/ha 1 Green boll damage % 2 Cost of pp /ha 3 yield q/ha	8.36 6250/- 22.05 9.58 5125/- 21.45				
Pigeaon pea	Rainfed	Major Pulse crop in Buldana district in kharif season growing on 72402 ha	Management of pigeonpea pod borer complex	07	T1 (Farmers Practice) - 1 or 2 chemical pesticide sprays comprising of Chlorpyriphos 20 EC 30ml, Triazophos 40 EC 30 ml per 10 lit	1 Pod damage % 2 Cost of pp/ ha 3 yield q/ha	18.55 6000/- 10.85	T2 treatment is effective over T3& farmers practice	Farmers appreciate T2 treatment	No	No

		area (2019) with Avg productivity of 624 Kg /ha. from last few year			water T2- 1st spray - Clorantraniliprole 18.5 SC @3 ml per 10 lit water at 50 per cent flowering 2nd spray- Flubendiamide 39.35 SC @2 ml per 10 lit water at pod filling stage T3 --1st spray Azadirachtin 300 ppm 50 ml /10 lit water 50% flowering 2nd Spray Emamectin Benzoate 5 SG 4.4 g/10 lit water based on ETL3rd spray Lamdacyhalothrin 5 EC 10 ml/10 lit water based on ETL	1 Pod damage % 2 Cost of pp / ha 3 yield q/ha 1 Pod damage % 2 Cost of pp / ha 3 yield q/ha	4.52 6500- 13.86 6.45 5000/- 12.78				
Cattle	--	Low fodder production Low nutritious feed & fodder Non cultivation of fodder crop	Assess the performance of Fodder crop CO5	08	Cultivation of CO5 fodder	Avg. Yield of fodder (ton/ha) Avg. milk yield, lit/day	375.4 4.300	24.81% 20.48%	Due to this technology increase in yield of fodder and milk yield	No	No
Poultry	--	Low eggs production, low growth rate, low weight gain, economic loss	Assess the performance of new variety Kaveri breed under backyard poultry	11	Rearing of Kaveri birds	Avg. body weight gain (kg/ bird) Avg. Eggs production (No)	2.600 158	45 75	Due to this eggs production, weight gain increase	No	No

BBF + Maize	Rainfed	Low yield due to uneven plant population High labour requirement in planting /dibbling operation	Enhancing productivity of Maize crop using BBF Planter in Buldana District	15	For high return Sowing of Maize on three row BBF on 60x20cm by tractor is recommended for getting maximum yield, net returns and to improve moisture conservation	Yield (q/ha) Net Return (Rs. /ha) Cost of operation Rs. /ha Field Field efficiency	T1- 54.66 T2 -64.23 T1- 27393/- T2- 37442/- T1- 3600 T2- 2000/- T1- 52.33?% T2- 64..23%	Inc. Yield 17.50 % ANR of Rs. 10049/- 44.45 % reduction in labour cost	Inc. yield, better growth, reduction in labour and time in seeding operation	Nil	
BBF + Jowar	Rainfed	Low yield due to uneven plant population	Enhancing productivity of Jowar crop using BBF Planter in Buldana District	15	Sowing of Jowar on four row 1.5 m. BBF at 45 cm by tractor is recommended for getting maximum yield, net returns and to improve moisture conservation	Yield (q/ha) Net Return (Rs. /ha) Cost of operation Rs. /ha Field efficiency%	T1- 18.23 T2- 21.08 T1- 51044/- T2- 59024/- T1- 2500/- T2- 2000/- T1- 54.33 T2- 64..2	15.63 % 7980/- 20 % reduction in cost of operation	Inc. yield, better growth, reduction in labour and time in seeding operation	Nil	

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, qt/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
T 1 (Farmer's practice)		1227	Kg/ha	53617	2.40
T 2- cv CICR Rajat bt	CICR, Nagpur	653	Kg/ha	20233	1.70
T 3- cv CICR AKH081 Bt	CICR, Nagpur	582	Kg/ha	15217	1.54
T 1 (Farmer's practice)- No spraying		4272	Kg/ha	41483	2.38
T 2- Spraying Of Metsulfuran Methyl@ 20gram a.i./ha at 35 DAS	PDKV Akola	4415	Kg/ha	45455	2.53
T 3- Spraying Of Clodinafop Propargyl + Metasulfuran Methyal @ 0.06+0.004 Kg ai/ha at 35 DAS	PDKV Akola	4559	Kg/ha	48997	2.62
T1 (Farmer's practice) Soil application of micronutrient		193.0	qt/ha	80500/-	1.71
T2 - Turmeric special micronutrient	IISR, Kozhikode	207.5	qt/ha	142625/-	2.48
T3 – Foliar application of Boron, Fe & Zn @ 375gm/acre at vegetative growth stage, two spray at 25 days interval	TNAU, Coimbatore	206.3	qt/ha	108500/-	2.18
T_1 – Farmers Practise (Local pactice)		142.01	qt/ha	487872	7.08
T_2 – IIHR, Bangalore developed Microbial consortium	IIHR, Bangalore	143.89	qt/ha	496998	7.32
T_3 – IISR, Kozhikode developed Microbial consortium	IISR, Kozicodi	146.0	qt/ha	506000	7.48

T1 (Farmers Practice) - 1 or 2 chemical pesticide sprays comprising of Chlorpyriphos 20 EC 30ml, Triazophos 40 EC 30 ml per 10 lit water		1855	Kg/ha	94475/-	2.49
T2- 1st Spray profenophos 50 EC @ 20 ml per 10 lit water at 60 DAS 2nd Spray Emamectin benzoate 5 SG @ 4.4 g per 10 lit water at 80 DAS and 3rd spray Lambda cyhalothrin 5 EC @ 10 ml per 10 lit water at 100 DAS	MPKV Rahuri, Joint Agrosco- 2018	2205	Kg/ha	126320/-	3.06
T3- Installation of Pheromone Traps @2/acre for monitoring at square formation, Spray Azadirachtin 300 ppm @ 50ml/10 lit at flower initiation, , Plucking of rosette flowers, ETL based application of Thiodicarb 75 WP 20 g per 10 lit water at boll formation followed by Deltamethrin 2.8 EC 10 ml	Dr. PDKV , AKOLA and Major uses of Pesticides, CIBRC publication 2018	2145	Kg/ha	122075/-	3.02
T1 (Farmers Practice) –2- 3 hemical pesticide sprays comprising of Chlorpyriphos 20 EC 30ml, Triazophos 40 EC 30 ml per 10 lit water		1085	Kg/ha	48240/-	3.16
T2- 1st spray - Clorantraniliprole 18.5 SC @3 ml per 10 lit water at 50 per cent flowering 2nd spray- Flubendiamide 39.35 SC @2 ml per 10 lit water at pod filling stage	Dr. VNMKV, Joint Agresco- 2019 and Major uses of Pesticides, CIBRC publication 2018	1336	Kg/ha	64340/-	3.85
T3 --1st spray Azadirachtin 300 ppm 50 ml /10 lit water 50% flowering 2nd Spray Emamectin Benzoate 5 SG 4.4 g/10 lit water based on ETL 3rd spray Lamdacyhalothrin 5 EC 10 ml/10 lit water based on ETL	Major uses of Pesticides, CIBRC publication 2018	1278	Kg/ha	62370/-	3.70

Technology T1(Farmer practice) : Cultivation of Jaywant Fodder	Dr. P.D.K.V Akola	3.200lit/day		184550/-	2.88
T2 : Cultivation of CO4 fodder		3.700lit/day		272650/-	3.78
T3 : Cultivation of CO5fodder		4.300lit/day		279550/-	3.85
T1 :Deshibirds		39 no of eggs		3480	3.78
T2 :Giriraja birds	Central poultry development	144no.of eggs		11516	4.29
T3 : Kaveri birds	organization Odisha	158no.of eggs		14675	4.47
T 1 - Farmer's practice Planting Manual		5466	Kg/ha	27393/-	1.86
T 2 - BBF Method	PDKV Akola	6423	Kg/ha	37442/-	2.24
T 1 (Sowing with bullock drawn seed drill)		1823	Kg/ha	51044/-	3.83
T 2 (BBF Method)	Dr. PDKV Akola	2108	Kg/ha	59024/-	4.37

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

Assessment (Agronomy)-I

1. **Title of Technology Assessed** : Assesment of Bt cotton varieties ICAR-CICR PKV 081 Bt and ICAR-CICR Rajat Bt
2. **Problem Definition** : Majority of the farmers are cultivating BGII hybrids of cotton whose seeds are costly and these hybrids are more suitable for fertile soil under assured rainfall with high inputs ,the yield levels are fluctuating widely depending upon the rainfall distribution and the incidence of sucking pests and pink boll worm .Bt Varieties Provide a cost effective alternative
3. **Details of technologies selected for assessment :** T1- Farmer Prctice
   T2- ICAR CICR Rajat Bt
   T3 – ICAR CICR PKV 081 Bt
4. **Source of technology :-** CICR ,Nagpur 2020
5. **Production system and thematic area :-** Varietal Evaluation
6. **Performance of the Technology with performance indicators :-**
   Table: Performance of the Technology

Performance indicator	T1 (Farmers Practice)	T2 (ICAR CICR Rajat Bt)	T3 (ICAR CICR PKV 081 Bt)
Plant Height (cm)	148	87	74
Bolls (Nos/Plant)	32.2	18.8	17.6
Boll Weight(grams)	5.2	2.8	2.1
Yield (Kg/ha)	1227	653	582

   ICAR CICRRajat Bt and PKV 081 gives 46.78% and 52.56 % Less yield than farmer practice (cv.Suppercot)
7. **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques**

Sr no	Prameters	Matrix scoring
1	No of bol/plant	1
2	Bol weight	1
3	Yield(qt/ha)	1
4	Pest and diseases resistance	2
5	Affordability	2
6	Acceptability	1

8. **Final recommendation for micro level situation** : ICAR CICR Rajat bt and CICR PKVAKH081gives less yield than Private sector Bt
9. **Constraints identified and feedback for research** : Boll size is smaller than Other Bt Cotton Varieties, Boll weight is less and labour refuge for picking
10. **Process of farmer's participation and their reaction**: Assessment has been taken as per problem diagnosed and CICRs Instruction. Village-wise meeting was conducted for selection of farmers. After selecting farmers, training has been given and made aware about complete procedure for assessment. Regular visit to farmers field were arranged and necessary suggestions were given to Farmers. From feedback of farmers it is reveled that ICAR CICR Rajat Bt and ICAR CICR PKV AKH081 Variety gives %Less yield respectively than Private Sector Bt and, boll size and boll are less due to which more labour required for picking.

Assessment (Agronomy) -II

1. **Title of Technology Assessed**: Assess the performance of Post emergence weedicide application (Clodinafop Propargyl + Metasulfuran Methyal @ 0.06+ 0.004 kg ai /ha) at 35DAS for controlling weed flora in wheat
2. **Problem Definition:** The wheat fields are mostly infected by monocot and dicot weeds shift in weed flora in favour of broad-leaved weeds or narrow leaf weeds was observed. Hence, it is essential to identify alternative herbicide molecules with broad spectrum activity for sustainable weed management in wheat. Therefore, an on-farm trial was conducted to check the effectiveness of post-emergence herbicides in weed control in wheat
3. **Details of technologies selected for assessment:**
   T1- Farmer Prctice
   T2- Spraying of Metsulfuran Methyl@ 20gram a.i./ha at 35 DAS
   T3 –Spraying of Clodinafop Propargyl + Metasulfuran Methyal @ 0.06+0.004 Kg ai/ha at 35 DAS
4. **Source of technology:** - PDKV, Akola
5. **Production system and thematic area**: - Weed Management
6. **Performance of the Technology with performance indicators**: - Treatment T3 (clodinafop 15% + metsulfuron methyl 1% WP @ 0.06+0.004 Kg ai/ha) at 35 DAS reduced the weed count from 24.5 to 4.5 and weed dry matter recorded at 60 DAS from 21.4 to 3.3 g/m2 .with higher WCE (81.33%) effective control of grassy and broad leaves weeds which resulted in decreased biomass of weeds and thereby increased weed control efficiency.
7. **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques**

Sr no	Prameters	Matrix scoring
1	Weed count nos/seqm	4
2	Weed Dry Matter (grams/sqm))	4
3	WCE (%)	5
4	Yield(qt/ha)	4
5	Affordability	4
6	Acceptability	3

8. **Final recommendation for micro level situation**: For effective control of grassy and broad leaves weeds in wheat post emergence weedicide (clodinafop 15% + metsulfuron methyl 1% WP @ 0.06+0.004 Kg ai/ha) alternative herbicide molecules with broad spectrum activity for sustainable weed management in wheat.
9. **Constraints identified and feedback for research** : no constrain
10. **Process of farmers participation and their reaction**; Assessment has been taken as per problem diagnosed. Village-wise meeting was conducted for selection of farmers. After selecting farmers, training has been given and made aware about complete procedure for assessment. Regular visit to farmers field were arranged and necessary suggestions were given to Farmers. From the feedback of farmers it is reveled that post emergence weedicide (clodinafop 15% + metsulfuron methyl 1% WP @ 0.06+0.004 Kg ai/ha) controls both narrow and broad leaves of weeds

Assessment (Horticulture) –III

1. Title of Technology Assessed : **Assessment of Turmeric special micronutrient as foliar spray in Turmeric crop**

2. Problem definition : 1. Micronutrient deficiency on foliage
2. More prone to disease incidence

3. Details of technologies selected for assessment:

T_1 – Farmers Practise (Local treatment)
T2 – Foliar spray of Turmeric special micronutrient @ 5gm/lit
T3 - Foliar application of Boron, Fe & Zn @ 375gm/acre at vegetative growth stage, two sprays at 25 days interval

4. Source of technology : Indian Institute of Spices Research, Kozhikode, Kerala

Tamil Nadu Agriculture University, Coimbatore

5. Production system thematic area : Medium to light soil, N level low, P level low, K level high Irrigated, Rainfall ranges from 650-750mm, Temperature 20-45^{0}C

6. Performance of the Technology with performance indicators

Table: Performance of the Technology with performance indicators

Performance indicator	T1(farmers treatment)	T2 (Turmeric special micronutrient)	T3 (Foliar spary of micronutrient)
Average yield/ha	193.0	207.5	206.3
Average crop duration	210	223	218

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

Sr. No.	Parameters	Matrix scoring
1	Average yield/ha	1
2	Average crop duration	2
3	Affordability	3
4	Acceptability	2

8. Final recommendation for micro level situation.

Foliar spray of Turmeric special micronutrient is cheap & easy method for quality improvement

9. Constrain identified and feedback for research: Unavailability of Turmeric special micronutrient in Region.

10. Process of farmer's participation and their reaction.

Assessment has been taken as per problem diagnosed, after village-wise meeting was conducted for selection of farmers. After selection of farmers, training has been given and made aware about complete procedure for assessment. Regular visit of farmers were arranged and necessary suggestions were given to farmers, farmers concluded after taking this assessment that, foliar spray of Turmeric special micronutrient is effective.

Assessment (Horticulture) –IV

1. **Title of Technology Assessed**: Assessment of Microbial consoutium to improve nutrient use efficiency.

2. Problem definition: 1. Nutrient deficiency in most of citrus cultivated soils.
2. Nutrient use efficiency decline due to less beneficial microbial count.

3. Details of technologies selected for assessment:

T_1 – Farmers Practise (Local variety)
T_2 – IIHR, Bangalore developed Microbial consortium
T_3 – IISR, Kozhikode developed Microbial consortium

4. Source of technology : IIHR, Bangalore developed Microbial consortium
IISR, Kozhikode developed Microbial consortium

5. Production system thematic area :

Medium to light soil, N level low, P level low, K level high, irrigated, rainfall ranges from 650-750mm, Temperature 20-45^{0}C

6. Performance of the Technology with performance indicators

Table: Performance of the Technology with performance indicators

Performance indicator	T1(farmers variety)	T2 (IIHR, Bangalore developed Microbial consortium)	T3 (IISR, Kozhikode developed Microbial consortium)
Change in N availability of soil	191.2	305.40	289.32
Change in P availability of soil	20.20	21.70	22.51
Change in Zn availability of soil	0.23	0.25	0.26

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

Sr. No.	Parameters	Matrix scoring
1	Change in N availability of soil	4
2	Change in P availability of soil	4
3	Change in Zn availability of soil	3
4	Affordability	4
5	Acceptability	2

8. Final recommendation for micro level situation.

Microbial consortium is very good in improving soil microbial strata which helps to improves fertilizer for crops.

9. Constrain identified and feedback for research: Microbial consortium application is quite laborious due to solid base. Non-availability is also constraint.

