ICAR-ATARI, Pune
DETAILS OF ANNUAL PROGRESS REPORT OF KVKs DURING 2023
(January 2023 to December 2023)

1. GENERAL INFORMATION ABOUT THE KVK

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

Address with PIN code	Telephone		E mail	Website address & No. of visitors (hits)
	Office	FAX		
KrishiVigyan Kendra, At.Karda Post Mothegaon, Tq.Risod, Dist.Washim	07251-222260	07251-222462	kvk.washim@yahoo.com	www.kvkwashim.com 13688

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

Address	Telephone		E mail	Website address
	Office	FAX		
Suvide Foundation , LoniRaod, Risod, Dist. Washim	07251-222260	07251-222462	suvide.rsd@gmail.com	www.kvkwashim.com

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

Name	Telephone / Contact		
	Office	Mobile	Email
Dr.Ravindra. L. Kale	07251-222260	7350205746	fishrlk@gmail.com

1.4. Date and Year of sanction: 1994-95

1.5. Staff Position (as on December, 2023)

					If Permanent, Please indicate			If Temporary, pl. indicate the consolidated amount paid (Rs./month)
Sl. No.	**Sanctioned post**	**Name of the incumbent**	**Mobile No.**	**Discipline**	**Current Pay Band**	**Current Grade Pay**	**Date of joining**	
1.	Senior Scientist and Head	Dr.R.L.Kale	7350205746	Fisheries Science	Level 13 A	166300	1.4.2014	Permanent
2.	Subject Matter Specialist	S.K.Deshmukh	9422938764	Extension Education.	Level 10	114000	19.5.1995	Permanent
3.	Subject Matter Specialist	R.S.Daware	9423133738	Plant Protection	Level 10	114000	24.5.1995	Permanent
4.	Subject Matter Specialist	N.B.Patil	9921008575	Horticulture	Level 10	73200	16.7.2013	Permanent
5.	Subject Matter Specialist	T.S.Deshmukh	8788835044	Agronomy	Level 10	71100	1.6.2014	Permanent
6.	Subject Matter Specialist	D.N.Ingole	9011927842	Agril. Economic	Level 10	71100	2.5.2016	Permanent
7.	Subject Matter Specialist	M.S.Deshmukh	9403060483	Livestock Product.	Level 10	56100	20.11.2023	Temporary
8.	Programme Assistant	S.N.Watane	9404075397	Home Science	Level 06	50500	5.3.2012	Permanent
9.	Computer Programmer	S.R.Bavaskar	9423430509	P A Computer	Level 06	72100	4.4.2000	Permanent
10.	Farm Manager	P.V.Deshmukh	9370093444	Farm Manager	Level 06	43600	4.1.2017	Permanent
11.	Accountant/Superintendent	R.V.Kothale	9422938753	O.S/Accountant	Level 06	72100	1.12.2000	Permanent
12.	Stenographer	S.S.Tonde	9623328311	Clerk / Typist	Level 02	40600	16.5.1995	Permanent
13.	Driver 1	G.S.Sarnaik	9850232027	Driver Jeep	Level 03	40600	15.5.1919	Permanent
14.	Driver - 2	Vacant	NA	NA	NA	NA	NA	NA
15.	Supporting staff 1	S.G.Tawar	9422938743	Watchman	Level 01	34400	15.5.1995	Permanent
16.	Supporting staff 2	D.W.Ganthade	9096162733	Field Asstt.	Level 01	33400	11.10.1995	Permanent

1.6. Total land with KVK (in ha): 21.50

S. No.	Item	Area (ha)
1	Under Buildings	0.30
2.	Under Demonstration Units	3.20
3.	Under Crops	12.50
4.	Horticulture	3.00
5.	Pond	0.20
6.	Others if any (Rock)	2.30

1.7. Infrastructural Development:

A) Buildings

S. No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Year	Plinth area (Sq. m)	Expenditure (Rs.)	Starting year	Plinth area (Sq. m)	Status of construction
1.	Administrative Building	ICAR	1998	696	4850760	-	-	-
2.	Farmers Hostel	ICAR		307		-	-	-
3.	Staff Quarters (6)	ICAR	2000	105	3020000	-	-	-
4.	Demonstration Units (2)	ICAR	1996	325	70000	-	-	-
5	Fencing	-	-	-	-	-	-	-
6	Rain Water harvesting system	-	-	-	-	-	-	-
7	Threshing floor							
8	Farm godown	-	-	-	-	-	-	-
9	ICT lab	-	-	-	-	-	-	-
10	Other	-	-	-	-	-	-	-

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Running	Present status
Jeep Mahindra	2016	800000	100000 Km	Need to be replaced.
Tractor	2009	499000	1685 (hrs.)	Need to be replaced.
Hero Honda	1996	44800	-	Need to be replaced.

C) Equipment & AV aids

Name of the equipment / Implements	Year of purchase	Cost (Rs.)	Present status
Over Head Projector	2002	25120	OK
LCD Projector	2005	110230	OK
TV & VCD	2003	13500	Need to be replaced.
Sound system	2002	102000	OK
Video Camera	2005	38000	OK
Xerox Machine	2009	149620	OK
Digital Camera	2009	19850	OK
Fax Machine	2009	19800	Need to be replaced.
Generator	2009	250087	Need to be replaced.

1.8. Details of SAC meeting conducted in the year:

Date	Name and Designation of Participants	Salient Recommendations	Action taken
-	-	-	-

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	Agriculture
2	Agriculture +Horticulture
3	Agriculture +Dairy
4	Agriculture + Sericulture
5	Agriculture + Goat rearing
6	Agriculture +Fisheries
7	Agriculture +Poultry

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

a) Soil type

S. No.	Agro-climatic Zone (Planning Commission)	Characteristics
1	Agro-climatic sub zone No.3 of the Agro climatic Zone No. 9 (Western plateau & hills) as per NARP classification	Washim district is divided into two agro climatic zones ACZ-7 and ACZ-8 having assured rainfall of 828mm with hilly area with light to medium soil, medium soil with single crop, medium soil with double crop rainfed and medium soil with double crop irrigation in agro-ecological situation. I,II,III and IVth respectively.

b) Topography

S. No.	Agro ecological situation	Characteristics
1	AES – I: Hilly Area With Light To Medium Soil (Somthana)	Malegaon & Manora blocks of the District Comprising 20.40% cultivable area. The crops grown in this situation are moong, Urid, Jowar, Tur, Soybean, and Cotton. Horticultural crops like orange, vegetables are grown on the well irrigated areas.
2	AES-II. Medium soil with single crop (Chambhai)	Part of Mangrulpir and Karanja blocks of the District And comprising 31.35% of District. The soil in these situations is predominantly black cotton soil. Major crops grown are vegetables are grown on well irrigation.
3	AES- III Medium Soil with Double Crop.	Malegaon, Risod and Partly Washim block of the District This situation has got a very large area about 47% of total cultivated area of the District. The crops grown in the situation are soybean, Tur, Gram, Safflower, Wheat and Fruit crops like orange, and Aonla.
	AES- IV Medium Soil With Double Crop Irrigated	Part of Washim and few parts of Mangrulpir blocks covering the cultivated area of District The crops grown in this situation area Soybean, Tur Jowar, Moong, Udid, Gram, Wheat, Safflower. Under canal irrigation summer groundnut is also grown.

2.3 Soil Types

S. No	Soil type	Characteristics	Area in ha
1	Shallow/light soil (55%)	Well drained	237000
2	Medium black soil (30%)	Medium deep, well drained soil	129000
3	Heavy black soils	Deep well drained	65000

2.4. Area, Production and Productivity of major crops cultivated in the area of jurisdiction of KVK (2023)

S. No	Crop	Area (ha)	Production (000 T)	Productivity (Kg/ha)
	Major Field crops			
1	Soybean.	308198	422755t	13.71
2	Cotton.	19518	41327 (*170kg)	3.60
3	Pigeon pea.	63628	39666t	6.23
4	Green gram (S).	2588	470t	1.84
5	Black gram.	6117	3350t	5.47
6	Chick pea.	83721	96730t	11.15
7	Wheat	38654	90783t	23.4
8	Kharif Sorghum.	364	1.70t	4.67
9	Safflower.	653	619t	9.48
10	Groundnut (summer)	2918	5850t	20.04
11	Linseed.	81	38	4.67
	Major Horticultural crops			
1	Mandarin	11950	40389	9.32
2	Turmeric	9570	36366	3.8
3	Mango	69.8	495	11000
4	Cusatard Apple	465	990	5500
5	Guava	208	1530	17000
6	Onion	750	12600	2100
7	Papaya	270	11960	1000
8	Brinjal	220	3871	4000
9	Cabbage & Cauliflower	257	2600	2200
10	Tomato	280	6350	5000

Source: State Agriculture Department

2.5. Weather data (2023)

Month	Normal RF(mm)	Normal Rainy days (number)	Temperature (^{0} C)		Relative Humidity (%)	
			Maximum	Minimum	Maximum	Minimum
January	0.0	00	29.1	12.9	81.7	39.4
February	0.0	00	33.2	12.8	44.9	15.9
March	41.7	05	32.9	18.0	50.3	22.6
April	46.9	06	36.5	21.6	47.1	26.0
May	45.0	09	38.3	24.6	46.0	14.6
June	23.0	04	38.2	26.8	47.4	25.9
July	362.8	13	27.6	22.9	88.5	84.6
August	81.0	09	29.6	24.2	90.6	80.9
September	195.0	11	29.9	25.3	94.1	86.2
October	34.0	06	32.6	18.0	81.4	45.1
November	107.5	10	29.9	16.3	79.4	45.4
December	2.0	02	26.8	14.6	94.0	57.4
Total	**938.9**	**75**	**32.1**	**19.8**	**70.5**	**45.3**

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

Category	Population (No)	Production	Productivity
Cattle			
Crossbred	22045	55112	5 lit/day
Indigenous	122321	122321	1 lit/day
Buffalo	67551	101326	6 lit/day
Sheep	10512	00	00
Goats	175483	175483	290 ml/day
Poultry			
Hens	137479	291cores/years	232 eggs/day
Desi			
Category		Production (Q.)	Productivity
Fish (Reservoir)	6300 Ha water spread area	12600	604 kg/ha

2.7. Details of Operational area / Villages :

Taluka / Block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
Malegaon	Bhaurad/ Ekamba	Soybean, Pigeon pea, Bengal gram and Wheat , Groundnut (Summer)	Soybean & Wheat Crop nutrient deficiency, Lack of recommended new improved varieties with high yield, Pre-sowing seed treatment, Fertilizer use, weedicide use .	Introduction of new variety, IPM, IDM,INM,BBF, seed treatment through FLD,OFT, training extension activity etc. Organic Manure & Vermi-compost production, Pigenpea, Economic analysis in selected enterprises(Poultry, Dairy, goatry, Sericulture, honeybee etc
Mangrulpir	Dastpur/ Warud	Soybean, Pigeon pea, Bengal gram	Less Irrigation Potential and gap in agricultural marketing. Excessive vegetative growth in Soybean, Lack of recommended improved varieties, Pre-sowing seed treatment, Fertilizer use, weedicide use	Introduction of new variety, IPM, IDM,INM through FLD,OFT, training extension activity etc
Mangrulpir	Warud	Soybean, Pigeon pea, Bengal gram	Gap in agricultural marketing. Excessive vegetative growth in Soybean, Lack of recommended improved varieties, Pre-sowing seed treatment, Fertilizer use, weedicide use	Introduction of new variety, IPM, IDM,INM through FLD,OFT, training extension activity etc

Karanja	Sohol	Soybean, Pigeon pea, Bengal gram Cotton and Wheat	Less Irrigation Potential and gap in agricultural marketing. lack improved varieties, Pre-sowing seed treatment, Fertilizer use, Lower yield of Pigeon pea & wilt	Introduction of new variety, IPM, IDM, INM,SMC, FLD,OFT, training extension activity etc
Karanja	Gaiwal	Soybean, Pigeon pea, Bengal gram Cotton and Wheat	Less Irrigation Potential and gap in agricultural marketing. lack improved varieties, Pre-sowing seed treatment, Fertilizer use, Lower yield of Pigeon pea & wilt	Introduction of new variety, IPM, IDM, INM, SMC FLD,OFT, training extension activity etc
Risod	Shelgaon/ Wadaji	Soybean, Pigeon pea, Bengal gram , Linseed, Cotton and Wheat	Gap in agricultural marketing. New improved varieties, Pre-sowing seed treatment, Fertilizer use, plant nutrient deficiency,	Introduction of new variety, IPM, IDM,INM through FLD,OFT, training extension activity etc. Organic Manure through Vermi-compost,
Washim	Kalamba Mahali	Soybean, Pigeon pea, Bengal gram and Wheat	Use of older variety and pest and disease incidence result in low yield. Stunted growth & yellowish leaves in soybean, New improved varieties, Pre-sowing seed treatment, Fertilizer use, weedicide use, Lower yield of Pigeon pea & wilt	Introduction of new variety, IPM, IDM,INM through FLD,OFT, training extension activity etc. Organic Manure through Vermi-compost,
Washim	Pardi Takmor	Soybean, Pigeon pea, Bengal gram and Wheat	Use of older variety and pest and disease incidence result in low yield. Stunted growth & yellowish leaves in soybean, New improved varieties, Pre-sowing seed treatment, Fertilizer use, weedicide use, Lower yield of Pigeon pea & wilt	Introduction of new variety, IPM, IDM,INM through FLD,OFT,SMC, training extension activity etc. Organic Manure through Vermi-compost,
Risod	Wadgi, Adoli	Orange	Dieback, Fruit Drop, Poor Quality, Uneven Fruiting, Phytopthora infestation, Bahar Management, INM, Irrigation practices	Bahar Treatment in Orange, INM, Citrus Declining, Irrigation management,
		Guava	Awareness about Planting practices. Lack of Training and pruning. Lack nutrient management, Bahar management Nematode and other pest disease	Training and Pruning in Guava INM and IPM Bahar Treatment.

		Turmeric	Unavailability of quality planting material of short duration varieties, Water scarcity for timely sowing, Poor yield and quality. Quality detoriation due to Post harvest processing & handling	Introduction of Short duration varieties, INM, IPM, Post Harvest Management
Risod	Belkheda,	Orange	Dieback, Fruit Drop, Poor Quality, Uneven Fruiting, Phytopthora infestation, Bahar Management, INM, Irrigation practices	Bahar Treatment in Orange, INM, Citrus Declining, Irrigation management,
Risod	Asegaon, Warud Tofa	Turmeric	Unavailability of quality planting material of short duration varieties, Water scarcity for timely sowing, Poor yield and quality. Quality detoriation due to Post harvest processing & handling	Introduction of Short duration varieties, INM, IPM, Post Harvest Management
Risod	Selu Khadse, Koyali	Orange	Dieback, Fruit Drop, Poor Quality, Uneven Fruiting, Phytopthora infestation, Bahar Management, INM, Irrigation practices	Bahar Treatment in Orange, INM, Citrus Declining, Irrigation management,
		Turmeric	Unavailability of quality planting material of short duration varieties, Water scarcity for timely sowing, Poor yield and quality. Quality detoriation due to Post harvest processing & handling	Introduction of Short duration varieties, INM, IPM, Post Harvest Management
		Onion	Scarcity of irrigation water in bulb development stage, Poor quality and Yield, Heavy Incidence of weeds, Low market rates, improper storage of produce	Off season (Kharif & Late Kharif) onion production, INM, Nursery Management, Post Harvest Management
		Onion Seed Production	Low Yield due to traditional sowing practices, Incidence of pest and diseases, poor Pollination, Imbalance nutrient management.	Sowing practices in onion seed production, IPM, INM, Micro irrigation systems, Pollination
		Watermelon	Poor Fruit Setting, Poor Fruit quality, Low market rates	Integrated Nutrient Management, Efficient use of insecticides, Off Season Cultivation, Mulching & Irrigation practices
Washim	Adoli	Orange	Dieback, Fruit Drop, Poor Quality, Uneven Fruiting, Phytopthora infestation, Bahar Management, INM, Irrigation practices	Bahar Treatment in Orange, INM, Citrus Declining, Irrigation management,

Risod	Wadji	Bengal gram	Use of older variety and pest and disease incidence result in low yield.	IPM and IDM,through FLD,OFT, training extension activity etc.
Washim	Pardi Takmor	Soybean	Use of older variety and pest and disease incidence result in low yield.	IPM and IDM,through FLD,OFT, training extension activity etc.
Malegaon	Mungala	Pigeon pea	Use of older variety and pest and disease incidence result in low yield.	IPM and IDM,through FLD,OFT, training extension activity etc.
Mangarulpir	Warud	Pigeon pea	Use of older variety and pest and disease incidence result in low yield.	IPM and IDM,through FLD,OFT, training extension activity etc.
Karanja	Dhotra	cotton	Use of older variety and pest and disease incidence result in low yield.	IPM and IDM,through FLD,OFT, training extension activity etc.
Mangrulpir	Dastapur	Soybean	Use of older variety and pest and disease incidence result in low yield.	IPM and IDM,through FLD,OFT, training extension activity etc.
Washim	Kalmba Mahali	Bengal gram	Use of older variety and pest and disease incidence result in low yield.	IPM and IDM,through FLD,OFT, training extension activity etc.
Karanja	Manabha, Sheluwada,		Unaware about balance Diet and Women friendly farm implements/tools	Household food security, Drudgery reduction and value addition, Income generation activity for RY& Farm women
Mangrulir	Dastapur		Unaware about balance Diet and Women friendly farm implements/tools	Household food security, Drudgery reduction and value addition, Income generation activity for RY& Farm women
Washim	Kalamabama hali,		Unaware about balance Diet and Women friendly farm implements/tools	Household food security, Drudgery reduction and value addition, Income generation activity for RY& Farm women
Risod	Karada		Unaware about balance Diet and Women friendly farm implements/tools	Household food security, Drudgery reduction and value addition, Income generation activity for RY& Farm women

2.8. Priority thrust areas:

Crop/Enterprise	Thrust area
Agronomy	
Soybean	Integrated Nutrient Management, Integrated Crop Management
Pigeon pea	INM, Varietal Assessment
Cotton	Weed Management, Varietal Assessment , INM, ICM
Green gram	INM, Varietal Assessment
Black gram	INM, Varietal Assessment
Groundnut	ICM practices
Safflower	ICM practices
Gram	INM, varietal Assessment, Integrated Crop Management
Wheat	Varietal Assessment, Weed management,
Horticulture	
Turmeric	Varietal Diversification in Turmeric crop Introduction of Short duration varieties in Turmeric Integrated Crop Management in Turmeric
Orange	Bahar Management & INM in Citrus Integrated nutrient management in Orange Irrigation management in citrus Training and pruning in citrus
Mango, Onion, Guava ,Custurd Apple and vegetables	High Density plantation in Mango Off season (Kharif & Late Kharif) onion production Integrated Nutrient Management & Nursery Management in onion Improved Planting methods in onion seed production IPM, INM, Micro irrigation systems, Pollination method in Onion Seed production Crop Diversification through Coriander Seed production of improved varieties, Crop Diversification through promotion of HDP in Mango and Guava Promotion of dry land horticulture through Custard apple crop Protected cultivation of vegetable crop
Plant Protection	
Soybean	IPM & IDM
Pigeon pea	IPM & IDM
Bengalgram	IPM & IDM
Vegetables	IPM & IDM
Citrus	IPM & IDM
Home Science	
	Household Food security
	Drudgery Reduction for farm women
	Women empowerment
	Value Addition
	Income generation activity

3. TECHNICAL ACHIEVEMENTS

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

OFT				FLD			
1				2			
Number of OFTs		Number of farmers		Number of FLDs		Number of farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
13	13	124	124	12	13	408	367

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
88	162	2468	7074	13	98	400	2125

Seed Production (Qtl.)		Planting materials (Nos.)	
5		6	
Target	Achievement	Target	Achievement
100	100.18	5000	3811

Livestock, poultry strains and fingerlings (No.)		Bio-products (Kg)	
7		8	
Target	Achievement	Target	Achievement
100000	265000	1000	3500

3.1. B. Operational areas details during 2023

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	**Soybean**	**Moisture stress, Stunted growth & reduced yield, Stem fly & girdle beetle incidence**	**280000**	**Dastapur, Warud,Sohol, Dhotra J., Gaywal,Kalamaba mahali ,Parditakmor,Wadji, Mungala**	**OFT, FLD, Training, Field visit, Field Day**
2	**Cotton**	**Moisture stress, Longer duration, Pest Weed complex, Low yield,**	**19518**	**Karanja & Risod Blocks**	**OFT, FLD, Training, Field visit, Field Day**
3	**Pigeon pea**	**Low yield, stunted height, weaker stem & branching, wilting**	**35000**	**Dastapur, Warud,Sohol, Dhotra J., Gaywal, Kalamaba mahali ,Parditakmor,Wadji, Mungala**	**OFT, FLD, Training, Field visit, Field Day**
4	**Safflower**	**Lower soil moisture, Pest losses, low yield**	**300**	**Risod block**	**OFT Training, Field visit, Field Day**
5	**Linseed**	**Lower soil moisture, Pest losses, low yield**	**50**	**Risod block**	**OFT Training, Field visit, Field Day**
6	**Bengal gram**	**Low yield, stunted height & yellowing, weaker branching, wilting**	**21000**	**Dastapur, Warud,Sohol, Dhotra J., Gaywal, Kalamaba mahali,Parditakmor,Wadji, Mungala**	**OFT, FLD, Training, Field visit, Field Day**
7	**Wheat**	**Water shortage, variety suitable for dryland sowing and limited irrigation**	**4000**	**Dastapur,Warud Sohol, Gaywal, Kalamaba mahali , Wadji,**	**OFT, FLD, Training, Field visit, Field Day**
8	**Wheat**	**Low yield, Substitute crop to alter the Gram suffering by wilt disease**	**800**	**Mungala, Gaywal, Wadji**	**OFT,FLD**
9	**Groundnut Summer**	**Low yield, pegging failure**	**2000**	**Risod Malegaon block**	**FLD, Training, Field Day visit,**
10	Orange	Dieback, Fruit Drop, Poor Quality, Uneven Fruiting, Phytopthora infestation, Bahar Management, INM, Irrigation practices	2560 ha	Wadji, Adoli, Belkhed, Wanoja, Shendurjana, Wanoja	OFT, FLD and Training on Bahar Treatment in Orange, INM, Citrus Declining, Irrigation management,
12	Guava	Awareness about Planting practices. Lack of Training and pruning. Lack nutrient management, Bahar management Nematode and other pest disease	200 ha	Wadji, Mangul Zhanak, Khadki Sadar, Wasari	Method demonstrations on Training and Pruning in Guava INM and IPM Bahar Treatment.
13	Turmeric	Unavailability of quality planting material of short duration varieties, Water scarcity for timely sowing, Poor yield and quality. Quality detoriation due to Post harvest processing & handling	3550 ha	Asegaon, Warud, Selu Khadse, karda , Shirpur, Koyali	Introduction of Short duration varieties, INM, IPM, Post Harvest Management, Assessment on type of planting material used . Trainings, Diagnostic visits
14	Onion	Scarcity of irrigation water in bulb development stage, Poor quality and Yield, Heavy Incidence of weeds, Low market rates, improper storage of produce. Availability of labor for transplanting of seedlings, higher cost of labor	150 ha	Warud, Karanja, Rithad, Belkhed	Promotion of Off season (Kharif & Late Kharif) onion production through training and demonstrations INM, Nursery Management, Post Harvest Management. OFT on direst sowing of onion seed in main field. Varietal demonstraions
15	Onion Seed Production	Low Yield due to traditional sowing practices, Incidence of pest and diseases, poor Pollination, Imbalance nutrient management.	600 ha	Selu khadse, wadji, Karda, Asegaon,	Sowing practices in onion seed production, IPM, INM, Micro irrigation systems, Pollination improvement
16	Soybean	Soybean stem fly, girdle beetle and root rot	18000-20000 ha	Wadji, Mungala,Pardi Takmor,Datapur, Warud, Dhotra, Kalamba Mahali	FLD, OFT and Training
17	Bengalgram	Pod borer incidence and damage results in low yield in Bengal gram	28000-30000 ha	Wadji, Mungala,Pardi Takmor,Datapur, Warud, Dhotra, Kalamba Mahali	OFT, FLD and Training
18	Greengram	Pulse beetle in stored green gram	10 to15% damage during storage of	Wadji, Mungala,Pardi Takmor,Datapur, Warud, Dhotra, Kalamba Mahali	OFT

			green gram grain		
19	Greengram	Use of older, non recommended pest and disease susceptible variety	7500-10000 ha	Wadji, Mungala,Pardi Takmor,Datapur, Warud, Dhotra, Kalamba Mahali	FLD and Training
20	Blackgram	Use of older, non recommended pest and disease susceptible variety	7500-10000 ha	Wadji, Mungala,Pardi Takmor,Datapur, Warud, Dhotra, Kalamba Mahali	FLD and Training
21	Pigeonpea	Use of older, non recommended and disease susceptible variety and Wilt	30000-35000 ha	Wadji, Mungala,Pardi Takmor,Datapur, Warud, Dhotra, Kalamba Mahali	FLD and Training
22	Cotton	Cotton Pink bollworm	15000-16000 ha	Wadji, Mungala,Pardi Takmor,Datapur, Warud, Dhotra, Kalamba Mahali	FLD and Training
23	Chilli	Chillithrips and leaf curl	1500-2000 ha	Wadji, Mungala,Pardi Takmor,Datapur, Warud, Dhotra, Kalamba Mahali	FLD and Training
24	Wheat	Malnutrition among farm families due to low nutrient diet	-	Manabha, Sheluwada	Assessment of Biofortified Wheat MACS 4028) for nutritional security for farm families
25	Turmeric	Female workers in performing different activities in turmeric production system indicated that maximum time consuming activity and health problem of the farm women reported were burning sensation to the skin, skin peeling and allergy	-	Manabha, Sheluwada	**Assessment of low-cost package of technology for drudgery mitigation in turmeric production system**
26	Soybean	During soybean harvesting scratches are found on hand	-	Manabha, Sheluwada	Demonstration on soya harvesting mittens
27	Wheat	Food grain damage and drudgery in grain cleaning	-	Manabha, Sheluwada	Method Demonstration on use of Insect Prob trap
28	Vegetables and fruits	Malnutrition among farm families due to low nutrient diet		Manabha, Sheluwada	Demonstration on Nutrition kitchen garden for nutritional security for farm families
29	Mushroom Oyster mushroom (Sajurkaju)			Manabha, Sheluwada	Demonstration on Mushroom Cultivation for nutritional security of r farm families and income generation
30	Wheat	Food grain damage and drudgery in grain cleaning	-	Dastapur	Training on Practices of safe storage grain
31	Vegetables & Fruit	Unaware about Balance diet	-	Dastapur	Training on Layout and planning for establishment of Nutrition kitchen garden
32	Farm Implement	Drudgery-	-	Kalamabamahali	Training on Introduction and use of women friendly

					implements for farm women
33	Soybean	During soybean harvesting scratches are found on hand	-	Kalamabamahali,	Training on cutting and stitching of soya mitten
34	-	Poor economic condition and lack of 10knowledge about balance diet	-	Kalamabamahali,	Training on Important of healthy diet for pregnant and lactating women
35	-	Poor economic condition and lack of knowledge about balance diet	-	Dastapur, Karada	Training on Introduction and important of balance diet in adolcent
36	-	Unaware about nutritive value of soybean	-	Karada,	Training on soya processing (Soya milk, soya tofu, soya nuts)
37	-	Unaware about value addition of fish	-	Risod Block	Training on Fish processing enterprise for self employment
38	-	Unaware about value addition of Fruits & Vegetables	-	Manabha, Sheluwada	Training on Fruits and Vegetables processing (Tomato Sauce, tomato ketchup, turmeric pickle)
39	-	Poor economic condition and lack of knowledge about balance diet	-	Manabha, Sheluwada	Training on Preparation of infant instant (Supplementary Weaning food ARF)
40	-	Lack Of income generation activity	-	Manabha, Sheluwada	Training on Making Eco-friendly Holi colour
41	-	Lack Of income generation activity	-	Manabha, Sheluwada	Training on Vegetables Dehydration (Fenugreek, Spinach bitter guard
42	-	Lack Of income generation activity	-	Manabha, Sheluwada	Training on West to Wealth From agriculture west