10. Process of farmers participation and their reaction.

Assessment has been taken as per problem diagnosed. Village-wise meeting was conducted for selection of farmers. After selection of farmers, training has been given and made aware about complete procedure for assessment. Regular visits of farmers were arranged and necessary suggestions were given to farmers. As per feedback of fartmres, the bio- fertilizers consortium application is less effective in early stage.

Assessment (PP) - V

1. **Title of Technology Assessed --** Management of Pink bollworm (*Pectinophora gossypiella*) on Bt cotton
2. **Problem Definition --** Reduction in yield & quality of cotton due to Pink bollworm & having intensity 65-75 %
3. **Details of technologies selected for assessment**

T1 (Farmers Practice) - 1 or 2 chemical pesticide sprays comprising of Chlorpyriphos 20 EC 30ml, Triazophos 40 EC 30 ml per 10 lit water

T2- 1st Spray profenophos 50 EC @ 20 ml per 10 lit water at 60 DAS 2nd Spray Emamectin benzoate 5 SG @ 4.4 g per 10 lit water at 80 DAS and 3rd spray Lambda cyhalothrin 5 EC @ 10 ml per 10 lit water at 100 DAS

T3- Installation of Pheromone Traps @ 2/acre for monitoring at square formation, Spray Azadirachtin 300 ppm @ 50ml/10 lit at flower initiation, Plucking of rosette flowers, ETL based application of Thiodicarb 75 WP 20 g per 10 lit water at boll formation followed by Deltamethrin 2.8 EC 10 ml per 10 lit water

4. **Source of technology --** MPKV Rahuri, Joint Agrosco- 2018 and Dr. PDKV, AKOLA and Major uses of Pesticides, CIBRC publication 2018
5. **Production system and thematic area** -- Cotton based Production system, IPM
6. **Performance of the Technology with performance indicators**

Table: Performance of the Technology with performance indicators

Performance indicator	T1	T2	T3
Greenboll damage (%)	27.45	8.36	9.58
Cost of PP(Rs/ha)	7500/-	6250/-	5125/-
Yield(qt/hq)	17.32	22.05	21.45
B:C		3.06	3.02
Increase in Yield		27.30	23.84

7. **Feedback, matrix scoring of various technology parameters done through farmers Participation / other scoring techniques**

Sr no	Prameters	Matrix scoring	
		T2	T3
1	Green boll damage (%)	3	2
2	Cost of PP	2	3
3	Yield (qt/ha)	3	2
4	Affordability	3	3
5	Acceptability	4	3

8. **Final recommendation for micro level situation**

T2 and T3 technologies perform better and need to trial on next year.

9. **Constraints identified and feedback for research and developmental department -**
10. **Process of farmers participation and their reaction**

Assessment has been taken as per problem diagnosed, after that village-wise meeting was conducted for selection of farmers. After selecting farmers, training has been given and made aware about complete procedure for assessment. Regular visit of farmers were arranged and necessary suggestions were given to Farmers, and Farmers says that over all two technology superior over farmer practice. But as outbreaks of pink bollworm in cotton integrated approach much effective for management of pink bollworm

Assessment (PP)-VI

1. **Title of Technology Assessed --** Management of pigeonpea pod borer complex
2. **Problem Definition** -- Major Pulse crop in Buldana district in kharif season growing on 72402 ha area (2019) with Avg productivity of 624 Kg /ha. from last few year incidence of pod borer complex was found ,which result in reduction in yield 35to 40 %
3. **Details of technologies selected for assessment**

   T1 (Farmers Practice) – 2- 3 hemical pesticide sprays comprising of Chlorpyriphos 20 EC 30ml, Triazophos 40 EC 30 ml per 10 lit water

   T2- 1st spray - Clorantraniliprole 18.5 SC @3 ml per 10 lit water at 50 per cent flowering 2nd spray- Flubendiamide 39.35 SC @2 ml per 10 lit water at pod filling stage

   T3 --1st spray Azadirachtin 300 ppm 50 ml /10 lit water 50% flowering 2nd spray Emamectin Benzoate 5 SG 4.4 g/10 lit water based on ETL 3rd spray Lamda Cyhalothrin 5 EC 10 ml/10 lit water based on ETL

4. **Source of technology --** Dr. VNMKV, Joint Agresco- 2019 and Major uses of Pesticides, CIBRC publication 2018

5. **Production system and thematic area --** Soybean based Production system, Integrated Pest Management
6. **Performance of the Technology with performance indicators**

Performance indicator	T1	T2	T3
Pod damage (%)	18.55	4.25	6.45
Cost of PP(Rs/ha)	6000/-	6500/-	5000/-
Yield(qt/hq)	10.85	13.86	12.78
Increase in Yield	27.74		17.78

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

Sr no	Prameters	Matrix scoring	
		T2	T3
1	Pod damage (%)	3	2
2	Cost of PP(Rs/ha)	2	3
3	Yield (qt/ha)	3	2
4	Affordability	3	3
5	Acceptability	4	3

8. **Final recommendation for micro level situation**
   The technology T2 and T3 performs well and need to conduct OFT in next year at farmer field.

9. **Constraints identified and feedback for research and developmental departments ---**

10. **Process of farmers participation and their reaction**
    Assessment has been taken as per problem diagnosed, after that village-wise meeting was conducted for selection of farmers. After selecting farmers, training has been given and made aware about complete procedure for assessment. Regular visit of farmers were arranged and necessary suggestions were given to Farmers,nand Farmers says that Over all two technology superior over farmer practice.

Assessment (Agril. Engg.)- VII

1 **Title of Technology Assessed:** Enhancing productivity of Maize crop in kharif season using BBF Planter in Buldana District
2 **Problem Definition:** Low yield due to uneven plant population, High labour requirement in planting /dibbling operation
3 **Details of technologies selected for assessment**
T1: Sowing manually by dibbling method (Farmers Practice)
T2: BBF Method (Improved Practice)
4 **Source of technology:** MPKV, Rahuri
5 **Production system and thematic area:** Kharif Maize, Farm Machineries
6 **Performance of the Technology with performance indicator:**
The performance parameters of the machine were evaluated such as

Performance parameter	T1: Sowing manually by dibbling method (Farmers Practice)	T2: BBF Method (Improved Practice)
Yield (q/ha)	54.66	64.23
Net Return (Rs/ha)	27393/-	37442/-
B:C Ratio	1.91	2.24
Cost of Operation Rs/ha	3600/-	2000/-
Labour requirement (Man days/ha)	20	01
Time required (ha/hr)	0.00625	0.4
Field efficiency (%)	54.33	64.2

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

Sr. No.	Parameters	Matrix scoring	
		T1: Sowing manually by dibbling method	T2: BBF Method
1	Labour reduction	1	4
2	Time saving	1	4
3	Drudgery reduction in operation	1	4
4	Availability	3	1
5	Affordability	3	1
6	Acceptability	02	03

8. **Final recommendation for micro level situation**
Use of BBF Planter for sowing of maize crop is recommended for increase in aeration of soil and to improve water conservation for enhancing productivity and reducing labour cost and time of operation
9. **Constraints identified and feedback for research and developmental departments**: Weather conditions to suit mechanized operation with tractor in kharif season.

10. **Process of farmers participation and their reaction**
Village wise meetings were conducted for selection of farmers. Trainings were conducted for awareness about assessment. Regular field visits were conducted to check and observe plant growth parameters such as no. leafs, plant height, no. of branches in various growing stages. Necessary observations were taken from farmer regularly.

Assessment (Agril. Engg.)- VIII

1. **Title of Technology Assessed**: Enhancing productivity of Jowar crop in kharif season using BBF Planter in Buldana District
2. **Problem Definition:** Low yield due to uneven plant population.
3. **Details of technologies selected for assessment**
   T1: Sowing with bullock drawn tifan (Farmers Practice)
   T2: Sowing with BBF Planter (Improved Practice)
4. **Source of technology:** Dr. PDKV, Akola

5. Production system and thematic area: Kharif Jowar, Farm Machineries

6. Performance of the Technology with performance indicator:

The performance parameters of the machine were evaluated such as

Performance parameter	T1: Sowing manually by seed drill method (Farmers Practice)	T2: BBF Method (Improved Practice)
Yield (q/ha)	18.23	21.08
Net Return (Rs/ha)	51044/-	59024/-
B:C Ratio	3.83	4.37
Cost of Operation Rs/ha	2500/-	2000/-
Labour requirement (Man days/ha)	05	01
Time required (ha/hr)	0.025	0.4
Field efficiency (%)		

7. Feedback, matrix scoring of various technology parameters done through farmers Participation / other scoring techniques

Sr. No.	Parameters	Matrix scoring	
		T1: Sowing manually by dibbling method	T2: BBF Method
1	Labour reduction	2	4
2	Time saving	2	4
3	Drudgery reduction in operation	2	4
4	Availability	3	1
5	Affordability	3	1
6	Acceptability	02	03

8. **Final recommendation for micro level situation**
   Use of BBF Planter for sowing of Jowar crop which improves aeration soil and water conservation is recommended for enhancing productivity and reducing labour cost and time of operation
9. **Constraints identified and feedback for research and developmental departments:**
   Weather conditions to suit mechanized operation with tractor
10. **Process of farmers participation and their reaction**
    Village wise meetings were conducted for selection of farmers. Trainings were conducted as awareness about assessment. Regular field visits were conducted to check and observe plant growth parameters such as no. leafs, plant height, no. of branches in various growing stages. Necessary observations were taken from farmer regularly.

Assessment (Vet. Sci) – IX

1. Title of Technology Assessed: To assess the performance of hybrid Napier fodder crop CO5

2. Problem definition

In Buldana District, there is a major problem of Low yield of fodder production, low nutritious fodder given to animals most of the farmers are feeding agriculture waste produce in farm. Non availability of green fodder throughout the year. Due to which growth rate & milk yield reduced resulting economic loss.

3. Details of technologies selected for assessment

T1 : Cultivation of Jaywant
T2 : Cultivation of CO4
T3 : Cultivation of CO5

4. Source of technology : Dr. P.D.K.V, Akola

5. Production system thematic area: Feed and Fodder management

6. Performance of the Technology with performance indicators

Table: Performance of the Technology with performance indicators

Performance indicator	T1 (Cultivatin of Jaywant)	T2 (Cultivation of CO4)	T3 (Cultivation of CO5)
Avg. Yield of fodder(Ton/ha)	282.5	370.6	377.5
Avg. milk yield	3.200 lit/day	3.700 lit/day	4.300 lit/day
Net Returns (Rs/ha)	184550	272650	279550
B:C	2.88	3.78	3.85
Increase in Yield	25.28 %		

Description of the Result

When the Technology was assessed on 08 farmers field gives 25.28 % more fodder yield and milk yield 13.95% in than Farmer practice

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

This cultivation of CO5 fodder grass gives better result

Sr no	Prameters	Matrix scoring
1	Avg. Yield of fodder	4
2	Avg. milk yield	3
3	Affordability	4
4	Acceptability	4

8. Final recommendation for micro level situation

This technology performs well and need to demonstrate on large scale

9. Constraints identified and feedback for research: No remarkable constraints found

10. Process of farmers participation and their reaction:

Assessment has been taken as per problem diagnosed, after that village-wise meeting was conducted for selection of farmers. After selecting farmers, training has been given and made aware about complete procedure for assessment. Regular visit of farmers were arranged and necessary suggestions were given to Farmers, and farmers taught Fodder CO5 gives better result.

Assessment (Vet. Sci) – X

1. Title of Technology Assessed: To assess the performance of new variety Kaveri breed under Backyard poultry.

2. Problem definition

In Buldana District, most of the farmers are rearing local birds for backyard poultry, there is a major problem of low yield of eggs production, low weight gain, low growth rate. Due to which low growth rate and low eggs production resulting economic loss.

3. Details of technologies selected for assessment

T1: Deshi birds
T2: Giriraja birds (1 month's age)
T3: Kaveri birds (1 month's age)

4. Source of technology : Central poultry development organization Odisha, 2014

5. Production system thematic area : Poultry production

6. Performance of the Technology with performance indicators

Table: Performance of the Technology with performance indicators

Performance indicator	T1 (Deshi birds)	T2 (Giriraja)	T3 (Kaveri)
Avg. body weight gain (kg/ bird)	1.430	2.160	2.600
Avg. Eggs production (No)	39	144	158
Net Returns (Rs/ha)	2980	11516	14675
B:C	3.78	4.29	4.47
Increase in Yield	25.28 %		

Description of the Result

When the Technology was assessed on 11 farmer's field gives 75.31 % more Av. eggs production and avg. weight gain 28.07% than Farmer practice

7. Feedback, matrix scoring of various technology parameters done through farmers Participation / other scoring techniques

This cultivation of CO5 fodder grass gives better result,

Sr no	Prameters	Matrix scoring
1	Avg. body weight gain	3
2	Avg. Eggs production	4
3	Acceptability	4

8. Final recommendation for micro level situation

This technology performs well and need to demonstrate on large scale

9. Constraints identified and feedback for research: No remarkable constraints found

10. Process of farmers participation and their reaction:

Assessment has been taken as per problem diagnosed, after that village-wise meeting was conducted for selection of farmers. After selecting farmers, training has been given and made aware about complete procedure for assessment. Regular visit of farmers were arranged and necessary suggestions were given to Farmers, and farmers taught Kaveri breed is given better result.

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 2021 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	**Cereals**						
	Wheat	Varietal evaluation	cv PDKV Sardar	FLD, Training and visit to demo plot	35	1250	500
	Maize	Integrated pest management	Management of shoot borer	FLD, Trainings	65	678	450
2	**Pulses Crop**						
	Greengram	Crop production	cv BM2003-2 and use of biofertilizer	Training and visit to demo plot, Mass media	115	2050	810
	Blackgram	Crop production	cv AKU10-1 and use of biofertilizer	Training and visit to demo plot, Mass media	78	1200	310
	Pigeonpea	Crop production	cv PKV TARA and use of biofertilizer	Training and visit to demo plot, Mass media	217	6000	4000
	Chickpea	Crop production	cv RVG202 and Phule Vikram and use of biofertilizer	Training and visit to demo plot, Mass media	210	1700	600
	Pigeaon pea	Integrated pest management	Management of Pod borer compex	FLD , Trainings	147	2750	980
	Chick pea	Integrated pest management	Management Helicoverpa	FLD , Trainings	149	3575	1650
3	**Oilseed Crop**						
	Soybean	Crop production	Cv MACS1188 and use of biofertilizer	Training and visit to demo plot, Mass media	310	1800	1200
4	**Commercial Crop**						
	--	--					

5	**Horticultural Crops**						
	Citrus	Nutrient management	Crop specific micronutrient foliar spray	Training, extension literature	10	56	42
	Onion	Weed management	Weed management through weedicide application	Training, extension literature	23	250	100
	Ajwain	Varietal evaluation	Varietal trial of AA01-19	Training, extension literature	11	32	26.0
6	Farm Implements						
	Cotton	Farm Machinery	Subsoiler	FLD , Trainings	4	15	6
	Cotton	Farm Machinery	Cotton Slasher	FLD , Trainings	12	25	25
	Groundnut	Farm Machinery	BBF	FLD , Trainings	6	25	25
7	**Livestock**						
	Dairy	CMT Kit	Control & prevention of matatis	Training, Demonstrations	12	325	--
	Goat	Dewormer	Use of Inj. Ivermectin to control endo-ecto paracite	Training, Demonstrations	41	760	--
8	**Home Sci**						
	Super grain Bag (wheat)	Value addition	Super grain Bag	Training, Demonstration, Literature, Exhibitions	35	75	--
	vegetable	Post harvest technology	Zero energy vegetable preservater	Training ,Exibition	25	60	--