* Support with problem-cause and interventions diagram

3.2. Technology Assessment (Kharif 2023, Rabi 2022-23, summer 2022)

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

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	TOTAL
Integrated Nutrient Management										
Varietal Evaluation	0	0	02	0	0	0	0	0	0	02
Integrated Pest Management	0	0	01	0	01	0	0	0	0	02
Integrated Crop Management	0	01	0	01	01	01	0	0	0	04
Integrated Disease Management	0	0	01	0	0	0	0	0	0	01
Small Scale Income Generation Enterprises	0	0	0	0	0	0	0	0	0	0
Weed Management	0	0	0	01	0	0	0	0	0	01
Resource Conservation Technology	0	0	0	0	0	0	0	0	0	0
Farm Machineries	0	0	0	0	0	0	0	0	0	0
Integrated Farming System	0	0	0	0	0	0	0	0	0	0
Seed / Plant production	0	0	0	0	0	0	0	0	0	0
Value addition	01	0	0	0	0	0	0	0	0	01
Drudgery Reduction	0	0	0	01	0	0	0	0	0	01
Storage Technique	0	0	0	0	0	0	0	0	0	0
Mushroom cultivation	0	0	0	0	0	0	0	0	0	0
Total	**01**	**01**	**02**	**01**	**2**	**1**	**0**	**0**	**0**	**12**

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

Thematic areas	Cattle	Poultry	Piggery	Rabbitry	Fisheries	TOTAL
Evaluation of Breeds	0	0	0	0	0	0
Nutrition Management	0	0	0	0	0	0
Disease of Management	0	0	0	0	0	0
Value Addition	0	0	0	0	1	01
Production and Management	0	0	0	0	0	0
Feed and Fodder	0	0	0	0	0	0
Small Scale income generating enterprises	0	0	0	0	0	0
TOTAL	**0**	**0**	**0**	**0**	**01**	**01**

B. Achievements on technologies Assessed

B.1. Technologies Assessed under various Crops

Thematic areas	Crop	Name of the technology assessed	No. of trials	Number of farmers	Area in ha (Per trial covering all the Technological Options)
Integrated Nutrient Management	Orange	Assessment on Integrated Nutrient Management for quality fruit production in Mandarin	01	07	2.80
Integrated Crop Management	Turmeric	Assessment on Influence of type of planting material used for yield and quality in turmeric	01	07	2.80
	Onion	Assessment on Direct sowing of onion by onion seeder in Late kharif season	01	07	2.80
	Orange	Assessment on Crop regulation in Mandarin	01	07	2.80
Varietal Evaluation	Chickpea	Assessment of improved variety in Chickpea crop	01	13	5.2
	Pigeonpea	Assessment of improved variety in Pigeonpea crop	01	07	5.6
Integrated Crop Management	Soybean	Assessment of foliar nutritional spraying in Soybean crop	01	13	5.2

Thematic areas	Crop	Name of the technology assessed	No. of trials	Number of farmers	Area in ha (Per trial covering all the Technological Options)
Weed Management	Cotton	Assessment of Integrated Weed Management practice in Cotton crop	01	07	5.6
Integrated Pest Management	Brinjal	Assessment of IPM technology with incorporation of need /ETL based use of newly recommended insecticide Lamdacylohathrine 5% EC @ 6 ml + 10 lit of water against Brinjal shoot and fruit borer	01	14	5.6
	Bengal gram	Assessment of IPM technology with incorporation of need /ETL based use of newly recommended insecticide Ethion50% EC @ 20 ml + 10 lit of water against Bengal gram pod borer at 50% flowering followed by spraying of Chlorantraniprole 18.5 SC @ 2.5 ml + 10 lit of water 15 days after first spraying against pod borer on Bengal gram	01	14	5.6
Integrated Disease Management	Pigeon pea	Assessment of IDM technology with incorporation of newly recommended fungicide seed treatment molecule Carboxin 37.5%+Thiram 37.5% @ 3gram/kg of the seed before sowing of Pigeon pea seed against wilt in pigeonpea followed by seed treatment of Trichodermaviride @ 10 gram/ Kg of seed.	01	14	5.6
Value addition	Wheat	Assessment of Bio fortified Wheat MACS 4028) for nutritional security for farm families	01	07	1.4
Drudgery Reduction	Turmeric	Assessment of low-cost package of technology for drudgery mitigation in turmeric production system	01	07	1.4
Total			**13**	**76**	**30.4**

B. 2. Technologies assessed under Livestock & fishery assessment

Thematic areas	Name of the livestock enterprise	Name of the technology assessed	No. of trials	No. of farmers
Processing & Value addition	Fisheries	Insulated fish bags	01	07
Total			**01**	**07**

B.3 Technologies assessed under other enterprises

Name of Enterprises	Name of the technology assessed	No. of trials	No. of farmers
Mushroom	**0**	**0**	**0**
Apiary	**0**	**0**	**0**
Vermicompost	**0**	**0**	**0**
Tailoring	**0**	**0**	**0**
Nutrition Garden	**0**	**0**	**0**
Nursery Management	**0**	**0**	**0**
Production and Management	**0**	**0**	**0**
Eentrepreneurship development	**0**	**0**	**0**
Engegy consrvation	**0**	**0**	**0**
storage techniques	**0**	**0**	**0**
House hold food security	**0**	**0**	**0**
organic farming	**0**	**0**	**0**
mechanization	**0**	**0**	**0**
Bee keeping	**0**	**0**	**0**
Seed production	**0**	**0**	**0**
post-harvest management	**0**	**0**	**0**
other	**0**	**0**	**0**

B 4.Technologies assessed under Women empowerment assessment

Name of Enterprises	Name of the technology assessed	No. of trials	No. of farmers
Drudgery Reduction	Assessment of low-cost package of technology for drudgery mitigation in turmeric production system	**01**	**07**
Nutrition security	Assessment of Biofortified Wheat MACS 4028) for nutritional security for farm families	**01**	**07**
Total		**02**	**14**

C. 1. 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
Bengal gram	Irrigated, medium deep Vertisol	Low grain wt. & reduced yields	Assessment of improved variety in Chickpea crop	1	T1: Farmers practice (use Jaki-9218 seeds) T2: PDKV Kanak variety for sowing	Plant height, Pods/plant	T1: 39.0 cm, 48 pods/ plant, T2: 41.0 cm, 51 pods/ plant	In Bengal gram crop, theassessed practice (T2) with Improved variety PDKV Kanak gave 17.5 q/ha yield which is 11.1% higher than farmers practice (T1) with var. JAKI 9218.	The variety PDKV Kanak is giving more pods & no wilting loss problem is observed over local check variety JAKI 9218 was suffering loss due to wilt (7-10%) but the improved variety PDKV Kanak was not affected by wilt disease.	Nil	Nil
Soybean	Rainfed medium deep Vertisol	Low yield , moisture stress in Vegetative growth & Flowering	Assessment of foliar sprayin g in Soybean crop	1	T1 Farmers practice without foliar spray application T2 Spraying 15 ppm Gibberellic acid 8.3 gm (90% ai.)/ha at flowering & pod filling stage	Plant height, Pods/plant	T1: 41 cm, 45 pods/ plant, T2: 40.0 cm, 49 pods/ plant	In soybean crop the recommended practise of (T2) Spraying 15 ppm Gibberellic acid 8.3 gm (90% ai.)/ha at flowering - pod filling stage showed 12.6 % increased yield over farmers practise	There was better grain pod development & flowering condition which gave higher yield & profit under intervention of Spraying 15 ppm Gibberellic acid 8.3 gm (90% ai.)/ha at flowering & pod filling stage	Nil	Nil

Pigeon pea	Rainfed medium deep Vertisol	Low yield, lower quality & less profit	Assessment of improved variety of Pigeon pea	1	T1 Farmers practice (use local Maroti seed) T2 Seed of Var. BDN 716 for sowing T3 Seed of Var.GRG 152 seed for sowing	Plant height, Pods/plant	T1: 128 cm, 98 pods/ plant, T2: 118 cm, 102 pods/ plant T3: 120 cm, 105 pods/ plant	Recommended practice with GRG 152 var. seed use showed 17.0 % increase in the yield over farmer practice.	The local & BDN 716 varieties were low yielding and less resistant to wilt attack than var. GRG 152 with better growth & pigeon pea crop yield.	Nil	Nil
Cotton	Rainfed medium deep Vertisol	Low yield, lower quality & less profit	Assessment on Integrated Weed Management practice in Cotton crop	1	1 Farmers practice 3(Hoeing+ HW) 20,40,60 DAS 2 Pendimethalin 38.7% 0.67ai/ha PE fb Hoeing 30-35 DAS HW 40-45 DAS 3 Parthioback Sodium 6% EC+Quiz. Ethyl 4% EC 0.06+0.04 ai/ha PoE 20DAS fb Hoeing 35-40 DAS	Plant height, Bolls/plant WI	T1: 82 cm, 36 bolls/ plant,0.0 T2: 85 cm, 34 bolls/ plant,3.80 T3: 80 cm, 37 bolls/ plant, 1.40	Farmers realized the importance of recommended improved practice for increase benefit & yields	The assessed newly recommend weedicide gave lower WI revealing the nearly atpar weedicide effect that of the control weedy check yields too .	Nil	Nil
Orange	Irrigated	Irregular flowering and bearing due to inadequate stress in heavy or high loamy soils which leads to negligence in orchard management resulting in to crop failure. Low yield and low income	Assessment on Integrated Nutrient Management for quality fruit production in Mandarin	07	Application of 900:300:300 NPK g /plant in 5 splits doses along with application of VAM 500 gm, 100 gm PSB, 100 gm Azospirilum and 100 gm trichoderma and FYM/VC 1. Stress Release Stage – 270:120:30 NPK g/plant 2. Pea size – 270:105:30 NPK g/plant 3. Marble size – 180:75:90 NPK g/plant 4.Egg size 195:00:75	Yield/ha, No of Fruits/tree, Average wt of fruit C: B Ratio	Farmers practice 1. Yield/ha, -171.60 2. No of Fruits/tree- - 615 3. Average wt o fruit – 146.6 gm 4. C: B Ratio -3 – Assessed practice 5. Yield/ha, -264 6. No of Fruits/tree- - 698 7. Average wt o fruit – 154.1 gm C: B Ratio -4.64-	The results shows that there is -53.85 % higher yield in T2- assessed technology over Farmers practice. The yield and quality of produced has been improved in T2. Net income is found to increased by 82.8 % over farmers practice in with highest BC ratio of 4.64.	The plant health and quality of fruits is excellent. The regularity of fruiting is also observed in assessed plot	NIL	NIL

					NPK g/plant 5. Pre mature - 90:00:75 NPK g/plant						
Turmeric	Irrigated with medium soils.	Turmeric is the major horticultural crop of the district. Availability of quality palting material is lacking. Majority of farmers are using primary and secondary rhizome as plating material which leads to low rhizome yield	Assessment on Influence of type of planting material used for yield and quality in turmeric	07	Farmers Practice (T1) – using primary and secondary rhizome as plating material Assessed Practice (T2) – Use of Mother rhizome as planting material	1) Yield (q/ha) 2) No. of til /plant 3) B :C Ratio	Farmers Prac (T1) – 1) Av fr Yield (q/ha) -268 2) Av dr Yield (q/ha) -54. 3) No. tillers /plant 4.48 4) B :C Ra - 1:3.71 Assessed Prac (T2) – 1) Av fresh Yield (q/ha) – 301.80 2) Av dr Yield (q/ha) - 60 3) No. tillers /plant – 5.2 4) B :C Ra 1:3.97	The results shows that the highest yield of 301.80 qt/ha was found in T2- against farmers practice. (268.2) The highest quality, net benefits and BC ration was observed in Assessed technology	Number of leaves, leaf area, stamp size and number of tillers has been found best in mother rhizome plot. The infestation of pest and diseases is also found less. Only rotting of bulb at initial stage is observed more in T2	Not required	NA
Onion	Irrigated with medium soils.	Onion is cultivated in Rabbi season only, which fetches less market price due to glut in the market. Against to that, soils of the area are suitable for Late kharif onion. Transplanting method is labour intensive and resulting	Assessment on Direct sowing of onion by onion seeder	07	Farmers Practice (T1) – Nursery raising and transplanting of seedling Assessed Practice (T2) – Direct sowing of onion by onion seeder in Late kharif season	i) Yield (qt/ha) ii) Seed rate iii) Duration of crop iv) Av. Rate (Rs/qt)	Farmers Prac (T1) – Yield (qt/ha) – 263 Seed rate – 10 kg/h Duration of cr 170.3 B:C ratio – 1:3.98 Assessed Prac	The result of trails shows highest yield (241.40 qt/ha) and highest BC raion (1:4.86) in assessed technology. Also the crop duration has	Uniform sowing of onion, expected spacing is achieved and crop is ready to harvest 18 to 25 days earlier as compared to T1. Reduced labor cost for	Not required	NA

		in to higher cost of production.	in Late kharif season			v) B: C ratio	(T2) – Yield (qt/ha)- 271.40 Seed rate -5 kg/ha Duration of crop – 152 B:C ratio – 1:4.86	been reduced to 11% and seed rate were also reduced by 50 %	transplanting while the number of irrigations required more in direct sowing		
Orange	Irrigated with medium soils.	Irregular flowering and bearing due to inadequate stress in heavy or high loamy soils which leads to negligence in orchard management resulting in to crop failure. Low yield and low income	Assessment on Crop regulation in Mandarin	07	Farmers Practice (T1) – Only water stress for 30 to 50 days Assessed Practice (T2) – Soil application of Paclobutrazol 9-12 g/plants in April month	1) Yield/ha, 2) Regularity in bearing (%) 3) No of Fruits/tree, 4) Average wt of fruit, 5) C: B Ratio	Farmers Practice (T1) – Only water stress for 30 to 50 days Yield/ha, - 152.28 Regularity in bearing (%) – 62.22 % No of Fruits/tree - 615, Average wt of fruit -146.67, C: B Ratio – 1:2.81 Assessed Practice (T2) Soil application of Paclobutrazol 9-12 g/plants in April month Yield/ha, - 349.18 Regularity in bearing (%) – 94.81 % No of Fruits/tree,- 698	The results shows that the of 349.00 qt/ha was found in T2- i.e. Application of Paclobutrazol 9-12 g/plants in April month against farmers practice. The highest quality, net benefits and BC ration was observed in Assessed technology	95 % plants showes uniform flowring and bearing of fruits. Green ness & vegour of plants has been improved.	Not required	NA

							Average wt of fruit,-157.14 C: B Ratio – 5.69				
Brinjal (kharif2023)	Irrigated	Brinjal is one of major vegetable crop of KVK operational area grown on 220 ha area. The av. annual production of Brinjal in district is 3871 MT and Brinjal shoot and fruit borer is single pest alone reduced the av. District production in the range of 7% to 59% with a average reduction of 33% annually.(Ref.: District Static Mentioned inn SREP ATMA Washim 2016) The review of literature revealed that the on an av.1 larvae of brinjal shoot and fruit borer can damage 4 to 6 fruits and severe infestation may lead 84% reduction in yield. (Ref.Hill,D.B. Agricultural Insect Pest of Tropics and their control,Cambridge University Press Cambridge)	Assessment of Newly recommended pesticide molecule Lambda Cylohathrin 5 EC against Brinjal fruit and shoot borer	14	T-1 (Farmers practice) Total 4 spraying first Two spraying of Trizophos 40% EC 20 ml + 10 lit of Water followed by Two spraying of Chlorantraniprole 18.5 SC 3ml +10 lit of water T-2 (Recommended practice) : (1)Removal of affected shoot and destroying the larvae at the time of plucking of fruits (2) Use of Trichogrammachiloni us 50000 eggs/ha 5 release at weekly interval (3)Need based spraying of Lamdacylohathrine5 % EC @ 6 ml + 10 lit of water against Brinjal shoot and fruit borer	1) Av.% fruit damage 2)Cost of plant protection Rs/ha3) Saving of plant protection cost Rs/ha4) yield q/ ha5)B:C: ratio 6) ICBR	In Farmers Practice *Av.% fruit damage : 10.80%* In recommended Practice *Av.% fruit damage : 4.60%*	The assessed technology found to be superior over farmer practice. In assess technology there is a 57.40 % reduced fruit damage was recorded over farmer practice with 21.92% increase in the yield with higer B:C ratio	The farmers preferred the assessed technology.	No	**No**
Bengalgram (Rabi 2022)	Irrigated	Bengalgram is one of the major rabbi crop of KVK Washim operational area. Bengalgram pod borer is the major insect pest responsible for considerable reduction of yield in the Bengalgram crop. The older pesticide molecule use by the farmer for the management of	Assessment of IPM technology with incorporation of need /ETL based use of newly recommended	14	T-1 (Farmer Practice) Ist spraying of Quinolphos, 25 EC 20ml+10lit of water at 40-50% flowering and IInd spray 15 days after Ist spray i.e.spraying of Trizophos 35%+Deltamethrine 1% EC 25ml+10lit of	Av. % pod damage	In Farmers Practice *Av.% pod damage : 3.10 %* In recommended Practice *Av.% pod damage : 1.60 %*	The assessed technology found to be superior over farmer practice. In assess technology there is a 48.38 % reduced pod damage was recorded over farmer practice with 17.55 %	The farmers preferred the assessed technology.	No	**No**

		Bengalgram pod borer was found to be less effective. Dr. PDKV Akola as per its recommendation 2014-15 recommended LamdaCylohathrin 5 E.C. @ 12.5ml+10lit of water against this pest. The new recommendation had been assessed for the solution of the problem under micro level situation.	insecticide Ethion50% EC @ 20 ml + 10 lit of water against Bengal gram pod borer at 50% flowering followed by spraying of Chlorantraniprole 18.5 SC @ 2.5 ml + 10 lit of water 15 days after first spraying against pod borer on Bengal gram		water T-2 (Recommended Practice) (1) Installation of bird perches @ 15/ha at 30 DAS (2) Two spraying of HaNPV @500 LE/ha (10 ml/10 lit) first at bud / flower initiation followed by second spray after 10 days after first spray (3) Spraying of Azadirachtin 300 PPM @50 ml + 10 lit of water after 10 days of second spray ofHaNPV. (4) ETL based spray of Ethion50% EC @ 20 ml + 10 lit of water against Bengal gram pod borer at 50% flowering followed by spraying of Chlorantraniprole 18.5 SC @ 2.5 ml + 10 lit of water 15 days after first spraying against pod borer on Bengal gram			increase in the yield with higer B:C ratio			
Pigeon pea (kharif 2023)	Rain fed	Pigeon pea is major kharif pulse crop of KVK operational area grown on 55586 ha area. Wilt is major disease responsible for considerable reduction of pigeon pea yield up to 30to 35% in district (Ref. SAO and PD ATMA Washimfeed back in Kharif ZREAC Washim) The review of literature	Assessment of IDM technology with incorporation of newly recommended fungicide seed treatment	14	T-1 (Farmers practice) (1) Sowing of pigeon pea seed without seed treatment (2) Non crop rotation (3)Sowing of wilt susceptible variety Maroti 8863 T-2 (Recommended practice) :(1) Crop rotation (2)Sowing of	Av. % incidence of wilt	In Farmers Practice Av.% wilt incidence: 7.20 % In recommended Practice Av.%wilt incidence: 2.20%	The assessed technology found to be superior over farmer practice. In assess technology there is a 69.44 % reduced wilt incidence was recorded over farmer practice with 16.66 % increase in the	The farmers preferred the assessed technology.	No	No

		revealed that the pre flowering and post flowering (at pod formation) wilt incidence in pigeon pea may results in 100% and 30% reduction in pigeon pea yield respectively.. (Ref. CROPSAP Crop Advisory Booklet of VNMAU 2015) The random questionnaire survey and group discussion of KVK SMS Plant Plant protection with Pigeon pea growers in district (2014-2018) reveled that the approximate 17% to 20% of av. Wilt incidence is recorded on pigeon pea in district with yield reduction ranges from 3% to 34%	molecule Carboxin 37.5%+Thiram 37.5% @ 3gram/kg of the seed before sowing of Pigeon pea seed against wilt in pigeonpea followed by seed treatment of Trichodermaviride @ 10 gram/ Kg of seed.		tolerant variety PKV TARA / BDN 716 (3) seed treatment molecule Carboxin 37.5%+Thiram 37.5% @ 3gram/kg of the seed before sowing of Pigeon pea seed against wilt in pigeonpea followed by seed treatemen of Trichodermaviride @ 10 gram/ Kg of seed.			yield with higer B:C ratio			
Wheat	In Washim District women (35.5%) and Children (60.3%) are Anemic(Source National family health report- 4 2015-16	Malnutrition among farm families due to low nutrient die	Assessment of Bioforti fied Wheat MACS 4028) for nutritional security for farm families	1 4	Bio Fortified Wheat MACS4028	Nutritional value of Thali 1-Protein 2-Iron	1—40g/day 2- 13mg/day	1- 39g/day 2- 11.5mg/day	Chapati made from bio fortified wheat flour MACS 4028 has good taste, texture, and color.	nil	Nil

Turmeric	Major role of farm women in the turmeric production system in washim district was found to be in planting rhizomes, weeding, harvesting and cleaning activities. In turmeric production system were performed by mannually	Female workers in performing different activities in turmeric production system indicated that maximum time consuming activity and health problem of the farm women reported were burning sensation to the skin, skin peeling and allergy	**Assessment of low-cost package of technology for drudgery mitigation in turmeric production system**	14	**low-cost package of technology for drudgery mitigation in turmeric production system(ukari & Finger guards, sulbha bag, new khurpi, wooden rack,)**	1- planting of turmeric rhizomes by using ukari and turmeric planting of rhizomes by using finger guards (area: m/hr), 2- weeding by new khurpi (area: m/hr), 3- manual fertilizers application by using sulbha bag (area: m/hr), 4- sorting and cleaning (Q/hr.)	1- 61.9 m//hr. 2- 100.17 m/hr. 3- 300.0 m/hr. 4- 5q/hr.	1-75.5m/hr. 2- 132.5m/hr. 3-350m/hr. 4-5.4q/hr.	when these low cost tool kit were used, work speed is increased and time was saved , while injuries to nails and hands were reduce	nil	nil

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	B:C Ratio
13	14	15	16	17	18
Technology option 1: (Farmer's practice var. Jaki 9218)		Bengal gram	15.5	51032	2.61
Technology option 2 : Var . PDKV Kanak	Dr. PDKV, Akola	Bengal gram	17.2	59310	2.83
Technology option 1: (Farmer's practice without foliar spray application)		Soybean	15.5	25233	1.55
Technology option 2 : Spraying 15 ppm Gibberellic acid 8.3 gm (90% ai.)/ha at flowering & pod filling stage	Dr. PDKV, Akola	Soybean	17.4	33079	1.70
Technology option 1 (Farmer's practice : Var local Maroti)		Pigeon pea	11.7	54044	3.32
Technology option 2 : Var. BDN 716	MPKV Rahuri	Pigeon pea	12.8	60916	3.60
Technology option 3 : Var. GRG 152	ARS Gutur	Pigeon pea	13.9	68459	3.92
Technology option 1: 3(Hoeing+ HW) 20,40,60 DAS	Dr. PDKV, Akola	Cotton	17.9	52777	1.75
Technology option 2: Pendimethalin 38.7% 0.67ai/ha PE fb Hoeing 30-35 DAS HW 40-45 DAS	Dr. PDKV, Akola	Cotton	17.0	50580	1.76
Technology option 3: Parthioback Sodium 6% EC+Quiz. Ethyl 4% EC 0.06+0.04 ai/ha PoE 20DAS fb Hoeing 35-40 DAS	Dr. PDKV, Akola	Cotton	17.5	53095	1.79
Technology option 1 (Farmer's practice)			171.60 Qt/ha	328480.00	1:3.16
Technology option 2 Application of 900:300:300 NPK g /plant in 5 splits doses along with application of VAM 500 gm, 100 gm PSB, 100 gm Azospirilum and 100 gm trichoderma and FYM/VC	Dr. PDKV, Akola	Orange	264.00 Qt/ha	600600.00	1:4.64
Technology option 1 use of primary and secondary rhizome as plating material	Farmers practice	Turmeric	54.18 Qt/ha	267227.27	1: 3.71
Technology option 2 Use of Mother rhizome as planting material	Dr. PDKV Akola	Turmeric	60.97 Qt/ha	307845.45	1: 3.97
Technology option 1 Nursery raising and transplanting of seedlings	Farmers practice	Onion	261.20 Qt/ha	275880	1: 3.98
Technology option 2 Direct sowing of onion by onion seeder in Late kharif season	IIHR Bengaluru	Onion	271.40 Qt/ha	323400	1: 4.86
Technology option 1 Only water stress for 30 to 50 days	Farmers practice	Orange	152.28 Qt/ha	274370.56	1: 2.81
Technology option 2 Soil application of	ICAR-CCRI, Nagpur	Orange	349.18 Qt/ha	834633.60	1: 5.69

Paclobutrazol 9-12 g/plants in April month					
T-1 (Farmers practice) Total 4 spraying first Two spraying of Trizophos 40% EC 20 ml + 10 lit of Water followed by Two spraying of Chlorantraniprole 18.5 SC 3ml +10 lit of water	Farmers practice	Fruit yield	22.80 t/ha	29800/-	1:1.16
T-2 (Recommended practice) : (1)Removal of affected shoot and destroying the larvae at the time of plucking of fruits (2) Use of Trichogrammachilonius 50000 eggs/ha 5 release at weekly interval (3)Need based spraying of Lamdacylohathrine5% EC @ 6 ml + 10 lit of water against Brinjal shoot and fruit borer	Dr PDKV Akola	Fruit yield	27.80 t /ha	83500/-	1:1.1.50
T-1 (Farmer Practice) Ist spraying of Quinolphos, 25 EC 20ml+10lit of water at 40-50% flowering and IInd spray 15 days after Ist spray i.e.spraying of Trizophos 35%+Deltamethrine 1% EC 25ml+10lit of water	Farmers practice	Grain yield	1.31 t/ha	29550/-	1:2.10
T-2 (Recommended Practice) (1) Installation of bird perches @ 15/ha at 30 DAS (2) Two spraying of HaNPV @500 LE/ha (10 ml/10 lit) first at bud / flower initiation followed by second spray after 10 days after first spray (3) Spraying of Azadirachtin 300 PPM @50 ml + 10 lit of water after 10 days of second spray ofHaNPV. (4) ETL based spray of Ethion50% EC @ 20 ml + 10 lit of water against Bengal gram pod borer at 50% flowering followed by spraying of Chlorantraniprole 18.5 SC @ 2.5 ml + 10 lit of water 15 days after first spraying against pod borer on Ben	Dr PDKV Akola	Grain yield	1.54 t /ha	40090/-	1:2.55
T-1 (Farmers practice) (1) Sowing of pigeon pea seed without seed treatment (2) Non crop rotation (3)Sowing of wilt susceptible variety Maroti 8863	Dr PDKV Akola	Grain yield	0.66 t/ha	26600/-	1:2.01
T-2 (Recommended practice) :(1) Crop rotation (2)Sowing of tolerant variety PKV TARA / BSMR736 (3) seed	Farmers practice	Grain yield	077 t/ha	35820/-	1:2.38

treatment molecule Carboxin 37.5%+Thiram 37.5% @ 3gram/kg of the seed before sowing of Pigeon pea seed against wilt in pigeonpea followed by seed treatemen of Trichodermaviride @ 10 gram/ Kg of seed					
Technology option 1 (Farmer's practice)					
Technology option 2	ARI Pune	nil	Nil	Nil	Nil
Technology option 3					
Technology option 2- low-cost package of technology(Digging Tool, Finger guards,Earthing up stool, sulbha bag, New khurpi, wooden rack)	VNMKV Parbhani	nil	Nil	Nil	nil

C. 2. Details of each On Farm Trial for assessment to be furnished in the following format separately as per the following details:

OFT1: Soybean crop

1	**Title of Technology Assessed (Year 1)**	**Assessment of foliar spraying in Soybean**
2	**Problem Definition**	In Washim district Soybean is a major oilseed crop cultivated on 3.06 lakh ha. area during kharif season. Farmers are facing the problem of declining crop yield, losses to crop due to lower quality, less vegetative vigor, reduced yield , various pests and diseases.
3	**Details of technologies selected for assessment**	T1 Farmers practice without foliar spray application T2 Spraying 15 ppm Gibberellic acid 8.3 gm (90% ai.)/ha at flowering & pod filling stage
4	**Source of technology**	Dr PDKV Akola
5	**Production system and thematic area**	Integrated crop management
6	**Performance of the Technology with performance indicators their reaction**	In soybean crop the recommended practise of (T2) Spraying 15 ppm Gibberellic acid 8.3 gm (90% ai.)/ha at flowering - pod filling stage showed ie 17.4q/ha yield, 12.6 % increase over farmers practise
7.	**Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques**	Farmer realized the potential application of Spraying 15 ppm Gibberellic acid 8.3 gm (90% ai.)/ha at flowering - pod filling stage for better crop yields.
8	**Final recommendation for micro level situation**	It is recommended to use Spraying of 15 ppm Gibberellic acid 8.3 gm (90% ai.)/ha at flowering - pod filling stage for better crop yields.
9	**Constraints identified and feedback for research**	Nil
10	**Process of farmers participation and their reaction**	Farmers realized the importance of recommended cheapest intervention in Soybean crop for increased yield.

OFT2: Bengal gram crop

1	**Title of Technology Assessed**	**Assessment of improved variety in Bengal gram crop**
2	**Problem Definition**	Bengalgram is a major pulse crop grown on approx. 65000 ha area during Rabi season in the Washim district. The crop variety grown by majority of farmers is JAKI-9218, but due to the problem of wilt as well as less productivity farmers are now shifting towards changing the crop variety and adopting some newer practise alternatives. So the assessment was planned for the newer recommended technology as high yielding variety PDKV Kanak to check its feasibility during Rabi season.
3	**Details of technologies selected for assessment**	T1: Farmers practice (local var. JAKI 9218) T2: Use of PDKV Kanak variety seed
4	**Source of technology**	Dr PDKV Akola
5	**Production system and thematic area**	Varietal evaluation
6	**Performance of the Technology with performance indicators their reaction**	In Bengal gram crop, the assessed practice (T2) with Improved variety PDKV Kanak gave 17.2 q/ha yield which is 11.1% higher than farmers practice (T1) with var. JAKI 9218. The variety is giving more pods & is not susceptible to wilt.
7.	**Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques**	The Bengalgram crop variety PDKV Kanak is resistant to wilt, giving more pods than farmers var. JAKI9218 Farmers preferred the assessed technology
8	**Final recommendation for micro level situation**	It is recommended to use improve variety PDKV Kanak seed of Bengal gram crop to have resistant to wilt disease and increased yield.
9	**Constraints identified and feedback for research**	Nil
10	**Process of farmers participation and their reaction**	Farmers realized the importance of recommended improved variety for use in avoiding the wilt and increase the yields.

OFT3: Pigeon pea crop

1	**Title of Technology Assessed (Year 1)**	**Assessment of improved varieties in Pigeon pea crop**
2	**Problem Definition**	In Washim district, Pigeon pea is a major pulse crop cultivated on 60000 ha area. Farmers regularly cultivate the local cultivar and are facing the problem like low yield, less number of pods and wilt disease in Pigeonpea crop. In order to address the farmers problem and aware them about improved crop technologies developed by research Institutes the activity for the farmers in the KVK adopted village.
3	**Details of technologies selected for assessment**	T1: Farmers practice (local var. Maroti seed) T2: Use of BDN 716 variety seed T3: Use of GRG 152 variety seed
4	**Source of technology**	VNMKV Parbhani, ARS Guntur 2020
5	**Production system and thematic area**	Varietal evaluation
6	**Performance of the Technology with performance indicators their reaction**	Pigeon pea crop improved variety GRG 152 gave yield of 13.9q/ha with 19% more yield followed by the BDN 716 variety over the yield of farmers local cultivated variety in pigeon pea crop .
7.	**Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques**	Farmers will preferred the assessed improved variety GRG 152 over the local cultivar
8	**Final recommendation for micro level situation**	It is recommended to use the var. GRG 152 over local var. cultivated by pigeon pea farmers for higher yield
9	**Constraints identified and feedback for research**	The farmers noticed that Var. Maroti is having lesser yield and is susceptible to wilt & so also is not suited if high rainfall is received.
10	**Process of farmers participation and their reaction**	Farmers realized the importance of recommended improved variety GRG 152 & BDN 716 for higher yields in pigeon pea crop

OFT4: Cotton crop

1	**Title of Technology Assessed**	**Assessment on Integrated Weed Management practice in Cotton crop**
2	**Problem Definition**	In Washim district, Cotton is a major fibre /cash crop cultivated on 19518 ha area. Farmers regularly cultivate the local cultivar and are facing the problem like low yield, weeds impairing cotton quality. In order to address the farmers problem and aware them about improved weed management technologies developed by research Institutes the activity for the farmers in the KVK adopted village.
3	**Details of technologies selected for assessment**	1 Farmers practice (Non weedicide) 2 Pendimethalin 38.5% as Preemergence fb Hoeing at 30 DAS 3 Parthiobac sodium 6%EC+Quialofop ethyl 4% EC Post emergence at 20DAS fb Hoeing at 30 DAS
4	**Source of technology**	Dr. PDKV Akola
5	**Production system and thematic area**	Weed management
6	**Performance of the Technology with performance indicators their reaction**	The assessed newly recommend weedicide Parthiobac sodium 6%EC+Quialofop ethyl 4% EC Post emergence at 20DAS fb Hoeing at 30 DAS gave lower WI(2.2) revealing the nearly atpar yields of farmers practice with total weedy check control .
7.	**Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques**	Farmers realized the importance of recommended improved practice for increase benefit & yields
8	**Final recommendation for micro level situation**	It is recommended to use improved weed management practice with treatment T3 Parthiobac sodium 6%EC+Quialofop ethyl 4% EC Post emergence at 20DAS fb Hoeing at 30 DAS for higher yield in cotton
9	**Constraints identified and feedback for research**	Nil
10	**Process of farmers participation and their reaction**	Farmers realized the importance of recommended improved practice for increase benefit & yields in Cotton

OFT5 :

1) **Title of Technology Assessed**	**Assessment on Integrated Nutrient Management in Mandarin for improvement of fruit quality and yield**
2) **Problem Definition**	25-30 % low yield than the actual potential due to flower drop, fruit drop, un even growth of fruits and also the quality of fruits detoriates due to irregular nutrient supply or uptake by the plants
3) **Details of technologies selected for assessment**	T-1 – Farmers Practice (Application of RDF in two splits) T2- Application of 900:300:300 NPK g /plant in 5 splits doses along with application of VAM 500 gm, 100 gm PSB, 100 gm Azospirilum and 100 gm trichoderma and FYM/VC 1. Stress Release Stage – 270:120:30 NPK g/plant 2. Pea size – 270:105:30 NPK g/plant 3. Marble size – 180:75:90 NPK g/plant 4. Egg size 195:00:75 NPK g/plant 5. Pre mature - 90:00:75 NPK g/plant
4) **Source of technology**	Dr. PDKV, Akola
5) **Production system and thematic area**	Irrigated with light to medium soil with depleting Water level fro December onwards Integrated Crop Management
6) **Performance of the Technology with performance indicators**	**Results Awaited**
7) **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques**	
8) **Final recommendation for micro level situation**	The technology is highly suitable for micro situation of washim district and should be horizontally spread on large number of farmers field
9) **Constraints identified and feedback for research**	NA
10) **Process of farmers participation and their reaction**	Active participation of the farmers has been given by the farmers and also are satisfied about this technology.

OFT6

<table>
<tr><td>1) Title of Technology Assessed</td><td>Assessment on Influence of type of planting material used for yield and quality in turmeric</td></tr>
<tr><td>2) Problem Definition</td><td>Turmeric is the major horticultural crop of the district. Availability of quality palting material is lacking. Majority of farmers are using primary and secondary rhizome as plating material which leads to low rhizome yield</td></tr>
<tr><td>3) 3. Details of technologies selected for assessment</td><td>Farmers Practice (T1) – using primary and secondary rhizome as plating material
Assessed Practice (T2) – Use of Mother rhizome as planting material</td></tr>
<tr><td>4) Source of technology</td><td>Dr. PDKV, Akola</td></tr>
<tr><td>5) Production system and thematic area</td><td>Irrigated with light to medium soil
Integrated Crop Management</td></tr>
<tr><td>6) Performance of the Technology with performance indicators</td><td>
<table>
<tr><td rowspan="2">SN</td><td rowspan="2">Parameter</td><td colspan="2">Treatments</td><td rowspan="2">% Change over T1</td></tr>
<tr><td>T1</td><td>T2</td></tr>
<tr><td>1</td><td>Av Fresh Yield (q/ha)</td><td>268.2</td><td>301.8</td><td>12.53</td></tr>
<tr><td>2</td><td>Av Dried Yield (q/ha)</td><td>54.18</td><td>60.97</td><td>12.53</td></tr>
<tr><td>3</td><td>No. of tillers/plant</td><td>4.48</td><td>5.22</td><td>16.52</td></tr>
<tr><td>4</td><td>Gross Income (Rs)</td><td>365727.27</td><td>411545.45</td><td>12.53</td></tr>
<tr><td>4</td><td>Net Income (Rs)</td><td>267227.27</td><td>307845.45</td><td>15.20</td></tr>
<tr><td>5</td><td>B:C ratio</td><td>3.71</td><td>3.97</td><td>6.89</td></tr>
</table>
</td></tr>
<tr><td>7) Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques</td><td>The results shows that there is increased in yield by 12.53 % in assess technology over Farmers practice. The yield and quality of produced has been improved in T2. Net income is found to increased by 15.20 % over farmers practice in with highest BC ratio of 3.97. The incidence pest and diseases were also found less in T2 as compared with T1</td></tr>
<tr><td>8) Final recommendation for micro level situation</td><td>Majority of the farmers are using figure rhizome. But the yield, quality and pest disease infestation were found better in assessed technology. So the farmers should adopt this technology</td></tr>
<tr><td>9) Constraints identified and feedback for research</td><td>NA</td></tr>
<tr><td>10) Process of farmers participation and their reaction</td><td>Active participation of the farmers has been given by the farmers and also are satisfied about this technology.</td></tr>
</table>

OFT 7

<table>
<tr><td>1) Title of Technology Assessed</td><td>Assessment on Direct sowing of onion by onion seeder in Late kharif season</td></tr>
<tr><td>2) Problem Definition</td><td>Onion is cultivated in Rabbi season only, which fetches less market price due to glut in the market. Against to that, soils of the area are suitable for Late kharif onion. Transplanting method is labour intensiv and resulting in to higher cost of production.</td></tr>
<tr><td>3) 3. Details of technologies selected for assessment</td><td>Farmers Practice (T1) – Nursery raising and transplanting of seedling
Assessed Practice (T2) – Direct sowing of onion by onion seeder in Late kharif season</td></tr>
<tr><td>4) Source of technology</td><td>IIHR Bangluru</td></tr>
<tr><td>5) Production system and thematic area</td><td>Irrigated with light to medium soil
Integrated Crop Management</td></tr>
<tr><td>6) Performance of the Technology with performance indicators</td><td>
<table>
<tr><td rowspan="2">SN</td><td rowspan="2">Parameter</td><td colspan="2">Treatments</td><td>%</td></tr>
<tr><td>T1</td><td>T2</td><td>Change over T1</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>1</td><td>Yield (qt/ha)</td><td>263.20</td><td>271.40</td><td>3.12</td></tr>
<tr><td>2</td><td>Seed Rate (kg/ha)</td><td>10.00</td><td>5.00</td><td>-50.00</td></tr>
<tr><td>3</td><td>Duration of crop (days)</td><td>170.00</td><td>152.00</td><td>-10.59</td></tr>
<tr><td>4</td><td>Gross Income (Rs)</td><td>368480.00</td><td>407100.00</td><td>10.48</td></tr>
<tr><td>5</td><td>Net Income (Rs)</td><td>275880.00</td><td>323400.00</td><td>17.22</td></tr>
<tr><td>6</td><td>B:C ratio</td><td>3.98</td><td>4.86</td><td>22.23</td></tr>
</table>
</td></tr>
<tr><td>7) Feedback, matrix scoring of various technology parameters done through farmer’s participation / other scoring techniques</td><td>The results shows that there is increased in yield by 3.12 % in assesse technology over Farmers practice. The seed rate per ha was also reduced to 11 % and duration of crop was also reduced by 20 days. T cost of production were also drastically reduced due to saving in labor cost for transplanting of seedlings. The highest BC ratio of 4.86 were observed in T2.</td></tr>
<tr><td>8) Final recommendation for micro level situation</td><td>There is huge problem of labor and onion transplanting is laborious activity. Many farmers are avoiding this crop because of labor issue only. This technology found suitable for washim district and should b horizontally spread.</td></tr>
<tr><td>9) Constraints identified and feedback for research</td><td>NA</td></tr>
<tr><td>10) Process of farmers participation and their reaction</td><td>Active participation of the farmers has been given by the farmers and also are satisfied about this technology.</td></tr>
</table>

OFT 8 :

<table>
<tr><td>1) Title of Technology Assess</td><td>Assessment on Crop regulation in Mandarin</td></tr>
<tr><td>2) Problem Definition</td><td>25-30 % low yield than the actual potential due to flower drop, fruit drop un even growth of fruits and also the quality of fruits detoriates due to irregular nutrient supply or uptake by the plants</td></tr>
<tr><td>3) 3. Details of technologies selected for assessment</td><td>Farmers Practice (T1) – Only water stress for 30 to 50 days
Assessed Practice (T2) –
Soil application of Paclobutrazol 9-12 g/plants in April month</td></tr>
<tr><td>4) Source of technology</td><td>ICAR-CCRI, Nagpur</td></tr>
<tr><td>5) Production system and thematic area</td><td>Irrigated with light to medium soil
Integrated Crop Management</td></tr>
<tr><td>6) Performance of the Technology with performance indicators</td><td>
<table>
<tr><th rowspan="2">SN</th><th rowspan="2">Parameter</th><th colspan="2">Treatments</th><th rowspan="2">% Change over T1</th></tr>
<tr><th>T1</th><th>T2</th></tr>
<tr><td>1</td><td>Yield (qt/ha)</td><td>152.28</td><td>349.18</td><td>129.31</td></tr>
<tr><td>2</td><td>No of Fruits/tree</td><td>615.00</td><td>698.00</td><td>13.50</td></tr>
<tr><td>3</td><td>Average wt of fruit</td><td>146.67</td><td>157.14</td><td>7.14</td></tr>
<tr><td></td><td>Regularity in bearing (%)</td><td>62.22</td><td>94.81</td><td>52.38</td></tr>
<tr><td>4</td><td>Gross Income (Rs)</td><td>426370.56</td><td>1012633.60</td><td>137.50</td></tr>
<tr><td>5</td><td>Net Income (Rs)</td><td>274370.56</td><td>834633.60</td><td>204.20</td></tr>
<tr><td>6</td><td>B:C ratio</td><td>2.81</td><td>5.69</td><td>102.81</td></tr>
</table>
</td></tr>
<tr><td>7) Feedback, matrix scoring of various technology parameters done through farmer’s participation / other scoring techniques</td><td>The results shows that there is increased in yield by 129.31 % in assessed technology over Farmers practice. The yield and quality of produced has been improved in T2. Net income is found to increased by 204.20 % over farmers practice in with highest BC ratio of 5.69.</td></tr>
<tr><td>8) Final recommendation for micro level situation</td><td>The technology is highly suitable for micro situation of washim district a should be horizontally spread on large number of farmers field. But the nutrient management should be strictly followed while adopting this technology</td></tr>
<tr><td>9) Constraints identified and feedback for research</td><td>NA</td></tr>
<tr><td>10) Process of farmers participation and their reaction</td><td>Active participation of the farmers has been given by the farmers and also are satisfied about this technology.</td></tr>
</table>

OFT 9 :

1	**Title of Technology Assessed**	**Assessment of IPM technology with incorporation of need /ETL based use of newly recommended insecticide Lamdacylohathrine 5% EC @ 6 ml + 10 lit of water against Brinjal shoot and fruit borer**
2	**Problem Definition**	Brinjal is one of major vegetable crop of KVK operational area grown on 220 ha area. The av. annual production of Brinjal in district is 3871 MT and Brinjal shoot and fruit borer is single pest alone reduced the av. District production in the range of 7% to 59% with a average reduction of 33% annually.(Ref.: District Static Mentioned inn SREP ATMA Washim 2016) The review of literature revealed that the on an av.1 larvae of brinjal shoot and fruit borer can damage 4 to 6 fruits and severe infestation may lead 84% reduction in yield. (Ref.Hill,D.B. Agricultural Insect Pest of Tropics and their control,Cambridge University Press Cambridge)
3	**Details of technologies selected for assessment**	T-1 (Farmers practice) Total 4 spraying first Two spraying of Trizophos 40% EC 20 ml + 10 lit of Water followed by Two spraying of Chlorantraniprole 18.5 SC 3ml +10 lit of water T-2 (Recommended practice) : (1)Removal of affected shoot and destroying the larvae at the time of plucking of fruits (2) Use of Trichogrammachilonius 50000 eggs/ha 5 release at weekly interval (3)Need based spraying of Lamdacylohathrine5% EC @ 6 ml + 10 lit of water against Brinjal shoot and fruit borer
4	**Source of technology**	Dr PDKV Akola
5	**Production system and thematic area**	IPM
6	**Performance of the Technology with performance indicators their reaction**	The assessed technology found to be superior over farmer practice. In assess technology there is a 57.40 % reduced fruit damage was recorded over farmer practice with 21.92 % increase in the yield with higer B:C ratio
7.	**Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques**	Farmers preferred the assessed technology
8	**Final recommendation for micro level situation**	It is recommended to use recommended IPM module against Brinjal shoot and fruit borer
9	**Constraints identified and feedback for research**	NIL
10	**Process of farmers participation and their reaction**	Farmers preferred the assessed technology

OFT 10 :

1	**Title of Technology Assessed**	**Assessment of IPM technology with incorporation of need /ETL based use of newly recommended insecticide Ethion50% EC @ 20 ml + 10 lit of water against Bengal gram pod borer at 50% flowering followed by spraying of Chlorantraniprole 18.5 SC @ 2.5 ml + 10 lit of water 15 days after first spraying against pod borer on Bengal gram**
2	**Problem Definition**	Bengal gram is major rabipulse crop of KVK operational area grown on 55100ha area. Bengal gram pod borer is major pest responsible for considerable reduction Bengal gram yield up to 30to 40 % in district (Ref. District Static Mentioned inn SREP ATMA Washim 2016) The review of literature revealed that the presence of single larvae on plant consume 30 to 40 pod or 6 to 8 gram grain in his whole life span. (Ref. CROPSAP Crop Advisory Booklet of VNMAU 2015) The random questionnaire survey and group discussion of KVK SMS Plant Plant protection with Bengal gram growers in district (2014-2018) reveled that the approximate 2.5% to27% of av. Pod damage is recorded in Bengal gram in district with yield reduction ranges from 4.5% to 37.50%
3	**Details of technologies selected for assessment**	T-1 (Farmer Practice) Ist spraying of Quinolphos, 25 EC 20ml+10lit of water at 40-50% flowering and IInd spray 15 days after Ist spray i.e.spraying of Trizophos 35%+Deltamethrine 1% EC 25ml+10lit of water T-2 (Recommended Practice) (1) Installation of bird perches @ 15/ha at 30 DAS (2) Two spraying of HaNPV @500 LE/ha (10 ml/10 lit) first at bud / flower initiation followed by second spray after 10 days after first spray (3) Spraying of Azadirachtin 300 PPM @50 ml + 10 lit of water after 10 days of second spray ofHaNPV. (4) ETL based spray of Ethion50% EC @ 20 ml + 10 lit of water against Bengal gram pod borer at 50% flowering followed by spraying of Chlorantraniprole 18.5 SC @ 2.5 ml + 10 lit of water 15 days after first spraying against pod borer on Bengal gram
4	**Source of technology**	Dr. PDKV Akola
5	**Production system and thematic area**	IPM
6	**Performance of the Technology with performance indicators their reaction**	The assessed technology found to be superior over farmer practice. In assess technology there is a 48.38 % reduced pod damage was recorded over farmer practice with 17.55 % increase in the yield with higer B:C ratio
7.	**Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques**	Farmers preferred the assessed technology
8	**Final recommendation for micro level situation**	It is recommended to to use recommended IPM module against Bengalgram pod borer.
9	**Constraints identified and feedback for research**	NIL
10	**Process of farmers participation and their reaction**	Farmers preferred the assessed technology

OFT 11 :

1	**Title of Technology Assessed**	**Assessment of Seed treatment of Carboxin 37.5%+Thiram 37.5% @ 3 gram/kg of the seed before sowing of pigeon pea seed against wilt in pigeon pea**
2	**Problem Definition**	Pigeon pea is major kharif pulse crop of KVK operational area grown on 55586 ha area. Wilt is major disease responsible for considerable reduction of pigeon pea yield up to 30to 35% in district (Ref. SAO and PD ATMA Washimfeed back in Kharif ZREAC Washim) The review of literature revealed that the pre flowering and post flowering (at pod formation) wilt incidence in pigeon pea may results in 100% and 30% reduction in pigeon pea yield respectively.. (Ref. CROPSAP Crop Advisory Booklet of VNMAU 2015) The random questionnaire survey and group discussion of KVK SMS Plant Plant protection with Pigeon pea growers in district (2014-2018) reveled that the approximate 17% to 20% of av. Wilt incidence is recorded on pigeon pea in district with yield reduction ranges from 3% to 34%
3	**Details of technologies selected for assessment**	T-1 (Farmers practice) (1) Sowing of pigeon pea seed without seed treatment (2) Non crop rotation (3)Sowing of wilt susceptible variety Maroti 8863 T-2 (Recommended practice) :(1) Crop rotation (2)Sowing of tolerant variety PKV TARA / BSMR736 (3) seed treatment molecule Carboxin 37.5%+Thiram 37.5% @ 3gram/kg of the seed before sowing of Pigeon pea seed against wilt in pigeonpea followed by seed treatemen of Trichodermaviride @ 10 gram/ Kg of seed.
4	**Source of technology**	Dr PDKV Akola
5	**Production system and thematic area**	IDM
6	**Performance of the Technology with performance indicators their reaction**	The assessed technology found to be superior over farmer practice. In assess technology there is a 69.44 % reduced wilt incidence was recorded over farmer practice with 16.66 % increase in the yield with higer B:C ratio
7.	**Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques**	Farmers preferred the assessed technology
8	**Final recommendation for micro level situation**	It is recommended to treat Pigeon pea seed with Carboxin 37.5%+Thiram 37.5% @ 3 gram/kg of the seed before sowing of pigeon pea seed against wilt in pigeon pea
9	**Constraints identified and feedback for research**	NIL
10	**Process of farmers participation and their reaction**	Farmers preferred the assessed technology

OFT-12 :

1	**Title of Technology Assessed**	**Assessment of Bio fortified Wheat MACS 4028) for nutritional security for farm families**
2	**Problem Definition**	Malnutrition among farm families due to low nutrient die
3	**Details of technologies selected for assessment**	Bio Fortified Wheat MACS4028
4	**Source of technology**	ARI Pune
5	**Production system and thematic area**	Household food sequrity
6	**Performance of the Technology with performance indicators**	The assessed technology increase nutritive value of Thali i.e. Protein 3gr/day & Iron 2.5mg/day
7	**Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques**	Chapati made from bio fortified wheat flour MACS 4028 has good taste, texture, and color.
8	**Final recommendation for micro level situation**	Chapati made from bio fortified wheat flour MACS 4028 is rich in protein and iron so it is beneficial to farm families for their household food sequrity
9	**Constraints identified and feedback for research**	Unaware about bio fortified verity and unviability in local market
10	**Process of farmers participation and their reaction**	`With the help of household head ,KVK gave them Bio fortified wheat seed (MACS4028) to produce for household consumption and create awareness about the nutritional properties of this wheat and made them use it in their daily diet.