B. Details of FLDs implemented during 2021 (Kharif 2021, Rabi 2020-21, Summer 2021) (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 / Enterprise	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ Demonstration			Reasons for shortfall in achievement
					Proposed	Actual	SC/ST	Others	Total	
Cereals										
1	Maize	Management of FAW IN Maize	T1 (Farmers Practice)- 1 or 2 chemical pesticide sprays comprising of Chloropyriphos 20EC @ 20ml or Profenophos 50 EC 20 ml T2(Recommended Technology)-Use of pheromone traps @ 2 traps /acre for monitoring, seed treatment of cyantraniliprole 19.8% + thiamethoxam19.8% @ 4ml per kg seed ETL base spraying of Azadiraction 1500PPM @ 50ml per 10liter of water followed by ETL based spraying of Chlorantraniliprole 18.5 % SC @ 3ml per 10 lit of water (Ministry of Agriculture& farmer welfare, GOI, New Delhi, circular dt 6 May2019and use of insecticides 28 may 2018)	Kharif 2021	10.0	10.0	03	22	25	
2	Wheat	Crop production	Variety PDKV Sardar	Rabi 2020-21	4	4	1	9	10	
Pulses Crops										
1	Chickpea	Crop production	Variety RVG202 and Phulevikram	Rabi 2020-21	40	40	5	88	93	
2	Pigeaon pea	Integrated disease management	Treat the seed of pigeon pea with combined product of fungicide Carboxin 37.5% + Thiram 37.5 % @ 3 g/kg	Kharif 2021	10.0	10.0	03	22	25	

			followed by Trichoderma virde @ 10 g/ kg seed to reduce the wilt incidence and more monitary return							
Oilseed Crops										
1	Soybean	Crop production	Variety MACS 1281	Kharif 2021	14	14	1	24	25	
2	Groundnut	Crop production	ICM	Summer 2021	10	10	2	23	25	
3	Soybean	Integrated pest management	Seed treatment with Thiamethoxam 30 FS @ 10 ml/kg seed followed by spray of Triazophos 40 EC 12.5 ml/10 lit water at 20-25 DAS followed by ETL based spray of Lambda cyhalothrin 5 EC @ 10 ml/10 lit water.	Kharif 2021	10.0	10.0	02	23	25	
Cotton & Commercial Crops										
--	--	--	--	--	--	--	--	--	--	--
Horticultural Crops										
01	Turmeric	Varietal introduction	Demonstration of Turmeric variety IISR Pragati	Kharif 2021	5.6	5.6	04	10	14	
02	Chilli	Nutrient management	Spray of NAA @ 50ppm at 6,8 & 10 weeks after transplanting	Kharif 2021	10	10	05	20	25	
03	Custard Apple	Integrated Crop Management	Pruning of plant 25% after 75 days of harvest	Kharif 2021	5.6	5.6	04	10	14	

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					
Cereals											
Maize	Kharif 2021	Rainfed	Medium to Heavy soil	low	low	high	soybean	2nd & 3rd week of June2021	Last week of octember 2021	792	50
Wheat	Rabi	Irrigated	Medium BC	Low	Low	Very High	soybean	First week of Dec	Second week of March	792	50
Pulses											
Chickpea	Rabi	Irrigated	Medium BC	Low	Low	Very High	soybean	Second week of Nov.	First week of March	792	50
Pigeaon pea	Kharif 2021	Rainfed	Medium to Heavy soil	low	low	high	soybean	2nd & 3rd week of June2021	Last week of December 2021 and 1st week of Jan 2021	792	50
Oilseed											
Soybean	Kharif	Rainfed	Medium BC	Low	Low	Very High	cotton	Second week of June	Last week of Sept	792	50
Groundnut	Summer	Irrigated	Medium BC	Low	Low	Very High	cotton	Last week of January	First week of May	792	50
Soybean	Kharif 2021	Rainfed	Medium to Heavy soil	low	low	high	cotton	2nd & 3rd week of June2021	2nd fortnight of October 21	792	50
Cotton & Commercial Crops											
Cotton	Kharif 2021	Irrigated	Medium BC	Low	Low	Very High	cotton	First week of June	Last week of January	792	50
Horticultural Crops											
Turmeric	Kharif	Irrigated	Medium BC	Low	Low	High	Soyabean	June-2021	Jan -2022	792	50
Chilli	Kharif	Irrigated	Medium BC	Low	Low	High	Cotton	June-2021	Dec-2021	792	50
Custard Apple	Mrig bahar	Irrigated	Medium BC	Low	Low	High	--	--	Nov-2021	792	50

Technical Feedback on the demonstrated technologies

S.No.	Feedback
Cereals Crops	
Maize (PP)	This technologies is effective and gives 22.36 % more yield than farmer practice
Wheat	PDKV Sardar Variety gives20.56 % more Yield than Lok-1 in Late sown Condition
Pulses Crops	
Pigeon pea (PP)	Seed treatment of combined fungicide followed by Trichoderma is effective for management of wilt and gives 22.79 % more yield.
Chickpea	Variety RVG202 gives 18.88% more Yield than Vijay Variety Phule Vikram gives 26.04 % more Yield Than Vijay Both varieties are Resistant to wilt and medium bold seeded
Oilseed Crops	
Soybean	Variety MACS1281 gives 22.21% higher Yield than JS335,Resistant to Girdle beetle
Groundnut	ICM in Groundnut crop Increases the yield by 19.4%
Soybean (PP)	This sprying technologies is effective and gives 21.84 % more yield than farmer practice
Horticultural Crops	
Turmeric	Short duration variety, less blight incidence, More girth of finger
Chilli	Flower & fruit drop reduces at 3rd foliar spray
Custard Apple	Training & Pruning of custard apple year old branched improves quality of fruit

Farmers' reactions on specific technologies

S.No.	Feedback
Cereals Crops	
Maize(PP)	Seed treatment of cyantraniliprole 19.8% + thiamethoxam19.8% @ 4ml per kg seed is effective for management of FAW but higher initial cost.
Wheat	PDKV sardar is suitable for late sowing and resistant to Rust
Pulses Crops	
Chickpea	Phule vikram and RVG202 both varieties are high yielding and resistant to wilt
Pigeon pea(PP)	Seed treatment of combined fungicide followed by Trichoderma is effective for management of wilt.
Oilseed Crops	

Soybean	Variety MACS1281is high yielding and non shattering
Groundnut	Use of Micronutrient and Soil test based Fertilizer increases the yild and pod filling is better
Soybean (PP)	Seed treatment of Thiamethixam is effective but higher initial cost
Horticultural Crops	
Turmeric	Suitable variety for area of more water shortage at ending of winter
Chilli	Reduces flower & fruit drop
Custard Apple	Fruit quality improves and get good prices

Extension and Training activities under FLD

Sl.No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	03	25/2/2021,27/3/2021, 25/12/21	139	
2	Farmers Training	14	23/03/21, 08/04/21 09/06/21, 22/07/21 11/08/21, 21/09/21 19.9.21,226.21,22.7.21, 15/10/20,20/10/20,8/1/21,12/3/21,5/6/2021	294	
3	Media coverage	09	26/10/2020,21/1/2021,17/2/2021,20/2/2021,4/3/2021		
4	Training for extension functionaries	3	31.5.21,17.6.21,27.7.21	507	

C. Performance of Frontline demonstrations

Frontline demonstrations on oilseed crops --

Crop	Thematic Area	technology demonstrated	Variety	No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
						Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
						High	Low	Average										
Soybean	Crop production	Variety+ICM	Variety MACS 1281	25	14	25.37	21.5	23.59	19.29	22.21	32701	141793	109092	4.34	31188	115831	84643	3.71
Soybean	Pest management	Seed treatment with Thiamethoxam 30 FS @ 10 ml/kg seed followed by spray of Triazophos 40 EC 12.5 ml/10 lit water at 20-25 DAS followed by ETL based spray of Lambda cyhalothrin 5 EC @ 10 ml/10 lit water.	JS-335	25	10	21.50	19.75	19.80	16.25	21.84	35500	118800	83300	3.34	35500	97500	62000	2.74
Groundnut	Crop production	ICM	TAG-24	25	10	31.88	27.02	27.82	23.37	19.4	65992	155774	89782	2.36	62999	130896	67897	2.08

Frontline demonstration on pulse crops

Crop	Thematic Area	technology demonstrated	Variety	No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
						Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
						High	Low	Average										
Chickpea	Crop Production	Use of Biofertilizer	RVG202	45	20	24.74	22.55	23.30	19.6	18.88	29070	135140	106070	4.65	28515	113680	85165	3.99
			Phule Vikram	48	20	24.90	23.03	23.72	18.82	26.04	29133	137576	108443	4.72	28398	109156	80758	3.84

Pigeonpea	Integrated diseaseManagement	Treat the seed of pigeon pea with combined product of fungicide Carboxin 37.5% + Thiram 37.5 % @ 3 g/kg followed by Trichoderma virde @ 10 g/ kg seed to reduce the wilt incidence and more monitary return	ICPL - 87119	25	10	15.50	12.75	13.20	10.75	22.79	21500	79200	57700	3.68	21500	64500	42310	3.06
Frontline demonstration on Cereal crops																		
Maize	IPM	Use of pheromone traps @ 2 traps /acre for monitoring, seed treatment of cyantraniliprole 19.8% + thiamethoxam19.8% @ 4ml per kg seed ETL base spraying of Azadiraction 1500PPM @ 50ml per 10liter of water followed by ETL based spraying of Chlorantraniliprole 18.5 % SC @ 3ml per 10 lit of water	Rider	25	10.0	50.72	47.50	49.25	40.25	22.36	55300	88650	33350	1.60	53200	72450	19250	1.36

FLD on Other crops

Category & Crop	Thematic Area	Name of the technology	No. of Farmers	Area (ha)	Yield (q/ha)				% Change in Yield	Other Parameters		Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
					Demo			Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
					High	Low	Average												
Cereals																			
Wheat Late Sown	Crop Production	Variety	10	4	44.2	41.4	42.8	35.5	20.56	Plant height - 60 cm Tiller /plant Grains/spike	57cm 3.8 47	30500	72760	42260	2.39	30500	60350	29850	1.98

FLD on Other crops (Horticulture)

Category & Crop	Thematic Area	Name of the technology	No. of Farmers	Area (ha)	Yield (q/ha)				% Change in Yield	Other Parameters		Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
					Demo			Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
					High	Low	Average												
Spices & condiments																			
Turmeric	Varietal evaluation	Demonstration of IISR Pragati	14	2.8	238	216	221	203	8.87	197	220	96500	254150	157650	2.63	107500	203000	95500	1.88
Vegetables																			
Chilli	Crop management	Spray of NAA @ 50ppm at 6,8 & 10 weeks after transplanting	25	10.0	326.9	280	314.7	275.3	14.31	No of flowers drop after 10 day of spray 38 nos	256	56892	150975	94083	2.65	57006	140020	83014	2.45
Fruit crop																			
Custard apple	Crop management	Pruning of plant 25% after 75 days of harvest	14	5.6	51.6	39.0	43.7	36.5	19.73	Aveg wt . of fruit 367 gm	289	40500	100510	60010	2.48	36950	67525	30575	1.82

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

Frontline Demonstration on Nutri cereals

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

FLD on Livestock

Category	Thematic area	Name of the technology demonstrated	No. of Farmer	No.of Units (Animal/ Poultry/ Birds, etc)	Major parameters		% change in major parameter	Other parameter		Economics of demonstration (Rs.)				Economics of check (Rs.)			
					Demo	Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Dairy	Disease management	Control and prevention of mastitis in milch animals	12	12	Incidance of mastitis 02 Expenditure on treatment 1320/-	05 3300/-	60 --	Av. Milk production 1.410	0.720	--	--	--	--	--	--	--	--
Sheep & Goat	Disease management	Use of inj. Ivermectin to control endo-ecto parasite in goat	10	50	Av weight gain 18.92 kg Exam. Of faecal sample before & after trial 600	16.0 kg 1860	18.25% --	Health status Body condition score II	Health status Body condition score I	15699	43800	28101	2.78	16000	21000	5000	1.31

FLD on Fisheries --- NIL

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			
				Demo	Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Oyster Mushroom	Oyster mushroom cultivation	13	13	Yield /bag - 878 gm Harvesting span 24 days	6 14 grm 27 days	42.9 11.11	--	--	1600/ 4kg spown batch	2810/ 4kg spown barch	1210	1.7	1600	24560		1.2

FLD on Women Empowerment -- NIL

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

FLD on Farm Implements and Machinery

Name of the implement	Crop	Technology demonstrated	No. of Farmer	Area (ha)	Major parameters	Filed observation (output/man hour)		% change in major 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
BBF Planter	Groundnut	Use of BBF Planter for enhancing productivity of groundnut crop	25	10	Yield, qt/ha Seed saving, kg Net Return, Rs/ha B:C	32.44 112.5 107480/- 3.79	26.71 150 81695/- 3.12	21.45 % 33.34% 25785/-	0	0	0	0	0	0	600/-	600/-
Cotton Slasher	Cotton	Use of cotton slasher for agro waste management	25	10	Biomass utilized t/ha Labour req.	4.68 0.25	0.2 17	224% 17	18	0	0	18	500	500	0	1000
Deseeding machine	Custard apple	Deseeding machine for extraction of custard apple pulp	15	06	Pulp recovery kg/hr Labour man days	76.53 01	7.12 10	969.10%	0	0	0	0	0	1800	0	1800/ hr
Subsoiler	Cotton	Use of Subsoiler for resource conservation	15	06	Yield m.c. %	15.6 28.83	13.45 21.96	15.98% 22.10	01	0	0	01	300/-	0	0	300/-

FLD on Other Enterprise: Kitchen Gardening

Category and Crop	Thematic area	Name of the technology demonstrated	No. of Farmer	No. of Units	Yield (Kg)		% change in yield	Other parameters		Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
					Demonstration	Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Vegetables	Household fruit security by kitchen gardening	To increase consumption of fruits & vegetables for improving nutritional status	13	13	748	150	79.94	756	342	4800	15680	10880	3.2	320	1800	1480	5.6

FLD on Demonstration details on crop hybrids -- Nil

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

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

Farmers' Training including sponsored training programmes (on campus)

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
I. Crop Production										
Resource Conservation Technologies	1	45	10	55	5	2	7	50	12	62
Crop Diversification	1	21	0	21	1	0	1	22	0	22
Integrated Crop Management	6	145	16	161	26	8	34	171	24	195
Integrated nutrient management	2	36	8	44	5	0	5	41	8	49
Total	**10**	**247**	**34**	**281**	**37**	**10**	**47**	**284**	**44**	**328**
II. Horticulture										
a) Vegetable Crops										
Production of low value and high valume crops	0	0	0	0	0	0	0	0	0	0
Total (a)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
b) Fruits										
Training and Pruning	01	19	00	19	01	00	01	20	00	20
Total (b)	**01**	**19**	**00**	**19**	**01**	**00**	**01**	**20**	**00**	**20**
c) Ornamental Plants										
Nursery Management	0	0	0	0	0	0	0	0	0	0
Total (c)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
d) Plantation crops										
Production and Management technology	0	0	0	0	0	0	0	0	0	0
Total (d)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
e) Tuber crops										
Processing and value addition	0	0	0	0	0	0	0	0	0	0
Total (e)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
f) Spices										
Production and Management technology	**03**	**31**	**00**	**31**	**01**	**00**	**01**	**32**	**00**	**32**
Total (f)	**03**	**31**	**00**	**31**	**01**	**00**	**01**	**32**	**00**	**32**
g) Medicinal and Aromatic Plants										
Nursery management	0	0	0	0	0	0	0	0	0	0
Total (g)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
GT (a-g)	**04**	**50**	**00**	**50**	**02**	**00**	**02**	**52**	**00**	**52**

III Soil Health and Fertility Management										
Integrated Nutrient Management	1	25	5	30	7	2	9	32	7	39
Production and use of organic inputs	1	22	3	25	5	2	7	27	5	32
Balance use of fertilizers	1	30	5	35	5	1	6	35	6	41
Soil and Water Testing	1	25	5	30	8	2	10	33	7	40
Total	**4**	**102**	**18**	**120**	**25**	**7**	**32**	**127**	**25**	**152**
IV Livestock Production and Management										
Dairy Management	02	41	0	41	04	0	04	45	0	45
Poultry Management	01	02	0	02	08	0	08	10	0	10
Disease Management	01	12	0	12	06	0	06	18	0	18
Total	**4**	**55**	**0**	**55**	**18**	**0**	**18**	**73**	**0**	**73**
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	01	36	15	51	08	03	11	44	18	62
Total	**01**	**36**	**15**	**51**	**08**	**03**	**11**	**44**	**18**	**62**
VI Agril. Engineering										
Farm Machinery and its maintenance	01	25	05	30	04	0	04	29	05	34
Small scale processing and value addition	01	21	03	24	02	01	03	23	04	27
Total	**02**	**46**	**08**	**54**	**06**	**01**	**07**	**52**	**09**	**61**
VII Plant Protection										
Integrated Pest Management	05	255	12	267	27	5	32	282	17	299
Integrated Disease Management	0	0	0	0	0	0	0	0	0	0
Bio-control of pests and diseases	0	0	0	0	0	0	0	0	0	0
Production of bio control agents and bio pesticides	0	0	0	0	0	0	0	0	0	0
Total	**05**	**255**	**12**	**267**	**27**	**5**	**32**	**282**	**17**	**299**
VIII Fisheries										
Integrated fish farming	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0

IX Production of Inputs at site										
Others Sericulture	01	60	14	74	5	2	7	65	16	81
Total	**01**	**60**	**14**	**74**	**5**	**2**	**7**	**65**	**16**	**81**
X Capacity Building and Group Dynamics										
Group dynamics	01	24	00	24	07	00	07	31	00	31
Entrepreneurial development of farmers/youths	01	05	145	150	00	26	26	05	171	176
Total	**2**	**29**	**145**	**174**	**7**	**26**	**33**	**36**	**171**	**207**
XI Agro-forestry										
Production technologies	0	0	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
GRAND TOTAL	**33**	**880**	**246**	**1126**	**135**	**54**	**189**	**1015**	**300**	**1315**