OFT-13 :

1	**Title of Technology Assessed**	**Assessment of low-cost package of technology for drudgery mitigation in turmeric production system**
2	**Problem Definition**	Female workers in performing different activities in turmeric production system indicated that maximum time consuming activity and health problem of the farm women reported were burning sensation to the skin, skin peeling and allergy
3	**Details of technologies selected for assessment**	**low-cost package of technology for drudgery mitigation in turmeric production system(ukari, Finger guards,Earthing up stool, sulbha bag, New khurpi, wooden rack,)**
4	**Source of technology**	VNMKV Parbhani
5	**Production system and thematic area**	Drudgery Reduction
6	**Performance of the Technology with performance indicators**	The assessed technology i. e. due to use of Ukari & Finger guard ,the cultivation of rhizomes increased by 13.6m/hr., use of new khurpi weeding area increased by32.33m/hr. , use of Sulbha bag for applying fertilizers area increased by 55m/hr. and use of Wooden rack 0.5q/hr. more turmeric were sorting and cleaning
7	**Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques**	when these low cost tool kit were used, work speed is increased and time was saved , while injuries to nails and hands were reduce
8	**Final recommendation for micro level situation**	low cost tool kit were used, work speed is increased and time was saved , while injuries to nails and hands were reduce
9	**Constraints identified and feedback for research**	Unaware about these low cost tool kit 7not easy to available
10	**Process of farmers participation and their reaction**	Farmers said it is very good and easy to handle

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 2023 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		
1	Safflower	Integrated Crop Management	ICM with Safflower Var. ISF-764, Recommended Presowing bio-inoculants, Diamethoate spray	ICM with Safflower Var. ISF-764 Field visit, Training & Demonstration	7	130	105
2	Soybean	Integrated Crop Management	ICM with Var. KDS 726 Recommended practices	ICM with Var. KDS 726 Field visit, Training & Demonstration	21	960	2250
3	Onion	Integrated Nutrient management	Demonstration on Integrated Nutrient Management in onion Seed Production	Demonstrations, Training, published Success stories, Media	19	254	140 ha
4	Turmeric	Varietal demonstration	Demonstration on short duration variety in Turmeric	Demonstrations, Training, published Success stories, Media	6	46	14.40 ha
5	Cotton	IPM	Management of pink boll worm	on 5 farmers field in each block. 2. Organized a new variety seed extension programme in selected focal villages. 3.Organize frequent exposure visit to FLD plot under Govt. funding	87	457	2040
6	Soybean	IPM	IPM in soybean	on 5 farmers field in each block. 2. Organized a new variety seed extension programme in selected focal	96	690	554

				villages. 3.Organize frequent exposure visit to FLD plot under Govt. funding			
7	Vegetables and fruits	Household food sequrity	Nutrition kitchen garden	Awareness programs , demonstration, training	300	1530	11.4
8	Soya harvesting mittens	Drudgery Reduction	Soya Harvesting Mittens	Awareness programs , demonstration, training on stitching Soya Harvesting Mittens	55	720	-

B. Details of FLDs implemented during 2023 **(Kharif 2023, Rabi 2022-23, summer 2023)** (Information is to be furnished in the following **three tables** for **each category** i.e. **cereals, horticultural crops, oilseeds, pulses, cotton and commercial crops**.)

Sl. No.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
					Proposed	Actual	SC/ST	Others	Total	
1	Soybean	INM	Seed treat.,	Kharif, 2023	04	04	01	09	10	Nil
2	Pigeon pea	VE	Seed	Kharif, 2023	04	04	01	09	10	Nil
3	Bengal gram	INM	Seed treat., Plant protection	Rabi, 2022	04	04	01	09	10	Nil
4	Wheat	VE	Seed	Rabi, 2022	04	04	01	09	10	Nil
5	Cotton	ICM	ICM	Kharif 2023	200	214.8	20	148	168	Nil
6	Soybean	ICM	Seed treat., & rec., plant protection	Kharif, 2023	40	40	08	92	97	Nil
7	Safflower	ICM	ICM	Rabi, 2022	20	20	02	23	38	Nil
8	Groundnut	ICM	Seed treat., Plant protection	Summer, 2023	20	20	01	24	41	Nil
9	Turmeric	Variety introduction	Demonstration on short duration varieties in Turmeric	Kharif 2023	0.28	0.28		07	07	NA
10	Onion	Variety introduction	Varietal demonstration in Late kharif onion	Late kharif 2023	2.80	2.80		07	07	NA
11	Onion	Integrated Nutrient Management	Demonstration on Integrated Nutrient Management in onion Seed Production	Rabbi 2023	5.56	5.60		14	07	NA
12	Soybean	IPM	IPM against girdle beetle and stem fly in soybean	Kharif 2023	4	4	2	8	10	-
13	Cotton	IPM	Integrated Management strategy against cotton pink bollworm	Kharif 2023	4	4	2	8	10	-

Details of farming situation

Crop	Season	Farming situation (RF/Irrigated)	Soil type	Status of soil			Previous crop	Sowing date	Harvest date	Seasonal rainfall (mm)	No. of rainy days
				N	P	K					
Soybean	Kharif2023	Rainfed/ protective irrigation	Medium to Heavy	Medium	Low	High	Bengal gram	24.06.23	27.09.23	798.0	49
Pigeon pea	Kharif, 2022	Rainfed/ protective irrigation	Medium to Heavy	Medium	Low	High	Bengal gram	27.06.23	10.01.23	798.0	49
Bengal gram	Rabi, 2022	Irrigated	Medium to Heavy	Medium	Low	High	Soybean	23.10.22	29.01.23	781.0	48
Wheat	Rabi, 2022	Limited Irrigated	Medium to Heavy	Medium	Low	High	Soybean	23.10.22	30.01.23	781.0	48
Cotton	Kharif 2023	Protective irrigation	Medium to Heavy	Medium	Low	High	Bengal gram	24.06.23	27.09.23	798.0	49
Soybean	Kharif, 2022	Rainfed/ protective irrigation	Medium to Heavy Soil	Medium	Low	High	Bengal gram	26.06.23	17.10.23	798.0	49
Safflower	Rabi, 2021	Rainfed/ protective irrigation	Medium to Heavy Soil	Medium	Low	High	Bengal gram	16.10.22	10.01.23	798.0	49
Groundnut	Summer, 2022	Irrigated	Medium to Heavy Soil	Medium	Low	High	Soybean	23.1.23	29.05.23	798.0	49
Turmeric	Kharif 2022	Irrigated	Medium black	Low	Low	High	Bengal Gram	07/06/22	28/03/2023		

Onion	Late kharif 2022	Irrigated	Medium black	Low	Low	High	Green gram	01/08/23	27/12/2023		
Onion	Rabbi 2021	Irrigated	Medium black	Low	Low	High	Soyabean	06/11/22	28/04/2023		
Soybean	Kharif 2323	Rainfed	Medium to heavy	Medium	Low	High	Bengalgram	IInd to last week of June 2023	IInd to last week of Oct 2023	1042	55
Cotton	Kharif 2023	Irrigated	Medium to heavy	Medium	Low	High	Bengalgram	IInd to last week of June 2023	IInd to last week of DEC 2023	1042	55

Technical Feedback on the demonstrated technologies:

S. No	Feed Back
1	In Soybean crop the pre sowing seed treatment with biofertilizer gave increased yield. The farmers realized importance of the use of presowing seed treatment for increased crop production
2	The variety BDN 716 of pigeon pea crop is having good grain quality & gave increased yield than local variety .
3	In Bengal gram crop the pre sowing seed treatment with biofertilizers gave good crop growth & increased yield. The farmers realized importance of the use of presowing seed treatment for increased crop production
4	The wheat crop variety MACS 6478 is suitable for timely sowing under irrigation, It has good grain & chapatti taste quality & gave increased yield than local variety
5	HDPS/CS Cotton technology gave 19.8% higher yield with better time, labour efficiency, feasible till early sowing rainfall permit & if planter is available, mostly farmers follow CS sowing
6	In Soybean crop the pre sowing seed treatment with biofertilizer gave increased yield. The farmers realized importance of the use of presowing seed treatment for increased crop production
7	In Safflower crop var. ISF 764 with recommended practices gave increased yield.
8	The Groundnut crop farmers realized importance of the use of presowing seed treatment & recommended technology for increased crop production
8	The wheat crop variety MACS 6478 is liked by farmers & they will use it further to replace local wheat variety in irrigated area
9	Availability of Pneumatic planter , shreder and rainfall conditions affect HDPS sowing, CS system is feasible in aby condition.
10	Short duration variety of turmeric i.e. PDKV waigaon is seems to suitable for specific area of washim district. Observed average result in some villages while extra ordinary result in 2 villages. That means this variety is suitable for specific soil types only. Can not be promoted in overall district,
11	This technology is highly suitable in district as the soil type is highly suitable in district. Farmers are also getting higher BC ratio as compared to traditional crops
12	Because of low or minimum movement of honey bee, pollination is poor and affecting the yield. As INM and application of boron improves the pollination and seed yield. For getting better yield, this technology is highly suitable
13	The farmers prefer the demonstrated IPM module against stem girdle beetle in soybean
14	The farmers prefer the demonstrated IPM module against cotton pink

Farmers' reactions on specific technologies

S. No	Feed Back
1	PDKV Waigaon variety responds well to organic fertilizers. Wheat crop is taken in PDKV waigaon plot as mature early compared to selam.
2	Germination is best in Bhima super variety, Neck thickness is also for optimum as compared with N53 variety. Color is attractive and hence got higher price in Bhima super
3	Pollination and seed setting is found improved in demonstrated technology. Application of boron through foliar spray resulted in higher yield

Extension and Training activities under FLD :

Sl.No.	Activity	No. of activities organized	Date	Number of participants	Remarks
1	Field days	6	11.5.23,22.2.23, 11.4.23, 21.9.22	240	Safflower, Groundnut, Soybean, Cotton crop activites
2	Farmers Training	8	19.10.22,10.22,25.8.23,21.6.23, 16.7.23, 19.7.23,20.7.23,15.6.23,6.2.23	295	Safflower, Groundnut, Soybean, Cotton crop activites
3	Media coverage	10	24.2.23, 11.4.23, 21.9.23		Safflower, Groundnut, Soybean, Cotton crop activites
4	Training for extension functionaries	2	24.5.23	032	Soil water conservation
5	Training of farmers	2	22.7.2023 and 25.9.2023	75	Off campus awareness training

C. Performance of Frontline demonstrations :

Frontline demonstrations on oilseed crops

Crop	Thematic Area	technology demonstrated	Variety	No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
						Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
						High	Low	Average										
Groundnut																		
Groundnut CFLD	ICM	ICM practices with Seed treatment, Rhizhobium PSB @25gm/kg& trichoderma@3gm/kg, Carboxin+Thirum @3gm/kg ,Gypsum,Quinolphos 25% EC@1.400lt/ha,Imazethapyr 10% SL20ml/lt,Neemark 1000ppm	TAG 24	50	20	26.8	22.5	24.3	20.4	19.6	50040	150689	100649	3.01	49290	126282	76992	2.56
Safflower CFLD	ICM	ICM practices with Seed treatment, Azatobacter PSB @25gm/kg& trichoderma@3gm/kg, Carboxin+Thirum @3gm/kg ,5% NSKE, Diamethoate 30EC13ml/10litwater	ISF 764	50	20	15	12	12.8	11.3	13	27820	72596	44776	2.61	26946	64091	37145	2.40
Soybean																		
Soybean	INM	Presown seed treatment	JS 335	10	04	18.0	15.5	16.9	15.2	11.0	46567	77510	30943	1.66	46067	69805	23738	1.52

Soybean CFLD	ICM	Integrated crop management practices 1. Seed trt. (Carboxin37.5+ thirum37.5)2g/kg seed 2.Rhizhobium, PSB @5g/10ml/kg seed 3. Imazethapyr+Imazamox 100g/ha 4. Thimethoxam + Lamdacyhalothrin 125ml/ha 5. Cholnitraniliprole 18.5SC 150ml/ha 6. Tebuconazole+Sulphur 1kg/ha	KDS 726 , MA US 612	100	40	21.3	20.0	20.6	17.4	18.5	48634	95623	46988	1.97	46067	80721	34654	1.75
Soybean Kharif 2023)	IPM	Demon Of Integrated Management strategy against soybean stemfly and soy Bean girdle beetle	JS 335	10	4	16.40	13.80	14.10	12.20	15.57	28990	70500	41510	1:2.43	29995	61000	31005	1 :2.03

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

Frontline demonstration on pulse crops

Crop	Thematic Area	technology demonstrated	Variety	No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
						Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
						High	Low	Average										
Pigeonpea	Varietal Demonstration	Improved variety	BDN 716	10	04	16.8	13.8	15.0	12.7	18.8	24420	98670	74250	4.04	23270	83655	60385	3.59
Chickpea	INM in Bengalgram	Pre sown Seed treatment	JAKI 9218	10	04	17.5	16.3	16.8	15.2	10.5	32155	89278	57133	2.78	31655	80883	46223	2.56

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

FLD on Other crops

Category & Crop	Thematic Area	Name of the technology	No. of Farmers	Area (ha)	Yield (q/ha)				% Change in Yield	Other Parameters		Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
					Demo			Check											
					High	Low	Average			Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Cereals																			
Wheat	Varietal Demo	Use of var. MACS 6478	10	04	27.5	22.5	24.8	21.9	13.24	5.6 tillers / plant	4 tillers/plant	20863	52700	31837	2.53	20010	46538	26528	2.33
Cotton	ICM	ICM HDPS	17	26	20.0	17.0	18.5	15.1	22.5	38	30	67930	127280	59350	1.68	64150	103888	39738	1.62
		ICM CS	161	192	19.5	16.1	17.8	15.1	17.9	36	34	71005	122464	51459	1.62	64150	103888	39738	1.62
		ICM AVG.	178	218	19.6	16.3	18.1	15.1	19.8	37	32	69468	124872	55405	1.80	64150	103888	39738	1.62
COTTON	IPM	IPM against cotton Pink bolloworm	10	4	15.60	12.60	13.40	11.20	19.64	Green boll damage% 3.9 %	Green boll damage % 7.4 %	39280	83080	43800	1 :2.11	41320	69440	28120	1:1.68
Vegetable pea																			
Onion	Variety introduction	Varietal demonstration in Late kharif onion	7	2.80	296.4	265.55	289.12	232.47	24.27			95500	404768	309268	4.24	94000	302211	208211	3.22
Onion	Integrated Nutrient Management	Demonstration on Integrated Nutrient Management in onion	14	5.60	10.24	8.22	9.45	8.13	6.75			123100	472500	349400	3.84	121800	403250	284450	3.34

		Seed Production (2022)																	
Turmeric	Variety introduction	Demonstration on short duration varieties in Turmeric (2022)	7	0.42	57.1	34.6	42.28	59.16	-34.26			9550	431280	335780	4.52	111000	384540	273540	3.46

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

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)
Composite fish culture	Varital demonstration	Use of Cat fish Pangacious for better growth & production	10	10	1188 Kg	870 Kg	36.55	-	-	47520	106920	59400	2.25	34800	60900	26100	1.80
Composite fish culture	Varital demonstration	Use of genetically improved breed of Jayanti rohu for better growth & production	10	10	792 Kg	580 Kg	36.55	-	-	31680	71280	39600	2.25	23200	40600	17400	1.75

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

FLD on Other enterprises

Category	Name of the technology demonstrated	No. of Farmer	No. of units	Major parameters		% change in major parameter	Other parameter		Economics of demonstration (Rs.) or Rs./unit				Economics of check (Rs.) or Rs./unit			
				Demo	Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Oyster Mushroom	Oyster Mushroom cultivation Sajurkaju	20	20	18kg/unit/batch	0kg/unit/batch	100			600/unit/batch	4500/unit/batch	3900/unit/batch	1:6.5	00	00	00	00

FLD on Women Empowerment

Category	Name of technology	No. of demonstrations	Name of observations	Demonstration	Check
Farm Women	Soya harvesting Mittens	50	Time required for 0.4h/day/labour	1.40	2.00

FLD on Other Enterprise: Kitchen Gardening

Nutrition garden components	Thematic area	Area (sq mt)	No. of Farmer	No. of Units	Yield (Kg)- supply of vegetables, fruits, etc from KG in the year		% change in yield	Household size (number)		Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
					Demonstration	Check*		Demo	Check	Gross Cost	Gross Return/Savings*	Net Return	BCR (R/C)	Gross Cost	Gross Return/ Savings*	Net Return	BCR (R/C)
Seasonal fruits and vegetables	Household food Sequrity	85.6 sq.m / garden	50	50	510	140	72.5	74.3sqm	18.3sq.m	2200/garden/year	15300/garden year	13100/garden/year	1:6	1100	4200	3100	1:3.2

***check maybe family adopting different Nutrition garden model/ no adoption of Nutrition garden model**
Savings from produce of Nutrition garden used for home consumption

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

Farmers' Training including sponsored training programmes (on campus)

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
I Crop Production										
Weed Management	3	85	0	85	4	0	4	89	0	89
Resource Conservation Technologies	0	0	0	0	0	0	0	0	0	0
Cropping Systems	0	0	0	0	0	0	0	0	0	0
Crop Diversification	0	0	0	0	0	0	0	0	0	0
Integrated Farming	0	0	0	0	0	0	0	0	0	0
Micro Irrigation/irrigation	0	0	0	0	0	0	0	0	0	0
Seed production	0	0	0	0	0	0	0	0	0	0
Nursery management	0	0	0	0	0	0	0	0	0	0
Integrated Crop Management	3	62	0	62	20	0	20	82	0	82
Soil & water conservation	0	0	0	0	0	0	0	0	0	0
Integrated nutrient management	1	31	0	31	0	0	0	31	0	31
Production of organic inputs	0	0	0	0	0	0	0	0	0	0
Others (pl. specify)	0	0	0	0	0	0	0	0	0	0
Total	**7**	**178**	**0**	**178**	**24**	**0**	**24**	**202**	**0**	**202**
II Horticulture										
a) Vegetable Crops										
Production of low value and high value crops	0	0	0	0	0	0	0	0	0	0
Off-season vegetables	**1**	**9**	**0**	**9**	**0**	**0**	**0**	**9**	**0**	**9**
Nursery raising	0	0	0	0	0	0	0	0	0	0
Exotic vegetables	0	0	0	0	0	0	0	0	0	0
Export potential vegetables	0	0	0	0	0	0	0	0	0	0
Grading and standardization	0	0	0	0	0	0	0	0	0	0
Protective cultivation	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total (a)	**1**	**9**	**0**	**9**	**0**	**0**	**0**	**9**	**0**	**9**
b) Fruits										
Training and Pruning	0	0	0	0	0	0	0	0	0	0
Layout and Management of Orchards	0	0	0	0	0	0	0	0	0	0
Cultivation of Fruit	3	104	0	104	12	0	12	116	0	116
Management of young plants/orchards	0	0	0	0	0	0	0	0	0	0
Rejuvenation of old orchards	0	0	0	0	0	0	0	0	0	0
Export potential fruits	0	0	0	0	0	0	0	0	0	0
Micro irrigation systems of orchards	0	0	0	0	0	0	0	0	0	0
Plant propagation techniques	0	0	0	0	0	0	0	0	0	0
Others (Mrig Bahar Management)	1	46	0	46	0	0	0	46	0	46
Total (b)	**4**	**150**	**0**	**150**	**12**	**0**	**12**	**162**	**0**	**162**
c) Ornamental Plants										
Nursery Management	0	0	0	0	0	0	0	0	0	0
Management of potted plants	0	0	0	0	0	0	0	0	0	0
Export potential of ornamental plants	0	0	0	0	0	0	0	0	0	0
Propagation techniques of Ornamental Plants	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	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
Processing and value addition	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	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	0	0	0	0	0	0	0	0	0	0
Production and Management technology	0	0	0	0	0	0	0	0	0	0
Processing and value addition	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total (e)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
f) Spices	0	0	0	0	0	0	0	0	0	0
Production and Management technology	0	0	0	0	0	0	0	0	0	0
Processing and value addition	0	0	0	0	0	0	0	0	0	0

Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total (f)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
g) Medicinal and Aromatic Plants										
Nursery management	0	0	0	0	0	0	0	0	0	0
Production and management technology	0	0	0	0	0	0	0	0	0	0
Post harvest technology and value addition	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total (g)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Grand Total (a to g)	**5**	**159**	**0**	**159**	**12**	**0**	**12**	**171**	**0**	**171**
III Soil Health and Fertility Management										
Soil fertility management	0	0	0	0	0	0	0	0	0	0
Integrated water management	0	0	0	0	0	0	0	0	0	0
Integrated Nutrient Management	0	0	0	0	0	0	0	0	0	0
Production and use of organic inputs	0	0	0	0	0	0	0	0	0	0
Management of Problematic soils	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
Nutrient Use Efficiency	0	0	0	0	0	0	0	0	0	0
Balance use of fertilizers	0	0	0	0	0	0	0	0	0	0
Soil and Water Testing	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IV Livestock Production and Management										
Dairy Management	0	0	0	0	0	0	0	0	0	0
Poultry Management	0	0	0	0	0	0	0	0	0	0
Piggery Management	0	0	0	0	0	0	0	0	0	0
Rabbit Management	0	0	0	0	0	0	0	0	0	0
Animal Nutrition Management	0	0	0	0	0	0	0	0	0	0
Disease Management	0	0	0	0	0	0	0	0	0	0
Feed & fodder technology	0	0	0	0	0	0	0	0	0	0
Production of quality animal products	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	0	0	0	0	0	0	0	0	0	0
Design and development of low/minimum cost diet	0	0	0	0	0	0	0	0	0	0
Designing and development for high nutrient efficiency diet	0	0	0	0	0	0	0	0	0	0
Minimization of nutrient loss in processing	0	0	0	0	0	0	0	0	0	0
Processing and cooking	0	0	0	0	0	0	0	0	0	0
Gender mainstreaming through SHGs	0	0	0	0	0	0	0	0	0	0
Storage loss minimization techniques	0	0	0	0	0	0	0	0	0	0
Value addition	3	25	54	79	3	12	15	28	66	94
Women empowerment	0	0	0	0	0	0	0	0	0	0
Location specific drudgery reduction technologies	1	2	8	10	1	7	8	3	15	18
Rural Crafts	0	0	0	0	0	0	0	0	0	0
Women and child care	0	0	0	0	0	0	0	0	0	0
Others (Income generation)	20	109	246	355	29	122	151	138	368	506
Total	**24**	**136**	**308**	**444**	**33**	**141**	**174**	**169**	**449**	**618**
VII Plant Protection										
Integrated Pest Management	3	81	11	92	6	0	6	87	11	98
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
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total	**3**	**81**	**11**	**92**	**6**	**0**	**6**	**87**	**11**	**98**
VIII Fisheries										
Integrated fish farming	0	0	0	0	0	0	0	0	0	0
Carp breeding and hatchery management	0	0	0	0	0	0	0	0	0	0
Carp fry and fingerling rearing	0	0	0	0	0	0	0	0	0	0
Composite fish culture	0	0	0	0	0	0	0	0	0	0

Hatchery management and culture of freshwater prawn	0	0	0	0	0	0	0	0	0	0
Breeding and culture of ornamental fishes	0	0	0	0	0	0	0	0	0	0
Portable plastic carp hatchery	0	0	0	0	0	0	0	0	0	0
Pen culture of fish and prawn	0	0	0	0	0	0	0	0	0	0
Shrimp farming	0	0	0	0	0	0	0	0	0	0
Edible oyster farming	0	0	0	0	0	0	0	0	0	0
Pearl culture	0	0	0	0	0	0	0	0	0	0
Fish processing and value addition	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	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										
Seed Production	0	0	0	0	0	0	0	0	0	0
Planting material production	0	0	0	0	0	0	0	0	0	0
Bio-agents production	0	0	0	0	0	0	0	0	0	0
Bio-pesticides production	0	0	0	0	0	0	0	0	0	0
Bio-fertilizer production	0	0	0	0	0	0	0	0	0	0
Vermi-compost production	0	0	0	0	0	0	0	0	0	0
Organic manures production	0	0	0	0	0	0	0	0	0	0
Production of fry and fingerlings	0	0	0	0	0	0	0	0	0	0
Production of Bee-colonies and wax sheets	0	0	0	0	0	0	0	0	0	0
Small tools and implements	0	0	0	0	0	0	0	0	0	0
Production of livestock feed and fodder	0	0	0	0	0	0	0	0	0	0
Production of Fish feed	0	0	0	0	0	0	0	0	0	0
Mushroom Production	0	0	0	0	0	0	0	0	0	0
Apiculture	0	0	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
X CapacityBuilding and Group Dynamics										
Leadership development	0	0	0	0	0	0	0	0	0	0
Group dynamics	0	0	0	0	0	0	0	0	0	0
Formation and Management of SHGs	0	0	0	0	0	0	0	0	0	0
Mobilization of social capital	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
WTO and IPR issues	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
XII Agricultural Ecomommics										
Doubling farm income	1	15	0	15	0	0	0	15	0	15
E-NAM Marketing	2	90	0	90	13	0	13	102	0	102
Market Intelligence	2	23	0	23	27	0	27	50	0	50
ICT Marketing	1	25	0	25	0	0	0	25	0	25
Marketing Linkage	1	17	0	17	13	0	13	30	0	30
Import-Export and Marketing	0	0	0	0	0	0	0	0	0	0
Crop insurance scheme	0	0	0	0	0	0	0	0	0	0
Drone Application in Agriculture	0	0	0	0	0	0	0	0	0	0
Agro-tourism	0	0	0	0	0	0	0	0	0	0
Supply chain Management	0	0	0	0	0	0	0	0	0	0
Marketing Linkage of Fruits &Vegetable	0	0	0	0	0	0	0	0	0	0
Training on warehousing	0	0	0	0	0	0	0	0	0	0
Total	**7**	**170**	**0**	**170**	**53**	**0**	**53**	**222**	**0**	**222**
GRAND TOTAL	**46**	**724**	**319**	**1043**	**128**	**141**	**269**	**851**	**460**	**1311**

Farmers' Training including sponsored training programmes (off campus)

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
I Crop Production										
Weed Management	3	85	0	85	4	0	4	89	0	89
Resource Conservation Technologies	0	0	0	0	0	0	0	0	0	0
Cropping Systems	0	0	0	0	0	0	0	0	0	0
Crop Diversification	0	0	0	0	0	0	0	0	0	0
Integrated Farming	0	0	0	0	0	0	0	0	0	0
Micro Irrigation/irrigation	0	0	0	0	0	0	0	0	0	0
Seed production	0	0	0	0	0	0	0	0	0	0
Nursery management	0	0	0	0	0	0	0	0	0	0
Integrated Crop Management	3	62	0	62	20	0	20	82	0	82
Soil & water conservation	0	0	0	0	0	0	0	0	0	0
Integrated nutrient management	1	31	0	31	0	0	0	31	0	31
Production of organic inputs	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total	**7**	**178**	**0**	**178**	**24**	**0**	**24**	**202**	**0**	**202**
II Horticulture										
a) Vegetable Crops										
Production of low value and high value crops	0	0	0	0	0	0	0	0	0	0
Off-season vegetables	**1**	**9**	**0**	**9**	**0**	**0**	**0**	**9**	**0**	**9**
Nursery raising	0	0	0	0	0	0	0	0	0	0
Exotic vegetables	0	0	0	0	0	0	0	0	0	0
Export potential vegetables	0	0	0	0	0	0	0	0	0	0
Grading and standardization	0	0	0	0	0	0	0	0	0	0
Protective cultivation	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total (a)	**1**	**9**	**0**	**9**	**0**	**0**	**0**	**9**	**0**	**9**
b) Fruits										
Training and Pruning	0	0	0	0	0	0	0	0	0	0
Layout and Management of Orchards	0	0	0	0	0	0	0	0	0	0
Cultivation of Fruit	3	104	0	104	12	0	12	116	0	116
Management of young plants/orchards	0	0	0	0	0	0	0	0	0	0
Rejuvenation of old orchards	0	0	0	0	0	0	0	0	0	0
Export potential fruits	0	0	0	0	0	0	0	0	0	0
Micro irrigation systems of orchards	0	0	0	0	0	0	0	0	0	0
Plant propagation techniques	0	0	0	0	0	0	0	0	0	0
Others (Bahar Management)	1	46	0	46	0	0	0	46	0	46
Total (b)	**4**	**150**	**0**	**150**	**12**	**0**	**12**	**162**	**0**	**162**
c) Ornamental Plants										
Nursery Management	0	0	0	0	0	0	0	0	0	0
Management of potted plants	0	0	0	0	0	0	0	0	0	0
Export potential of ornamental plants	0	0	0	0	0	0	0	0	0	0
Propagation techniques of Ornamental Plants	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	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
Processing and value addition	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	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	0	0	0	0	0	0	0	0	0	0
Production and Management technology	0	0	0	0	0	0	0	0	0	0
Processing and value addition	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total (e)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
f) Spices	0	0	0	0	0	0	0	0	0	0
Production and Management technology	0	0	0	0	0	0	0	0	0	0
Processing and value addition	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total (f)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
g) Medicinal and Aromatic Plants										
Nursery management	0	0	0	0	0	0	0	0	0	0