Farmers' Training including sponsored training programmes (off campus)

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
I. Crop Production										
Resource Conservation Technologies	1	40	7	47	10	0	10	50	7	57
Cropping Systems	3	70	3	73	18	0	18	88	3	91
Crop Diversification	1	30	0	30	4	0	4	34	0	34
Integrated Crop Management	2	60	0	60	10	0	10	70	0	70
Integrated nutrient management	1	26	0	26	4	0	4	30	0	30
Others Seed Treatment	01	14	01	15	00	00	00	14	01	15
Total	**9**	**240**	**11**	**251**	**46**	**0**	**46**	**286**	**11**	**297**
II. Horticulture										
a) Vegetable Crops										
Production of low value and high valume crops	01	14	0	14	04	0	04	18	0	18
Off-season vegetables	02	21	0	21	05	0	05	26	0	26
Total (a)	**03**	**35**	**0**	**35**	**09**	**0**	**09**	**44**	**0**	**44**
b) Fruits										
Cultivation of Fruit	02	28	0	28	02	0	02	30	0	30
Management of young plants/orchards	01	31	0	31	06	0	06	37	0	37
Management of young plants/orchards	0	0	0	0	0	0	0	0	0	0
Export potential fruits	0	0	0	0	0	0	0	0	0	0
Total (b)	**03**	**59**	**0**	**59**	**08**	**0**	**08**	**67**	**0**	**67**
c) Ornamental Plants										
Nursery Management	0	0	0	0	0	0	0	0	0	0
Total (c)	**0**	**0**	**0**	**0**	**0**	**00**	**0**	**0**	**0**	**0**
d) Plantation crops										
Production and Management tech	0	0	0	0	0	0	0	0	0	0
Total (d)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
e) Tuber crops										
Processing and value addition	0	0	0	0	0	0	0	0	0	0
Total (e)	**0**	**0**	**0**	**0**	**0**	**0**	**00**	**0**	**0**	**0**
f) Spices										

Processing and value addition	01	11	00	11	09	00	09	20	00	20
Total (f)	**01**	**11**	**00**	**11**	**09**	**00**	**09**	**20**	**00**	**20**
g) Medicinal and Aromatic Plants										
Production and management technology	01	14	00	14	06	00	06	20	00	20
Total (g)	**01**	**14**	**00**	**14**	**06**	**00**	**06**	**20**	**00**	**20**
Total (a-g)	**08**	**119**	**00**	**119**	**32**	**00**	**32**	**151**	**00**	**151**
III. Soil Health and Fertility Management										
Soil fertility management	2	67	10	77	17	10	27	84	20	104
Management of Problematic soils	1	19	0	19	1	0	1	20	0	20
Nutrient Use Efficiency	1	19	0	19	1	0	1	20	0	20
Total	**4**	**105**	**10**	**115**	**19**	**10**	**29**	**124**	**20**	**144**
IV. Livestock Production and Management										
Dairy Management	03	27	06	33	09	0	09	36	06	42
Disease Management	02	19	0	19	04	0	04	23	0	23
Feed & fodder technology	08	67	02	69	15	04	19	82	06	88
Total	**13**	**113**	**8**	**121**	**28**	**4**	**32**	**141**	**12**	**153**
Total										
V. Home Science/ Women empowerment										
Household food security by kitchen gardening and nutrition gardening	01	04	08	12	00	01	01	04	09	13
Location specific drudgery reduction technologies	01	00	07	07	00	14	14	00	21	21
Value addition	0	0	0	0	0	0	0	0	0	0
Women and child care	0	0	0	0	0	0	0	0	0	0
Enterpreneurship development	0	0	0	0	0	0	0	0	0	0
Total	**2**	**4**	**15**	**19**	**0**	**15**	**15**	**4**	**30**	**34**
VI. Agril. Engineering										
Farm Machinery and its maintenance	03	36	0	36	02	0	02	38	0	38
Installation and maintenance of micro irrigation systems	03	47	0	47	02	0	02	49	0	49
Repair and maintenance of farm machinery	01	20	0	20	07	0	07	27	0	27

and implements										
Small scale processing and value addition	01	0	0	0	17	04	21	17	04	21
Total	**8**	**103**	**0**	**103**	**28**	**4**	**32**	**131**	**4**	**135**
VII. Plant Protection										
Integrated Pest Management	07	145	0	145	23	36	59	168	36	204
Integrated Disease Management	04	46	11	57	04	04	08	50	15	65
Total	**11**	**191**	**11**	**202**	**27**	**40**	**67**	**218**	**51**	**269**
VIII. Fisheries										
Integrated fish farming	0	0	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IX. Production of Inputs at site										
Organic manures production	1	22	0	22	0	0	0	22	0	22
Mushroom Production	01	07	46	53	02	08	10	09	54	63
Total	**2**	**29**	**46**	**75**	**2**	**8**	**10**	**31**	**54**	**85**
X. Capacity Building and Group Dynamics										
Leadership development	0	0	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
XI. Agro-forestry										
Nursery management	0	0	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
GRAND TOTAL	**57**	**904**	**101**	**1005**	**182**	**81**	**263**	**1086**	**182**	**1268**

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

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
I. Crop Production										
Resource Conservation Technologies	2	85	17	102	15	2	17	100	19	119
Cropping Systems	3	70	3	73	18	0	18	88	3	91
Crop Diversification	2	51	0	51	5	0	5	56	0	56
Integrated Crop Management	8	205	16	221	36	8	44	241	24	265
Integrated nutrient management	3	62	8	70	9	0	9	71	8	79
Others Seed Treatment	01	14	01	15	00	00	00	14	01	15
Total	**19**	**487**	**45**	**532**	**83**	**10**	**93**	**570**	**55**	**625**
II. Horticulture										
a) Vegetable Crops										
Production of low value and high valume crops	01	14	0	14	04	0	04	18	0	18
Off-season vegetables	02	21	0	21	05	0	05	26	0	26
Total (a)	**03**	**35**	**0**	**35**	**09**	**0**	**09**	**44**	**0**	**44**
b) Fruits										
Layout and Management of Orchards	01	19	0	19	01	0	01	20	0	20
Cultivation of Fruit	02	28	0	28	02	0	02	30	0	30
Management of young plants/orchards	01	31	0	31	06	0	06	37	0	37
Total (b)	**04**	**78**	**0**	**78**	**9**	**0**	**9**	**87**	**0**	**87**
c) Ornamental Plants										
Nursery Management	0	0	0	0	0	0	0	0	0	0
Total (c)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
d) Plantation crops										
Processing and value addition	0	0	0	0	0	0	0	0	0	0
Total (d)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
e) Tuber crops										
Processing and value addition	0	0	0	0	0	0	0	0	0	0
Total (e)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
f) Spices										
Production and	03	31	00	31	01	00	01	32	00	32

Management technology										
Processing and value addition	01	11	00	11	09	00	09	20	00	20
Total (f)	**04**	**42**	**0**	**42**	**10**	**0**	**10**	**52**	**0**	**52**
g) Medicinal and Aromatic Plants										
Production and management technology	01	14	00	14	06	00	06	20	00	20
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total (g)	01	14	00	14	06	00	06	20	00	20
GT (a-g)	**12**	**169**	**00**	**169**	**34**	**00**	**34**	**203**	**00**	**203**
III Soil Health and Fertility Management										
Soil fertility management	2	67	10	77	17	10	27	84	20	104
Integrated Nutrient Management	1	25	5	30	7	2	9	32	7	39
Production and use of organic inputs	1	22	3	25	5	2	7	27	5	32
Management of Problematic soils	1	19	0	19	1	0	1	20	0	20
Nutrient Use Efficiency	1	19	0	19	1	0	1	20	0	20
Balance use of fertilizers	1	30	5	35	5	1	6	35	6	41
Soil and Water Testing	1	25	5	30	8	2	10	33	7	40
Total	**8**	**207**	**28**	**235**	**44**	**17**	**61**	**251**	**45**	**296**
IV Livestock Production and Management										
Dairy Management	05	68	06	74	13	0	13	81	06	87
Poultry Management	01	02	0	02	08	0	08	10	0	10
Disease Management	03	31	0	31	10	0	10	41	0	41
Feed & fodder technology	08	67	02	69	15	04	19	82	06	88
Total	**17**	**168**	**8**	**176**	**46**	**4**	**50**	**214**	**12**	**226**
V Home Science/ Women empowerment										
Household food security by kitchen gardening and nutrition gardening	02	40	23	63	08	04	12	48	27	75
Location specific drudgery reduction technologies	01	00	07	07	00	14	14	00	21	21
Women and child care	0	0	0	0	0	0	0	0	0	0

Enterpreneurship development	0	0	0	0	0	0	0	0	0	0
Total	**3**	**40**	**30**	**70**	**8**	**18**	**26**	**48**	**48**	**96**
VI Agril. Engineering										
Farm Machinery and its maintenance	4	61	5	66	6	0	6	67	5	72
Installation and maintenance of micro irrigation systems	3	47	0	47	2	0	2	49	0	49
Repair and maintenance of farm machinery and implements	01	20	0	20	07	0	07	27	0	27
Small scale processing and value addition	2	21	3	24	19	5	24	40	8	48
Total	**10**	**149**	**8**	**157**	**34**	**5**	**39**	**183**	**13**	**196**
VII Plant Protection										
Integrated Pest Management	12	400	12	412	50	41	91	450	53	503
Integrated Disease Management	04	46	11	57	04	04	08	50	15	65
Production of bio control agents and bio pesticides	0	0	0	0	0	0	0	0	0	0
Total	**16**	**446**	**23**	**469**	**54**	**45**	**99**	**500**	**68**	**568**
VIII Fisheries										
Integrated fish farming	0	0	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IX Production of Inputs at site										
Organic manures production	1	22	0	22	0	0	0	22	0	22
Mushroom Production	01	07	46	53	02	08	10	09	54	63
Others Sericulture	01	60	14	74	5	2	7	65	16	81
Total	**3**	**89**	**60**	**149**	**7**	**10**	**17**	**96**	**70**	**166**
X Capacity Building and Group Dynamics										
Group dynamics	01	24	00	24	07	00	07	31	00	31
Entrepreneurial development of farmers/youths	01	05	145	150	00	26	26	05	171	176
Total	**2**	**29**	**145**	**174**	**7**	**26**	**33**	**36**	**171**	**207**
XI Agro-forestry										
Production techn	0	0	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
GRAND TOTAL	**90**	**1784**	**347**	**2131**	**317**	**135**	**452**	**2101**	**482**	**2583**

Training for Rural Youths including sponsored training programmes (On campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Integrated Disease Management	0	0	0	0	0	0	0	0	0	0
Integrated Pest Management	0	0	0	0	0	0	0	0	0	0
Micro nutrient deficiency in crops	0	0	0	0	0	0	0	0	0	0
Protected cultivation of vegetable crops	0	0	0	0	0	0	0	0	0	0
Seed production	0	0	0	0	0	0	0	0	0	0
Mushroom Production	0	0	0	0	0	0	0	0	0	0
Dairy Management	0	0	0	0	0	0	0	0	0	0
Poultry Management	0	0	0	0	0	0	0	0	0	0
Poultry Management	0	0	0	0	0	0	0	0	0	0
Balance use of fertilizers	0	0	0	0	0	0	0	0	0	0
Production of organic inputs	1	11	3	14	6	0	6	17	3	20
Small scale processing	01	00	56	56	00	09	09	00	65	65
Vermi-culture	0	0	0	0	0	0	0	0	0	0
Biopestcide production	01	12	0	12	5	0	5	17	0	17
Low cost pest management / IPM	03	34	0	34	2	0	2	36	0	36
Any other (soil and water testing	1	24	0	24	2	0	2	26	0	26
TOTAL	**7**	**81**	**59**	**140**	**15**	**9**	**24**	**96**	**68**	**164**

Training for Rural Youths including sponsored training programmes (Off campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Integrated Pest Management	0	0	0	0	0	0	0	0	0	0
Commercial fruit production	**02**	**20**	**10**	**30**	**00**	**11**	**11**	**20**	**21**	**41**
Dairying	02	15	0	15	02	0	02	17	0	17
Design and development of low/minimum cost diet	0	0	0	0	0	0	0	0	0	0
Balance use of fertilizers	0	0	0	0	0	0	0	0	0	0
Repair and maintenance of farm machinery and implements	01	30	0	30	02	0	02	32	0	32
Nutrient Use Efficiency	0	0	0	0	0	0	0	0	0	0

Dairying	0	0	0	0	0	0	0	0	0	0
Low cost pest management / IPM	04	68	0	68	9	0	9	77	0	77
TOTAL	**9**	**133**	**10**	**143**	**13**	**11**	**24**	**146**	**21**	**167**

Training for Rural Youths including sponsored training programmes – CONSOLIDATED (On + Off campus)

Area of training	**No. of Courses**	**No. of Participants**								
		General			**SC/ST**			**Grand Total**		
		Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Integrated Disease Management	0	0	0	0	0	0	0	0	0	0
Integrated Pest Management	0	0	0	0	0	0	0	0	0	0
Commercial fruit production	02	20	10	30	00	11	11	20	21	41
Dairying	02	15	0	15	02	0	02	17	0	17
Repair and maintenance of farm machinery and implements	01	30	0	30	02	0	02	32	0	32
Seed production	0	0	0	0	0	0	0	0	0	0
Mushroom Production	0	0	0	0	0	0	0	0	0	0
Dairying	0	0	0	0	0	0	0	0	0	0
Poultry production	0	0	0	0	0	0	0	0	0	0
Poultry Management	0	0	0	0	0	0	0	0	0	0
Balance use of fertilizers	0	0	0	0	0	0	0	0	0	0
Production of organic inputs	1	11	3	14	6	0	6	17	3	20
Planting material production	0	0	0	0	0	0	0	0	0	0
Vermi-culture	0	0	0	0	0	0	0	0	0	0
Protected cultivation technology	0	0	0	0	0	0	0	0	0	0
Production and Management technology	0	0	0	0	0	0	0	0	0	0
Entrepreneurial development of farmers/youths	0	0	0	0	0	0	0	0	0	0
Small scale processing	01	00	56	56	00	09	09	00	65	65
Biopestcide production	01	12	0	12	5	0	5	17	0	17
Low cost pest management / IPM	07	102	0	102	11	0	11	113	0	113
Any other (soil and water testing	1	24	0	24	2	0	2	26	0	26
TOTAL	**16**	**214**	**69**	**283**	**28**	**20**	**48**	**242**	**89**	**331**

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Integrated diseases management	02	142	2	144	10	0	10	152	2	154
Integrated pest managemrnt	04	390	42	432	58	14	72	458	56	514
soil and water testing	1	45	7	52	10	3	13	55	10	65
Care and maintenance of farm machinery and implements	01	60	16	76	10	08	18	70	24	94
Group Dynamics and farmers organization	01	21	08	29	02	01	03	23	09	32
Information networking among farmers	01	35	00	35	05	00	05	40	00	40
TOTAL	**10**	**693**	**75**	**768**	**95**	**26**	**121**	**798**	**101**	**899**

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Integrated pest managemrnt	**01**	**40**	**6**	**46**	**7**	**4**	**11**	**47**	**10**	**57**
Integrated Nutrient management	0	0	0	0	0	0	0	0	0	0
soil and water testing	0	0	0	0	0	0	0	0	0	0
TOTAL	**1**	**40**	**6**	**46**	**7**	**4**	**11**	**47**	**10**	**57**

Training programmes for Extension Personnel including sponsored training programmes – CONSOLIDATED (On + off campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Integrated diseases management	02	142	2	144	10	0	10	152	2	154
Integrated pest managemrnt	05	430	48	478	65	18	83	505	66	571
soil and water testing	1	45	7	52	10	3	13	55	10	65
Care and maintenance of farm machinery and implements	01	60	16	76	10	08	18	70	24	94
Group Dynamics and farmers organization	01	21	08	29	02	01	03	23	09	32
Information networking among farmers	01	35	00	35	05	00	05	40	00	40
TOTAL	**11**	**733**	**81**	**814**	**102**	**30**	**132**	**845**	**111**	**956**

Table Sponsored training programmes

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop production and management										
Commercial production of vegetables	0	0	0	0	0	0	0	0	0	0
Spices crops	0	0	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Farm machinery										
Training program under PCRA	13	321	28	349	39	6	45	360	34	394
Farm machinery, tools and implements	0	0	0	0	0	0	0	0	0	0
Total	**13**	**321**	**28**	**349**	**39**	**6**	**45**	**360**	**34**	**394**
Livestock and fisheries										
Livestock production and management	01	06	0	06	03	0	03	09	0	09
Total	**01**	**06**	**0**	**06**	**03**	**0**	**03**	**09**	**0**	**09**
Home Science										
Processing & value addition	0	0	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Agricultural Extension										
Entrepreneurship development	0	0	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
GRAND TOTAL	**14**	**327**	**28**	**355**	**39**	**6**	**48**	**369**	**34**	**403**

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop production and management										
Commercial vegetable production	0	0	0	0	0	0	0	0	0	0
Commercial vegetable production	01	14	00	14	01	00	01	15	00	15
Total	**01**	**14**	**00**	**14**	**01**	**00**	**01**	**15**	**00**	**15**
Livestock and fisheries										
Sheep and goat rearing	0	0	0	0	0	0	0	0	0	0
Poultry farming	0	0	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Income generation activities										
Vermicomposting	01	08	0	08	07	0	07	15	0	15
Value addition (Dal Mill)	01	06	02	08	0	01	01	06	03	09
Sericulture	01	43	03	46	04	00	04	47	03	50
Mushroom cultivation	01	11	00	11	10	00	10	21	00	21
Total	**4**	**68**	**5**	**73**	**21**	**1**	**22**	**89**	**6**	**95**
Grand Total	**05**	**82**	**05**	**87**	**22**	**01**	**23**	**104**	**6**	**110**

3.5 Extension Programmes

Activities	No. of programmes	No. of farmers	No. of Extension Personnel	TOTAL
Advisory Services	128	3213	64	3277
Diagnostic visits	29	134	10	144
Field Day	03	340	10	350
Field visit	12	72	12	84
Group discussions	01	20	02	22
KisanGhosthi	04	111	00	111
Film Show	0	0	0	0
Self -help groups	1	21	0	21
Kisan Mela	3	310	10	320
Exhibition	01	330	05	335
Exhibition and animal diagnostic camp	2	130	2	132
Scientists' visit to farmers field	28	108	38	146
Animal health camps	5	732	10	742
Farm Science Club	0	0	0	0
Ex-trainees Sammelan	0	0	0	0
Farmers' seminar/workshop	04	216	05	221
Method Demonstrations	11	516	38	554
Celebration of animal husbandry day	0	0	0	0
Farmer Interfase	01	172	05	177
World Milk Day	01	32	01	33
World Soil Day	1	66	10	76
Exposure visits (DAESI)	07	532	07	539
World Women Day	01	55	01	56
World Water Day	01	43	1	44
World Bee Day	01	53	1	54
ICAR Day	01	165	02	167
Krishi Din	01	33	02	35
Mahila Kisan Diwas	01	39	0	39
World Food Day	01	65	0	65
Constitution Day	01	49	0	49
Agriculture Education Day	01	36	0	36
Kisan Diwas	01	40	0	40
Ranbhaji Mahotsav	01	139	20	159
Parthenium Week	01	160	0	160
Crop Insurance Week	01	33	02	35
Swachhata Maah (2-30 Oct.2021)	01	498	18	516
Poshan Maah (Sept 2021)	01	224	04	228
Swachhata Pakhwada (16-31 Oct 2021)	01	445	16	461
Uttam Kheti Unnat Kisan	04	159	03	162
Live streaming of NH fair	01	33	0	33
Poshan Baaag Maah Abhiyan	01	38	01	39
Total	**264**	**9362**	**300**	**9662**

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

Details of other extension programmes

Particulars	Number
Electronic Media (CD./DVD)	--
Extension Literature	5
News paper coverage	184
Popular articles	7
Radio Talks	5
TV Talks	10
Animal health amps (Number of animals treated)	5 (1042 animals)
News Letter	01

3.6 Online activities during year 2021

S. No.	Activity Type	Mode of implementation (Video conferencing / Audio Conferencing / Facebook Live / YouTube Live/ Zoom/ Google meet/ Webexetc)	Title of Program	No. of Programmes	No. of Participants/ Views
A	**Farmers training**				
1	Online Training Programme	Zoom	Custard apple cultivation production	01	50
2		Webex	Orange crop production technology	01	39
3		Zoom	Integrated nutrient Management of Bt cotton	01	98
4		Webex	Improved cultivation of Wheat	01	36
5		Zoom	Sucking pest management in cotton	01	59
6		Zoom	Pest & disease management in soybean	01	42
7		Zoom	Disease management in Bengal gram	01	37
8		Google Meet	White grub management	01	41
9		Google Meet	Sericulture	01	81
10		Zoom	In situ moisture conservation	01	49
11		Zoom	Custard Apple Processing	01	38
12		Zoom	Entrepreneurship development through small scale processing	01	41
13		Zoom	Training for Agriculture Input Dealers	01	75

14		Zoom-SSC Chikhali	Organic farming – A need of hour	01	180
15		Shekru Foundation Facebook, Youtube	management of Pink Boll Worm in cotton	01	41
16			Use of BBF for sowing of Bengalgram	01	53
17			Management of Hasta Bahar in lemon	01	38
18			Linseed – Production technology	01	44
19			Goat Farming	01	65
20			Processing of Pulses – Dal Mill	01	38
21			Onion cultivation	01	46
22			IPM in Bengalgram	01	51
23			Improved cultivation of summer ground nut	01	43
24			Sericulture	01	57
25			Mushroom production technology	01	46
26			Entrepreneurship in bio fertilizer	01	38
27			Azolla Production	01	39
28			Dashparni Ark production	01	42
29			Jiwamrut production	01	48
	Total			**29**	**1555**
B	**Farmers scientist's interaction programme**				
	Total	--			
C	**Farmers seminars**				
	Total	--			
D	**Expert lectures**				
1	Expert lectures	Kisan Forum Facebook Live	उन्हाळी भुइमुंग लागवड तंत्रज्ञान	01	47
2	Expert lectures	Kisan Forum Facebook Live	टरबूज व खरबूज लागवड तंत्रज्ञान	01	25
3	Expert lectures	Kisan Forum Facebook Live	हरभरा पिक – एकात्मिक कीड व रोग व्यवस्थापन	01	55
4	Expert lectures	Kisan Forum Facebook Live	लिंबू बहार व्यवस्थापन	01	19
5	Expert lectures	Kisan Forum Facebook Live	संत्रा मृग बहार आणि कीड व रोग व्यवस्थापन तसेच इंडो – इस्त्राईल लागवड पद्धत	01	65
6	Expert lectures	Google Meet	कापूस पिकांवरील किडींची ओळख व व्यवस्थापन पद्धती	01	38
7	Expert lectures	Zoom (SSC Motala)	Organic farming – A need of hour	01	85

	Total			**07**	**249**
E	**Any other Extension Functionary Trainings**	Zoom	PoCRA FFS planning	**10**	**670**
F	**Pre Kharif Mela**	Google Meet	Planning of Kharif crops	**01**	**85**
	Grand Total (A-F)			**47**	**2559**

3.7 PRODUCTION OF SEED/PLANTING MATERIAL AND BIO-PRODUCTS

Production of seeds by the KVKs

Crop	Name of the crop	Name of the variety	Name of the hybrid	Quantity of seed (q)	Value (Rs)	Number of farmers
Cereals	Wheat	PKV Sardar	-	7.0	17600	75
Oilseeds	Soybean	Phule Sangam, Phule Kimaya	-	14.0	140000	
Pulses	Benlgalgram	RVG-202, Phule Vikram	-	8.0	34500	
Spices	Turmeric	IISR Pragati	-	07	17500	07
		PDKV Waigaon	-	07	17500	07
Fodder crop seeds	CO4,CO5 Grass slips	CO4,CO5	-	4600	9200	10
Azolla	Azolla	-	-	35	5250	25
Bio-products	Vermicompost	Isenia Fotida	-	65	65000	07

Production of planting materials by the KVK

Crop	Name of the crop	Name of the variety	Name of the hybrid	Number	Value (Rs.)	No. of farmers
Vegetable seedlings	Chilli	Jwala	Jwala	9000	9000	02
	Drumstick	KDM-1	-	850	17000	91
Fruits	Custard apple	Balanagar	-	7361	220850	40
	Lime	Pramalini	-	3492	104760	29
	Sweet Orange	Nucellar	-	405	20250	08
	Mandarin	Nagpur Santra	-	10	600	03
	Guava	L-49	-	13	780	02
	Tamarind	Local	-	100	2000	50
Total				21231	375240	225

Production of Bio-Products

Bio Products	Name of the bio-product	Quantity Kg	Value (Rs.)	No. of Farmers
Bio Fertilisers	Vermicompost	6500	65000	7
Total		**6500**	**65000**	**7**

Production of livestock materials –

Particulars of Live stock	Name of the breed	Number	Value (Rs.)	No. of Farmers
Poultry				
Broilers	Vencob	745	144814	12
Duals (broiler and layer)	Giriraja, Kaveri	350	80820	25
Total				

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

A. KVK News Letter ((Date of start, Periodicity, number of copies distributed etc.) — 2020 yearly 300 copies

B. Literature developed/published

Item	Title	Authors name	Number
Research papers / Abstract	Enhancing the productivity & production of greengram through cluster FLD in Buldana district.	S A Borde	01
	Impact of FLD to transfer of technology in Blackgram in Buldana district.	S A Borde	01
	Influence of BBF Seed Drill on yield of Soybean	S A Borde	01
	Technological & Extension yield gap in Pigeon pea in Buldana district	S A Borde	01
	Effect of BBF in Chickpea in Buldana district.	S A Borde	01
	Impact Assesment of FLD on Yield of Greengram.	S A Borde	01
Technical reports	--		
News letters	KVK News Letter	V.G. Jadhao	01
Technical bulletins	--		
Popular articles	--		
Extension literature	Improved cultivation of Chickpea	S.M.Umale,A.T.Gabhane	01
	Sericulture-A Profitable Enterprize	S A Borde,V G Jadhao	01
	Mushroom Production	S A Borde,V G Jadhao	01

C. Details of Electronic Media Produced

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

D. Details of Social Media Platforms Created / Used

S. N.	Type of social media platform	Title of social media	Number of Followers/ Subscribers
1	YouTube Channel	KVK Buldana-I	164
2	Facebook page	www.facebook.com/KVKBuldana1	740
3	WhatsApp groups	KVK Contact Farmer-I & II, Dairy Farmers, KVK-SHG, Custard apple grower, Buldana Citrus grower, Guava grower, Banana grower, Nursery worker, Goatary Farmer, Poultry Farmer, Dal Mill, KVK-IM (6 groups), DAESI (4 groups), KVK-INM,	2300
4	Twitter Account	KVK Buldana-I @BuldanaI	1870

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 I

Mr. Atul Sheshrao Bhagat
At/Po. Jalgaon Jamod
Dist- Buldana
Mob. No. 940562782

Situation analysis/Problem statement:
Mr Atul Sheshrao Bhagat R/o Jalgaon Jamod Dist Buldana, graduate in arts B.A and was doing his traditional farming business with his family. He has 04 acres of land on which he was growing cotton and soybean due to attack of pink boll worm in cotton and low market prices for soybean he hardly earn Rs. 10000/- per acre. This low income was not able to fulfill his family needs. He was in contact with KVK for generating other income source, KVK Scientist suggest him subsidiary agriculture business ideas like poultry, goat farming and small scale processing and value addition.
He identified his core competencies as he has experience of floor making on floor mill, he decided to go for Dal Mill enterprising and start approaching KVK to gain knowledge and skill

Plan, Implement and Support:
KVK Buldana-I suggest him to go for dal milling on small to medium scale make him aware about various capacities machinery and space requirement also suggested fund and subsidies available in small and medium scale enterprising for that KVK suggested subsidies available with KVIC, DIC, and Dept. of Agriculture.

Technical support:
KVK conducted hand of vocational training on Dal mill under this training program Mr. Atul Bhagat participated as trainee and gain knowledge about pulses processing for quality dal making, their varietal characteristic in dal making process. He also gains knowledge about basic operation of mini dal mill and maintenance of machinery. He also gain knowledge about various economical supports available with government departments.

Implementing dal production
Mr. Atul Bhagat applied for subsidies in various departments and get subsidy of Rs. 8.75 lacks from KVIC to establish 5 tons per day processing plant with capital requirement of 30 lacks and 10000sq ft plot. KVK experts suggested him to apply for loan in banks for financial support and he get finance from bank of Rs. 25lacks.

Output:
As a result of his consistent hard work and KVK support in knowledge and implanting he has established his medium scale enterprise of 5 ton per day capacity in 2019. Started his production work with his family support and also making employment for 03 labours during production period from February to June.
The three years production has been studied and it was found, the dal mill business has employment potential with annual income of Rs. 9-12 lacks per year as shown in table below.

Enterprise Dal Mill	Quantity process own selling (qt/year)	Profit Margin (Rs/qt)	Processing Income Rs/yr	Quantity process own selling (qt/year)	Hiring charges (Rs/qt)	Hiring income Rs/yr	Total	Interes 12.5%	Cost Rs./year	Net profit Rs/yr
2019	686	1170	802620	720	700	504000	1306620	299143	162452	904120
2020	760	1203	914280	850	700	595000	1509280	267562	174960	1066758
2021	869	1210	1051490	864	700	604800	1656290	231800	187456	1237034

Presently Mr. Atul Bhagat is supplying his own dal produce to KVIC farmers producing companies working in pune district with annual demand of 20000-25000 qt per year. For quality dal production he also purchased colour sorter machine to compete market quality production. He is also focusing on organic dal production.

As there is huge demand in pulses crop processing and need of some FPO organizations he also interested in expansion mean while KVK also focusing in creating enterpruners like Mr. Atul Bhagat.

Outcome:

Mr. Atul Bhagat has started dal mill for processing of pulses and under this production plant he has started his own production as well as he is giving service to farming community to curtail down farmers expenses of purchasing dal from market due to his timely service nearly 1800 farmer on an average yearly processing pulses for fulfilling his family food demand also the waste of dal mill enrich the health of milch animals present on farmers field.

KVK is now visiting their trainees for dal mill production plant of Mr. Atul Bhagat. He also shares his effort, help from KVK and building new trainees with confidence and interest.

Impact:

Buldana district has large area under pulses crop production. The process flow of the dl production has long chain i.e. farmer to market to retailer to processor and to retailers and consumers. But if farmers processing their own produce then it will be big opportunity to him to curtail transport expenses occurred in this long chain of market. If we process our own farm produce and sell in the market then there will be two stage income rather than selling raw material. Due to such innovative entrepreneur the most of young people come in contact with KVK and started to think about their own enterprise. Most of rural youths can get employed in this sector from this inspiration 02 dal mills in Jalgaaon Jamod 01 in wadgaon patan and 01 in warwat bakal started their enterprise through dal processing and providing employment to 08 persons in slack agriculture production time.

Orange orchard

Dal Mill & Sortex Machine

Success Story II

Sheela Nagesh Dukare
Address: At post Wadi Tal-Nandura,
Dist. Buldana, Maharashtra
Mobile Number: 8275063357

1. **Situation analysis/ Problem statement:**
   Mrs Sheela Dukare aged 36 years r/o Wadi Tal-Nandura doing her traditional agriculture farming o her 10 acre family land. She used to cultivate soybean redgram mixed cropping system on her own land from this much area she was earning annual income of 70000-80000 per annuam from this less income she was not able to fulfill her family needs and kids expectation. As due to the situation of low-income potential in agriculture business due to climatic venerability and insect pest infestation she was interested for enterprising but in which sector to do business was not clearly decided. She interacted KVK Buldana-I to overcome this situation KVK Buldana-I suggested primary processing and value addition of crops that can be grown locally.
2. **Plan, Implement and Support**: KVK Buldana-I conducted training and exposure visit in primary processing of oilseed and pulses crops and visited local entrepreneurs in this program Mrs. Sheela dukare get interested in traditional oil extraction processes that has potential of income generation and there is demand of health aware customer for mechanical oil extraction method. KVK advised her to go for subsidies available with DIC, KVIC, Deptt. Of agriculture. She applied for subsidies at KVIC and Department of agriculture. Mrs. Sheela Dukare get benefited subsidy under Project on climate resilient agriculture Dept. of Agriculture as she was participated in KVK organized training ad she has set up oil extraction unit at Wadi tal- Nandura.

3. **Output**:
   Mrs Sheela Dukare started production of raw oil from oilseed crops like groundnut, sunflower, safflower, linseed, sesamum and mustard oil farmers in the jurisdiction bring raw material and getting pure mechanical extracted oil as per requirement on hiring basis so that farmers are getting raw oil in pure condition at low rate and Mrs. Sheela dukare get started her own business in this way two-way program get started.