Production and management technology	0	0	0	0	0	0	0	0	0	0
Post harvest technology and value addition	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total (g)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Grand Total (a to g)	**5**	**159**	**0**	**159**	**12**	**0**	**12**	**171**	**0**	**171**
III Soil Health and Fertility Management										
Soil fertility management	0	0	0	0	0	0	0	0	0	0
Integrated water management	0	0	0	0	0	0	0	0	0	0
Integrated Nutrient Management	0	0	0	0	0	0	0	0	0	0
Production and use of organic inputs	0	0	0	0	0	0	0	0	0	0
Management of Problematic soils	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
Nutrient Use Efficiency	0	0	0	0	0	0	0	0	0	0
Balance use of fertilizers	0	0	0	0	0	0	0	0	0	0
Soil and Water Testing	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IV Livestock Production and Management										
Dairy Management	0	0	0	0	0	0	0	0	0	0
Poultry Management	0	0	0	0	0	0	0	0	0	0
Piggery Management	0	0	0	0	0	0	0	0	0	0
Rabbit Management	0	0	0	0	0	0	0	0	0	0
Animal Nutrition Management	0	0	0	0	0	0	0	0	0	0
Disease Management	0	0	0	0	0	0	0	0	0	0
Feed & fodder technology	0	0	0	0	0	0	0	0	0	0
Production of quality animal products	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	0	0	0	0	0	0	0	0	0	0
Design and development of low/minimum cost diet	0	0	0	0	0	0	0	0	0	0
Designing and development for high nutrient efficiency diet	0	0	0	0	0	0	0	0	0	0
Minimization of nutrient loss in processing	0	0	0	0	0	0	0	0	0	0
Processing and cooking	0	0	0	0	0	0	0	0	0	0
Gender mainstreaming through SHGs	0	0	0	0	0	0	0	0	0	0
Storage loss minimization techniques	0	0	0	0	0	0	0	0	0	0
Value addition	3	25	54	79	3	12	15	28	66	94
Women empowerment	0	0	0	0	0	0	0	0	0	0
Location specific drudgery reduction technologies	1	2	8	10	1	7	8	3	15	18
Rural Crafts	0	0	0	0	0	0	0	0	0	0
Women and child care	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	20	109	246	355	29	122	151	138	368	506
Total	**24**	**136**	**308**	**444**	**33**	**141**	**174**	**169**	**449**	**618**
VII Plant Protection										
Integrated Pest Management	3	81	11	92	6	0	6	87	11	98
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
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total	**3**	**81**	**11**	**92**	**6**	**0**	**6**	**87**	**11**	**98**
VIII Fisheries										
Integrated fish farming	0	0	0	0	0	0	0	0	0	0
Carp breeding and hatchery management	0	0	0	0	0	0	0	0	0	0
Carp fry and fingerling rearing	0	0	0	0	0	0	0	0	0	0
Composite fish culture	0	0	0	0	0	0	0	0	0	0
Hatchery management and culture of freshwater prawn	0	0	0	0	0	0	0	0	0	0
Breeding and culture of ornamental	0	0	0	0	0	0	0	0	0	0

fishes										
Portable plastic carp hatchery	0	0	0	0	0	0	0	0	0	0
Pen culture of fish and prawn	0	0	0	0	0	0	0	0	0	0
Shrimp farming	0	0	0	0	0	0	0	0	0	0
Edible oyster farming	0	0	0	0	0	0	0	0	0	0
Pearl culture	0	0	0	0	0	0	0	0	0	0
Fish processing and value addition	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	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										
Seed Production	0	0	0	0	0	0	0	0	0	0
Planting material production	0	0	0	0	0	0	0	0	0	0
Bio-agents production	0	0	0	0	0	0	0	0	0	0
Bio-pesticides production	0	0	0	0	0	0	0	0	0	0
Bio-fertilizer production	0	0	0	0	0	0	0	0	0	0
Vermi-compost production	0	0	0	0	0	0	0	0	0	0
Organic manures production	0	0	0	0	0	0	0	0	0	0
Production of fry and fingerlings	0	0	0	0	0	0	0	0	0	0
Production of Bee-colonies and wax sheets	0	0	0	0	0	0	0	0	0	0
Small tools and implements	0	0	0	0	0	0	0	0	0	0
Production of livestock feed and fodder	0	0	0	0	0	0	0	0	0	0
Production of Fish feed	0	0	0	0	0	0	0	0	0	0
Mushroom Production	0	0	0	0	0	0	0	0	0	0
Apiculture	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
X Capacity Building and Group Dynamics										
Leadership development	0	0	0	0	0	0	0	0	0	0
Group dynamics	0	0	0	0	0	0	0	0	0	0
Formation and Management of SHGs	0	0	0	0	0	0	0	0	0	0
Mobilization of social capital	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
WTO and IPR issues	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
XII Agricultural Ecomommics										
Doubling farm income	1	15	0	15	0	0	0	15	0	15
E-NAM Marketing	2	90	0	90	13	0	13	102	0	102
Market Intelligence	2	23	0	23	27	0	27	50	0	50
ICT Marketing	1	25	0	25	0	0	0	25	0	25
Marketing Linkage	1	17	0	17	13	0	13	30	0	30
Import-Export and Marketing	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Crop insurance scheme	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Drone Application in Agriculture	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Agro-tourism	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Supply chain Management	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Marketing Linkage of Fruits &Vegetable	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Training on warehousing	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total	**7**	**170**	**0**	**170**	**53**	**0**	**53**	**222**	**0**	**222**
GRAND TOTAL	**46**	**724**	**319**	**1043**	**128**	**141**	**269**	**851**	**460**	**1311**

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

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
I Crop Production										
Weed Management	4	114	0	114	6	0	6	120	0	120
Resource Conservation Technologies	0	0	0	0	0	0	0	0	0	0
Cropping Systems	0	0	0	0	0	0	0	0	0	0
Crop Diversification	0	0	0	0	0	0	0	0	0	0
Integrated Farming	0	0	0	0	0	0	0	0	0	0
Micro Irrigation/irrigation	2	48	0	48	10	0	10	58	0	58
Seed production	0	0	0	0	0	0	0	0	0	0
Nursery management	0	0	0	0	0	0	0	0	0	0
Integrated Crop Management	12	297	0	297	105	0	105	402	0	402
Soil & water conservation	1	20	0	20	4	0	4	24	0	24
Integrated nutrient management	1	31	0	31	0	0	0	31	0	31
Production of organic inputs	2	57	0	57	7	0	7	64	0	64
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total	22	567	0	567	132	0	132	699	0	699
II Horticulture	0	0	0	0	0	0	0	0	0	0
a) Vegetable Crops										
Production of low value and high value crops	2	269	0	269	26	0	26	295	0	295
Off-season vegetables	2	21	0	21	0	0	0	21	0	21
Nursery raising	0	0	0	0	0	0	0	0	0	0
Exotic vegetables	0	0	0	0	0	0	0	0	0	0
Export potential vegetables	0	0	0	0	0	0	0	0	0	0
Grading and standardization	0	0	0	0	0	0	0	0	0	0
Protective cultivation	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total (a)	4	290	0	290	26	0	26	316	0	316
b) Fruits										
Training and Pruning	0	0	0	0	0	0	0	0	0	0
Layout and Management of Orchards	0	0	0	0	0	0	0	0	0	0
Cultivation of Fruit	7	978	0	978	109	0	109	1087	0	1087
Management of young plants/orchards	0	0	0	0	0	0	0	0	0	0
Rejuvenation of old orchards	0	0	0	0	0	0	0	0	0	0
Export potential fruits	0	0	0	0	0	0	0	0	0	0
Micro irrigation systems of orchards	0	0	0	0	0	0	0	0	0	0
Plant propagation techniques	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	21	854	0	854	118	0	118	972	0	972
Total (b)	28	1832	0	1832	227	0	227	2059	0	2059
c) Ornamental Plants										
Nursery Management	0	0	0	0	0	0	0	0	0	0
Management of potted plants	0	0	0	0	0	0	0	0	0	0
Export potential of ornamental plants	0	0	0	0	0	0	0	0	0	0
Propagation techniques of Ornamental Plants	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	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
Processing and value addition	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	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										
Production and Management technology	0	0	0	0	0	0	0	0	0	0
Processing and value addition	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	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	10	346	0	346	94	0	94	440	0	440
Processing and value addition	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total (f)	10	346	0	346	94	0	94	440	0	440
g) Medicinal and Aromatic Plants										
Nursery management	0	0	0	0	0	0	0	0	0	0

Production and management technology	0	0	0	0	0	0	0	0	0	0
Post harvest technology and value addition	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total (g)	0	0	0	0	0	0	0	0	0	0
Grand Total (a to g)	42	2468	0	2468	347	0	347	2815	0	2815
III Soil Health and Fertility Management										
Soil fertility management	0	0	0	0	0	0	0	0	0	0
Integrated water management	0	0	0	0	0	0	0	0	0	0
Integrated Nutrient Management	0	0	0	0	0	0	0	0	0	0
Production and use of organic inputs	0	0	0	0	0	0	0	0	0	0
Management of Problematic soils	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
Nutrient Use Efficiency	0	0	0	0	0	0	0	0	0	0
Balance use of fertilizers	0	0	0	0	0	0	0	0	0	0
Soil and Water Testing	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
IV Livestock Production and Management										
Dairy Management	0	0	0	0	0	0	0	0	0	0
Poultry Management	0	0	0	0	0	0	0	0	0	0
Piggery Management	0	0	0	0	0	0	0	0	0	0
Rabbit Management	0	0	0	0	0	0	0	0	0	0
Animal Nutrition Management	0	0	0	0	0	0	0	0	0	0
Disease Management	0	0	0	0	0	0	0	0	0	0
Feed & fodder technology	0	0	0	0	0	0	0	0	0	0
Production of quality animal products	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	6	20	99	119	3	20	23	23	119	142
Design and development of low/minimum cost diet	0	0	0	0	0	0	0	0	0	0
Designing and development for high nutrient efficiency diet	0	0	0	0	0	0	0	0	0	0
Minimization of nutrient loss in processing	0	0	0	0	0	0	0	0	0	0
Processing and cooking	0	0	0	0	0	0	0	0	0	0
Gender mainstreaming through SHGs	0	0	0	0	0	0	0	0	0	0
Storage loss minimization techniques	1	0	20	20	0	4	4	0	24	24
Value addition	3	25	54	79	3	12	15	28	66	94
Women empowerment	0	0	0	0	0	0	0	0	0	0
Location specific drudgery reduction technologies	1	2	8	10	1	7	8	3	15	18
Rural Crafts	0	0	0	0	0	0	0	0	0	0
Women and child care	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	20	109	246	355	29	122	151	138	368	506
Total	31	156	427	583	36	165	201	192	592	784
VII Plant Protection										
Integrated Pest Management	26	786	11	797	56	0	56	842	11	853
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
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total	**26**	**786**	**11**	**797**	**56**	**0**	**56**	**842**	**11**	**853**
VIII Fisheries	0	0	0	0	0	0	0	0	0	0
Integrated fish farming	0	0	0	0	0	0	0	0	0	0
Carp breeding and hatchery management	0	0	0	0	0	0	0	0	0	0
Carp fry and fingerling rearing	0	0	0	0	0	0	0	0	0	0
Composite fish culture	0	0	0	0	0	0	0	0	0	0
Hatchery management and culture of freshwater prawn	0	0	0	0	0	0	0	0	0	0
Breeding and culture of ornamental fishes	0	0	0	0	0	0	0	0	0	0
Portable plastic carp hatchery	0	0	0	0	0	0	0	0	0	0

Pen culture of fish and prawn	0	0	0	0	0	0	0	0	0	0
Shrimp farming	0	0	0	0	0	0	0	0	0	0
Edible oyster farming	0	0	0	0	0	0	0	0	0	0
Pearl culture	0	0	0	0	0	0	0	0	0	0
Fish processing and value addition	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	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										
Seed Production	0	0	0	0	0	0	0	0	0	0
Planting material production	0	0	0	0	0	0	0	0	0	0
Bio-agents production	0	0	0	0	0	0	0	0	0	0
Bio-pesticides production	0	0	0	0	0	0	0	0	0	0
Bio-fertilizer production	0	0	0	0	0	0	0	0	0	0
Vermi-compost production	0	0	0	0	0	0	0	0	0	0
Organic manures production	0	0	0	0	0	0	0	0	0	0
Production of fry and fingerlings	0	0	0	0	0	0	0	0	0	0
Production of Bee-colonies and wax sheets	0	0	0	0	0	0	0	0	0	0
Small tools and implements	0	0	0	0	0	0	0	0	0	0
Production of livestock feed and fodder	0	0	0	0	0	0	0	0	0	0
Production of Fish feed	0	0	0	0	0	0	0	0	0	0
Mushroom Production	0	0	0	0	0	0	0	0	0	0
Apiculture	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
X Capacity Building and Group Dynamics										
Leadership development	0	0	0	0	0	0	0	0	0	0
Group dynamics	0	0	0	0	0	0	0	0	0	0
Formation and Management of SHGs	0	0	0	0	0	0	0	0	0	0
Mobilization of social capital	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
WTO and IPR issues	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
XII Agricultural Ecomommics										
Doubling farm income	1	15	0	15	0	0	0	15	0	15
E-NAM Marketing	2	90	0	90	13	0	13	102	0	102
Market Intelligence	2	23	0	23	27	0	27	50	0	50
ICT Marketing	1	25	0	25	0	0	0	25	0	25
Marketing Linkage	1	17	0	17	13	0	13	30	0	30
Import-Export and Marketing	2	57	0	57	0	0	0	57	0	57
Crop insurance scheme	1	30	0	30	0	0	0	30	0	30
Drone Application in Agriculture	1	460	0	460	27	0	27	487	0	487
Agro-tourism	1	31	0	31	14	0	14	45	0	45
Supply chain Management	1	0	0	0	15	0	15	15	0	15
Marketing Linkage of Fruits &Vegetable	2	0	0	0	59	0	59	59	0	59
Training on warehousing	1	0	69	69	0	0	0	0	69	69
Total	16	748	69	817	168	0	168	915	69	984
GRAND TOTAL	**137**	**4725**	**507**	**5232**	**739**	**165**	**904**	**5463**	**672**	**6135**

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

Area of training	No. of Courses	No. of Participants								
		General/ Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops	1	15	0	15	4	0	4	19	0	19
Training and pruning of orchards	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
Commercial fruit production	0	0	0	0	0	0	0	0	0	0
Integrated farming	0	0	0	0	0	0	0	0	0	0
Seed production	**1**	**30**	**0**	**30**	**1**	**0**	**1**	31	0	31
Production of organic inputs	**1**	**20**	**4**	**24**	**1**	**0**	**1**	21	4	25
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
Mushroom Production	0	0	0	0	0	0	0	0	0	0
Bee-keeping	0	0	0	0	0	0	0	0	0	0
Sericulture	0	0	0	0	0	0	0	0	0	0
Repair and maintenance of farm machinery and implements	0	0	0	0	0	0	0	0	0	0
Value addition	2	06	18	24	02	09	11	08	27	35
Small scale processing	0	0	0	0	0	0	0	0	0	0
Post Harvest Technology	0	0	0	0	0	0	0	0	0	0
Tailoring and Stitching	0	0	0	0	0	0	0	0	0	0
Rural Crafts	0	0	0	0	0	0	0	0	0	0
Production of quality animal products	0	0	0	0	0	0	0	0	0	0
Dairying	0	0	0	0	0	0	0	0	0	0
Sheep and goat rearing	0	0	0	0	0	0	0	0	0	0
Quail farming	0	0	0	0	0	0	0	0	0	0
Piggery	0	0	0	0	0	0	0	0	0	0
Rabbit farming	0	0	0	0	0	0	0	0	0	0
Poultry production	0	0	0	0	0	0	0	0	0	0
Ornamental fisheries	0	0	0	0	0	0	0	0	0	0
Composite fish culture	0	0	0	0	0	0	0	0	0	0
Freshwater prawn culture	0	0	0	0	0	0	0	0	0	0
Shrimp farming	0	0	0	0	0	0	0	0	0	0
Pearl culture	0	0	0	0	0	0	0	0	0	0
Cold water fisheries	0	0	0	0	0	0	0	0	0	0
Fish harvest and processing technology	0	0	0	0	0	0	0	0	0	0
Fry and fingerling rearing	0	0	0	0	0	0	0	0	0	0
Any other (Weed Management)	**1**	**26**	**0**	**26**	**3**	**0**	**3**	29	0	29
IPM	1	20	00	20	00	00	00	20	00	20
Income generation	01	00	15	15	00	05	05	00	20	20
TOTAL	**8**	**117**	**37**	**154**	**11**	**14**	**25**	**57**	**47**	**179**

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

Area of training	No. of Courses	No. of Participants								
		General/ Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops	1	57		57	4	0	4	61	0	61
Training and pruning of orchards	1	20		20	9	0	9	29	0	29
Protected cultivation of vegetable crops	0	0	0	0	0	0	0	0	0	0
Commercial fruit production	3	72	0	72	9	0	9	81	0	81
Integrated farming	0	0	0	0	0	0	0	0	0	0
Seed production	0	0	0	0	0	0	0	0	0	0
Production of organic inputs	0	0	0	0	0	0	0	0	0	0
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
Mushroom Production	0	0	0	0	0	0	0	0	0	0
Bee-keeping	0	0	0	0	0	0	0	0	0	0
Sericulture	0	0	0	0	0	0	0	0	0	0
Repair and maintenance of farm machinery and implements	0	0	0	0	0	0	0	0	0	0
Value addition	0	0	0	0	0	0	0	0	0	0
Small scale processing	0	0	0	0	0	0	0	0	0	0
Post Harvest Technology	0	0	0	0	0	0	0	0	0	0
Tailoring and Stitching	0	0	0	0	0	0	0	0	0	0
Rural Crafts	0	0	0	0	0	0	0	0	0	0
Production of quality animal products	0	0	0	0	0	0	0	0	0	0
Dairying	0	0	0	0	0	0	0	0	0	0
Sheep and goat rearing	0	0	0	0	0	0	0	0	0	0
Quail farming	0	0	0	0	0	0	0	0	0	0
Piggery	0	0	0	0	0	0	0	0	0	0
Rabbit farming	0	0	0	0	0	0	0	0	0	0
Poultry production	0	0	0	0	0	0	0	0	0	0
Ornamental fisheries	0	0	0	0	0	0	0	0	0	0
Composite fish culture	0	0	0	0	0	0	0	0	0	0
Freshwater prawn culture	0	0	0	0	0	0	0	0	0	0
Shrimp farming	0	0	0	0	0	0	0	0	0	0
Pearl culture	0	0	0	0	0	0	0	0	0	0
Cold water fisheries	0	0	0	0	0	0	0	0	0	0
Fish harvest and processing technology	0	0	0	0	0	0	0	0	0	0
Fry and fingerling rearing	0	0	0	0	0	0	0	0	0	0
Any other (Income generation	01	00	17	17	00	25	25	00	42	42
TOTAL	**6**	**149**	**17**	**166**	**22**	**25**	**47**	**171**	**42**	**213**

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

Area of training	No. of Courses	No. of Participants								
		General/ Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops	2	72	0	72	8	0	8	80	0	80
Training and pruning of orchards	1	20	0	20	9	0	9	29	0	29
Protected cultivation of vegetable crops	0	0	0	0	0	0	0	0	0	0
Commercial fruit production	3	72	0	72	9	0	9	81	0	81
Integrated farming	0	0	0	0	0	0	0	0	0	0
Seed production	1	30	0	30	1	0	1	31	0	31
Production of organic inputs	1	20	4	24	1	0	1	21	4	25
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
Mushroom Production	0	0	0	0	0	0	0	0	0	0
Bee-keeping	0	0	0	0	0	0	0	0	0	0
Sericulture	0	0	0	0	0	0	0	0	0	0
Repair and maintenance of farm machinery and implements	0	0	0	0	0	0	0	0	0	0
Value addition	2	6	18	24	2	9	11	8	27	35
Small scale processing	0	0	0	0	0	0	0	0	0	0
Post Harvest Technology	0	0	0	0	0	0	0	0	0	0
Tailoring and Stitching	0	0	0	0	0	0	0	0	0	0
Rural Crafts	0	0	0	0	0	0	0	0	0	0
Production of quality animal products	0	0	0	0	0	0	0	0	0	0
Dairying	0	0	0	0	0	0	0	0	0	0
Sheep and goat rearing	0	0	0	0	0	0	0	0	0	0
Quail farming	0	0	0	0	0	0	0	0	0	0
Piggery	0	0	0	0	0	0	0	0	0	0
Rabbit farming	0	0	0	0	0	0	0	0	0	0
Poultry production	0	0	0	0	0	0	0	0	0	0
Ornamental fisheries	0	0	0	0	0	0	0	0	0	0
Composite fish culture	0	0	0	0	0	0	0	0	0	0
Freshwater prawn culture	0	0	0	0	0	0	0	0	0	0
Shrimp farming	0	0	0	0	0	0	0	0	0	0
Pearl culture	0	0	0	0	0	0	0	0	0	0
Cold water fisheries	0	0	0	0	0	0	0	0	0	0
Fish harvest and processing technology	0	0	0	0	0	0	0	0	0	0
Fry and fingerling rearing	0	0	0	0	0	0	0	0	0	0
Any other (Income generation)	2	26	17	43	3	25	28	29	42	71
IPM	1	20	0	20	0	0	0	20	0	20
Income generation	1	0	15	15	0	5	5	0	20	20
TOTAL	**14**	**266**	**54**	**320**	**33**	**39**	**72**	**299**	**93**	**392**

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

Area of training	No. of Courses	No. of Participants								
		General/ Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops	1	11	0	11	1	0	1	12	0	12
Integrated Pest Management	0	0	0	0	0	0	0	0	0	0
Integrated Nutrient management	0	0	0	0	0	0	0	0	0	0
Rejuvenation of old orchards	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 use of organic inputs	0	0	0	0	0	0	0	0	0	0
Care and maintenance of farm machinery and implements	0	0	0	0	0	0	0	0	0	0
Gender mainstreaming through SHGs	0	0	0	0	0	0	0	0	0	0
Formation and Management of SHGs	0	0	0	0	0	0	0	0	0	0
Women and Child care	0	0	0	0	0	0	0	0	0	0
Low cost and nutrient efficient diet designing	0	0	0	0	0	0	0	0	0	0
Group Dynamics and farmers organization	0	0	0	0	0	0	0	0	0	0
Information networking among farmers	0	0	0	0	0	0	0	0	0	0
Capacity building for ICT application	0	0	0	0	0	0	0	0	0	0
Management in farm animals	0	0	0	0	0	0	0	0	0	0
Livestock feed and fodder production	0	0	0	0	0	0	0	0	0	0
Household food security	0	0	0	0	0	0	0	0	0	0
Any other (SMC)	1	15	0	15	5	0	5	15	5	20
TOTAL	2	26	0	26	6	0	6	27	5	32

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

Area of training	No. of Courses	No. of Participants								
		General/ Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops	0	0	0	0	0	0	0	0	0	0
Integrated Pest Management	0	0	0	0	0	0	0	0	0	0
Integrated Nutrient management	0	0	0	0	0	0	0	0	0	0
Rejuvenation of old orchards	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 use of organic inputs	0	0	0	0	0	0	0	0	0	0
Care and maintenance of farm machinery and implements	0	0	0	0	0	0	0	0	0	0
Gender mainstreaming through SHGs	0	0	0	0	0	0	0	0	0	0
Formation and Management of SHGs	0	0	0	0	0	0	0	0	0	0
Women and Child care	0	0	0	0	0	0	0	0	0	0
Low cost and nutrient efficient diet designing	1	0	11	11	0	6	6	0	17	17
Group Dynamics and farmers organization	0	0	0	0	0	0	0	0	0	0
Information networking among farmers	0	0	0	0	0	0	0	0	0	0
Capacity building for ICT application	0	0	0	0	0	0	0	0	0	0
Management in farm animals	0	0	0	0	0	0	0	0	0	0
Livestock feed and fodder production	0	0	0	0	0	0	0	0	0	0
Household food security	0	0	0	0	0	0	0	0	0	0
Any other (pl.specify)	0	0	0	0	0	0	0	0	0	0
TOTAL	1	0	11	11	0	6	6	0	17	17

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

Area of training	No. of Courses	No. of Participants								
		General/ Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops	1	11	0	11	1	0	1	12	0	12
Integrated Pest Management	0	0	0	0	0	0	0	0	0	0
Integrated Nutrient management	0	0	0	0	0	0	0	0	0	0
Rejuvenation of old orchards	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 use of organic inputs	0	0	0	0	0	0	0	0	0	0
Care and maintenance of farm machinery and implements	0	0	0	0	0	0	0	0	0	0

Gender mainstreaming through SHGs	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Formation and Management of SHGs	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Women and Child care	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Low cost and nutrient efficient diet designing	**1**	**0**	**11**	**11**	**0**	**6**	**6**	**0**	**17**	**17**
Group Dynamics and farmers organization	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Information networking among farmers	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Capacity building for ICT application	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Management in farm animals	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Livestock feed and fodder production	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Household food security	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Any other (pl.specify)	**1**	**15**	**0**	**15**	**5**	**0**	**5**	**15**	**5**	**20**
TOTAL	**3**	**26**	**11**	**37**	**6**	**6**	**12**	**27**	**22**	**49**

Sponsored training programmes

Area of training	**No. of Courses**	**No. of Participants**								
		General/ Others			**SC/ST**			**Grand Total**		
		Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Crop production and management										
Increasing production and productivity of crops	**5**	**233**	**2**	**235**	**80**	**5**	**85**	**313**	**7**	**320**
Commercial production of vegetables	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Production and value addition	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Fruit Plants	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Ornamental plants	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Spices crops	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Soil health and fertility management	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Production of Inputs at site	3	74	0	74	9	0	9	83	**0**	**83**
Methods of protective cultivation	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Others (pl. specify)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total	**8**	**307**	**2**	**309**	**89**	**5**	**94**	**396**	**7**	**403**
Post harvest technology and value addition	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Processing and value addition	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Others (pl. specify)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Farm machinery	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Farm machinery, tools and implements	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Others (pl. specify)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Livestock and fisheries	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Livestock production and management	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Animal Nutrition Management	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Animal Disease Management	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Fisheries Nutrition	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Fisheries Management	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Others (pl. specify)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Home Science	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Household nutritional security	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Economic empowerment of women	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Drudgery reduction of women	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Others (Income generation)	**23**	**115**	**304**	**419**	**31**	**136**	**167**	**146**	**440**	**586**
Total	**23**	**115**	**304**	**419**	**31**	**136**	**167**	**146**	**440**	**586**
Agricultural Extension										
CapacityBuilding and Group Dynamics	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Others (pl. specify)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
GRAND TOTAL	**31**	**422**	**306**	**728**	**120**	**141**	**261**	**542**	**447**	**989**

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/ Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop production and management										
Commercial floriculture	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Commercial fruit production	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Commercial vegetable production	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Integrated crop management	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Organic farming	**01**	**20**	**04**	**24**	**01**	**00**	**01**	**21**	**04**	**25**
Others (pl. specify)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total	**1**	**20**	**04**	**24**	**01**	**00**	**01**	**21**	**04**	**25**
Post harvest technology and value addition										
Value addition	02	06	18	24	02	09	11	08	27	35
Others (pl. specify)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total	02	06	18	24	02	09	11	08	27	35
Livestock and fisheries										
Dairy farming	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Composite fish culture	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Sheep and goat rearing	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Piggery	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Poultry farming	**01**	**09**	**00**	**09**	**13**	**01**	**14**	**22**	**01**	**23**
Others (Nursery management)	**01**	**15**	**0**	**15**	**4**	**0**	**04**	**19**	**0**	**19**
Total	**2**	**24**	**0**	**24**	**17**	**1**	**18**	**41**	**1**	**42**
Income generation activities										
Vermicomposting	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Production of bio-agents, bio-pesticides,	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
bio-fertilizers etc.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Repair and maintenance of farm machinery	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
and implements	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Rural Crafts	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Seed production	01	30	0	30	1	0	1	31	**0**	**31**
Sericulture	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Mushroom cultivation	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Nursery, grafting etc.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Tailoring, stitching, embroidery, dying etc.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Agril. para-workers, para-vet training	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Others (pl. specify)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total	01	30	0	30	1	0	1	31	**0**	**31**
Agricultural Extension										
Capacity building and group dynamics	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Others (pl. specify) **Nursery Management**	**01**	**15**	**0**	**15**	**4**	**0**	**04**	**19**	**0**	**19**
Total	**01**	**15**	**0**	**15**	**4**	**0**	**04**	**19**	**0**	**19**
Grand Total										

3.5. Extension Programmes

Activities	No. of programmes	No. of farmers	No. of Extension Personnel	TOTAL
Advisory Services (Other than KMAS)	35	633948	00	633948
Diagnostic visits	20	538	20	558
Field Day	07	607	20	627
Group discussions	04	285	05	290
KisanGhosthi	14	788	25	813
Film Show	05	255	05	260
Self -help groups	07	145	10	155
KisanMela	05	970	20	990
Exhibition	04	1097	20	1117
Scientists' visit to farmers field	21	586	20	606
Plant/animal health camps	00	00	00	00
Farm Science Club	05	110	05	115
Ex-trainees Sammelan	01	30	05	35
Farmers' seminar/workshop	09	824	20	844
Method Demonstrations	02	48	05	53
Celebration of important days	04	312	15	327
Special day celebration	05	233	20	253
Exposure visits	01	25	02	27
Parthenium Awareness Week	01	250	10	260
Innovative Farmers Meet	01	230	10	240
STRY-Skill Training for Rural Youth	05	75	05	80
Total	**156**	**641356**	**242**	**641598**

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

Details of other extension programmes:

Particulars	Number
Electronic Media (CD./DVD)	02
Extension Literature	11
Newspaper coverage	280
Popular articles	19
Radio Talks	37
TV Talks	00
Animal health camps (Number of animals treated)	00
Social Media (No. of platforms Used)	05
Others (pl. specify) ICAR News	03
Total	**357**

3.6 Online activities during year 2023

S. No.	Activity Type	Mode of implementation (Video conferencing / Audio Conferencing / Facebook Live / YouTube Live/ Zoom/ Google meet/ Webex etc.)	Title of Program	No. of Programmes	No. of Participants/ Views
A	Farmers training	Zoom	Organic crop management practices	01	40
1	Farmers training	Zoom	Online training on Soil sampling, design and layout for plantation of fruit crops	01	**21**
2	Farmers training	Zoom	Online training on Ultra High density plantation in Mango	01	**57**
3	Farmers training	Zoom	Online training program on Bahar Regulation in Mandarin	01	**38**
4	Farmers training	Zoom	Online Training program on Integrated Nutrient Management in Orange	01	**46**
5	Farmers training	Zoom	Onion Seed Production technology	01	**9**
	Total			**6**	**211**

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
Oilseeds						
	Soybean	AMS-1001	AMS-1001	126	504000	125
	Soybean	PKV-AMBA	PKV-AMBA	08	32000	03
Pulses						
	Chickpea	PDKV Kanak	PDKV- Kanak	17.5	74725	25

Production of planting materials by the KVK

Crop	Name of the crop	Name of the variety	Name of the hybrid	Number	Value (Rs.)	Number of farmers
Plantation						
	Mango	kesar	kesar	200	16000	10
	Custard apple	Balanagar	Balanagar	1200	24000	60
	Guava	Sardar	Sardar	550	16500	57
	Drumstick	CO-4	CO-4	300	3000	10
	Lime	PDKV Lime	PDKV Lime	1561	15610	150

Production of Bio-Products

Bio Products	Name of the bio-product	Quantity Kg/Lit	Value (Rs.)	No. of Farmers
Bio Fertilizers				
	Vermicompost	1500	150000	0
Total		**1500**	**150000**	**0**

Production of livestock materials

Particulars of Live stock	Name of the animal / bird / aquatics	Name of the breed	Type of Produce	unit (no./ lit/kg)	Quantity	Value (Rs.)	No. of Farmers
Duals (broiler and layer)	Poultry	Kaweri	Day old chicks	No.	3256	81400	36
Fisheries							
Indian carp							
Exotic carp							
Others (Fish)	Fish	Catla and Rohu	Fingerlings	No.	115000	57500	27
Total					**118256**	**138900**	**63**

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

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

B. Literature developed/published

Item	Citation/ Title	Authors name	Number
Research papers (Give Citation)	Enterprise diversification for enhancing productivity and farm income abstract No-515 "Satisfaction level encountered by the farmers in adoption of drip irrigation technology" in ISEE National Seminar 2023 on 23rd June 2023.	Dr.S.K.Deshmukh Rajaguru s and T. Kalidasan	1
Technical reports	MPR, APR and FLD reports	Dr.R.L.Kale	8
	Capacity Building and Food Processing	Shubhangi N. Watane	18
News letters	KVK Monthly News Letter	KVK Team	24
Technical bulletins	-	-	0
Popular articles	Success Story of Women Entrepreneur Sau.GopaliManojDighade-Masala Enterprises shows path for successful business published in Agrowon dated 1 April 2023.	S.N.Watane	1
	Recipes of Millets by Miss.S.N.Watane published in Journal KrishiVasant April 2023 Page no.13	S.N.Watane	1
	Nutri Smart Cereals recipe published in KrishiVasant May 2023 issue Page no.12.	S.N.Watane	1
	Integrated management practices for effective flowering in sweet lime for mrigbahar published in Agrowon 15 June 2023	N.B.Patil	1
	Skill based program and activities of KVK Washim published in KrishiJagranMagzine vol-9 Page no.34-36 June 2023	Dr.R.L.Kale	1
	Success Story on Benefits of BBF technologies and horizontal spread through interventions by KVK Washim in adopted village Shirsala published in Agrowon on 6th July 2023.	Dr.D.N.Ingole	1
	Importance of Nutri-Cereals in daily diet and various recipes of	S.N.Watane	1

	millets published in KrishiVasant (e-publication) page no-23 July 2023 issue		
	Success Story of Turmeric grower YogeshKhanzode for successful cultivation of Waigaon Turmeric variety through scientific management practices published in Agrowon on 10 August 2023.	N.B.Patil	1
	Success story of orange grower group farming from Wadaji village published in Agrowon on 11 August 2023.	N.B.Patil	1
	Popular article on Healthy fruit Karvand published in Agrowon on 15 August 2023.	S.N.Watane	1
	Popular article on Composting technique from Agri Waste published in Agrowon	T.S.Deshmukh	1
	DAMU KVK Washim Agro Advisory message published in Lokmat 11 Nov 2023.	T.S.Deshmukh	1
	Success Story of VimalDattaRajguruHelping Papad Production published in Hitvada 7 Nov 2023.	S.N.Watane	1
	Crop advisory and plant protection measure in view of unseasonal rain in the district by SMS Plant Protection published in Sakal of dated 2 Dec 23.	R.S.Daware	1
	Crop advisory and plant protection measure in view of unseasonal rain in the district by SMS Plant Protection published in Agrowon of dated 5 Dec 23.	R.S.Daware	1
	Crop advisory and plant protection measure in view of unseasonal rain in the district by SMS Plant Protection published in Lokmat of dated 4 Dec 23.	R.S.Daware	1
	INM for successful Mrig bahar management in Orange	Nivrutti Patil, SMS Hort Agroone 15 June 2023	1
	Karwandache aharatil Mahtwa	Shubhangi N. Watane	1
	Nirmayatun Campost Nirmity	Shubhangi N. Watane	1
Extension literature	Booklets on Introduction of KVK Washim through ICT to school students published and release on 27 October 2023.	Dr.R.L.Kale, Dr.S.K.Deshmukh P.V.Deshmukh	1
	Extension Folder: Under VBSY 2023 Extension folder on Soil Testing, its importance and sample collection methods.	Dr.S.K.Deshmukh	1
	Extension Folder: Under VBSY 2023 Extension folder on Organic and Natural Farming practices.	T.S.Deshmukh	1
	Extension folder on Trichoderma Production under VBSY-2023 published and 1000 copy distributed.	R.S.Daware	1
	Extension literature on soil health card, trichoderma production and natural farming distributed to farmers in Vikasit Bharat Sankalp Yatra-2023 awareness program.	Dr.R.L.Kale	1
	Folders on Wheat Gram Cotton Safflower Groundnut Soybean Linseed Pigeonpea Natural Farming Soil testing	T S Deshmukh, Dr. RL Kale	7
	Plantation techniques in oranges INM in Organges	Nivrutti Patil, SMS Hort	2000 2000
	Importance of Millets in Diet (Sorghum, erl millets,& Finger Millets)	Shubhangi N. Watane, S.K. Deshmukh, Dr. R. L. Kale	500
Others Published in ICAR News	National Fish Farmers Day celebrated by KVK Washim published on ICAR portal.	Dr.S.K.Deshmukh	1

	Celebration world Soil Day-2023 published in ICAR portal	Dr.S.K.Deshmukh	1
	Director ATMA DashrathTambhale visited KVK Washim published in ICAR Portal.	Dr.S.K.Deshmukh	1
TOTAL			**4585**

C. Details of Electronic Media Produced

S. No.	Type of media (CD / VCD / DVD/ Audio-Cassette)	Title of the programme	Number
1	**YouTube Video**	**Papad Making Enterprise by Vimal Rajguru**	**1**
2	**Yourtube video uploaded**	**Use of BBF technology in soybean to increase production**	**1**
3	**Youtube video uploaded**	**Importance of Organic farming by a farmer.**	**1**

D. Details of Social Media Platforms Created / Used

S. No.	Type of social media platform	No of events (uploaded video/post/story etc.	Title of social media	Number of Followers/ Subscribers
1	YouTube Channel (no of video uploaded)	10	KVK Washim	1570
2	Facebook page/ Account (No of Post)	55	KVK Washim	1815
3	Mobile Apps	-	-	-
4	WhatsApp groups	24	Agro Advisory and allied information	4897
5	Twitter Account	28	@KVK Washim	157
6	Any other (KVK Web portal)	**365**	**Various Events uploaded**	NA

D. Success stories / Case studies if any (two or three pages writeup on each case with suitable action photographs. The success stories /Case studies need not be restricted to the reporting period).

1. **Title : Organic Farming Skill Training and Sale of Input has enhanced Farmers Income Level**

Name of the Farmers : Mr.Govind Prataprao Deshmukh

District : Washim

State : Maharashtra

Situation Analysis :

Mr. GovindPrataprao Deshmukh (32 years) and 10th standard pass is innovate and devotional contact farmer of KrishiVigyan Kendra, Washim. He is connected to KVK, Washim since from 2015 when suffering the problem of low yield in turmeric and other crops. Farmer is having 5 acres of irrigated agricultural land. The soils are light with poor drainage. Most of the time farmers suffered from crop failure due to poor drainage of water and his family was finding other sources of livelihood. His brother has started working at Grocery shop to ruin their family needs.

Support and Motivation :

Farmer came in contact with KVK through training programme on organic farming under STRY training on 5 to 11 January 2023 TP No.2728 and he was convinced towards organic farming as the cost of production is very low in organic farming. Earlier farmer was practicing conventional chemical farming where the cost of production is getting on higher side. Hence farmer started growing turmeric organically since kharif 2016 and continued till date and started various innovative practices in organic farming. Step by step farmer has recycled all crop residues and farm waste available on the farm and converted his entire field under organic cultivation so that soil fertility is maintained is high level. Under livestock two desi cows and a bullock pairs which are very helpful for compost and cow urine as a part of organic farming. To save the input cost farmer has started producing Vermicompost, Go Kripaamrut, waste decomposer, Dashparni ark etc at farm level.

During Kharif 2021, farmer has cultivated Salem variety of turmeric on 1 acre and PDKV Waigaon Turmeric on 10 R area.1 acre is soybean + pigeon pea and 2 acre was sole soybean and Remaining 20 R is left for family consumption which is having mixed crops including black gram, green gram, jowar and wheat for family consumption.

As per his four year experience of organic farming and under the guidance of Mr. NivruttiPatil, SMS, Horticulture, he followed complete package of practices especially organic nutrient management and disease management.

Output :

- The Skill based training program helped Mr.GovindDeshmukh to acquire knowledge and skill required for Organic Input Production which encouraged him to take up organic input production as a supplementary income generating activity.

- Before training, he was able to generate an income of not more than Rs. 2.3 lakhs annually. The implementation of various skills acquired during the training helped her generate an income of more than Rs 3.0 lakhs per year from the various activities undertaken utilizing the same resources.

Outcomes :

After undergoing training farmer has upscale technologies on organic input production in domain area like vermicomposting, Bulb treatment with Go Kripaamrut, neem oil cake and Trichoderma, Application of Jivamrut @ 300 liters per acre 30 days after sowing, Spraying of Vermi Wash, Dashparni Ark and Butter Milk of desi cow at 15 days interval.

Awards & Recognition

KVK Washim has honoured Mr.GovindDeshmukh by Innovative Farmer Award on the eve of ICAR Foundation Day Program. ATMA Washim has also honoured GovindDeshmukh for his contribution in Organic Farming.

Impact of the technology :

- By observing the income and passion of Mr.GovindDeshmukh from that locality are also interested in taking up farming like he. He has emerged as a role model for local youth in production and marketing of organic input and is considered as an example by rural youths.

- Mr.GovindDeshmukh and his contact farmers has formed NavChaitannya Farmers Producer Company and has made available vermibed, vermiwash, vermiculture, gokrupa culture for sale during various exhibitions participated by their FPO.

Outreach of the technology :

Introduction, Need of Organic Farming, Benefits of Organic Farming, Social aspects of Organic Farming, Market aspects **of** Organic Farming, Need of Organic Fertilizer, Benefits of Organic Fertilizer, Preparation of Organic Fertilizer, Demonstration & land preparation, Need of Microorganism, Benefits of Microorganism, Management of Microorganism, Soil formation; Composition and characteristics, Types of soil according to composition, Distribution of soil groups. Integrated pest & disease managements, Organic pesticides, bio-pesticides, Inorganic pesticides, disadvantages of their use, Seed, seedling and soil Treatment measures, Feasibility of complete dependence on organic sources.

STRY Team

	Name	***Designation***	***Email ID***
Director, SAMETI			
STRY Nodal Officer	Dr.S.K.Deshmukh	SMS Extension Education	sms.skdeshmukh@gmail.com
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2. Title- Economics analysis of Ridges and Furrow methods and Farmers Practice (Drilling method) in Soybean crop of Washim District.

Situation analysis: - Soybean, also known as the miracle bean', occupies almost 60 per cent of the total world production of oilseeds and is considered as the most important source of protein and oil. The expansion of area under soybean took place at quite a fast rate in absolute as well as relative terms specifically after mid 1980's. Maharashtra and Madhya Pradesh are the two major soybean producing states and currently contributes more than 80 per cent to the total area and production of soybean in India. Maharashtra being a major soybean producing state with higher productivity, soybean cultivation is concentrated in two regions (Vidarbha and Marathwada) located in the eastern part of Maharashtra. Around 80 per cent of the soybean production of the state is contributed by these regions.

In washim district of Maharashtra state, soybean is cultivated in an area of 3.08 lakh ha with productivity of 13.71 q/ha. However, low productivity of the crop remains a major problem in soybean cultivation. This may be due to various technological, adopted by the soybean growers. Hence, the present study was conducted to study the improved practice vs farmer's practices by the farmers in soybean cultivation.in study area.

Planning / Interventions - The study was conducted in Washim district of Maharashtra during kharif season of 2023. The farmers were selected purposively from Malegaon tashsil of Washim district on improved soybean cultivation practices .Out of six taluks of Washim district, one taluks namely, were selected as these taluks had highest number of soybean growers. three villages from from Malegaon was selected based on the availability of maximum number of soyabean growers. The selected villages were Shirsala, somthana and selgaon bandade. The sample size of 100 farmer were selected from improved as well as traditional technology adopted by the farmers.

Technological intervention s :

1. Selected farmers adopted the improved technology i.e. Ridges and Furrow, BBF, Seed treatment,
2. Newly release varieties of Soyabean, minimization of seed rate,
3. Clean cultivation, dibbling methods of soyabean,
4. Use of pheromone traps
5. Use of Neemarks spray (Niboli)

Impact of the technology :

Horizontal Spread - During the year 2022 1320 hectare land cultivated under soyabean crop by providing the technology of R&F method while it was increased to 2023 46400 ha land under R&F method for soyabean crop.

Economic gains - Based on the results of the impact on ridges and furrows for cultivation of Soybean variety MAUS-612 in Washim district during Kharif 2023. Soybean yield was 19.68 q/ha in farmers practice (control) whereas in R&F demonstration it was observed 24.71 q/ha, which was 23.71 percent higher over farmers practice. Similarly, BC ratio was depicted 2.92 by demonstrated R&F method while 2.67 was observed in control (FP).

Demonstration of R&F methods was superior technology than farmer's practice of sowing by drill method in study area.

3. **Technology Module and success story under CFLDs**

Oilseeds 2023

Crop: Soybean

Technology Module:

Improved Varieties	:	KDS -726 & MAUS 612 (Demo), JS-335 (Check farmers)
Seed Rate kg/ha	:	62.5
Seed Treatment	:	Pre sowing seed treatment with chemical fungicide (Carboxim37.5%+ Thirum37.5%) 100 gm/acre followed by Use presowing seed dressing by Biofertilizers culture like Rhizhobium PSB each @ 10ml/kg seed.
Sowing Time	:	Last week of June 2023
Spacing (cm)	:	45x 5 cm
Irrigation with stages	:	Rainfed
Moisture Conservation Practices Followed	:	Opening furrow at 30 DAS
Fertilizer Application	:	30.75.30 Kg/ha
Insect/pest Management Practices	:	1. Recommended pesticide spraying by Thimethoxam+Lamdacyhalothrin 50ml/acre,Chloratranilipole 18.5% EC 60ml/acre 2. Fungicide Spraying of Tebuconazole +Sulphur 1kg/ha.
Weed Control	:	3. Use of Imazethapyr+Imazamox 100g/ha for post emergence weed control 15-20 DAS followed by Hoeing at 30-35 DAS
Harvesting	:	First fortnight October 2023
Existing Cropping Systems	:	Soybean – Bengal gram / Wheat

Information about successful technological interventions under CFLDs on oilseeds and pulses:

Title of the technological intervention :

Integrated crop management for sustainable Soybean crop productivity

Farming situation:-

The soybean is major crop cultivated in washim district during Kharif season. As During Kharif 2023, KVK Washim under aegis of ICAR-ATARI Pune implemented the cluster demonstration on Soybean crop on 40 ha involving 89 farmers from Somthana , Vyad, Loni Bk. of Risod block & Bhourad Tq. Malegaon block of Washim district. The cluster demonstration was organised to generate the farmers awareness about improved variety and package of practices for the Soybean crop among the farmers to increase the crop productivity. The average productivity of the Soybean is 13.7 q/ha lower than the potential of 22-25 q/ha of recommended varieties.

Climatic vulnerability: -

The farmers are facing the problem of low quality grains lower yields, late sowing, dry spells during crop growth, pest problem during the growing season.

Problems identified

Farmer was facing soybean yield loss in cultivated variety JS-335 due to reduced seed grade susceptibility to pest infestation. The farmer was unaware about improved high yielding variety, seed availability, recommended pesticide and pre sowing seed treatment practices.

Technological intervention in brief: -

Cultivation of crop with recommended plant protection & production measures.

1. Use of Improved Variety variety KDS 726 seed having bold seeds & high yield potential of 26-31 q/ha with recommended package of practices & moderately resistant to stem fly pest. (by farmer)
2. Pre sowing seed treatment with chemical fungicide (Carboxim + Thirum) 100 gm/acre (Rs.240)
3. Use presowing seed dressing by Biofertilizers culture like Rhizhobium PSB & trichoderma each @ 1kg/demo. (Rs. 300)
4. Use of 5% NSKE spraying (Rs. 350)
5. Recommended pesticide spraying by Thimethoxam+Lamdacyhalothrin 50ml, Chloratranilipole 18.5% EC 3ml in 10 lit water (Rs. 1060)
6. Fungicide Spraying of Tebuconazole +Sulphur 10 ml in 10 lit water(Rs. 375)

KVK Washims interventions for Awareness on Technology of Soybean crop

KVK organised Farmers training on Integrated crop management of Soybean crop & also supplied recommended inputs in Somthana , Vyad, Loni Bk. of Risod block & Bhourad Tq. Malegaon block of Washim district. KVK distributed the technical folder on Soybean crop management to the farmer. KVK gave technical backstopping through training & monitoring visit to guide farmer infield during crop season. KVK organised the Field Day of CFLD farmers Bhourad Villages on Dt.21.9.2023. The programme was chaired by Dr. R. L. Kale, Head & Sr. Scientist KVK, TAO Malegaon was Chief guest of the Programme.

- Sh. T.S. Deshmukh SMS Agronomy & Incharge CFLD Soybean crop addressed farmers on the importance of the integrated crop management in Soybean with use of newer improved variety KDS 726 & MAUS 612. The publicity about Soybean crop training, field day was made through social media & local news paper for mass awareness.
- **Outcome and impact of the intervention**

The integrated crop management demonstrations with Soybean crop variety KDS-726 gave avg. 21 q/ha yields avg. net profit of Rs. 47828/ha with BCR of 1.76 by Soybean variety KDS-726 i.e. avg. 20.6% more than other demonstrated variety MAUS 612 & JS 335 as cultivated by farmer during Kharif 2023. The farmer earned avg. net profit of Rs.46988/ha with BCR of 1.75 & 19.6% increased yields resp. by Soybean demonstration under recommended practices.
Farmers feedback on technology was the demonstrated variety KDS726, seed is more bold , variety is moderately resistant to stem fly which makes it superior over the farmers cultivated variety JS-335. The variety KDS726 with pre-sowing seed treatment with biofertilizer, chemical fungicide & ICM practises is helpful in crop management.

View of Soybean crop in the field
Shri Devidas Borkar Wyad

Soybean Field view of
Shri Gajanan Narayan Napte,

Performance of CFLD Soybean Demonstration

Details	No. of Farmers /demos	Area (ha)	Yield (q/ha)				% Increase in yield
			Demo			Check	
			High	Low	Average		
ICM (Variety KDS 726)	34	15.2	22.5	19.5	21.0	17.4	20.6%
ICM (Variety MAUS 612)	59	24.8	21.3	18.75	20.0	17.4	14.5%
AVG	93	40	21.3	20.0	20.6	17.4	19.6%

Technology	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
ICM (Variety KDS 726)	48669	96497	47828	1.98	46090	81328	35238	1.76
ICM (Variety MAUS 612)	48600	94749	46149	1.95	46043	80114	34071	1.74
AVG	48634	95623	46988	1.97	46067	80721	34654	1.75

4. Success story format for individual Oilseeds farmer in Kharif 2023

Name of KVK: KVK Washim

Title of intervention: Demonstration on Improved crop production technology of Soybean crop

Crop and Variety: Soybean Var. KDS -726 & MAUS 612 (Demo), JS-335 (Check farmers)

Name of farmer & Address: Gajanan Narayan Napte, Bhourad Tq. Malegaon. Dist Washim

Details of technology demonstrated: Sowing of the crop on 14-6-2023. He used 65 kg/ha seed of KDS 726 variety. He cultivated of crop with recommended plant protection & production measures.

1. Use of Improved Variety variety KDS 726 seed having bold seeds, moderately resistant to stemfly & high yield potential of 26-31 q/ha with recommended package of practices & moderately resistant to stem fly & girdle beetle pest. (by farmer)
2. Pre sowing seed treatment with chemical fungicide (Carboxim + Thirum) 100 gm/acre (Rs.240)
3. Use presowing seed dressing by Biofertilizers culture like Rhizhobium PSB & trichoderma each @ 1kg/demo. (Rs. 300)
4. Use of 5% NSKE spraying (Rs. 350)
5. Recommended pesticide spraying by Thimethoxam+Lamdacyhalothrin 50ml, Chloratranilipole 18.5% EC 3ml in 10 lit water (Rs. 1060)
6. Fngicide Spraying of Tebuconazole +Sulphur 10 ml in 10 lit water(Rs. 375)

Institutional Involvement: KVK organised Farmers training on Integrated crop management of Soybean crop on 19.6.2023. Distributed the technical folder on advances in Soybean crop management to the farmer.

Also Supplied recommended inputs as part of improved production technology for Soybean to the farmer including, Biofertilizers like Rhizhobium PSB &trichoderma kit /demo. (Rs. 300) for Pre sowing seed treatment. Gave technical backstopping & monitoring visit to guide farmer on crop management during the crop season. Sh. T.S. Deshmukh SMS Agronomy & Incharge CFLD Soybean address farmers on the importance of the integrated crop management in Soybean with use of newer improved variety KDS 726.