   Fixed Cost
   Plant and machinery : - Rs. 200000.00
   Shed Construction : - Rs. 150000.00
   Electrical and miscellaneous: - Rs 25000.00
   Interest calculations 10.5 % per annum for 05 years: -

Year	Principal paid Rs.	Interest Rs. 10.5 % per annum	Total annual repayment
2020	60189.00	36533.05	96772.00
2021	66822	29899.96	96772.00
2022	74186	22535.87	96772.00
2023	82262.31	14360.25	96772.00
2024	91438.92	5283.64	96772.00
Total	374898.2	108612.8	483511.00

Annual Income statement

Year	Oil extraction on hiring Tones/year	Rate of processing Rs/ Tone	Income from hiring Rs./year) (A)	Selling own produced oil tone/year	Profit Rs/ tone	Income from selling Rs./year (B)	Total Income Rs./year (A+B)
2020	176	1956	344256	1.5	26000	39000	383256
2021	196	2045	400820	2	26520	53040	453860

As from the cost and income statement Mrs. Sheela Dukare is getting annual income of Rs. 2.0-2.5 lacks per annual from this enterprising. As the business having large potential and daily requirement, she can grow in this profitable business unit.

4. **Outcome**:
   From success of Mrs. Sheela dukare more no. of young entrepreneurs is interested to do oil milling business for processing and value addition.
5. **Impact**:
   From success of Mrs. Sheela dukare, presently 03 oil extraction unit Lakdi ghana are working in Shemba, khaira and walati villages in Nandura taluka and 03 Lakdi ghana (oil mill) are started in 2021 in Jalgaon jamod tehsil. So that 06 enterpruners started theirm income generation activity and develop 3600 days employment to workers and skill experts in this sector.



Lakdi Ghana & Products

Success Story III

Mr. Prashant Vinayak Agarkar
At/post – Bodkha, Sangrampur
Dist – Buldana
Mob- 9011913426

1. **Situation analysis/problem statement:**

Mr. Prashant V. Agarkar R/o Bodkha Tq- Sangrampur is traditional cultivating rainfed crops viz, cotton, soyaben and Tur. Everyone in his family is related to farming activity with 5 acre of ancestral land with limited source of irrigation. He has got 1.60 lack gross incomes by cultivating cotton & soybean crop with limited crop input, more cost of cultivation high climatic factor which results in very less net return. These crops are main source of income to fulfil his family needs.

2. **Plan, Implementation and support:**

Mr. Prashant has attended training and meets SMS (Horti) in one off campus training in 2017 then he is regularly attaining every vegetable related training in 2018. He attended 25 days skill training at KVK for protected cultivation & nursery management. He got subsidy for construction of shade net. At each stage of construction KVK scientist visited his field & guided about proper planning. After completion of shadenet construction; within 06 month started cultivation of vegetable crops. First crop has taken cucumber cultivation in summer 2019. He has able to sale his crop within 3 to 4 adjoining market. He has earn nearly 75 thousand gross profit by first crop which is 03 times more gross income per year of 2018.

3. **Output :**

As a result of his continues subsequent cropping since from 2018 to upto 2021 and hard work, kvk technical support, he has able to reach his annual net income 95 thousand to upto 2.85lack net income. Which is merly 2.5 times than before starting vegetable cultivation in shadenet condition? He can able to take vegetable crops all round the year. In kharip 2021, he got more benefit through cultivation of leafy vegetable and cucumber crop crosses maximum rate as due to heavy rain in open field but in shadenet condition he can able to take crop.

Continues cultivation of vegetable crops such as cucumber, Bittle gourd, and sweet pepar, he has able to stay his net income constant within these days.

Year	Crop	Yield	Gross yield	Net income	C:B ratio	Total Net income of year
2019	Cucumber	87qt	67000/-	32000/-	2.09	32000/-
2020	Bittle gourd	59 qt	46000/-	19000/-	2.42	66000/-
	Cucumber	102 qt	40000/-	28000/-	1.42	
	Sweet peper	76 qt	38000/-	19000/-	2.0	
2021	Cucumber	95 qt	49000/-	33000/-	1.48	94000/-
	Bittle gourd	46 qt	55000/-	34000/-	1.61	
	Sweet peper	78 qt	43000/-	27000/-	1.59	

4. **Outcome:** Mr. Prashant Agarkar getting constant earning from 0.5 acre shadenet and within 02 years most of invested money has earn by him. By starting this crop cultivation he has not only provided vegetable cultivation throught years but also provided employment to 03 to 04 labours for all round the years.

Success Story IV

Goat Farming & Poultry
Name of Enterpreuner: Mr. Milind Hari Bangar
At.Po.Ta. Khamgaon, Dist: Buldana

1. Situation analysis/Problem statement:
Buldana district has a dry land area. Due to imbalanced rainfall, farmers do not get satisfactory income from their land. To overcome this problem & to get additional income sources, farmers are motivated to subsidiary businesses like Poultry, Gortary and Dairy, nursery, honeybee keeping etc.
In the Buldana district, the main source of income is agriculture. Mr. Milind Hari Bangar (26) is a landless youth from khamgaon block and passed 12th Std. He was doing agriculture work as a labour, which was not regular and insufficient for his family's daily needs. He visited KVK with his friend to get some information about the subsidiary business. He contacted KVK scientists and expressed his situation and getting low income. KVK scientists advised him to start subsidiary business like poultry and goat farming. He visited the KVK goat unit & collected necessary information about it and expressed interest in starting. He acquired training on poultry and got farming from KVK.

2. Plan, Implement, and Support: Goat and backyard poultry rearing as a subsidiary business.

Activities implemented by KVK:
Mr.Milind Hari Banga attended the various training program, group discussions, Krishi melawa, exhibitions organized by KVK, SAU & other depts. He collected required information about the goat and poultry rearing, feeding management, vaccination schedules, disease information, and controls. In Jan. 2019, he started small poultry & goat unit in the available structure. In 2019 he purchased 05 nos of local goats, and 50 nos poultry birds reared them. During 2020-21, KVK scientists gave technical support for small Azolla cultivation and hydroponics.

3. Output:
Initially, he started a small-scale goat unit in available structure by investing his own amount and taking some debt from his friend. After one year number of goats increased, out of which he has sold 07 males & females for Rs. 42000/- also sold eggs of Rs. 58500/- in 2020-21. In the year 2021-22, the number of goats increased. He sold 12 male and female goats of varying ages for Rs. 96500/-
In the current year, he has 22 male and female goats. KVK scientists regularly visit his goat farm and guide him frequently with the problems he faces.

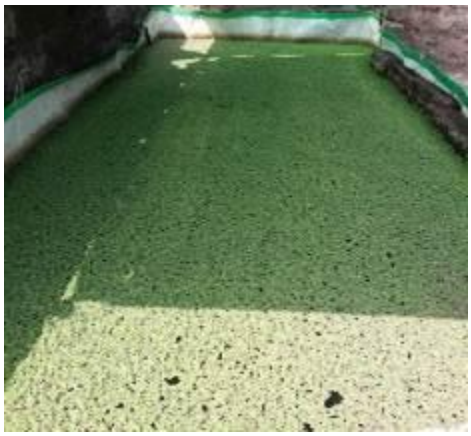
Year	No. of goats	Cost of prod.	Income	Net income
2019-20	05 50 dual poultry birds	40000/- 34980/-	-- 3900 nos of eggs (Rs.58500/-)	-- 23520/-
2020-21	05+10 90 dual poultry birds	21000/- 40600/-	07 sold Rs.42000/- 7020 eggs (Rs. 84240/-)	21000/- 43640/-
2021-22	08+14 120 dual poultry birds	41000/- 48500/-	12 nos sold 96500 Laying still going	55500/- --

4. **Outcome**: Due to the initial steps of Mr. Milind H. Bangar, his friends and other rural youths from nearby villages are getting motivated and starting goat and backyard poultry rearing. Under the guidance of KVK scientists, another two small goat units are started in shelodi villageT of Khamgaon block.

Small Poultry unit

Small Goat unit

Hydroponics



Azolla Unit

Goat Unit

5.1. Indicate the specific training need analysis tools/methodology followed for

A. Practicing Farmers

a) PRA
b) RRA
c) Group Discussion

B. Rural Youth

a) PRA
b) RRA
c) Group Discussion

C. In-service personnel

a) Need Assess through Ex-trainee sammelan

5.2. Indicate the methodology for identifying OFTs/FLDs

For OFT:

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

For FLD:

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

5.3. Field activities

i. Name of villages identified/adopted with block name (from which year) –
Year – **2019-20**
At.Po. Dhanora Jangam, Tq: Nandura,
At.Po. Wadgaon Wan, Tq: Sangrampur

ii. No. of farm families selected per village : 100

iii. No. of survey/PRA conducted : 02

iv. No. of technologies taken to the adopted villages : 35

v. Name of the technologies found suitable by the farmers of the adopted villages: 24

1. INM in cotton	2. 2% urea spraying
3. IPM in cotton	4. Feeding of Azolla
5. Spraying of KNO3 @ 2%	6. Use of Potasium bio ortho phosphate in banana
7. IPM in pigeon pea	8. Sowing of onion on raise bed
9. IPM in Beglagram	10. Use of micro-irrigation
11. Use of Bengalgram var. JAKI-9218	12. Direct sowing of onion
13. Use of Pigeon pea var. BSMR-736, ICPL-72119	14. Deworming in goat
15. Use of Blackgram var. AKU-15	16. Precision farming
17. Use of bio-fertilizer	18. Mineral mixture supplementation
19. Seed treatment	20. Production of organic inputs
21. Use of BBF planter in soybean & bengalgram	22. Nutritional kitchen gardening
23. Use of cotton slasher	24. Opening of ridges & furrow

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

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

6. LINKAGES

A. Functional linkage with different organizations

Name of organization	Nature of linkage
Dr. P.D.K.V.,Akola	Technical guidance regarding training, demonstrations & other extension activities etc.
Agril. Commissioner, Pune	Implementation of Govt. sponsored scheme & non-granted scheme.
State Agriculture Department (ATMA)	Collaboration in implementation of training, demonstrations, other extension activities & other schemes of State Govt. Provides financial support for conducting On Farm Testing, Demonstrations, Trainings & other extension activities under ATMA. KVK Scientists work as a Resource Person for various training programmes & other activities.
District Soil Survey & Soil Testing Office Buldana	Joint Implementation of Soil Analysis
ICRISAT, Hyderabad	Conducting training programme and demonstrations, KISAN MITrA Project
MANAGE Hyderabad	Technical and Financial, DAESI Programme – One year diploma programme for input dealers.
NIPHM Hyderabad	Conducting CCIM course for insecticide dealers Technical backstopping
A.D.O., Z.P., Buldana	Collaboration in implementation of extension activities. KVK Scientists work as a Resource Person for various training programmes & other activities.
State Animal Husbandry Dept.	To arrange & conduct livestock health & diagnostic camps. KVK Scientists work as a Resource Person for various training programmes & other activities.
National Bank for Agri. & Rural Development (NABARD)	To establish self help groups in villages
VANAMATI, Nagpur	Financial & Technical Back stopping for DAESI diploma course
MAFSU,Nagpur	Technical guidance regarding training, demonstrations & other extension activities etc
MAVIM, Buldana	To conduct need based training.
Manav Vikas Mission, Buldana	Financial support for establishment of Mobile Soil Testing Van
Rashtriya Krishi Vikas Yojana (State Agriculture Dept.)	Financial support for farm mechanization.
CARE India	Conducting training programmes
BAIF	Conducting training programmes
NABARD	Participation in Meeting
Krishi Vikas Sanstha (NGO)	Conducting training programmes
Bhart Bhauudeshik Sanstha (NGO)	Conducting training programmes
PCRA, Mumbai	Workshops on Energy saving in Agriculture

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

Name of the scheme	Date/ Month of initiation	Funding agency	Amount (Rs.)
Training , Demonstration & Extension activities	2021	ATMA	340000/-
Diploma in agriculture extension for input dealers (DAESI)	2021	MANAGE, Hyderabad and ATMA Buldana	1100000/-
Farm Field School (FFS) training	2021	PoCRA Mumbai	5990/-
SDC Project	2021	ICRISAT, Hyderabad	279412/-
CCIM Course for Pestcide Dealers under NIPHM , Hyderabad	2021	Self Finance	360000/-
Skill training under ASCI	2021	ASCI, New Delhi	180000/-
Capacity building Training programme	2021	MoFDAH, GOI	200000/-

C. Details of linkage with ATMA

a) Is ATMA implemented in your district -- Yes

If yes, role of KVK in preparation of SREP of the district?
All KVK scientists actively participated in preparation of SREP of Buldana district. PRA & RRA in selected villages is done by KVK scientist. Also KVK scientists play a vital role in process of need access and findings of gap in technologies.

Coordination activities between KVK and ATMA

S. No.	Programme	Particulars	No. of programmes attended by KVK staff	No. of programmes Organized by KVK	Other remarks (if any)
01	Meetings	AMC Meeting	02	-	
		GB Meeting	08	-	
		BFBC Meeting			
02	Research projects	--			
03	Training programmes	Farmers Training	12	14	--
04	Demonstrations	Kharif crops			
05	Extension Programmes	-	-	-	-
	Kisan Gosthi	Kisan Gosthi	05	04	--
06	Publications	--			
07	Extension Literature	-	-	-	-
08	Other Activities	-	-	-	-

D. Give details of programmes implemented under National Horticultural Mission

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

E. Nature of linkage with National Fisheries Development Board

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

F. Details of linkage with RKVY

S. No.	Programme	Nature of linkage	Funds received if any Rs.	Expenditure during the reporting period in Rs.	Remarks
1	----				

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

S. No.	Programme	Nature of linkage	Funds received if any Rs.	Expenditure during the reporting period in Rs.	Remarks
1	Model cluster Demonstration	Financial	3.30 lakh	255300	

H. Details of linkage with NFSM

S. No.	Programme	Nature of linkage	Funds received if any Rs.	Expenditure during the reporting period in Rs.	Remarks
1	SHC mission	Trainings	**-**	-	Conducted 07 training in 7 blocks

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

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

7. Convergence with other agencies and departments: Nil

8. Innovator Farmer's Meet

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

9. Farmers Field School (FFS) : Nil

S. No	Thematic area	Title of the FFS	Budget proposed in Rs.	Brief report
1	Crop production Technologies	Cooton + greengram & Black gram Soybean+ Pigeonpea	-	KVK experts attended various FFS sessions organized by tate Agri. Dept. under PoCRA in 5 blocks

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

Agronomy

Demonstrated Varity of Chickpea RVG 202 gives higher yield than Vijay

Demonstrated Varity of Soybean MACS1188 gives higher yield than JS335 and resistant to girdle beetle

Horticulture

- **Assesment**

  Turmeric - Foliar spray of Turmeric special micronutrient improves hidden hunger micronutrient deficiency. It will benefit for quality improvement.

  Banana – Foliar spray of potassium bio-orthophosphate for quality improvement is good, easy and cost effective.
- **Front Line Demonstration**

  Turmeric – Improved variety IISR Pragati having short duration, more curcumin content and less blight attack

Plant Protection

- Pink bollworm management in cotton both technologies demonstrated effective and gives 26.52 and 20.42 per cent more yield than farmer practice.
- Pod borer complex effectively manage by two recommended technologies and increase the yield 28.52 and 22.53 per cent respectively.
- Seed treatment of combined fungicide @ 3 gram /kg seed followed by Trichoderma @ 5 gram /kg seed is effective for management of wilt in pigeaon pea.
- Seed treatment of Thiamothaxom 30FS@10 ml per kg seed is effective for control of stem ly and girdle beetle in soybean.

Agriculture Engineering

- PDKV Garlic planter was helpful in terms of time and labour cost savings.
- BBF - Seed saving, good yield, reduction in no. of irrigation, open furrow helps to install sprinkler pipeline.
- Cotton Slasher - Reduction in drudgery and labour requirement in uprooting operation. Saves cost and time of operation.
- Subsoiler - Improves subsurface drainage, soil is loosen for cultivation, solve problem of water stagnation to good extent.
- PDKV Deseeding machine is helpful for pulp extraction in peak fruit ripening and in unfavorable weather conditions which will be helpful in value addition of custard apple.

Animal Husbandry

Assessment

- Kaveri breed of poultry gives more eggs production and weight gain.
- Cultivation of fodder crop CO5 gives high fodder yield liked by animals

FLD

- Due to use of CMT kit for early detection of sub clinical mastitis expenditure cost of treatment is reduced

- Inj, Ivermectin 1ml/50kg body weight control endo-ecto parasite in goat, it minimizes both endo-ecto worm infestation.

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

Agronomy

- Foliar Spray of Salicylic acid on Rainfed Bt Cotton at 75 and 105 DAS increases the yield by 11% , red leaves % found to be Less
- New variety of wheat PDKV Sardar is high yielding , lodging occur, grain bursting found if harvested late

Horticulture

- **Assesment**
  Turmeric – Micronutrient deficiency in turmeric crop after turmeric special remain as it in rainy time however as soon as rain goes deficiency reduces.
  Banana – Foliar spray of potassium bio-orthophosphate for quality improvement is good, easy and cost effective however sometimes cracking of fingers remain as it.
- **Front Line Demonstration**
  Turmeric – Improved variety IISR Pragati having short duration and produce very good yield however finger girth is less as compaired to selum variety.