Organised the Field Day of CFLD farmers at Bhourad Village on dt. 9.9.2023. The programme was chaired by Dr. R. L. Kale, Head & Sr. Scientist KVK, Sh. Wagh AO Risod was Chief guest of the Programme. The publicity about Soybean crop field day was made through local news paper for mass awareness.

Success Point: The farmer crop was harvested on 12 Oct. 2023. The variety KDS 726 gave 20.6 q/ha yields i.e.18.5% more than variety JS-335 yield as cultivated by farmer during Kharif 2023 season. The farmer earned net profit of Rs.46988/ha with BCR of 1.97 by Soybean variety KDS 726 under recommended practices. Additional gross return of Rs.12334/-per ha. was earned by farmer.

Farmer Feedback: In the demonstrated variety KDS726, seed is more bold , variety is moderately resistant to stem fly which makes it superior over the farmers cultivated variety JS-335.

Yield (q/ha)	
Demonstration	20.6 q/ha
Potential yield of variety/technology	23-25 q/ha
District average	13.7 q/ha
State average	11.4 q/ha

Performance of technology vis-à-vis Local check (Increase in productivity and returns)

Practice used	Yield (q/ha)	Gross cost (Rs/ha)	Gross income (Rs/ha)	Net income (Rs/ha)	B:C ratio
Farmer practices	17.4	46067	80721	34654	1.75
Demonstration	20.6	48634	95623	46988	1.97
% Increase	18.5 %				

5. Technology Module and success story under CFLDs

Oilseeds 2022-23

Crop: SAFFLOWER (Rabi 2022)

Technology Module:

Improved Varieties	:	ISF 724 (IIOR Hyderabad)
Seed Rate kg/ha	:	12 Kg
Seed Treatment	:	Rhizhobium J. & PSB each @ 25 gm /kg seed, trichoderma @5gm/kg & Carboxim + Thirum@3 gm/kg seed,
Sowing Time	:	3rd-4th week october
Spacing (cm)	:	45 X20 cm
Irrigation with stages	:	Irrigation in Preflowering & Pod development
Moisture Conservation Practices Followed	:	Hoeing
Fertilizer Application	:	40:25:0 Kg/ha NPK(ie. Urea 87Kg, SSP 156 Kg), applied half quantity as seed is treated with biofertilizers
Insect/pest Management Practices	:	In vegetative crop stage, sucking pest incidence was reported (5% NSKE fb Diamethoate 30 EC spraying 13ml in 10 lit water.)
Weed Control	:	Manal weeding/hoeing early 20 DAS
Harvesting	:	Manual by Labour during 3rd -4th week of March
Existing Cropping Systems	:	Soybean/Green gram -Safflower

Information about successful technological interventions under CFLDs on oilseeds :

1. **Demonstration on Integrated Crop Management in Safflower crop**

Farming situation:-

The Safflower is major oilseed crop cultivated in washim district during Rabi season. During Rabi 2022, KVK Washim under aegis of ICAR-ATARI Pune implemented the cluster demonstration on Safflower crop on 20 ha in Mangul zhanak & Dapuri village of Washim district. The cluster demonstration was organised to generate the farmers awareness about improved variety and package of practices for the Safflower crop among the farmers to increase the crop productivity. The average productivity of the Safflower is 4.6 q/ha lower than the potential of 16-25 q/ha of recommended varieties. So to increase edible oil production area under safflower with higher productivity minimising the technical issues, market rate and marketability is important. In order to fulfil the availability through higher productivity demonstration of technology needs to be boosted in oilseed area.

Climatic vulnerability: -

Late sowing due to delayed late kharif season rainfall.

Problems identified

The farmers are facing the problem of lower yields, wilt disease & attack by sucking pest in cultivated variety Bhima. The farmer were unaware about improved high yielding variety, seed availability, recommended pesticide and pre sowing seed treatment practices.

Technological intervention in brief: -

Cultivation of crop with recommended plant protection & production measures.

1. Use of Improved Variety ISF 764 seed having bold seeds & high yield potential of 16-25 q/ha with recommended package of practices & moderately resistant to stem fly pest. (Rs.600)
2. Pre sowing seed treatment with chemical fungicide (Carboxim + Thirum) 100 gm/acre (Rs.240)

3. Use presowing seed dressing by Biofertilizers culture like Azatobacter, PSB & trichoderma each @ 1kg/demo. (Rs. 300)
4. Use of 5% NSKE spraying (Rs. 350)
5. Recommended pesticide spraying by Diamethoate 30 EC spraying 13ml in 10 lit water. (Rs. 500)

Efforts made by KVK / methodology followed: -

KVK organised Farmers training on Integrated crop management of Safflower crop on 24.10.2022 at Mangul zhanak, Dapuri village & Distributed the recommended inputs with technical folder on crop management to the farmer. KVK expert gave technical backstopping & monitoring visit to guide farmer field during crop season. KVK Organised the Field Day of CFLD farmers at Mangul zhanak shivar on dt. 24.2.2023.

Sh. T.S. Deshmukh SMS Agronomy & Incharge CFLD oilseed addressed farmers on the importance of the integrated crop management in Safflower with use of newer improved variety ISF 764 for higher yield & oil %. The publicity about field day was made through local news paper for mass awareness.

Output, outcome and impact of the intervention: –

The variety ISF 764 gave 13 q/ha yields i.e.13% more than variety cultivated by farmer during Rabi 2022-23 season. The farmer earned net profit of Rs.44776/ha with BCR of 2.61 under demonstrated recommended practices. Additional gross return of Rs.10799/-per ha. was earned by farmer.

View of Safflower demo. field of Sh. Zhanak , at Mangul Zhanak Dt.26.2.23

Safflower Var. ISF 764 field of Shri Datarao Zhanak Mangul Zhanak village

6. Success story format for individual farmer: Safflower Oilseeds Rabi 2022:

Name of KVK : KVK Washim
Title of intervention: Demonstration on Improved crop production technology of Soybean crop
Crop and Variety: Safflower, Var. ISF 764
Name of farmer & Address:
Datrao Zhanak , Mangul zhanak Tq. Risod. Dist Washim
Farmers field profile :He is having medium deep black soil in his field , He completed the Sowing of the crop on 26-10-2022. He used 12 kg/ha seed of ISF 764 variety.

Details of technology demonstrated:
Cultivation of crop with recommended plant protection & production measures.

1. Use of Improved variety ISF 764 seed having bold seeds, with high yield potential of 20-25 q/ha bold seeded, higher oil %.
2. Pre sowing seed treatment with chemical fungicide (Carboxim + Thirum) 100 gm/acre (Rs.240)
3. Use presowing seed dressing by Biofertilizers culture like Azatobacter PSB & trichoderma each @ 1kg/demo. (Rs. 300)
4. Use of 5% NSKE spraying (Rs. 350)
5. Recommended pesticide spraying by Diamethoate 30ml, in 10 lit water (Rs. 1050)

Institutional Involvement:
KVK organised Farmers training on Integrated crop management of Safflower crop on 24.10.2022. Distributed the technical folder on advances in Safflower crop management to the farmer. The programme was chaired by Dr. R. L. Kale, Head & Sr. Scientist KVK.
Also Supplied recommended inputs as part of improved production technology for Safflower CFLD to the farmer including, Seed, Biofertilizers like Azatobacter PSB & trichoderma kit /demo. (Rs. 300) for Pre sowing seed treatment. Gave technical backstopping & monitoring visit to guide farmer on crop management during the crop season. Sh. T.S. Deshmukh SMS Agronomy & Incharge CFLD oilseed address farmers on the importance of the integrated crop management in Soybean with use of newer improved variety ISF 764.
Organised the Field Day of CFLD farmers at Mangul zhanak shivar on dt. 24.2.2023. The publicity about Safflower crop field day was made through local news paper for mass awareness.

Success Point:
The farmer crop was harvested on 29.03.2022. The variety ISF 764 gave 13 q/ha yields i.e.13% more than variety cultivated by farmer during Rabi 2022-23 season. The farmer earned net profit of Rs.44776/ha with BCR of 2.61 under demonstrated recommended practices. Additional gross return of Rs.7631/-per ha. was earned by farmer.

Farmer Feedback:

Yield (q/ha)	
Demonstration	13 q/ha
Potential yield of variety/technology	20-25 q/ha
District average	9.48 q/ha
State average	3.75 q/ha

Performance of technology vis-à-vis Local check (Increase in productivity and returns)

Practice used	Yield (q/ha)	Gross cost (Rs/ha)	Gross income (Rs/ha)	Net income (Rs/ha)	B:C ratio
Farmer practices	11.3	26946	64091	37145	2.40
Demonstration	12.8	27820	72596	44776	2.61
% Increase	13 %				

View of Safflower demo. field of Shri Zanak , at Mangul Zanak Dt.26.2.23

Safflower Var. ISF 764 field of Shri Dattarao Zanak Mangul Zanak village

7. Technology Module and success story under CFLDs

Oilseeds2023

Crop: GROUNDNUT (Summer 2023)

Technology Module:

Improved Varieties	:	TAG 24
Seed Rate kg/ha	:	100 Kg
Seed Treatment	:	Rhizhobium J. & PSB each @ 25 gm /kg seed, trichoderma @5gm/kg & Carboxim + Thirum@3 gm/kg seed,
Sowing Time	:	2nd to last week of January
Spacing (cm)	:	45 X10 cm
Irrigation with stages	:	Protective irrigation as required especially in Preflowering & Pod development
Moisture Conservation Practices Followed	:	Hoeing
Fertilizer Application	:	25:50:30 Kg/ha NPK(ie. Urea55Kg, SSP 300 Kg), applied half quantity as seed is treated with biofertilizer
Insect/pest Management Practices	:	I In vegetative crop stage, sucking pest incidence was reported (5% NSKE fb spraying), leaf eating caterpiller pest (Spraying Quinolphos 25% in 10 lit water).Fungal leaf spot incidence Spraying of Hexaconazole 5% 3 ml in 10 lit water.)
Weed Control	:	Applied post emergence recommended weedicide Quizalofop ethyl 5% 100gm ai 25 DAS
Harvesting	:	Manual by Labour during 2-3rd week of May
Existing Cropping Systems	:	Green gram/ Soybean -Groundnut

Information about successful technological interventions under CFLDs on oilseeds and pulses:

View of Groundnut crop demo field of Shivnarayan K Budhvant Borkhedi Dist Washim

Field Day at Borkhedi Dist Washim Dt. 11.5.23

8. Demonstration on Integrated Crop Management in Groundnut crop

Farming situation:-

The Groundnut is major oilseed crop cultivated in washim district during Summer season. During Summer 2023, KVK Washim under aegis of ICAR-ATARI Pune implemented the cluster demonstration on Groundnut crop on 20 ha demonstration. The cluster demonstration was organised to generate the farmers awareness about improved package of practices for the Groundnut crop among the farmers to increase the crop productivity. The average productivity of the Groundnut is 20 q/ha lower than the potential yield of 24-26 q/ha.

Climatic vulnerability: -

The farmers are facing the problem of low quality grains, lower yields, late sowing, pest problem during the growing season.

Problems identified

Farmer was facing Groundnut yield loss in cultivated variety due to reduced seed grade susceptibility to pest infestation. The farmer was unaware about improved recommended pesticide use and pre sowing seed treatment practices.

Technological intervention in brief: -

Cultivation of crop with recommended plant protection & production measures.

1. Pre sowing seed treatment with chemical fungicide (Carbendazim + Mancozeb) 300 gm/acre
2. Use presowing seed dressing by Biofertilizers culture like Rhizhobium PSB & trichoderma each @ 1kg/demo.
3. Recommended pesticide spraying by weedicide Quizalofop ethyl 5% 100gm ai, use of 5% NSKE spraying Quinolphos 25% in 10 lit water, Fungicide Mancozeb.

Efforts made by KVK / methodology followed: -

KVK organised Farmers training on Integrated crop management of Groundnut crop on 1.01.2023 & also Supplied recommended inputs. Distributed the technical folder on Groundnut crop management to the farmer. Gave technical backstopping & monitoring visit to guide farmer field during crop season. Organised the Field Day of CFLD farmers at Khadki sadar Village on dt. 11.4.2023. The programme was chaired by S K Deshmukh, Extn. Scientist KVK.

Sh. T.S. Deshmukh SMS Agronomy & Incharge CFLD oilseed crop addressed farmers on the importance of the integrated crop management in Groundnut crop. The publicity about field day was made through local news paper for mass awareness.

Output, outcome and impact of the intervention: –

The ICM demonstration in Groundnut gave avg. 24.3 q/ha yields i.e.19.6% more than farmers practice (Avg. 20.4 q/ha) as cultivated by farmer during Summer 2023 season. The farmer earned avg. net profit of Rs.100649/ha with BCR of 3.01 under demonstration of recommended practices.

9. Success story format for individual farmer: Oilseeds 2023:

Name of KVK : KVK Washim
Title of intervention: Demonstration on Improved crop production technology of Groundnut crop
Crop and Variety: Groundnut, TAG 24
Name of farmer & Address:
Samadhan Palwe , Borkhedi. Dist Washim
Farmers field profile :
He is having medium deep black soil in his field , He completed the Sowing of the crop on 18-1-2023. He used 100 kg/ha seed for sowing.

Details of technology demonstrated:
Cultivation of crop with recommended plant protection & production measures.

7. Recommended package of practices
8. Pre sowing seed treatment with chemical fungicide (Carboxim + Thirum) 100 gm/acre (Rs.240)
9. Use presowing seed dressing by Biofertilizers culture like Rhizhobium PSB & trichoderma each @ 1kg/demo. (Rs. 300)
10. Use of 5% NSKE spraying (Rs. 350)
11. Recommended pesticide spraying by Thimethoxam+Lamdacyhalothrin 50ml, Chloratranilipole 18.5% EC 3ml in 10 lit water (Rs. 1060)
12. Fungicide Spraying of Tebuconazole +Sulphur 10 ml in 10 lit water(Rs. 375)

Institutional Involvement:
KVK organised Farmers training on Integrated crop management of Groundnut crop on 20.1.2023. Distributed the technical folder on advances in Groundnut crop management to the farmer. Also Supplied recommended inputs as part of improved production technology to the farmer including, Biofertilizers like Rhizhobium PSB & trichoderma kit /demo. for Pre sowing seed treatment. Gave technical backstopping & monitoring visit to guide farmer on crop management during the crop season. Sh. T.S. Deshmukh SMS Agronomy & Incharge CFLD oilseed crop address farmers on the importance of the integrated crop management in Groundnut. KVK organised the Field Day of CFLD farmers at Borkhedi Village on dt. 11.4.2023. The programme was chaired by S K Deshmukh SMS Agri. Extn. Scientist KVK. The publicity about field day was made through local news paper for mass awareness.

Success Point:
The farmer crop was harvested on 20-5-2023. The ICM demonstration gave 24.3 q/ha yields i.e.19.6% more than farmers practice during Summer 2023 season. The farmer earned net profit of Rs.100649/ha with BCR of 3.01 & additional income of Rs. 23657/-by under recommended practices.

Farmer Feedback:

Yield (q/ha)	
Demonstration	24.3 q/ha
Potential yield of variety/technology	25-30 q/ha
District average	20.0 q/ha
State average	10.4 q/ha

Performance of technology vis-à-vis Local check (Increase in productivity and returns)

Practice used	Yield (q/ha)	Gross cost (Rs/ha)	Gross income (Rs/ha)	Net income (Rs/ha)	B:C ratio
Farmer practices	20.4	49290	126282	76992	2.56
Demonstration	24.3	50040	150689	100649	3.01
% Increase	19.6%				

CFLD Goundnut field of Sh. Samadhan Palawe, Borkhedi Dist Washim

CFLD Goundnut field of Pandurang V Shinde, Khandala Shinde Dist Washim

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

1. Krishi Vigyan Kendra Washim is one of the center catering training needs of the farming community in the district. KVK has good functional linkages with the department hence they have identified the center started at district place (VIDATA Training Center) as a Nodal Agency for major schemes like Agri-Clinics and Agri-Business program (AC&ABC), Diploma in Agricultural extension Services for Input Dealers, PMFME Seed Capital Beneficiary and DLC beneficiary and Rashtriya Gram Swaraj Abhiyan Sarpanch Training Program. Beneficiaries of all these training helps in extension networking and creates outreach of KVK in the district.

2. **Group Farming** Approach: KVK has adopted Citrus orchard beneficiaries and 5 villages were regular weekly field visit in alternate villages in presence of KVK experts and farmers are arranged twice in month. The basic role is follow up and monitoring of technology adoption by the farmers and main thing is that farmers learns through experience sharing and create healthy competition among the farmers. As a result of this various line department and agencies has approach KVK for convergence program and even Vice Chancellor Dr.Sharad Gadakh and his scientist visited the adopted village Wadaji and appreciated end to end approach of the KVK.

- Horticulture expert has started **Mandarin Group Farming** *(santra Gat sheti)* Concept in five major mandarin producing i.e. Wadji, Adoli, Shendurjana, Wanoja and Belkhed village. In this concept, formed and promoted the group of mandarin producer in the each village. In every month shivar feri (Visit of scientist and farmers to orchards of group members) followed by technical session are arranged. During shivar feri, observation of growth performance, pest, diseases infestation and cultural practices are being observed and also shared and discussed with group to find out the cause and preventive measure and possible remedies to overcome same. As a outcome, 95 farmers group at Wadji village, 48 farmers group at Belkhed, 25 farmers group at Adoli village, 30 farmers group in shendurjana village and 18 farmers group in Wanoja village were developed. The area covered is 450 acres. Orchards are well developed. The yield and quality of fruit is improved and finally the net profit of the is increased from Rs.1.5 lacks to Rs. 3.5 lacks per acre. Farmers are very much satisfied about this innovative method of technology transfer. Hon Vice chancellor, Dr. PDKV, Hon Principle secretory, agriculture and other dignitaries have participated and visited to these village.
- For marketing and value addition purpose, FPO of orange growers has been promoted and conducted exposure visits to such units. Brand of Washim district as Washim Orange (WAO) has been developed.

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

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

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

A. Practicing Farmers
B. Rural Youth
C. In-service personnel

KVK Washim while adopting the villages for technology transfer focus on PRA and need assessment survey and prepared plan for on and off campus activities and programs to be implemented by KVK. Rapid PRA survey and group discussion with farmers help KVK scientist to identify and arrange need based and skill supported training programs for the farmers. In case of rural youth KVK organizes ARYA, ASCI and STRY training program. MANAGE supported training like AC&ABC and DAESI are also part of the activity. In case of extension personal KVK arranges thematic based training like Natural Farming, Shednet house, Millets based value addition and farmers field school etc.

5.2. Indicate the methodology for identifying OFTs/FLDs

For OFT:

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

For FLD:

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

5.3. Field activities

a. Name of villages identified/adopted with block name (from which year) -2020
b. No. of farm families selected per village :1050
c. No. of survey/PRA conducted :07
d. No. of technologies taken to the adopted villages:- 25
e. Name of the technologies found suitable by the farmers of the adopted villages:Organic farming, Natural farming, Honey
f. Beekeeping, BBF, soil testing, IPM practices, methods of organic input production and value addition in major grown crops
g. Impact (production, income, employment, area/technological– horizontal/vertical) Horizontal spread of technology help farmer in getting better yield under different climatic condition and raised the farmers income through allied enterprises.
h. Constraints if any in the continued application of these improved technologies Major constrain includes labour scarcity, high
i. cost of inputs, non-availability of good quality seeds, failure of seasonal rainfall, severe pest and disease attack, inadequate credit facilities, high cost of labour, high cost of insecticide and higher rent for threshing machine.

6. LINKAGES

A. Functional linkage with different organizations

Name of organization	Nature of linkage
Dr.PDKV Akola	Collaborative training and technical backstopping, FLD on Wheat & Green gram Trials, Oilseed & Pulses technical backstopping, For technical interaction. Extension activity
NARP- ARS Washim	Training and demonstration, and Extension programmes
MSRLM	Training cum demonstration of Pashu and KrishiSakhi
District Animal Husbundery Department	Technically guidance, Collaboration animal health camps
ATMA Washim	Training, Supply of poultry input, Exhibition, FFS, Field day and workshops
R-SETI Washim	Vocational Training Programs
NABARD	FPO project, CAT and Awareness programs, MEDP Training
Chetak Farm	Honey Bee value addition
PoCRA	Value chain management and processing
Agriculture Department	Soil health card, training and demonstration
MANAGE Hyderabad	DAESI and AC&ABC training
VANAMATI Nagpur	DAESI and STRY training programmes
MAVIM	SHGs Training Program
IIFDC	POPI FPO promotion
MCED	Entrepreneurship training
NIPHM Hyderabad	Certificate course on insecticide management
VNMAU Parbhani	Joint implementation of farm implement trial, seed production,training and demonstration
ManavVikasMision- Planning department	Training and Demonstrations
Skill development and Entrepreneurship department	TI and VTP and various extension programme
DIET-District Administrative Training Institute	Training program for extension functionaries
Zillah Parishad	Extension programmes
NFDB Hyderabad	Training and demonstration of fisheries activities
Sericulture department	Training and demonstration of sericulture activities
District Industries center	Self-employment generation scheme & Common Facility Center
Piramal Foundation	Training on water use efficiency
PanchayatSamitiRisod	Joint implementation of various training
District Soil survey and Soil testing officer	Implementation of soil health card programme
College of Agriculture Risod	Joint implementation of various activities
Common Service Center	Agri- telecommunication centers
SIRD-YASHADA Pune	RGSA Sarpanch Training
State Nodal Agency-PMFME	DLTI- PMFME Beneficiary Training
Dhanuka pvt ltd	Sponsorship for training
Gencrist bioproducts pvt.ltd	Sponsorship for training
Syngenta ind ltd	Sponsorship for training

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

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

Name of the scheme	Date/ Month of initiation	Funding agency(State Govt./Other Agencies)	Amount (Rs.)
DAMU	**May 2019- Mar 2024**	**IMD**	**1200000/-**
NFSM cotton	**August 2023**	**CICR ICAR**	**1500000/-**
AC & ABC	**Sept 2022**	**MANAGE**	**840000/-**
DAESI	**Jan 2023**	**MANAGE**	**730000/-**
Sustainable Development of SHGs	**July 2023**	**DPDC**	**5700000/-**

C. Details of linkage with ATMA

a) Is ATMA implemented in your district Yes/No

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

Coordination activities between KVK and ATMA

S. No.	Programme	Particulars	No. of programmes attended by KVK staff	No. of programmes Organized by KVK	No of Farmers attending
01	**Meetings**	**AMC & GB**	**10**	**0**	**0**
02	**Research projects**	**0**	**0**	**0**	**0**
03	**Training programmes**	**STRY**	**00**	**02**	**30**
04	**Demonstrations**	**0**	**0**	**0**	**0**
05	**Extension Programmes**				
	Farmers Field School	**Orange & Turmeric**	**0**	**12**	**360**
06	**Publications**				
	Video Films	**0**	**0**	**0**	**0**
	Books	**Natural Farming**	**0**	**0**	**5000**
	Book chapter	**0**	**0**	**0**	**0**
	Extension Literature	**Millets**	**0**	**0**	**2000**
	Pamphlets	**Natural Farming**	**0**	**0**	**2000**
	Others (Pl. specify)				
07	**Other Activities** (Pl.specify)				
	Watershed approach	**0**	**0**	**0**	**0**
	Integrated Farm Development	**0**	**0**	**0**	**0**
	Agri-preneurs development	**0**	**0**	**0**	**0**

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
0	**0**	**0**	**0**	**0**	**0**

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
0	**0**	**0**	**0**	**0**	**0**

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
01	Skill Training	Organic farming	235000	234500	20 participants
02	Skill Training	Poultry farming	245000	244600	20 participants

G. Details of linkage with PKVY (Paramparagat Krishi Vikas Yojana)

S. No.	Programme	Nature of linkage	Funds received if any Rs.	Expenditure during the reporting period in Rs.	Remarks
0	0	0	0	0	0

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	CFLD	Demonstration	150000	300000	Late funding

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
0	0	0	0	0	0

7. Convergence with other agencies and departments:

8. Innovative Farmers Meet

Sl.No.	Particulars	Details
1	Have you conducted Farm Innovators meet in your district?	Yes
	ICAR celebrates its Foundation Day on 16th July every year and from this year it is observed as the "Foundation and Technology Day" and this event will be organized from 16 to 18 July 2023. KVK Washim celebrated ICAR Foundation and Technology Day by organizing Innovative Farmers Meet and Agricultural Technology Exhibition from 16 to 18 July 2023 at KVK campus. First day program was chaired by DSAO Agriculture Department, WashimAarif Shah, Dr.R.L.Kale KVK Head and Senior Scientist, Risod TAO ChandrakantUlemale and Agril. Officer Vilas Wagh KVK expert Dr.D.N.Ingole, N.B.Patil, P.V.Deshmukh and S.R.Bawaskar were prominent dignitaries present on the dias.On this occasion eight farmers and farm women who have proven them self in society and provided employment opportunities through commercial sustainable agriculture practices were honored by giving shawl, shrifal and tree plant sapling.KVK publication, Vermiwash and Dashparni products were also release during the program. Agricultural technology exhibition showcasing the key areas and sale of various inputs and services was arranged at program site.	

9. Farmers Field School (FFS) :

S. No	Thematic area	Title of the FFS	Budget proposed in Rs.	Expenditure	Brief report
1	INM and IPM	FFS on orange	21000	21000	Sponsored by ATMA, Washim
2	INM and IPM	FFS on Turmeric	21000	21000	Sponsored by ATMA, Washim

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

S.No	FeedBack
1	Soybean : In Soybean crop demonstration with integrated nutrient management by the pre sowing seed treatment with bio fertilizer practice gave 11% increased yield with additional net profit of Rs.7205/ha & higher BC ratio 1.66 over the farmers practice. The farmers realized importance of the use of pre sowing seed treatment for increased crop production. Farmer needed the bio fertilizer inputs. The cluster demonstration of ICM practices with using KDS 726/ MAUS 612 variety in Soybean crop gave 18.5% increased yield with additional net profit of Rs.12334/ha & higher BC ratio of 1.97 over the farmers practice. The farmers realized the potential of recommended practices in increasing profit in crop productivity and will adopt the demonstration package.
2	Pigeon pea : The improved variety BDN 716 demonstration of pigeon pea crop is having good grain quality, gave 18.8% increased yield with additional net profit of Rs.13865/ha &higher BC ratio 4.04 over the farmers practice.
3	Cotton : In crop demonstration with integrated crop management in HDPS/CS using RCH 608/RCH 578 variety practice gave 19.8% increased yield with additional net profit of Rs.15667/ha & higher BC ratio 1.80 over the farmers practice. The farmers realized importance of the use of HDPS/CS technology for increased crop production.
4	Bengal gram : In Bengal gram crop with integrated nutrient management demonstration by the pre-sowing seed treatment with bio fertilizers gave good crop growth, 10.5% increased yield with additional net profit of Rs.10910/ha & higher BC ratio was 2.78 over the farmers practice. The farmers realized importance of the use of pre-sowing seed treatment for increased crop production. Farmer needed the bio fertilizer inputs.
5	Wheat : In wheat crop demonstration of the improved variety MACS 6478 is suitable for sowing under irrigation condition, has good grain chapatti quality giving 13.2% increase yield with additional net profit of Rs.5309/ha & higher BC ratio 2.53 over the farmers practice. The improved variety shows excess height characteristic in soils with previous crop history of turmeric & FYM application. Also variety is susceptible to crop lodging in later stages. So the farmers were reluctant to use the variety.
6	Safflower The cluster demonstration of ICM practices with using ISF 764 variety in Safflower crop gave 13.3% increased yield with additional net profit of Rs.7631/ha & higher BC ratio of 2.61 over the farmers practice. The farmers realized the potential of recommended practices in increasing profit in crop productivity and will adopt the demonstration package.
7	Groundnut (Summer) The cluster demonstration of ICM practices with using TAG 24 variety under ICM practices in Groundnut crop gave 19.6% increased yield with additional net profit of Rs.24000/ha & higher BC ratio of 3.01 over the farmers practice

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

- **The existing variety of Soybean crop viz. JS 335 needs substitute varieties for resistant to stemfly & girdle beetle pest with better yield potential.**

- **In pigeon pea crop improved varieties with wilt resistant characteristics and increased yield potential needs to be given more attention.**
- **In Cotton crop HDPS mechanization needs timely support. Weedicide management is also an beneficial alternative to reduce cost of management.**
- **In Wheat crop, under irrigated condition farmers need non lodging varieties with rust resistance having higher 40-50 q/ha yield with good grain, chapati quality amber colour grain.**
- **In Chick pea existing variety JAKI 9218 is suffering due to wilt, as such better yielding and wilt resistance varieties is farmers demand.**
- **In Safflower crop, farmers are in trouble due to more labour charges demand by labourers at Harvest. Also they require variety with more oil recovery, suited to mechanical harvester with non-shattering loses in field.**
- **In Groundnut crop farmers demanded better performing, yielding improved varieties in summer season with good grain, pod quality and three seeded pods.**

11. Technology Week celebration during 2023: No

12. Interventions on drought mitigation (if the KVK included in this special programme) : No

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)
ICM in Soybean var. KDS 726/ MAUS612	100	85	80000	94000
ICM in Safflower var ISF 764	50	70	64000	72000
ICM Groundnut Summer var. TAG 24	50	78	120000	150000
INM in Pigeon pea var. BDN 716	50	70	85000	93000
INM in Chickpea var JAKI 9218	50	65	80000	88000
Adoption of MACS 6478 Varietal use in Wheat	50	80	46000	52000
INM in Nagpur Mandarin	428	71%	350000 /ha	680000 / ha
Direct sowing of onion by onion seeder in Late kharif season	62	54 %	180000/ ha	270000/ha
Onion Seed Production technology	210	70 %	350000 / ha	430000/ ha
Introduction of late kharif onion production technology	185	48%	112000 /ha	230000/ha
Mandarin plantation technology	740	80 %	Newly planted	
IPM in cotton	42	55.90	Rs 5400 Rs plant protection cost before training	Rs 4600 plant protection cost after training

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

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

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

CONSTRAINTS EXPERIENCED BY THE SOYBEAN GROWERS IN ADOPTION OF SOYBEAN PRODUCTION TECHNOLOGY IN MAHARASHTRA

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ABSTRACT

The study was conducted in ten selected villages of Washim District of Maharashtra to study the constraints experienced by soybean growers in adoption of improved soybean production technologies.. A sample size comprised of 150 trainees and 150 non-trainees from the KVK operated villages. The results of the study revealed that the major situational and economic constraints experienced by both the trainee and non-trainee farmers were labour scarcity, high cost of inputs, non-availability of good quality seeds, failure of seasonal rainfall, severe pest and disease attack, inadequate credit facilities, high cost of labour, high cost of insecticide and higher rent for threshing machine. The technological constraints were faced by majority of the non-trainee farmers, whereas the same were faced by only a lesser proportion of the trainee farmers. As the trainees have undergone training on technological aspects on soybean production, they might have not experienced these constraints.

Keywords : Constraints, Adoption, Technologies and Soybean growers

INTRODUCTION

Soybean (Glycine max L. Merril) is the world's most important seed legume, which contributes to 25% of the global edible oil and about two-thirds of the world's protein concentrate for livestock feeding. In India,

Soybean is cultivated in an area of 11.00 million ha and the production of 9.30 million tonnes with a productivity of 8.65 q / ha under rainfed crop system in Madhya Pradesh, Rajasthan, Karnataka, Chattisgarh and Telengana. There persist wide variation in the productivity ranging from 7.80 q / ha in Rajasthan to 11.25 q/ ha in Maharashtra primarily due to farm level inefficiencies. In Maharashtra, soybean is cultivated in an area of 3.73 million ha with production of 3.94 million tonnes and productivity of 11.25 q / ha with second rank in India (SOPA Databank, 2019). However, low productivity of the crop remains a major problem in soybean cultivation. This may be due to various technological, situational and economic constraints experienced by the soybean growers. Hence, the present study was attempted to study the constraints faced by the farmers in soybean cultivation.

METHODOLOGY

The study was conducted in Washim district of Maharastra state during 2018-19. A list of farmers attended training on improved soybean cultivation practices was obtained from KVK, Karda. Out of six taluks of Washim district, three taluks namely, Risod, Washim and Malegaon were selected as these taluks had highest number of trainees. Six villages from Risod, two villages from Washim and two villages from Malegaon were selected based on the availability of maximum number of trainees. The selected villages were Bhapur, Tandalwadi, Belkhed, Gobhani, Warud Tofa and Karda from Risod taluk, Shelgaon bagade and Tiwali from Malegaon taluk, Hiwara rohila and Sawargaon jire from Washim taluk. A sample size of 150 trainee farmers and 150 non-trainee farmers were selected from all these ten villages by following the proportionate random sampling technique. Thus a total of 300 farmers were selected for the study.

The trainee and non-trainee farmers were asked to reveal the various constraints faced by them in adoption of improved soybean production technology. The data were collected with the help of pre- tested and structured interview schedule by personal interview method. Percentage analysis was worked out to interpret the results.

RESULTS AND DISCUSSION

The results on constraints experienced by the farmers in adoption of recommended soybean cultivation practices are presented in following tables.

TECHNOLOGICAL CONSTRAINTS

Table 1. Technological Constraints experienced by the farmers in adoption of soybean production technology

S. No.	constraints	Trainees (n=150)		Non-trainees (n=150)	
		Numbers	Per cent	Numbers	Per cent
1.	Inadequate knowledge on chemical and bio-fertilizer seed treatment	16	10.67	101	67.33
2.	Inadequate knowledge on herbicide	21	14.00	109	72.67
3.	Inadequate knowledge on pest and disease management	26	17.33	114	76.00
4.	Inadequate knowledge on manuring	17	11.33	98	65.33

Table 1 reveals that the technological constraints namely, 'inadequate knowledge on chemical and bio-fertilizer seed treatment' (67.33per cent), 'inadequate knowledge on herbicide' (72.67 per cent), 'inadequate knowledge on pest and disease management' (76.00 per cent) and 'inadequate knowledge on manuring' (65.33 per cent) were experienced by majority of the non-trainee farmers. Whereas, only a smaller proportion of the trainee farmers experienced the technological constraints. As the trainee farmers have undergone training on soybean production technologies, they might have acquired required knowledge on the technological aspects of soybean cultivation. This in turn would have enabled them to get rid of these constraints. On the contrary, as the non-trainee farmers have not undergone training on soybean cultivation, they would have not acquired adequate knowledge on these aspects and hence would have experienced these constraints. Similar findings were also reported by Singh et.al., (2012).

SITUATIONAL CONSTRAINTS

Table 2. Situational constraints experienced by the farmers in adoption of soybean production technology

S. No.	constraints	Trainees (n=150)		Non-trainees (n=150)	
		Numbers	Per cent	Numbers	Per cent
1.	Labor scarcity	124	82.67	138	92.00
2.	Non-availability of good quality seeds	116	77.33	132	88.00
3.	Non-availability of FYM	98	65.33	84	56.00
4.	Failure of seasonal rainfall	134	89.33	139	92.67
5.	Severe pest and disease attack	87	58.00	119	79.33

Table 2 shows that both the trainee and non-trainee farmers experienced the situational constraints namely 'labour scarcity' (92.00 per cent), 'non-availability of good quality seeds' (88.00 per cent), 'non-availability of FYM' (65.33 per cent), 'failure of seasonal rainfall' (92.67 per cent) and 'severe pest and disease attack' (79.33 per cent).

More than ninety per cent of the respondents expressed 'labour scarcity' (92.00 per cent) as their constraints. Soybean cultivation requires more number of labourers from sowing to harvesting operations. Many of the agricultural labourers were demanding higher wages irrespective of the nature of the work. Also, all of them would prefer to go for 100 days employment scheme implemented by the Government as they could get higher wages with minimum work. Hence labour scarcity arose as the major problem. This might have enabled majority of the respondents to report this as an important constraint.

'Failure of seasonal rainfall' was expressed as a constraint by majority of the respondents (92.67 per cent). The farmers revealed that they depend mostly on seasonal rainfall for irrigation. But, for the past several years, the rainfall fails on the season and hence led to unassured irrigation. This in turn would have resulted in poor yield. This might be the possible reason for the reported constraint.

Non-availability of good quality of seeds was the constraint faced by 88.00 per cent of the respondents. Good quality seeds are must for getting high yield in crop cultivation. Most of the respondents are using the seeds harvested from their own field of sowing in the next season. Sometimes, the seeds are infected with fungus due to improper storage facilities. When these seeds are used for sowing that would result in poor germination, this might have enabled them to express the above mentioned constraint.

'Severe pest and disease attack' was the constraint experienced by 79.33 per cent of the respondents. Soybean crop is affected by pests like girdle beetle, pod borer and stem fly and diseases like yellow mosaic virus and root rot. The pest and disease infestation causes severe yield reduction in soybean and hence the farmers might have reported this constraint.

The constraint experienced by 65.33 per cent of the respondents was 'Non-availability of FYM'. Basal application of FYM was the practice adopted by all the farmers to ensure soil fertility and virulent crop growth. Nowadays, the cattle population in the villages has been drastically reduced due to many reasons and hence led to unavailability of FYM. So, the farmers could not get adequate quantity of FYM for application in their soybean fields.

ECONOMIC CONSTRAINTS

Table 3. Economic constraints experienced by the farmers in adoption of soybean production technology

S. No.	constraints	Trainees (n=150)		Non-trainees (n=150)	
		Numbers	Per cent	Numbers	Per cent
1.	High cost of inputs	121	80.67	138	92.00
2.	Inadequate credit facilities	101	67.33	124	82.67
3.	High cost of labour	136	90.676	139	92.67
4.	High cost of insecticide	92	61.33	128	85.33
5.	Higher rent for threshing machine	131	87.33	129	86.00

Table 3 shows that economic constraints namely, 'high cost of inputs' (92.00 per cent), 'inadequate credit facilities' (82.67 per cent), 'high cost of labour' (92.67 per cent), 'high cost of insecticide' (85.33 per cent) and 'higher rent for threshing machine' (86.00 per cent) were experienced by both the trainee and non-trainee farmers.
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The important constraint expressed by majority of the respondents (92.00 per cent) was 'high cost of inputs'. This may be due to the increasing cost of inputs viz., seeds, fertilizers and pesticides etc., year by year. Whereas, the price of produce has not increased proportionality every year. Most of the respondents do not have adequate savings for purchase of inputs required for cultivation. They always depend upon private input dealers/commission agents and money lenders for financial assistance. By using this situation, these agencies exploit the farmers by selling inputs at high cost. This may be the reason for above reported constraints by the respondents.

High cost of labour was the another major constraint faced by majority of the farmers (92.67 per cent).The farmers revealed that they had to pay more wages for the labourers irrespective of the work done due to scarcity of labour during crucial stages of cultural operations.

'Inadequate credit facilities' was the constraint expressed by 82.67 per cent of the respondents. The farmers could not avail of the credit facilities from banks because of its tedious and time consuming procedure. They could not borrow money from non-institutional sources because of higher interest rates.

High cost of insecticide was the constraint revealed by 85.33 per cent of the farmers. As the crop is infested by pests like girdle beetle, stem fly and pod borer and hence the farmers had to apply insecticides to control them. But the cost of plant protection chemicals are too high and hence the farmers could not afford the cost as revealed by them.

Majority of the farmers (87.33 per cent) expressed ‘higher rent for threshing machine' as the constraint. The farmers could not hire threshing machines during peak harvest seasons and also had to pay higher rents for the machines they hired. This leads to increased production cost and resulted in poor net profit to the farmers. Similar findings were also reported by Deshmukh and Deshmukh (2013).

CONCLUSION

The results of the study revealed that the major situational and economic constraints experienced by both the trainee and non-trainee farmers were labour scarcity, high cost of inputs, non-availability of good quality seeds, failure of seasonal rainfall, severe pest and disease attack, inadequate credit facilities, high cost of labour, high cost of insecticide and higher rent for threshing machine. The technological constraints were faced by majority of the non-trainee farmers, whereas the same were faced by only a lesser proportion of the trainee farmers. As the trainees have undergone training on technological aspects on soybean production, they might have not experienced these constraints. The scientists from agricultural universities, extension officials of KVK, extension workers from State Department of Agriculture and other officials concerned may have to take necessary efforts to help the farmers to overcome these constraints. The KVK may organise training programs on soybean production technology to all the farmers in the entire district so as to get rid of technological constraints.

REFERENCES

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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 2023	3	42518	254
Feb 2023	3	35789	211
March 2023	3	35789	152
April 2023	2	35423	198
May 2023	3	47894	155
Jun 2023	3	45789	255
Jul 2023	4	45781	247
Aug 2023	3	55415	227
Sept 2023	3	52467	298
Oct 2023	2	35487	298
Nov. 2023	3	45780	245
Dec. 2023	3	47512	241
Total	**35**	**525644**	**2781**

Name of KVK	**Message Type**	**Type of Messages**						
		Crop	**Livestock**	**Weather**	**Marke-ting**	**Aware-ness**	**Other enterprise**	**Total**
	Text only	17	3	6	6	3	2	37
	Voice only	0	0	0	0	0	0	0
	Voice & Text both	17	3	6	6	3	2	37
	Total Messages	**17**	**3**	**6**	**6**	**3**	**2**	**37**
	Total farmers Benefitted	**215038**	**45204**	**98625**	**82855**	**52477**	**31445**	**525644**

15. PERFORMANCE OF INFRASTRUCTURE IN KVK

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

Sl. No.	Demo Unit	Year of establishment	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Produce	Qty.	Cost of inputs	Gross income	
1	Dalmil	2012	0.40	PKV Dalmil	Dal	75	15000	7000	Rural youth
2	Tech. Hub.	2020	01	Animal base tech	Eggs, Meat, Milk, Compost	Egg = 678, Chicks=300, Milk= 600 lit	997000	24925	

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

Name of the crop	Date of sowing	Date of harvest	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Type of Produce	Qty.	Cost of inputs	Gross income	
Pulses									
	RVG-202	28/01/2023	01	PDKV Kanchan	Truthful Seed	17.5	40000	74725	
Oilseeds									
	AMS-1001	21/09/2023	06	AMS-1001	Truthful Seed	126	177000	504000	
	PKV-AMBA	21/09/2023	0.40	PKV AMBA	Truthful Seed	08	12500	32000	

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

Sl. No.	Bio Products	Name of the Product	Qty (kg/lit)	Amount (Rs.)		Remarks
				Cost of inputs	Gross income	
1.	Bio-Fertilizers	Vermi-compost	1500	75700	150000	Use in Farm & sold to farmers
2.	Bio-Fertilizers	Rhizobium & PSB	200	12000	40000	For trials only
3.		Trichoderma	2000	250000	400000	For trials only
4.	Total		3700	337700	590000	

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

Sl. No	Name of the animal / bird / aquatics	Details of production			Amount (Rs.)		Remarks
		Breed	Type of Produce	Qty.	Cost of inputs	Gross income	
1	Fish	IMC & Common carp	Fish seed	225000	0.50/no	112500	Sale as per farmers demand
2	Poultry	Kaveri & Giriraja	Day old chicks	3900	25/no	97500	Sale as per farmers demand

E. Utilization of hostel facilities

Accommodation available (No. of beds):

Months	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
January **2023**	22	2	-
February **2023**	08	2	Field visit
March **2023**	11	2	Training Organic
April **2023**	21	2	Training
May **2023**	11	2	Poultry
June **2023**	15	1	-
July **2023**	15	4	Soil Testing
August **2023**	07	3	Fishery
September **2023**	04	4	Fishery-
October **2023**	08	3	Organic
November **2023**	12	1	Visit
December **2023**	15	2	field visit

F. Database management

S. No	Database target	Database created
1	**10000**	**7600**

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

Amount sanction (Rs.)	Expenditure (Rs.)	Details of infrastructure created / micro irrigation system etc.	Activities conducted					Quantity of water harvested in '000 litres	Area irrigated / utilization pattern
			No. of Training programmes	No. of Demonstration s	No. of plant materials produced	Visit by farmers (No.)	Visit by officials (No.)		
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

H. Performance of Nutritional Garden at KVK farm

If Nutritional Garden developed at KVK farm/Village Level? : 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	Seasonal vegetables like Rajgira , Spinach, fenugreek, Brinjal, Tomato, Drumstik, Hatga etc	8 to 10/ species	450
	Guava, custard apple, amola	2/fruit lants	
	Roselle	10	

Nutritional Garden developed at Village Level (Area under nutritional garden)

No. of Villages covered	Component of Nutritional Garden	No. of species / plants in nutritional garden	No. of farmers covered
260	Seasonal vegetables like Rajgira , Spinach, fenugreek, Brinjal, Tomato, Drumstik, Hatga etc	8 to 10/ species	1560
	Guava, custard apple, amola	2/fruit lants	
	Roselle	10	

H. Details of Skill Development Trainings organized

S.No.	Name of KVKs/SAUs/ ICAR Institutes	Name of QP/Job role	Duration (hrs)	No. of participants					
				SCs/STs		Others		Total	
				Male	Female	Male	Female	Male	Female
1	Washim	Small Organic Cultivator RKVY	400	01	00	20	04	21	04
2	Washim	Poultry Farmer	320	13	01	09	00	22	01

16. FINANCIAL PERFORMANCE

A. Details of KVK Bank accounts :

Bank account	Name of the bank	Location	Branch code	Account Name	Account Number	MICR Number	IFSC Number
With Host Institute	State Bank of India	Risod	02173	Chairman Suvide Foundation	11577083717	444002726	SBIN0002173
With KVK	State Bank of India	Risod	02173	Chairman Suvide Foundation KrishiVigyan Kendra	11577083842	444002726	SBIN0002173

B. Utilization of KVK funds during the year 2023-24 (Rs. in lakh) (Till Dec, 2023)

S.No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	**Pay & Allowances**	20588647	16347000	16799750
2	**Traveling allowances**	100000	50000	48590
3	**Contingencies**			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	**1473500**	**610000**	**957250**
B	POL, repair of vehicles, tractor and Equipments			
C	Meals/refreshment for trainees (ceiling upto Rs.40/- per day/trainee be maintained)			
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)			
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)			
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)			
G	Training of extension functionaries			
H	Maintenance of buildings			
I	Establishment of Soil, Plant & Water Testing Laboratory			
J	Library			
TOTAL (A)		**22162147**	**17007000**	**17805590**
B. Non-Recurring Contingencies				
1	**Works**	0	0	0
2	**Equipments including SWTL & Furniture**	0	0	0
3	**Vehicle** (Four wheeler/Two wheeler, please specify)	0	0	0
4	**Library** (Purchase of assets like books & journals)	0	0	0
TOTAL (B)		0	0	0
C. REVOLVING FUND		0	0	0
GRAND TOTAL (A+B+C)		**22162147**	**17007000**	**17805590**

C. Status of revolving fund (Rs. in lakh) for the Four 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	1471412	5816530	5548982	1738960
April 2019 to March 2020	1738960	2066000	2347822	1457138
April 2020 to March 2021	1457138	1245600	1219614	1483124
April 2021 to March, 2022	1438124	1366504	1340600	1464028
April 2022 to March 2023	1464028	1645590	1530470	1579148
April 2023 to March 2024	1579148	2245900	2140600	1684448

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
TS Deshmukh	**SMS Agronomy**	**Application** of Remote Sensing & Geographical Information Systems in Agricultural Development (under CBC),	**Organised by MANAGE Hyderabad**	**Online/ Hybrid mode 3 Day**	25-27 Sept. 2023
T S Deshmukh	**SMS Agronomy**	**Minor Millet Cultivation Technology District level Workshop by ATMA Washim**	**ATMA DSAO Washim**	**1 day**	**Dt. 10.2.2023**
T S Deshmukh	**SMS Agronomy**	**Drone A Boom for Agriculture. Drone Conference 2023.**	SAACT CJSM Univ Kanpur & AgriMeet Foundation	**online**	Dt. 27-29/1/2023
T S Deshmukh	**SMS Agronomy**	Weather forecast based farming constraints & solutions at	AGROVISION Regional Exhibition Nagpur	**1 Day**	**Nov.2023**
Shubhangi N. Watane	**P. A. Home Science**	**Soft Skill & Personality Development**	Dr. PDKV Akola	**Offline**	**13 to 15 July 2023**
Shubhangi n. Watane	**P. A. Home Science**	**Capacity Building of Agriculture Extension Professionals to Promote Agro Processing**	ICAR-CIPHET, Ludhiana	**Offline**	**07 to 11 August 2023**
S.R.Bavaskar	**P.A.Computer**	**Video Production & Dissemination Skill for Agriculture Extension Funcationaries**	Dr. PDKV, Akola	**Offline**	**10 to 12 July 2023**

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)	
				Before (base year)	After (current year)
Hiwara Rohila	100	1. Improvement in crop productivity. 2.Improvement in livestock productivity. 3.Increase in the cropping intensity.	10	25600	54900
Shelu Khadse	100	Agriculture input production for saving in the cost of production , diversification towards high value crop promotion and agriculture allied enterprise.	10	29700	61600

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
0	0	0	0	0	0

20. Details of Progress of ARYA Project

Name of Enterprise	No of Training Conducted	No of Beneficiaries	No of Extension Activities	No of Beneficiaries	No of Unit established	Change in income		No. Of Groups Formed
						Before	After	
Agro Processing	5	60	3	70	7	12,000/Month	14500/Month	3
Freshwater Fish farming	2	50	2	50	27	Rs.48000/-	162000	2

21. Details of SAP :

S. No.	*Types of major Activity conducted- Swachhta Pakhwada, Cleaning, Awareness Workshop, Microbial based Agricultural Waste Management by Vermicomposting etc.*	No. of Programmes conducted	No. of Participants
1	***Microbial based Agricultural Waste Management***	05	162

Sr. No	Name of KVK	Date	***Activity***	No of VIPs	No of Farmers	Total
1.	KVK Washim	16/01/23	Cleaning and awareness workshop	13	400	413
2.	KVK Washim	24/02/23	Cleaning and awareness workshop	05	45	50
3.	KVK Washim	23/03/23	Swcchata hi sewa pladge	09	30	39
4.	KVK Washim	15/04/23	Compost production technology	04	24	28
5.	KVK Washim	06/05/23	Cleaning and awareness workshop	05	70	75
6.	KVK Washim	10/07/23	Compost production technology	04	14	18
7.	KVK Washim	11/08/23	Cleaning and awareness workshop	05	65	70
8.	KVK Washim	11/09/23	Cleaning and awareness workshop on compost and vermicomposting production tech	03	150	153
9.	KVK Washim	08/12/23	compost and vermicomposting production tech	02	19	21

21. Books published 2023-24

Title of the Book	Authors	ISBN No	Publisher	Pages No	Description/review of the book (one paragraph/sentence)
Natural Farming	T S Deshmukh etal	-	KVK	25	Introduction to Natural Farming
Introduction of Agriculture Technology through KVK	P V Deshmukh	-	KVK	21	Introduction of Agricultural Technologies through KVK

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

State Institute of Rural Development (SIRD) YASHADA Pune has identified KVK as a Nodal Agency for conducting Refresher Training for Directly Elected Sarpanch, Foundation Training of Panchayat Samiti Member, SHG- PRI convergence training and Adarsh Gaon training. KVK Washim has organized 15 training program both in Akola and Washim district total 540 participants trained the program.

APR SUMMARY

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

1. Training Programmes

Clientele	No. of Courses	Male	Female	Total participants
Farmers & farm women	114	5312	214	5526
Rural youths	11	286	51	337
Extension functionaries	3	26	23	49
Sponsored Training	27	542	447	989
Vocational Training	6	79	93	172
Total	**161**	**6245**	**828**	**7073**

2. Frontline demonstrations

Crops/Enterprise	No. of Farmers	Area(ha)	Units/Animals
Oilseeds	145	94	4
Pulses	20	8	2
Cereals	10	4	1
Vegetables	42	16.8	0
Other crops	24	4.56	0
Hybrid crops	200	200	1
Total	441	327.36	8
Livestock & Fisheries	0	0	0
Other enterprises	0	0	0
Total	0	0	0
Grand Total	441	327.36	8

3. Technology Assessment & Refinement

Category	No. of Technology Assessed & Refined	No. of Trials	No. of Farmers
Technology Assessed			
Crops	4	4	40
Livestock	0	0	0
Various enterprises	0	0	0
Total	4	4	40
Technology Refined	**4**	**4**	**40**
Crops	0	0	0
Livestock	0	0	0
Various enterprises	0	0	0
Total	0	0	0
Grand Total	4	4	40

4. Extension Programmes

Category	No. of Programmes	Total Participants
Extension activities	45	1510
Other extension activities	0	0
Total	**45**	**1510**

5. Mobile Advisory Services :

Name of KVK	Message Type	Type of Messages						
		Crop	Livestock	Weather	Marke-ting	Awar e-ness	Other enterpri se	Total
Washim	Text only	17	3	6	6	3	2	37
	Voice only	0	0	0	0	0	0	0
	Total Messages	**17**	**3**	**6**	**6**	**3**	**2**	**37**
	Total farmers Benefitted	**215038**	**45204**	**98625**	**82855**	**52477**	**31445**	**525644**

6. Seed & Planting Material Production :

	Quintal/Number	Value (Rs.)
Seed (q)	151.5	610725
Planting material (No.)	3811	75110
Bio-Products (kg)	1500	150000
Livestock Production (No.)	-	-
Fishery production (No.)	-	-

7. Soil, water & plant Analysis :

Samples	No. of Beneficiaries	Value (Rs.)
Soil	2315	347250
Water	13	2600
Plant	0	0
Total	**2328**	**349850**

8. HRD and Publications :

Sr. No.	Category	Number
1	Abstract	
2	Workshops	
3	Conferences	
4	Meetings	
5	Trainings for KVK officials	
6	Visits of KVK officials	
7	Book published	
8	Training Manual	
9	Book chapters	
10	Booklet	
11	Leaflets/ Folder/ Pamphlet	
12	Research papers	
13	Technical Bulletin	
14	Popular article	
15	Lead papers	
16	Seminar papers	
17	Extension folder	
18	Proceedings	
19	Award & recognition	
20	On-going research projects	

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