Plant Protection

- Availabiliaty and quality of bio pesticides is major isssue
- To develop wilt resistant varieties in pigean pea.

Agriculture Engineering

- Use of garlic planter was promising results in field coverage, and in laboratory test. The seed loss due to over throwing should be minimized while in operation.
- Use of BBF Planter for sowing of groundnut has increase production potential with 33.34% seed sowing. Broad bed furrow planting method help root crop to grow more than in open field.
- Use of Cotton slasher helps utilization of agro waste for cotton crop waste utilized is 4.68 t/ha and reduction in cost, time and drudgery in operation.
- Subsoiler is helpful in treatment of ill drain, water logged soil.
- Sowing of Soybean–Chickpea double cropping system on BBF Planter was found economical in saline tract region of purna river basin.

Animal Husbandry

Assessment

- Kaveri breed of poultry gives more eggs production and weight gain.
- Cultivation of fodder crop CO5 gives high fodder yield.

FLD

- Due to use of CMT kit for early detection of sub clinical mastitis expenditure cost of treatment is reduced but it is not easily available in market.
- Inj, Ivermectin 1ml/50kg body weight control endo-ecto parasite in goat, it minimizes both endo-ecto worm infestation but it require skill person and proper dose

11. Technology Week celebration during- 2021

Period of observing Technology Week: Oct. 2021
Total number of farmers visited : 240
Total number of agencies involved : 03
Number of demonstrations visited by the farmers within KVK campus: 11

Other Details

Types of Activities	No. of Activities	Number of Farmers	Related crop/livestock technology
Gosthies	2	63	Cotton, soybean, feed & fodder management
Lectures organized	3	83	White grub management, Pink boll worm management
"Sitaphal Mahotsav" Exhibition	1	138	Custard apple, drudgery reduction tools
Film show	1	31	Enterpreneurship development, Mushroom cultivation
Fair	2	89	
Farm Visit	3	138	KVK instructional farm, Horticulture farm, nursery, Watershed structures Compost units, Azolla unit
Diagnostic Practicals	1	134	Identification of beneficial & harmful insects
Supply of Literature (No.)	1	240	Pink boll worm management
Total number of farmers visited technology week		240	
Number of organizations participated	2		

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

-- KVK is not included in special programme

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
Total		

C. Farmers-scientists interaction on livestock management

State	Livestock components	Number of interactions	No. of participants
Total			

D. Animal health camps organized

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

E. Seed distribution in drought hit states (Seed distribution/sold by KVK)

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

F. Large scale adoption of resource conservation technologies

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

13. IMPACT

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

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.)	
			Before (Rs./Unit)	After (Rs./Unit)
IPM in cotton	3520	62.09	53250/- per ha	65000/- per ha
IPM in bengalgram	2245	67.25	56000/- per ha	69000/- per ha
Seed treatment in pulses	3175	65.29	40000/- per ha	44000/- per ha
Use of 5 % neem seed extract	110	61.810	--	Saving in cost upto 1200/-per ha
Training and pruning method in citrus	420	64.29	250000/- per ha	265000/- per ha
Use of bordo mixture in fruit crop	1610	76.40	--	--
Crop specific micro-nutrient in vegetable	340	82.35	--	15% increase in yield per ha
New improved variety of Ajwain AA01-19	175	50.85%	82440/-	105000/-
Use of BBF Planter	956	16.85	16420/-	22132/-
Use of Cotton slasher	396	32.66	34653/-	37850/-
Use of PDKV Dal mill	180	02%	--	125630/-
In situe soil and water conservation	56	07%	18960/-	24650/-
Installation if micro irrigation unit	350	36%	24630/-	46120/-
Use of Garlic planter	16	60	--	Saving 6500/-
Use of Subsoiler	40	23%	34650/-	36590/-
Use of spiral separator	163	24 %	--	300/- per qt.
Use of PDKV drip coiler	30	9%	--	Labour cost saving Rs 300/ha
Deseeding for custard apple	45	2%	46000/-	94000/-
De-worming in livestock	1825	79.45%	--	10.89% Increase in weight & improve health status
Mineral mixture supplementation	720	75%	--	Improve health status fertility & milk yield

CMT kit for mastitis detection	620	60.57%	--	Early detection of mastitis leads to minimize cost of treatment
Detection of heat	1410	83.68%	--	Early detection of heat reduces dry period
Azolla feeding	310	62.90%	--	Improve wt gain
Nutritional garden	124	66.94	--	Improves HB level

B. Cases of large scale adoption

(Please furnish detailed information for each case)

i. Dryland Horticulture - Custard Apple c.v. Balangar

Most of the area in Buldana district is under drought prone area, the water table is going deeper & deeper and also the rains are not received properly from last 8-10 years. Hence, whatever area is under horticultural orchards i.e. Santra, Kagzi lime are decreasing day by day hence there was a need to increase the area under horticultural crops which can be grown under minimum water conditions. Hence KVK has decided to increase the area under dryland horticultural crops. On the other hand Buldana district is situated in between the Satpuda & Sahyadri ranges which are favourable for dryland horticultural crops like Custard Apple and Aonla. Custard Apple is found in plenty amounts in jungles as well as on the bank of small rivers & nalas which is supposed to be the wild crop therefore cannot fetch the good price in the market.

With considering the need of area & favourable climatic conditions for custard apple and aonla KVK has started to promote the farmers for cultivation of these crops where main emphasis was given to the custard apple. The demand of custard apple from the urban areas and metros are increasing. Also the crop has a potential to survive and give the sufficient production. Therefore KVK is promoting the farmers for cultivation of Balanagar locally selected variety which is bigger in size, attractive in appearance and sweeter in taste due to TSS about 24%.

In this regard KVK has also developed custard apple orchard on KVK horticulture farm. KVK is promoting and creating awareness among the farmers for culstard Apple cultivation in the district from last 8 years through various training programmes in collaboration with State Agril. Dept., Banks, different NGO's. Also telecasted and broadcasted T.V. shows and Radio talk's respt. on custard apple cultivation. In this regard KVK organised one State Level Custard Apple Workshop & Exhibition and two District Level Workshops.

Among the various thrust areas of custard apple i.e. genuine planting Materials, improved package of practice, proper method of harvesting, post handling, processing and value addition priority was given to availability of genuine planting material of custard apple. Hence KVK has taken the action towards it and as the host institute has a registered nursery named as Satpuda Nursery which is run under the technical supervision of KVK. And due to this technical support in this nursery 124500 custard apple seedlings are produced and sold to the farmers of this area with the technical knowhow of package of practices. As an impact of various activities and efforts of KVK, State Agriculture Department, NHM area under custard apple is increased from 184 ha in 1999 to 1645 ha in 2019-20 and also the productivity has been increased from 2.5 MT/ha to 5 MT/ha.

At present and in future KVK emphasis to provide improved package of practices, proper harvesting, post harvest handling, packing, marketing and processing, value addition so that farmers can get the maximum return and save the farmer from the glut in custard apple market. KVK's next objectives are to start the packing house, co-operative marketing and processing unit for custard apple. As a result of above efforts no. of farmers are earning plenty of income from custard apple.

ii. Integrated Pest Management in Cotton

Cotton is one of the major commercial crops of Buldana district in kharif season. Area under cotton crop is 2.46 lakh hectares which is 33% of total area. This crop is grown in medium to heavy black cotton soil under rainfed as well as irrigated condition in some pockets. There is a wide variation in productivity & economic returns due to rainfed condition. Cotton productivity is low due to lack of knowledge about improved package of practices, balanced fertilizer application, proper plant protection measures and emergence of new pests in cotton eco-system i.e. heavy incidence of sucking pests. Among these various problems due to pest & diseases, cotton yield is affected upto 30-40% and for controlling the target pest farmers use high grade & indiscriminate use of pesticides which increases the expenditure of plant protection and ultimately increases the cost of production.

To overcome this problem KVK Buldana is continuously working on the theme of Integrated Pest Management in cotton from last 11 years. For popularising IPM in cotton, KVK adopted the technologies/module suggested by Dr. PDKV, Akola. During this period KVK carried out various activities for popularization & dissemination of IPM concept in adopted villages as well as whole district through training programmes, FLD and collaborative programmes with State Agril. Dept.Various extension activities like kisan melawa, field day, kisan goshti, T.V. talk, radio talk and other extension activities viz. publication of various print material and popular articles in news papers & magazines are regularly conducted.

Activities carried out by KVK on IPM

Activity	Area / No. of activities
Training programmes	97
FLD's	560 ha
FFS	08
Krishi Melawa	14
Field Day	18
T.V. / Radio talk	14
Booklet and folder	14
Popular articles published	21
Webinar	02

As an impact of various activities carried out by KVK in regards to IPM concept

- Farmers got the knowledge of harmful & beneficial insects.
- Farmers started selection of proper pesticides at right time with proper concentration on target pests.
- Due to IPM plant protection cost is curtailed down by 40-50%.
- Status of beneficial insects is increased due to reduction in pesticides used in IPM villages.
- Yield level increased from 12.61 qt/ha to 17.25 qt/ha in rainfed condition in IPM villages.

iii. Enhancing productivity through use of BBF Planter in Buldana District

Background

Most of the area in Buldana district is under Rainfed Farming Situation, the water table is going deeper & deeper and also the rains are not received properly from last 7-8 years. Every year occurrence of dry spell, heavy rainfall in some specific period destroy crop condition as due to lack of soil and water conservation practices followed by farmers. Soybean, Cotton Redgram, Bengalgram, Green gram, Blackgram crops are mostly sown in the district.

Technology adoption

Dr. PDKV Developed BBF Planter consisting of four rows and driven by Tractor. It has seed metering device which maintains plant population in proper condition. Sowing of seed is done on Broad Bed which enhance seed bed preparation. The Broad Bed is followed by Furrow of V Shape 1 ft at top and 1 ft in depth. The use of furrow to store water in field thus increases water holding capacity of soil also help in draining excess of water. The BBF system is helping crops to withstand better growth in heavy rainfall situation as well as it conserves moisture in furrow which help to increase wilting point by 1-2 week in dry spell.

KVK Efforts

KVK Jalgaon Jamod is promoting BBF from year 2012 though Assessment, Demonstration and Training, Publication in Magazines. It was farmers feedback that yield of Soybean increases up to 20%, in Bengalgram yield was found to be increases up to 14 % and in Groundnut Seed cost is Reduced By Rs. 1200/- per acre and increase in yield was found up to 30 % as compared to local practice.

KVK Activities	Area / No. of activities
Training programmes Farmers	46
Training programmes Extension workers	06
Assessment	60 ha
FLD's	380 ha
FFS	04
Krishi Melawa	08
Field Day	12
Research papers	05
Booklet and folder	05
Popular articles published	09
Villages covered	123
Custom Hiring	560 ha

Technical support of KVK to the farmers

KVK is conduction technical guidance to farmers using BBF planter for its setting and adjustment of new machineries and also providing skill trainings to operators.

Government support for Technology promotion

Agril Dept. has distributed BBF Planter on 90% subsidies to farmers under farm mechanization program. Now under PoCRA and DBT programs Government is providing 50-60 % subsidy to beneficiaries of the district.

iv. Cotton Slasher for Management of Cotton crop waste

Background

Cotton is one of the major commercial crops of Buldana district in kharif season. Area under cotton crop is 2.46 lakh hectares which is 33% of total area. This crop is grown in medium to heavy black cotton soil under rainfed as well as irrigated condition in some pockets.The district soil profile shows low organic carbon content in the soil which result in low productivity of Cotton and other crops and increase of fertilizer doze every year. Low organic carbon content in the soil is due to low availability of FYM and organic residue incorporation in soil. Farmer every year uproot cotton crop after harvet followed by burning it in field which results in Drudgery in uprooting cotton crop manually and loss of Valuable orgaic matter due to burning.

Technology Adoption

Cotton Slasher is an implement driven by Tractor PTO. It is Single row Chopper. It cuts Cotton row chop them in Cutter and Spread the chopped cotton residues over field. Cotton Slasher reduces drudgery, time and Cost in cotton uprooting and increases soil humus and organic carbon. Farmers in this jurisdiction well aware about this technology as the technology has promising results about cost, time and labour saving as there is shortage of labour the tractor owners identified the need and demand of such machinery. Presently 90 cotton slasher are working under KVK Jurisdiction area providing hiring facility to 540 ha area covering 1024 farmers

KVK Efforts

KVK Adopted use of cotton slasher from year 2012-13 and demonstrated its use through Assessment, Demo. Training, Booklet, and Popular Article. As a result Most of Progressive Farmers and Tractor Owners have purchased this machine and its use is also increasing year by year.

Activity	Area / No. of activities
Training programmes	32
Assesssment	18 ha
FLD's	95 ha
Field Day	03
Booklet and folder	02
Popular articles published	05
Villages covered	92
Custom Hiring	312 ha

v. PKV Mini dal mill for entrepreneurship development

Background

Buldana district having most of area under pulses crop production.The cropping patterncomprises of sole as well as mixed cropping system of Soybean+ Red gram, Cotton+ Green gram and Cotton + Black gram.In Rabi most of area under Chickpea production. The fluctuating market prices of the agriculture commodities reduced in hand profits of the farmers. There is a need for primary processing and value addition at grass root level so as to overcome problem of fluctuating market prices and for employment generation which is also a major problem due to land fragmentation.

To mitigate above situation KVK Buldana identified the need to solve this problems and identified PKV mini dal mill as a solution for primary processing of pulses for

processing at grass root level for value addition of pulses and generation of employment in rural areas.

Technology Adoption

PKV dal mill having less space requirement 15m2 having both option of single and 3-phase electricity supply with 3.0 hp motor. Mini dal mill having capacity of 10 qt per day making dal of all pulse crop like, red gram, green gram, black gram and chickpea. Beside it has a facility for cleaning of grain with attached roller. Dal milling is engaging activities of slack farming time i.e. in summer season.

PKV mini dal mill has employability to generate income of Rs. 25000 to 50000 pe month on of season of agriculture work most of the rural youths are working on pulse processing by dal milling providing hiring facility to farmers so they can process their own farm produce at low cost enriching their health. Dal mill waste is well utilize as animal feed and fodder.

KVK Efforts

KVK Adopted use of PKV mini dal mill from year 2010-11 and demonstrated its use through Vocation Trainings for rural youth and farm women's, Book, booklets and popular articles have been published As a result Most of Rural youths and farm women's from SHG have actively started their units nearly 246 small scale processing centers are running in this district as an impact nearly one dal mill unit is generating Rs15000/- to 25000/- income per month in production time of March-June (four month)

Activity	Area / No. of activities
Vocational trainings	08
Trainings of Beneficiaries (Dal Mill Beneficiary)	160
Popular article	12
Booklet	02
Visitors Demo. Unit	360
Dal Mill Inauguration	06
KVK connected dal mill in operation in the district	26

vi. Rural Empowerment through Skill Development & Vocational Trainings

To generate self employment for rural youths in the district KVK has conducted various skill development and vocational training programmes regarding Goat Farming, Broiler Poultry Farming, Dairy Farming, Dal mill processing, Shed net, Sericulture, Mushroom production, tailoring, pickles processing for rural youths. As an impact of these skill & vocational training programmes 248 small units are established and 1109 rural youths are employed in private sector.

Sr.No.	Skill / Vocational Trainings	No. of Units started
1	Poultry	18
2	Goat farming	14
3	Dairy	05
4	Protective cultivation	16
5	Sericulture	140
6	Dal Milling	08

7	Tailoring	24
8	Mushroom	06
9	Fruit processing small scale (SHG)	08
10	Value addition in Safed Musli & Minor Millet (SHG)	09
	Total	**248**

vii. Establishment of Self Help Groups

KVK has established 115 SHG under SHG establishment and linkages programme of NABARD. KVK is conducting regular trainings & demonstrations to SHG for developing income-generating units and some of SHG groups have started their Safed Musli processing, Aonla processing, Pickles, Contrat Farming, Poultry, Dairy and Vermi-compost units successfully with the technical support of KVK. For strengthening SHG, KVK has conducted skill development and foundation training programme in collaboration with NABARD to make aware about the entrepreneurship development related to agriculture business. At present following SHG's started their own entrepreneurship,

Name of SHG	Entrepreneurship	Income / month (Rs)
Durgamata Mahila Bachat gat, Bhendwal,	Various Pickles	20000/-
Renuka Mahila Bachat Gat,Jalgaon Jamod	Minor millet processing	21000/-
Shetkari Mahila Bachat Gat Yeulkhed	Organic Pulses products	15000/-
Savitribai Fule Mahila Bachat Sungaon	Aonla Processing	20000/-
Sharda Mahila Bachat Gat Jalgaon Jamod	Natural Holi Colors	12000/-
Ramai Mahila Bachat Gat Sungaon, Tq; Jalgaon	Processing of Safed Musli & Turmeric	22000/-
Bhimai Mahila Bachat Gat Sungaon, Tq; Jalgaon	Processing of Safed Musli & Turmeric	21000/-
Swami Samarth Mahila Bachat Gat Sungaon, Tq: Jalgaon	Processing of Safed Musli & Aonla	25000/-
Ramai Mahila Bachat Gat, Akola Kh.	Safed Musli Processing	15000/-
Mahalaxmi SHG, Nirod Tq; Jalgaon Dist: Buldana	Milk Processing, Nursery & Goat	16000/-

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

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
Jan 2021	1	232388	--
Feb 2021	1	74225	--
March 2021	0	0	--
April 2021	2	171719	--
May 2021	2	65773	--
Jun 2021	3	119955	--
Jul 2021	2	109007	--
Aug 2021	4	115053	--
Sept 2021	3	92202	--
Oct 2021	2	32007	--
Nov. 2021	1	74889	--
Dec. 2021	3	13089	--
Total	**24**	**232338**	**--**

Name of KVK	Message Type	Type of Messages						
		Crop	Livestock	Weather	Marke-ting	Aware-ness	Other enterprise	Total
Buldana-I	Text only	12	03	01	01	04	03	**24**
	Voice only	--	--	--	--	--	--	--
	Total Messages	12	03	01	01	04	03	**24**
	Total farmers Benefitted	**109007**	**32007**	**74225**	**65773**	**119955**	**171719**	**24**

15. PERFORMANCE OF INFRASTRUCTURE IN KVK

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

S. N.	Demo Unit	Year of establishment	Area	Details of production			Amount (Rs.)		Remarks
				Variety	Produce	Qty.	Cost of inputs	Gross income	
1	Dual purpose poultry	--	--	Giriraja, kaveri	Eggs	350	60500/-	80820/-	
2	Broiler poultry			Vencob	Meat	745	131977/-	144814/-	
2	Vermi-compost Unit	2009-10	880 sqft	Isenia Fotida	Vermi-compost	65 qt	10000/-	65000/-	Supplied to 7 farmers & KVK farm
3	Azolla	2016-17	200 sqft	Azolla Pinnata	Azolla culture	35 kg	1200/-	5250/-	45 farmers & KVK
4	Dalmill	2013	-	-	Dall	200 kg	700/-	16000/-	
5	Ideal Nursery	2009	2000 sqft	Custard Apple, Citrus, Sweet Orange	Seedling	21231	45500/-	375240	262farmers
6	Custom hiring	2012	--	--	--	--	--	125000/-	

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. qt	Cost of inputs	Gross income	
Cereals									
Maize	08.06.2021	25.11.2021	1	SH-9255	grain	17	12500	24581	
Wheat	17.11.2020	15.03.2021	1	PKV-Sardar	grain	8	18200	29600	
Pulses									
Redgram	25.06.2021	15.01.2022	1	ICPL-87119	grain	19.42	22100	121572	
Bengalgram	20.11.2020	30.03.2021	0.4	RVG-202	Seed	8.0	8800	34500	
Oilseeds									
Soybean	15.06.2021	25.10.2021	1	Phule Sangam, Kimaya	Seed	14	35000	140000	
Fibers									
Cotton	07.06.2021	25.01.2022	3.0	RCH-659, NBC-11, PKV-Rajat	Seed cotton	28.95	72500	180210	
Sub-total							**169100**	**530463**	
Spices & Plantation crops									
Floriculture									
Fruits									
Custard apple	2006	Nov 2021	1.50	Balanagar	Fruits		5760	21750	
Guava	2018	Dec 2021	0.40	L-49	Fruits		3500	5950	
Aonla	2006	Nov 2021	0.60	Krishna	Fruits		4200	18577	
Sweet ornage	2006	Sept 2021	0.40	Nucellar, Katol gold	fruits		11523	27510	
Sub-total							**24983**	**73787**	
Grand total							**194083**	**604250**	

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

Sl. No.	Name of the Product	Qty	Amount (Rs.)		Remarks
			Cost of inputs	Gross income	
1	Vermi-compost	65 qt	10000/-	65000/-	Supplied to 7 farmers & KVK farm

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

Sl. No	Name of the animal	Details of production			Amount (Rs.)		Remarks
		Breed	Type of Produce	Qty.	Cost of inputs	Gross income	
01	Broieler birds	Vencob	Meat	746	131977	144814	
02	Backyard poultry	Giriraj & kaveri	Meat & eggs	350	60850	80820	

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)
Jan 2021	--	--	COVID – 19 restrictions
Feb 2021			
March 2021	24	120	
April 2021	--	--	
May 2021	--	--	
Jun 2021	--	--	
Jul 2021	26	130	
Aug 2021	--	--	
Sept 2021	--	--	
Oct 2021	--	--	
Nov. 2021	--	--	
Dec. 2021	80	240	

F. Database management

S. No	Database target	Database created
1	02 Database of soil testing farmers DFI farmers	03 Database of soil testing farmers, Database of progressive farmers, Database of DFI farmers

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

Amount sanction (Rs.)	Expenditure (Rs.)	Details of infrastructure created / micro irrigation system etc.	Activities conducted					Quantity of water harvested in '000 litres	Area irrigated / utilizatio n patter
			No. of Training programm s	No. of Demonstr ation s	No. of plant materials produced	Visit by farmers (No.)	Visit by officials (No.)		
--									

H. Performance of Nutritional Garden at KVK farm
If Nutritional Garden developed at KVK farm/Village Level? Yes If yes,
Nutritional Garden developed at KVK farm

Area under nutritional garden (ha)	Component of Nutritional Garden	No. of species / plants in nutritional garden	No. of farmers visited
0.01	Vegetable crops	8 Brinjal, Tomato, Cucumber, Spong guard, ridge guard, spinach, coriander, radish, Chilli, carrot, custard apple, papaya	450
	Fruit crops		

Nutritional Garden developed at Village Level

No. of Villages covered	Component of Nutritional Garden	No. of species / plants in nutritional garden	No. of farmers covered
45	Vegetable crops	Tomatoo,Brinjal,Chlli,Leafy Vegatables.Drumstick.	45
45	Fruit crops	Custard Apple,Guava,	45

I. Details of Skill Development Trainings organized - Nil

S.No.	Name of KVKs/SAUs/ICAR Institutes	Name of QP/Job role	Duration (hrs)	No. of participants					
				SCs/STs		Others		Total	
				Male	Female	Male	Female	Male	Female
1	--	--							

15. FINANCIAL PERFORMANCE

A. Details of KVK Bank accounts

Bank account	Name of the bank	Location	Branch code	Account Name	Account Number	MICR Number	IFSC Number
With Host Institute	--	--	--	--	--	--	--
With KVK	SBI Jalgaon Jamod	Jalgaon Jamod	01052	SES.KVK, Main A/c JJ	11496505890	443002692	SBIN0001052
	SBI Jalgaon Jamod	Jalgaon Jamod	01052	SES.KVK, Main A/c JJ	37075357417	443002692	SBIN0001052
	SBI Jalgaon Jamod	Jalgaon Jamod	01052	SES.KVK, R/F A/c JJ	11496505903	443002692	SBIN0001052
	SBI Jalgaon Jamod	Jalgaon Jamod	01052	SES.KVK, R/F A/c JJ	37047695891	443002692	SBIN0001052

B. Utilization of KVK funds during the year 2021-22 (Rs. in lakh) (Till Dec. 2021)

<table>
<tr><th>S.N.</th><th>Particulars</th><th>Sanctioned</th><th>Released</th><th>Expenditure</th></tr>
<tr><td colspan="5">A. Recurring Contingencies</td></tr>
<tr><td>1</td><td>Pay & Allowances</td><td>166.00</td><td>138.00</td><td>126.0904</td></tr>
<tr><td>2</td><td>Traveling allowances</td><td>1.00</td><td>0.68</td><td>0.28922</td></tr>
<tr><td>3</td><td>Contingencies</td><td colspan="3"></td></tr>
<tr><td>A</td><td>Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)</td><td rowspan="2">4.00</td><td rowspan="11">8.00</td><td rowspan="11">8.45772</td></tr>
<tr><td>B</td><td>POL, repair of vehicles, tractor and equipments</td></tr>
<tr><td>C</td><td>Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)</td><td rowspan="9">8.00</td></tr>
<tr><td>D</td><td>Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)</td></tr>
<tr><td>E</td><td>Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)</td></tr>
<tr><td>F</td><td>On farm testing (on need based, location specific and newly generated information in the major production systems of the area)</td></tr>
<tr><td>G</td><td>Training of extension functionaries</td></tr>
<tr><td>H</td><td>Maintenance of buildings</td></tr>
<tr><td>I</td><td>Estb. of Soil, Plant & Water Testing Laboratory</td></tr>
<tr><td>J</td><td>Library</td></tr>
<tr><td colspan="2">TOTAL (A)</td><td>179.00</td><td>146.68</td><td>134.81598</td></tr>
<tr><td colspan="2">B. Non-Recurring Contingencies</td><td></td><td></td><td></td></tr>
<tr><td>1</td><td>Works</td><td>--</td><td>--</td><td>--</td></tr>
<tr><td>2</td><td>Equipments including SWTL & Furniture</td><td>--</td><td>--</td><td>--</td></tr>
<tr><td>3</td><td>Vehicle (Four wheeler/Two wheeler, specify)</td><td>--</td><td>--</td><td>--</td></tr>
<tr><td>4</td><td>Library (Purchase of assets like books& journals)</td><td>--</td><td>--</td><td>--</td></tr>
<tr><td colspan="2">TOTAL (B)</td><td>--</td><td>--</td><td>--</td></tr>
<tr><td colspan="2">C. REVOLVING FUND</td><td>--</td><td>--</td><td>--</td></tr>
<tr><td colspan="2">GRAND TOTAL (A+B+C)</td><td>179.00</td><td>146.68</td><td>134.81598</td></tr>
</table>

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

Year	Opening balance as on 1st April	Income during the year	Expenditure during the year	Net balance in hand as on 1st April of each year
April 2018 to March 2019	41.65	36.54	18.62	59.57
April 2019 to March 2020	59.27	37.43	16.10	80.90
April 2020 to March, 2021	80.90	25.13	13.72	92.31
April 2021 to Dec, 2021	92.31	17.90	11.07	99.14

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

Name of the staff	Designation	Title of the training programme	Institute where attended	Mode (Online/ Offline)	Dates
Vikas G. Jadhao	Sr. Scientist & Head	Water Resources Modelning	ICAR-NAHEP & MPKV, Rahuri	Online	08 Feb2021
Anil Gabhane	SMS, PP	Online training on fruit fly management	NIPHM, Hyderabad	Online	19-22 April 2021
Anil Gabhane	SMS, PP	Online training on POCRA Project	NIPHM, Hyderabad	Online	26-30 April 2021
Vikas G. Jadhao	Sr. Scientist & Head	e-Extension in Agriculture & Allied Sectors	MANAGE Hyderabad	Online	10-14 May 2021
Vikas G. Jadhao	Sr. Scientist & Head	Use of Statastical tools in agriculture & allied fields	Society of Krishi Vigyan, Kolkata	online	16-19 July 2021
Vikas G. Jadhao	Sr. Scientist & Head	On farm production of bio-control agents & micro-bial bio-pesticides	NIPHM, Hyderabad	Online	13-17 Sept. 2021
Sanjay Umale	SMS, Agro	On farm production of bio-control agents & micro-bial bio-pesticides	NIPHM, Hyderabad	Online	13-17 Sept. 2021
Sanjay Umale	SMS, Agro	Agricultural legistation for agriculture extension professionals	BHU Waranasi & MANAGE Hyderabad	Online	20-24 Oct. 2021

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

Name of the village	Total No. of families surveyed	Key interventions implemented	No. of farmers covered in each intervention	Change in income (Rs/unit, Rs/ha)	
				Before	After
Dhanora Jangam Tq: Nandura	85	Improved varieties, INM, IPM, Goat farming Dal Mill Poultry On farm production of Biofertilizer,Biopesticides, Vermicomposting,	60 80 03 01 01 01	7500 7800 20200 95000 4500 70500	13200 17200 41500 204000 9600 380000
Charban, Tq:Jalgaon Jamod	45	Improved varieties, INM, IPM, Goat farming Backyard Poultry Nutrient & bahar management in citrus	40 30 32 45 15	5500 5300 19300 3800 320000	11300 10800 38500 8400 690000

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

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

20. Details of Progress of ARYA Project - Nil

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

21. Details of SAP

S. No.	Types of major Activity conducted- SwachhtaPakhwada, Cleaning, Awareness Workshop, Miccobial based Agricultural Waste Management by Vermicomposting etc.	No. of Programmes conducted	No. of Participants
1	Digitization of office records/ e-office,	1	12
2	Basic maintenance (include housekeeping, cleaning of guest house, institute buildings & toilets, campus, etc)	2	27
3	Sanitation and SWM	1	16
4	Cleaning and beautification of surrounding areas	2	78
5	Vermicomposting/Composting of biodegradable waste management & other activities on generate of wealth for waste	4	119
6	Used water for agriculture/ horticulture application	1	25
7	Swachhta Awareness at local level	2	71
8	Swachhta Workshops	1	38
9	Swachhta Pledge	3	81
10	Display and Banner	1	23
11	Foster healthy competition	1	95
12	Involvement of print and electronic media	1	16
13	Involving and with the help of the farmers, farm women and village youth in their adopted villages (no of adopted villages)	3	39

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

APR SUMMARY

1. Training Programmes

Clientele	No. of Courses	Male	Female	Total participants
Farmers & farm women	90	2101	482	2583
Rural youths	16	242	89	331
Extension functionaries	11	845	111	956
Sponsored Training	14	369	34	403
Vocational / Skill Training	05	104	06	110
Total	**136**	**3661**	**722**	**4383**

2. Frontline demonstrations

Enterprise	No. of Farmers	Area (ha)	Units/Animals
Oilseeds	75	24	--
Pulses	118	14	--
Cereals	35	14	--
Horticultural crops	53	18.4	--
Total	**281**	**70.4**	**--**
Livestock & Fisheries	22	--	62 units/animals
Other enterprises	26	--	26 units
Implements	80	32	--
Total	**128**	**32**	**88** units/animals
Grand Total	**409**	**102.40**	**88** units/animals

3. Technology Assessment & Refinement

Category	No. of Technology Assessed & Refined	No. of Trials	No. of Farmers
Technology Assessed			
Crops	6	6	48
Livestock	2	2	18
Various enterprises	2	2	30
Total	**10**	**10**	**96**
Technology Refined			
Crops	--	--	--
Livestock	--	--	--
Various enterprises	--	--	--
Total	--	--	--
Grand Total	**10**	**10**	**96**

4. Extension Programmes

Category	No. of Programmes	Total Participants
Extension & other extension activities	264	9662
Total	**264**	**9662**

5. Mobile Advisory Services

Name of KVK	Message Type	Type of Messages						
		Crop	Livestock	Weather	Marke-ting	Aware-ness	Other enterprise	Total
Buldana-I	Text only	12	03	01	01	04	03	**24**
	Voice only	--	--	--	--	--	--	--
	Voice & Text	--	--	--	--	--	--	--
	Total Messages	12	03	01	01	04	03	**24**
	Total farmers Benefitted	**109007**	**32007**	**74225**	**65773**	**119955**	**171719**	**232338**

6. Seed & Planting Material Production

	Quintal/Number	Value Rs.
Seed (q)	29 qt	192100
Planting material (No.)	21231 nos	375240
Bio-Products (kg)	65 qt	65000
Livestock Production (No.)	1095 Nos	225634
Fodder crop sets	4600 Nos	9200
Azolla	35 kg	5250

7. Production of livestock materials –

Particulars of Live stock	Name of the breed	Number	Value (Rs.)	No. of Farmers
Poultry				
Broilers	Vencob	745	144814	12
Duals (broiler and layer)	Giriraja, Kaveri	350	80820	25
Total				

8. Soil, water & plant Analysis

Samples	No. of Beneficiaries	Value Rs.
Soil - 2187	2187	328050
Water - 1077	1077	107700
Total - 3264	**3264**	**435750**

9. HRD and Publications

Sr. No.	Category	Number
1	Workshops	01
2	Conferences	--
3	Meetings	12
4	Trainings for KVK officials	08
5	Visits of KVK officials	40
6	Book published	--
7	Training Manual	--
8	Book chapters	--
9	Research papers	06
10	Lead papers	--
11	Seminar papers	--
12	Extension folder	05
13	Proceedings	01
14	Award & recognition	01
15	News Letter	01